REDACTED

INFORMATION SHEET

PRESIDING: Chair Mitchell, Presiding; and All Commissioners
PLACE: Via WebEx Videoconference
DATE: Wednesday, November 18, 2020
TIME: 10:00 a.m. – 12:30 p.m.
DOCKET NO.: E-2, Sub 1257
COMPANY: Duke Energy Progress, LLC
DESCRIPTION: Application for a Certificate of Public Convenience and Necessity to Construct a 5-MW Solar Photovoltaic Generating Facility in Buncombe County, North Carolina
VOLUME:

APPEARANCES
FOR DUKE ENERGY PROGRESS, LLC:
Lawrence B. Somers, Esq.
Jack E. Jirak, Esq.
Robert W. Kaylor, Esq.

FOR THE USING AND CONSUMING PUBLIC:
John D. Little, Esq.

WITNESSES

Lawrence Watson	Jeff Thomas	Todd Beaver	Jason Walls

EXHIBITS

Thomas Exhibit 1 (I/A)
DEP Application and Exhibits 1A, 1B, 2 and 3 (A)

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REPORTED BY: Kim Mitchell	TRANSCRIPT PAGES: 128
DATE FILED: December 11, 2020	PREFILED PAGES: 67
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NORTH CAROLINA UTILITIES COMMISSION
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DATE November 18, 2020 DOCKET #: E-2, Sub 1257___

PUBLIC STAFF MEMBERS John D. Little________________________

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John D. Little_______________________________________

s/ John D. Little
Signature of Public Staff Member

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: ____11/18/2020___ DOCKET NO.: ___E-2, Sub 1257_________

ATTORNEY NAME and TITLE: Lawrence B. Somers, Deputy General Counsel

FIRM NAME: _Duke Energy Corporation_____________________________

ADDRESS: _P. O. Box 1551____

CITY: _Raleigh______ STATE: _NC______ZIP CODE: _27602_________

APPEARING FOR:__Duke Energy Progress, LLC_____________________________

APPLICANT: _X__ COMPLAINANT: ___ INTERVENOR: ___

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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SIGNATURE: Lawrence B. Somers____

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE: ____11/18/2020___ **DOCKET NO.:** ___E-2, Sub 1257_________

ATTORNEY NAME and TITLE:_Jack E. Jirak, Associate General Counsel

FIRM NAME: _Duke Energy Corporation______________________

ADDRESS: _P. O. Box 1551____

CITY: _Raleigh______ **STATE:** _NC______**ZIP CODE:** _27602_________

APPEARING FOR:__Duke Energy Progress, LLC______________________________

APPLICANT: _X__ **COMPLAINANT:** ___ **INTERVENOR:** ___

PROTESTANT: ___ **RESPONDENT:** ___ **DEFENDANT:** ___

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SIGNATURE: Jack Jirak____

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE: Nov. 18, 2020 **DOCKET NO.:** E-2, Sub 1257

ATTORNEY NAME and TITLE: Robert W. Kaylor

FIRM NAME: Law Office of Robert W. Kaylor, P.A.

ADDRESS: 353 E. Six Forks Rd. Ste. 260

CITY: Raleigh **STATE:** NC **ZIP CODE:** 27609

APPEARING FOR: Duke Energy Progress, LLC

APPLICANT: ✓ **COMPLAINANT:** ___ **INTERVENOR:** ___

PROTESTANT: ___ **RESPONDENT:** ___ **DEFENDANT:** ___

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SIGNATURE: Robert W. Kaylor

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/A

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1257

In the Matter of	)	
Application of Duke Energy Progress, LLC for a Certificate of Public Convenience and Necessity to Construct a Solar Generating Facility in Buncombe County, North Carolina	))))))	APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT THE WOODFIN SOLAR GENERATING FACILITY

Duke Energy Progress, LLC ("the Company" or "DEP") hereby applies to the North Carolina Utilities Commission ("Commission") pursuant to North Carolina General Statutes ("N.C. Gen. Stat.") § 62-110.1 and Commission Rule R8-61 for a Certificate of Public Convenience and Necessity ("CPCN") authorizing the construction and completion of the Woodfin Solar Generating Facility ("Woodfin Solar Facility") in Buncombe County, North Carolina on a landfill owned by Buncombe County. The Woodfin Solar Facility is consistent with the Company's commitment and the Commission's March 28, 2016 *Order Granting Application, in Part, with Conditions, and Denying Application in Part* in Docket No. E-2, Sub 1089 ("the WCMP CPCN Order"). The Application is also supported by the testimony of Lawrence Watson, Director of Distributed Asset Commercial Development, and Exhibits. In accordance with Commission Rule R8-61(b)(1), Confidential Exhibit 1A contains the 2018 Duke Energy Progress Integrated Resource Plan ("IRP") and 2019 IRP Update Report, and Exhibit 1B contains the additional resource planning information. Exhibit 2 (Siting and Permitting Information), Confidential Exhibit 3 (Equipment and Cost Information) and Exhibit 4 (Construction Schedule and Other Facility Information) contain the additional information required by Commission Rule R8-61(b)(2) – (4). All exhibits are incorporated as part of the Application. In further support of the Application, the Company respectfully submits the following:

General Information

1. The Applicant's general offices are located at 410 S. Wilmington Street, Raleigh, North Carolina, and its mailing address is:

Duke Energy Progress, LLC
410 S. Wilmington Street, NCRH 20
Raleigh, North Carolina 27601

2. DEP is a public utility operating in North Carolina and South Carolina where it is engaged in the generation, transmission, distribution, and sale of electricity for compensation and is regulated by this Commission.

3. The names and addresses of Applicant's attorneys are:

Jack E. Jirak
Associate General Counsel
Duke Energy Progress, LLC
410 S. Wilmington Street, NCRH 20
Raleigh, North Carolina 27601
919.546.3257
jack.jirak@duke-energy.com

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
353 E. Six Forks Road, Suite 260
Raleigh, NC 27609
919.828.5250
bkaylor@rwkaylorlaw.com

Copies of all pleadings, testimony, orders, and correspondence in this proceeding should be served upon the attorneys listed above.

Project Overview

4. The facility consists of an approximately 5 megawatt ("MW") alternating current ("AC") / 6.3 MW direct current ("DC") solar photovoltaic ("PV") electric generator in Buncombe County, North Carolina ("Woodfin Solar Facility"). The Woodfin Solar Facility is part of a larger solar facility deployment plan and grid modernization effort in the Western Carolinas. In response to the NCUC's urging DEP to move forward in a timely manner on DEP's commitment to site solar and energy storage as part of the Western Carolinas Modernization Project ("WCMP"), DEP identified opportunities to deploy 15 MW of solar PV and over 5 MW of energy storage projects throughout the region. DEP has received strong support from Buncombe County and other local community partners for the Woodfin Solar Facility.

5. The Woodfin Solar Facility will be located on a closed Buncombe County Landfill. The Woodfin Solar Facility will allow DEP to gain experience owning and operating a solar facility on a customer's landfill site, and it will also be supportive of the customer's renewable energy goals. While landfill PV development has occurred across the United States, Duke Energy has not deployed solar on a municipal-owned landfill in the Carolinas. While developing solar on a landfill can have an impact on costs due to the inability to penetrate the landfill cap, the size and other positive characteristics described help to balance overall project costs and limit local environmental impacts. In addition, finding available sites within the Asheville region that can support a solar facility of this scale while limiting environmental impacts (such as tree clearing and wetland disturbance) is challenging, given topography and high land cost in the Asheville region.

6. Exhibit 2 contains additional details concerning the Woodfin Solar Facility site and permitting details and includes Appendices 1 and 2 that provide site layout and other information. Exhibit 3 contains additional details related to cost and other financial aspects of the project. Finally, Exhibit 4 identifies details related to the anticipated construction schedule and other aspects of the facility. The Woodfin Solar Facility will be interconnected to the single DEP-owned 24 kV distribution feeder.

DEP REPS Compliance Needs

7. While the Woodfin Solar Facility is capable of producing renewable energy Certificates ("RECs") that are eligible for compliance with the North Carolina Renewable Energy and Energy Efficiency Portfolio Standard ("REPS") program, DEP is not planning to apply for approval as a New Renewable Energy Facility at this time. The Company's plans for the RECs are addressed further in Exhibit 2. If necessary in the future, DEP would seek to register the facility as a New Renewable Energy Facility under N.C. Gen. Stat. § 62-133.8 in order to use these RECs for future compliance with the REPS program.

The Western Carolinas Modernization Project

8. As the Commission is aware from its approval in the WCMP CPCN Order, the WCMP is an energy innovation project for the Asheville area in the western region of DEP. The goal of this project is to partner with the local community and elected leaders to help transition Western North Carolina to a cleaner, smarter and more reliable energy future. DEP is committed to this partnership to promote the efficient use of energy in the region. The WCMP allows for the retirement of the existing Asheville coal units and replacement of the capacity with new natural gas combined cycle units. Additionally, the project calls for deliberate investment in distributed energy resources, including solar and

storage, and increased promotion and access to new and existing demand-side management and energy efficiency ("DSM/EE") programs. In the WCMP CPCN Order, the Commission accepted DEP's commitment to solar and storage projects and held, "As to solar and storage, the Commission expects DEP to file as soon as practicable the CPCN to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region. The Commission further urges DEP to move forward in a timely manner with the 5 MW storage project in the Asheville region." WCMP CPCN Order at p. 38.

9. The Woodfin Solar Facility is a key component of the Western Carolinas Modernization Project. The Project complies with DEP's commitments and the Commission's requirements in the WCMP CPCN Order and is consistent with, and designed to promote, the public policies of North Carolina, specifically those enumerated in Senate Bill 3 (Session Law 2007-397). The Woodfin Solar Facility will diversify the resources used to reliably meet the energy needs of consumers in the State while providing greater energy security through the use of indigenous energy resources available within the State.

10. DEP still intends to construct solar generation and battery storage facilities at the Asheville Plant site, itself. Although construction and final plans are contingent upon completion of the ash basin work and coal plant demolition activities, at this time the Company expects to install approximately 9-10 MW of solar generation along with additional battery storage at the Asheville Plant site and seek a CPCN from the Commission for the generation facilities prior to commencing construction sometime in the 2023-2024 timeframe.

11. The Company's 2018 Integrated Resource Plan ("IRP") was filed September 5, 2018 in Docket No. E-100, Sub 157 and includes the Western Carolinas Modernization Plan. The 2018 IRP incorporates a 15-year load forecast, purchase power contracts, existing generation, DSM/EE programs, new resource additions, and a minimum target planning reserve margin of 17.0%. The comprehensive planning process for the 2018 IRP demonstrates that a combination of renewable resources, DSM/EE programs, and additional base load, intermediate, and peaking generation are required over the next fifteen years to reliably meet customer demand. From a total system perspective, the DEP 2018 IRP identifies the need for approximately 6,300 MW of new resources to meet customers' energy needs by 2033. Additionally, the 2018 IRP calls for 80 MW of energy storage and approximately 1,000 MW of incremental solar installations over the next five years. Accordingly, the Woodfin Solar Facility is consistent with the 2018 IRP as well as the 2019 IRP Update Report.

Environmental

12. Operation of the Woodfin Solar Facility will have no emissions or pollutants, and the generation source of the solar facility's power will be 100% renewable. In addition, the Woodfin Solar Facility shall be designed in accordance with State of North Carolina environmental requirements with regard to materials.

Cost Estimates

13. The cost estimate for the Woodfin Solar Facility is approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. The estimate includes Engineering Procurement & Construction ("EPC"), major equipment, labor, and associated permitting and development costs. The average annual operating cost is approximately

[BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL].** Any tax credits and accelerated depreciation benefits will offset project costs for the benefit of customers.

Contractors

14. The Company will contract with reputable component manufacturers. The Company will seek to purchase components and services from North Carolina providers – to the extent that they provide the required functionality and are cost competitive in relation to other options – so as to promote economic development in the State. The Company has started discussions with suppliers but has not yet signed any binding agreements related to the Woodfin Solar Facility.

WHEREFORE, Duke Energy Progress respectfully requests that the Commission issue a Certificate pursuant to N.C. Gen. Stat. § 62-110.1 that the public convenience and necessity require construction of the Woodfin Solar Facility and requests such further relief as the Commission deems just and proper.

Respectfully submitted, this the 24th day of July, 2020.

Jack E. Jirak
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Attorneys for Duke Energy Progress, LLC

DUKE ENERGY PROGRESS, LLC

Request:

Absent the Commission's *Order Granting Application In Part, With Conditions, And Denying Application in Part* in Docket No. E-2, Sub 1089 (Western Carolinas Modernization Project order), and taking into account the Commission's October 31, 2018 Order in Docket No. E-2, Sub 1185 in which the Commission states that a demonstration that the generation project meets the public convenience and necessity, does DEP believe this facility meets the public interest and necessity requirement? Please explain.

Response:

The Woodfin solar project meets the public interest and necessity requirement as it is implementing the Commission's directives in connection with the Western Carolinas Modernization Project (WCMP). The Company does not believe that it is relevant to this proceeding to speculate concerning other potential basis for satisfying the public interest and necessity.

Response provided by:
Larry Watson, Director Distributed Asset Commercial Development

OFFICIAL COPY

Exhibit 1A

Docket No. E-2 Sub 1257

Jul 27 2020

DUKE ENERGY PROGRESS

INTEGRATED RESOURCE PLAN

2019

PUBLIC

DEP 2019 IRP CONTENTS:

ABBREVIATIONS:	
AC	Alternating Current
ACE	Affordable Clean Energy
ADP	Advanced Distribution Planning
AEO	Annual Energy Outlook
BCFD	Billion Cubic Feet Per Day
CAIR	Clean Air Interstate Rule
CAMA	North Carolina Coal Ash Management Act of 2014
CAMR	Clean Air Mercury Rule
CAPP	Central Appalachian Coal
CC	Combined Cycle
CCR	Coal Combustion Residuals Rule
CCS	Carbon Capture and Sequestration
CECPCN	Certificate of Environmental Compatibility and Public Convenience and Necessity (SC)
CEP	Comprehensive Energy Planning
CFL	Compact Fluorescent Light bulbs
CO_2	Carbon Dioxide
COD	Commercial Operation Date
COL	Combined Construction and Operating License
COWICS	Carolinas Offshore Wind Integration Case Study
CPCN	Certificate of Public Convenience and Necessity (NC)
CPRE	Competitive Procurement of Renewable Energy
CSAPR	Cross State Air Pollution Rule
CT	Combustion Turbine
DC	Direct Current
DCA	Design Certification Application
DEC	Duke Energy Carolinas
DEF	Duke Energy Florida
DEI	Duke Energy Indiana
DEK	Duke Energy Kentucky
DEP	Duke Energy Progress
DER	Distributed Energy Resource
DESC	Dominion Energy South Carolina, Inc.
DIY	Do It Yourself
DOE	Department of Energy
DOJ	Department of Justice
DSM	Demand-Side Management
EE	Energy Efficiency
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EPC	Engineering, Procurement, and Construction Contractors
EPRI	Electric Power Research Institute
EVs	Electric Vehicles
FERC	Federal Energy Regulatory Commission

ABBREVIATIONS:	
FGD	Flue Gas Desulfurization
FLG	Federal Loan Guarantee
FPS	Feet Per Second
GALL-SLR	Generic Aging Lessons Learned for Subsequent License Renewal
GHG	Greenhouse Gas
GWh	Gigawatt-hour
HRSG	Heat Recovery Steam Generator
HVAC	Heating, Ventilation and Air Conditioning
IA	Interconnection Agreement
IGCC	Integrated Gasification Combined Cycle
ILB	Illinois Basin
ILR	Inverter Load Ratios
IRP	Integrated Resource Plan
IS	Interruptible Service
ISOP	Integrated Systems and Operations Planning
IT	Information Technologies
ITC	Federal Investment Tax Credit
IVVC	Integrated Volt-Var Control
JDA	Joint Dispatch Agreement
kW	Kilowatt
kWh	Kilowatt-hour
LCR Table	Load, Capacity, and Reserves Table
LED	Light Emitting Diodes
LEED	Leadership in Energy and Environmental Design
LEO	Legally Enforceable Obligation
LFE	Load Forecast Error
LNG	Liquified Natural Gas
LOLE	Loss of Load Expectation
M&V	Measurement and Verification
MACT	Maximum Achievable Control Technology
MATS	Mercury and Air Toxics Standard
MGD	Million Gallons Per Day
MW	Megawatt
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NAP	Northern Appalachian Coal
NAPP	Northern Appalachian Coal
NC	North Carolina
NC HB 589	North Carolina House Bill 589
NC REPS	North Carolina Renewable Energy and Energy Efficiency Portfolio Standard
NCCSA	North Carolina Clean Smokestacks Act
NCDAQ	North Carolina Division of Air Quality
NCEMC	North Carolina Electric Membership Corporation

ABBREVIATIONS:	
NCMPA1	North Carolina Municipal Power Agency #1
NCTPC	NC Transmission Planning Collaborative
NCUC	North Carolina Utilities Commission
NEMS	National Energy Modeling Systems
NERC	North American Electric Reliability Corporation
NES	Neighborhood Energy Saver
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NSPS	New Source Performance Standard
NUG	Non-Utility Generator
NUREG	Nuclear Regulatory Commission Regulation
NYMEX	New York Mercantile Exchange
O&M	Operating and Maintenance
OATT	Open Access Transmission Tariff
PD	Power Delivery
PEV	Plug-In Electric Vehicles
PJM	PMJ Interconnection, LLC
PMPA	Piedmont Municipal Power Agency
PPA	Purchase Power Agreement
PPB	Parts Per Billion
PROSYM	Production Cost Model
PSCSC	Public Service Commission of South Carolina
PSD	Prevention of Significant Deterioration
PURPA	Public Utility Regulatory Policies Act
PV	Photovoltaic
PVDG	Solar Photovoltaic Distributed Generation Program
PVRR	Present Value Revenue Requirement
QF	Qualifying Facility
RCRA	Resource Conservation Recovery Act
REC	Renewable Energy Certificate
REPS	Renewable Energy and Energy Efficiency Portfolio Standard
RFP	Request for Proposal
RICE	Reciprocating Internal Combustion Engines
RIM	Rate Impact Measure
RPS	Renewable Portfolio Standard
RRP	Refrigerator Replacement Program
SAE	Statistical Adjusted End-Use Model
SAT	Single-Axis Tracking
SC	South Carolina
SC Act 62	South Carolina Energy Freedom Act of 2018

ABBREVIATIONS:	
SC DER or SC ACT 236	South Carolina Distributed Energy Resource Program
SCR	Selective Catalytic Reduction
SEPA	Southeastern Power Administration
SERC	Southeastern Electric Reliability Corporation
SERVM	Strategic Energy Risk Valuation Model
SG	Standby Generation
SIP	State Implementation Plan
SISC	Solar Integration Services Charge
SLR	Subsequent License Renewal
SMR	Small Modular Reactor
SO	System Optimizer
SO_2	Sulfur Dioxide
SRP – SLR	Standard Review Plan for the Review of Subsequent License Renewal
STAP	Short-Term Action Plan
T&D	Transmission & Distribution
TAG	Technology Assessment Guide
The Company	Duke Energy Progress
The Plan	Duke Energy Progress Annual Plan
TRC	Total Resource Cost
TVA	Tennessee Valley Authority
UCT	Utility Cost Test
UEE	Utility Energy Efficiency
VACAR	Virginia/Carolinas
VAR	Volt Ampere Reactive
WERP	Weatherization and Equipment Replacement Program
ZELFRS	Zero – Emitting Load Following Resources

1. INTRODUCTION

For more than a century, North and South Carolinians have received affordable and reliable electricity from Duke Energy Progress (DEP) who now serves more than 1.5 million customers. Working with businesses and communities, Duke Energy helped shape the Carolinas of today, building important infrastructure like our power plants, transmission grid and other facilities that power our homes and businesses. Duke Energy is committed to securing a sustainable energy future for its growing number of customers by planning for resource needs in the most reliable and economic way possible while using increasingly clean forms of energy. DEP works across the Carolinas to support a cleaner environment and mitigate climate change by being an industry leader in carbon-free nuclear, hydro-electric and solar generation. DEP is also a driving force of innovation in a region well-known for research and scientific exploration, helping to engineer new technologies that move the Carolinas forward. Through its Joint Dispatch Agreement (JDA) with Duke Energy Carolinas (DEC), the two companies collectively provide approximately 55% of all energy delivered on the combined Carolinas system with carbon-free resources.

Each year, as required by the North Carolina Utilities Commission (NCUC) and the Public Service Commission of South Carolina (PSCSC), DEP submits a long-range planning document called the Integrated Resource Plan (IRP). The IRP details projections of infrastructure needed to match the forecasted electricity needs of our customers plus an adequate reserve margin to maintain a reliable electric system for customers over the next 15 years.

The Company files a comprehensive Biennial IRP in even numbered years. This document is an update to the comprehensive DEP 2018 IRP.

In recent years, the Company has filed separate IRP updates to the comprehensive plan for NC and SC, which has created some confusion. The IRP is truly a single plan, for a single system that happens to span both NC and SC. As result, the Company is filing one IRP update for both states to ensure each Commission and all stakeholders have a clear and comprehensive view of the Company's integrated resource plan. The IRP update analyzes the DEP system in total across both states including customer demand, energy efficiency (EE), demand side management (DSM), renewable resources and traditional supply-side resources.

2. 2019 IRP SUMMARY

Each year, as required by the NCUC and the PSCSC, DEP submits an IRP detailing projected infrastructure needed to meet the forecasted electricity requirements for its customers over the next 15 years. The 2019 IRP is the best projection of how the Company's capacity and energy portfolio is expected to evolve over the next 15 years, based on current data assumptions. This projection may change over time as variables such as the projected load forecasts, fuel price forecasts, environmental regulations, technology cost and performance characteristics and other outside factors change.

The proposed plan will meet the following objectives:

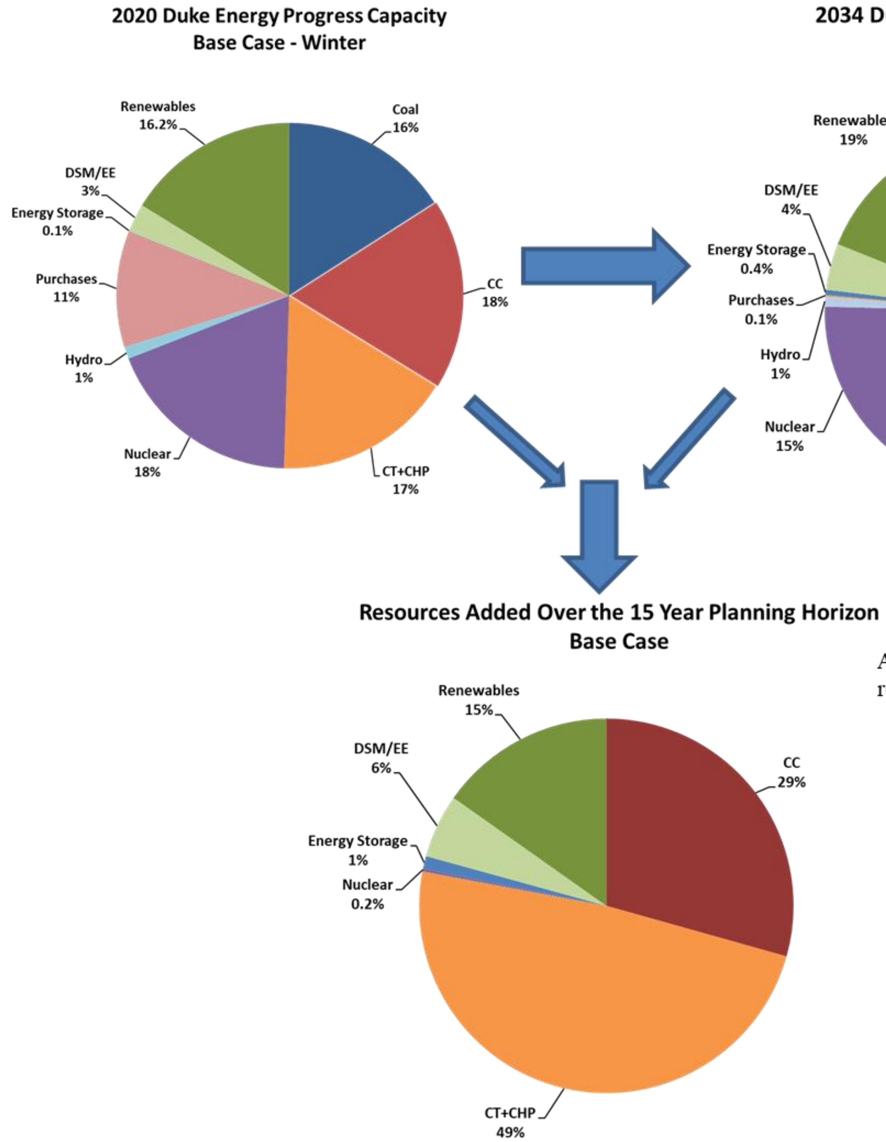
- Provide reliable electricity throughout the year, especially during periods of high peak demand such as cold winter mornings by maintaining adequate planning reserve margins. Peak demand refers to the highest amount of electricity being consumed for any given hour across DEP's entire system.
- Select new resources at the lowest reasonable cost to customers. These resources include a balance of EE, DSM, renewable resources, battery storage and natural gas generation.
- Improve the environmental footprint of the portfolio by meeting or exceeding all federal, state and local environmental regulations. Furthermore, Duke Energy Corporation is committed to reducing its carbon emissions. Over the next decade, we are on track in the Carolinas to reduce carbon emissions by over 50 percent relative to a 2005 baseline level. Beyond 2030 even further reductions are attainable with continued technology development in the areas of carbon free generation and energy storage.

As 2019 is an update year, DEP developed two cases which reflect updates to the 2018 IRP Base Case. The first case, or the "Base Case," is an update to the presented base case in the 2018 IRP, which includes the expectation of future carbon legislation. Additionally, a "No Carbon Case" was developed in which no carbon legislation is considered. All results presented in this IRP represent the Base Case, unless otherwise noted. DEP has updated several key planning assumptions such as technology cost assumptions, fuel prices, renewable generation projections and the DEP load forecast.

As shown in the 2019 IRP Base Case, projected incremental needs are driven by load growth, contract expirations and the retirement of aging coal-fired and natural gas/oil resources. Of note, DEP has an increased load forecast relative to the prior IRP filing. A more detailed discussion of the load forecast can be found in Chapter 5. This increased forecast coupled with contract expirations and retirement of aging natural gas/oil resources at DEP have left a short-term need for capacity in the mid-2020 timeframe. As mentioned in the Short-Term Action Plan, the Company has worked diligently to procure both renewable and traditional generation to meet this energy and capacity need in the near term. Those developments have been reflected in this year's IRP update.

The 2019 IRP seeks to achieve a reliable, economic long-term power supply through a balance of incremental renewable resources, EE, DSM, energy storage and traditional supply-side resources planned over the coming years which allows the Company to maintain a diversified resource mix while also providing increasingly clean energy. Chart 2-A represents the incremental investments required to meet future needs.

Chart 2-A 2020 and 2034 Base Case Winter Capacity Mix and Sources of Incremental Capacity



All capacities represent winter ratings except renewables, which represent nameplate.

3. IRP PROCESS OVERVIEW

To meet the future needs of DEP's customers, it is necessary for the Company to adequately understand the load and resource balance. For each year of the planning horizon, the Company develops a load forecast of cumulative energy sales and hourly peak demands. To determine total resources needed, the Company considers the peak demand load obligation plus a 17% minimum planning reserve margin.

The projected capability of existing resources, including generating units, EE and DSM, renewable resources and purchase power contracts, is measured against the total resource need. Any deficit in future years will be met with a mix of additional resources that reliably and cost-effectively meet the load obligation and planning reserve margin while complying with all environmental and regulatory requirements.

Growth in Peak Demand and Energy Consumption	+	Resource Retirements Contract Expirations	=	New Resource Needs

It should be noted that DEP considers the non-firm energy purchases and sales associated with the JDA with DEC in the development of its independent Base Case. To accomplish this, DEP and DEC plans are determined simultaneously to minimize revenue requirements of the combined jointly-dispatched system while maintaining independent reserve margins for each company.

DEP's IRP includes new resource additions driven by winter peak demand projections inclusive of winter reserve requirements. The completion of a comprehensive reliability study in 2016 demonstrated the need to include winter peak planning in the IRP process. The study recognized the growing volatility associated with winter morning peak demand conditions such as those observed during recent polar vortex events. The study also incorporated the expected significant growth in solar facilities that provide valuable assistance in meeting summer afternoon peak demands on the system but do little to assist in meeting demand for power on cold winter mornings. Based on results of the reliability study, DEP is utilizing a winter planning reserve margin of 17% in its planning process.

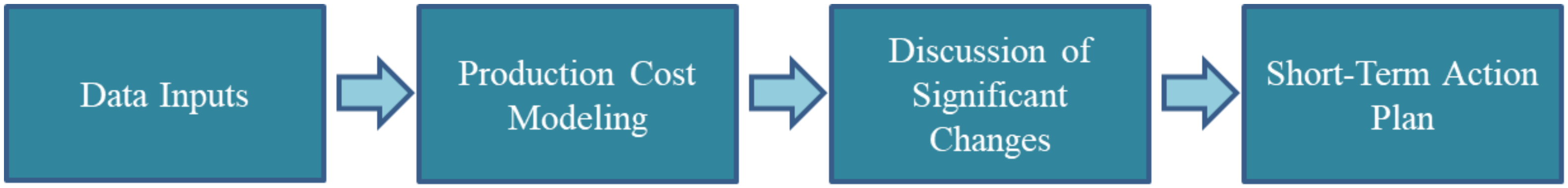
For the 2019 Update IRP, the Company presents a Base Case with a carbon tax beginning in 2025. However, remaining consistent with the Commission's Order to both include and exclude costs associated with carbon regulation, the current assumption of a carbon tax is intended to serve as a placeholder for some form of potential future carbon regulation. [1] An additional case assuming no carbon legislation was also developed.

While future carbon legislation is unknown, the Company feels that it is prudent to continue to plan for this scenario, as well as other potential future scenarios. Furthermore, a primary focus of this update IRP is the Short-Term Action Plan (STAP), which covers the period 2020 to 2024. It was determined that the inclusion of the carbon tax did not have a significant impact on the STAP, and therefore the majority of the data presented in this report represents the Base Case.

Figure 3-A represents a simplified overview of the resource planning process in the update years (odd years) of the IRP cycle.

[1] "Order Accepting Integrated Resource Plans and Accepting REPS Compliance Plans"; NCUC Docket No. E-100, Sub 147; p. 35

Figure 3-A Simplified IRP Process



Data Inputs

- Load Forecast
- Fuel Price Forecasts
- Existing Generation
- Energy Efficiency
- Demand Response
- Renewable Resources
- New Generation Resources
- Technology Costs
- Environmental Legislation

Production Cost Modeling

- With CO_2 (Base Case)
- Without CO_2

Discussion of Significant Changes

- Since 2018 Biennial IRP
  - Load Forecast
  - Contract Expirations
  - Energy Storage
  - CHP
  - Transmission Planned or Under Construction

Short-Term Action Plan

- 2020 through 2024

4. SIGNIFICANT CHANGES FROM THE 2018 IRP

As an initial step in the IRP process, all production cost modeling data is updated to include the most current data. Throughout the year, best practices are implemented to ensure the IRP best represents the Company's planning assumptions including load forecast, generation system, conservation programs, renewable energy and fuel costs. The data and methodologies are regularly updated and reviewed to determine if adjustments can be made to further improve the IRP process and results.

As part of the review process, certain data elements, with varying impacts on the IRP, inevitably change. A discussion of new or updated data elements that have the most substantial impact on the 2019 IRP is provided below.

a) Load Forecast

The Duke Energy Progress Spring 2019 forecast provides projections of the energy and peak demand needs for its service area. The forecast covers the time period of 2020 – 2034 and represents the needs of the following customer classes:

- Residential
- Commercial
- Industrial
- Other Retail
- Wholesale

The Retail forecast consists of the three major classes: Residential, Commercial and Industrial.

The Residential class sales forecast is comprised of two projections. The first is the number of residential customers, which is driven by population. The second is energy usage per customer, which is driven by weather, regional economic and demographic trends, electricity prices and appliance efficiencies.

The average annual growth rate of Residential energy sales in the Spring 2019 forecast, including the impacts of Utility Energy Efficiency programs (UEE), rooftop solar and electric vehicles from 2020 – 2034 is 1.3%.

The three largest sectors in the Commercial class are offices, education and retail. Commercial energy sales are expected to grow 0.8% per year over the forecast horizon.

The Industrial class is forecasted by a standard econometric model, with drivers such as total manufacturing output, textile output, and the price of electricity. Overall, Industrial sales are expected to grow 0.5% per year over the forecast horizon.

The Company continues to look at ways to improve the load forecasting methodology in order to develop the most accurate and reasonable demand forecasts for DEP. The load forecast has increased in the 2019 Update as compared to the 2018 IRP, primarily driven by adding 2018 peaks to the history used in the forecast. The key economic drivers and forecast changes are shown below in Tables 4-A and 4-B. A more detailed discussion of the load forecast can be found in Chapter 5.

Table 4-A Key Drivers

	2020-2034
Real Income	2.7%
Manufacturing Industrial Production Index (IPI)	1.1%
Population	1.6%

Table 4-B reflects a comparison between the 2018 and 2019 growth rates of the load forecast with and without impacts of EE.

Table 4-B 2019 Load Forecast Growth Rates vs. 2018 Load Forecast Growth Rates (Inclusive of Retail and Wholesale Load)

	2019 Forecast (2020 – 2034)			**2018 Forecast (2019 – 2033)**		
	Summer Peak Demand	**Winter Peak Demand**	**Energy**	**Summer Peak Demand**	**Winter Peak Demand**	**Energy**
Excludes impact of new EE programs	1.2%	1.1%	1.2%	1.0%	0.8%	0.7%
Includes impact of new EE programs	1.0%	0.9%	1.0%	0.8%	0.7%	0.5%

Peak Demand and Energy Forecast

The load forecast projection for energy and capacity, including the impacts of UEE, rooftop solar, and electric vehicles, that was utilized in the 2019 IRP is shown in Table 4-C.

Table 4-C Load Forecast Net of Energy Efficiency Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2020	13,133	14,473	63,964
2021	13,182	14,434	64,040
2022	13,274	14,557	64,465
2023	13,404	14,649	65,043
2024	13,529	14,843	65,724
2025	13,663	14,965	66,330
2026	13,867	15,106	66,990
2027	13,995	15,326	67,718
2028	14,198	15,502	68,586
2029	14,359	15,690	69,295
2030	14,551	15,883	70,163
2031	14,735	16,073	71,241
2032	14,937	16,276	72,552
2033	15,136	16,461	73,374
2034	15,360	16,654	74,306
Avg. Annual Growth Rate	1.0%	0.9%	1.0%

Note: This table differs from Tables 9-A and 9-B due to a 150 MW firm sale in years 2020 – 2024.

b) Contract Expirations and Short-Term Need

The 2018 IRP reflected the impact of approximately 1,500 megawatts (MW) of purchase power contract expirations by 2025. The expiration of these contracts, along with the increase in the winter peak demand forecast and the planned retirement of nearly 500 MW of aging CT units at the Darlington CT Complex, created a significant short-term resource need. The Company has worked diligently to address this short-term need by issuing a Request for Proposals (RFP) resource solicitation in 2018. DEP received a significant response to the solicitation, and as a result, DEP is currently in the process of negotiating contracts with short-listed bidders to fulfill its near-term needs.

As discussed in Section 10, contracts that have been executed as part of this solicitation as of August 1, 2019 are included as firm designated resources in this year's IRP while others are still under negotiation. Contracts that have yet to be executed are not included as designated resources in the IRP and, as such, the IRP continues to reflect a resource need as early as the winter of 2020. The Company fully expects to fill this resource gap through future execution of these contracts.

c) Energy Storage

Building on the 2018 IRP which included placeholders for approximately 140 MW of usable alternating current (AC)[2] grid-tied battery storage, the 2019 Update IRP includes estimates for additional battery storage that is coupled with solar. The inclusion of nearly 100 MW of storage coupled with solar over the planning horizon is driven by two factors. First, the results of the first tranche of CPRE in DEC included two solar plus storage winning projects which provide some guidance as to the types of projects being developed. Second, the most recent avoided cost rate structures proposed in both NC and SC provide strong price incentives for Qualifying Facilities (QFs) to shift energy from lower priced energy-only hours to hours that have higher energy and capacity prices. This new rate design provides appropriate incentives to encourage storage plus solar projects.[3] The amount of solar coupled with storage represented in the IRP will change over time as conditions evolve, but these initial assumptions represent a first-step towards including such installations.

[2] Usable alternating current for battery storage refers to the portion of the battery's nameplate AC MW rating that is available to the grid after taking into account limitations in depth of charge and discharge.
[3] From North Carolina Avoided Cost Docket No. E-100, Sub 158 and South Carolina Avoided Cost Docket Nos. 2019-185-E and 2018-186-E.

Looking forward, advancements in modeling capabilities and plans to further study the capacity value of storage in the Carolinas will help the Company ensure the reliability benefits of these technologies are appropriately captured in its planning process.

d) Combined Heat and Power

Combined Heat and Power (CHP) systems, also known as cogeneration, generate electricity and useful thermal energy in a single, integrated system. CHP is not a new technology, but an approach to applying existing technologies. Heat that is normally wasted in conventional power generation is recovered as useful energy, which avoids the losses that would otherwise be incurred from separate generation of heat and power. CHP incorporating a gas-fired combustion turbine (CT) and heat recovery steam generator (HRSG) is more efficient than the conventional method of producing power and usable heat separately with a CT/generator and a stand-alone steam boiler.

DEP is exploring and working with potential customers with good base thermal loads on a regulated Combined Heat and Power offer. The steam sales are credited back to the revenue requirement of the projects to reduce the total cost of this resource. Along with the potential to be a cost-competitive generation resource, CHP can result in carbon dioxide (CO_2)emission reductions, and is a potential economic development opportunity for both NC and SC. In DEP, discussions with potential steam hosts are currently underway.

Potential projects with industrial customers have been challenging due to credit requirements, contract length, estimated capital cost, and changes to natural gas price forecasts. As such, no projections for CHP have been included this DEP IRP update.

This is a difference from the 2018 IRP placeholders have been removed in the update::

2021: 22 MW (winter) / 20 MW (summer)
2022: 22 MW (winter) / 20 MW (summer)

As CHP development continues, future IRPs will incorporate CHP, as appropriate. Additional technologies evaluated as part of this IRP are discussed in Chapter 9.

e) Transmission Planned or Under Construction

This section lists the planned transmission line additions. A discussion of the adequacy of DEP's transmission system is also included. Table 4-D lists the transmission line projects that are planned to meet reliability needs. This section also provides information pursuant to the North Carolina Utilities Commission Rule R8-62

Table 4-D: DEP Transmission Line Additions

	Location		Capacity	Voltage	
Year	**From**	**To**	**MVA**	**KV**	**Comments**
2019	Roxboro Plant	Person (Hyco)	1084	230	Uprate
2020	Cleveland Matthews Rd. Tap	Cleveland Matthews Rd	621	230	New
2020	Sutton Plant	Wallace	580	230	Uprate
2020	Jacksonville	Grants Creek	1195	230	New
2020	Newport	Harlowe	681	230	New
2021	Vanderbilt	West Asheville	307	115	Upgrade
2021	Asheboro	Asheboro East North Line	307	115	Upgrade
2021	Sutton Plant	Castle Hayne North Line	239	115	Upgrade
2022	Baldwin Tap	Baldwin	209	115	New
2023	Chestnut Hills	Milburnie	202	115	Uprate

DEP has three transmission line projects, 161 kilovolt (kV) and above, currently under construction. These are the Cleveland Matthews Rd 230 kV Tap Line, the Jacksonville-Grants Creek 230 kV Line and the Newport-Harlowe 230 kV Line.

The remainder of this section provides information pursuant to the North Carolina Utility Commission Rule R8-62.

Rule R8-62: Certificates of environmental compatibility and public convenience and necessity for the construction of electric transmission lines in North Carolina.

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(1) For existing lines, the information required on FERC Form 1, pages 422, 423, 424, and 425, except that the information reported on pages 422 and 423 may be reported every five years.

Please refer to the Company's FERC Form No. 1 filed with NCUC in April 2019.

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(2) *For lines under construction, the following:*

a. Commission docket number;
b. Location of end point(s);
c. Length;
d. Range of right-of-way width;
e. Range of tower heights;
f. Number of circuits;
g. Operating voltage;
h. Design capacity;

i. Date construction started;
j. Projected in-service date;

Cleveland Matthews Road 230 kV Tap Line

Project Description: Construct new 230 kV transmission line from the Erwin-Selma 230 kV Line in Johnston County to the Cleveland Matthews Road 230 kV Substation in Johnston County.

a. Docket number: E-2, Sub 1150
b. County location of end point(s); Johnston County
c. Approximate length; 11.5 miles
d. Typical right-of-way width for proposed type of line; 125 feet
e. Typical tower height for proposed type of line; 80 – 120 feet
f. Number of circuits; 1
g. Operating voltage; 230 kV
h. Design capacity; 621 MVA
i. Date construction started; March 2019
j. Projected in-service date; June 2020

Jacksonville – Grants Creek 230 kV Line

Project Description: Construct new 230 kV transmission line from the Jacksonville 230 kV Substation in Onslow County to the Grants Creek 230 kV Substation in Onslow County.

a. Docket number: E-2, Sub 1102
b. County location of end point(s); Onslow County
c. Approximate length; 15 miles
d. Typical right-of-way width for proposed type of line; 125 feet
e. Typical tower height for proposed type of line; 80 – 120 feet
f. Number of circuits; 1
g. Operating voltage; 230 kV
h. Design capacity; 1195 MVA
i. Date construction started; September 2018
j. Projected in-service date; June 2020

<u>Newport – Harlowe 230 kV Line</u>

Project Description: Construct new 230 kV transmission line from the Newport 230 kV Substation in Carteret County to the Harlowe 230 kV Substation in Carteret County.

a. Docket number: E-2, Sub 1113
b. County location of end point(s); Carteret County
c. Approximate length; 8 miles
d. Typical right-of-way width for proposed type of line; 125 feet
e. Typical tower height for proposed type of line; 80 – 120 feet
f. Number of circuits; 1
g. Operating voltage; 230 kV
h. Design capacity; 681 MVA
i. Date construction started; October 2018
j. Projected in-service date; June 2020

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(3) For all other proposed lines, as the information becomes available, the following:

a. county location of end point(s);
b. approximate length;
c. typical right-of-way width for proposed type of line;
d. typical tower height for proposed type of line;
e. number of circuits;
f. operating voltage;
g. design capacity;
h. estimated date for starting construction (if more than 6 month delay from last report, explain); and
i. estimated in-service date (if more than 6-month delay from last report, explain). (NCUC Docket No. E-100, Sub 62, 12/4/92; NCUC Docket No. E-100, Sub 78A, 4/29/98.)

The following pages represent those projects in response to Rule R8-62 part (3).

Porters Neck 230 kV Tap Line

Project Description: Construct new 230 kV transmission line from the Castle Hayne-Folkstone 230 kV Line to the Porters Neck 230 kV Substation in New Hanover County.

a. County location of end point(s); New Hanover County
b. Approximate length; 4.5 miles
c. Typical right-of-way width for proposed type of line; 125 feet
d. Typical tower height for proposed type of line; 80 – 120 feet
e. Number of circuits; 1
f. Operating voltage; 230 kV
g. Design capacity; 442 MVA
h. Estimated date for starting construction; January 2022
i. Estimated in-service date; June 2023

DEP Transmission System Adequacy

DEP monitors the adequacy and reliability of its transmission system and interconnections through internal analysis and participation in regional reliability groups. Internal transmission planning looks 10 years ahead at available generating resources and projected load to identify transmission system upgrade and expansion requirements. Corrective actions are planned and implemented in advance to ensure continued cost-effective and high-quality service. The DEP transmission model is incorporated into models used by regional reliability groups in developing plans to maintain interconnected transmission system reliability. DEP works with DEC, North Carolina Electric Membership Corporation (NCEMC) and ElectriCities to develop an annual NC Transmission Planning Collaborative (NCTPC) plan for the DEP and DEC systems in both North and South Carolina. In addition, transmission planning is coordinated with neighboring systems including Dominion Energy South Carolina (DESC) and Santee Cooper under a number of mechanisms including legacy interchange agreements between DESC, Santee Cooper, DEP, and DEC.

The Company monitors transmission system reliability by evaluating changes in load, generating capacity, transactions and topography. A detailed annual screening ensures compliance with

DEP's Transmission Planning Summary guidelines for voltage and thermal loading. The annual screening uses methods that comply with SERC Reliability Corporation (SERC) policy and North American Electric Reliability Corporation (NERC) Reliability Standards and the screening results identify the need for future transmission system expansion and upgrades. The transmission system is planned to ensure that no equipment overloads and adequate voltage is maintained to provide reliable service. The most stressful scenario is typically at projected peak load with certain equipment out of service. A thorough screening process is used to analyze the impact of potential equipment failures or other disturbances. As problems are identified, solutions are developed and evaluated.

Transmission planning and requests for transmission service and generator interconnection are interrelated to the resource planning process. DEP currently evaluates all transmission reservation requests for impact on transfer capability, as well as compliance with the Company's Transmission Planning Summary guidelines and the FERC Open Access Transmission Tariff (OATT). The Company performs studies to ensure transfer capability is acceptable to meet reliability needs and customers' expected use of the transmission system. Generator interconnection requests are studied in accordance with the Large and Small Generator Interconnection Procedures in the OATT and the North Carolina and South Carolina Interconnection Procedures.

SERC audits DEP every three years for compliance with NERC Reliability Standards. Specifically, the audit requires DEP to demonstrate that its transmission planning practices meet NERC standards and to provide data supporting the Company's annual compliance filing certifications. SERC conducted a NERC Reliability Standards compliance audit of DEP in June 2019. DEP received "No Findings" from the audit team.

DEP participates in a number of regional reliability groups to coordinate analysis of regional, sub-regional and inter-balancing authority area transfer capability and interconnection reliability. Each reliability group's purpose is to:

- Assess the interconnected system's capability to handle large firm and non-firm transactions for purposes of economic access to resources and system reliability;

- Ensure that planned future transmission system improvements do not adversely affect neighboring systems; and

- Ensure interconnected system compliance with NERC Reliability Standards.

Regional reliability groups evaluate transfer capability and compliance with NERC Reliability Standards for the upcoming peak season and five- and ten-year periods. The groups also perform computer simulation tests for high transfer levels to verify satisfactory transfer capability.

Application of the practices and procedures described above ensures that DEP's transmission system continues to provide reliable service to its native load and firm transmission customers.

5. LOAD FORECAST

Methodology

The Duke Energy Progress spring 2019 forecast provides projections of the energy and peak demand needs for its service area. The forecast covers the time period of 2020 – 2034 and represents the needs of the following customer classes:

- Residential
- Commercial
- Industrial
- Other Retail
- Wholesale

Energy projections are developed with econometric models using key economic factors such as income, electricity prices, industrial production indices, along with weather, appliance efficiency trends, rooftop solar trends, and electric vehicle trends. Population is also used in the residential customer model.

The economic projections used in the Spring 2019 Forecast are obtained from Moody's Analytics, a nationally recognized economic forecasting firm, and include economic forecasts for the states of North and South Carolina. Moody's forecasts consist of economic and demographic projections, which are used in the energy and demand models.

The Retail forecast consists of the three major classes: Residential, Commercial and Industrial.

The Residential class sales forecast is comprised of two projections. The first is the number of residential customers, which is driven by population. The second is energy usage per customer, which is driven by weather, regional economic and demographic trends, electricity prices and appliance efficiencies.

The usage per customer forecast was derived using a Statistical Adjusted End-Use Model (SAE). This is a regression based framework that uses projected appliance saturation and efficiency trends developed by Itron using Energy Information Administration (EIA) data. It incorporates naturally occurring efficiency trends and government mandates more explicitly than other models. The outlook for usage per customer is essentially flat through much of the forecast horizon, so most of the growth is primarily due to customer increases. The average annual growth rate of residential in the Spring

2019 forecast, including the impacts of Utility Energy Efficiency programs (UEE), rooftop solar and electric vehicles from 2020 – 2034 is 1.3%.

The Commercial forecast also uses an SAE model in an effort to reflect naturally occurring as well as government mandated efficiency changes. The three largest sectors in the commercial class are offices, education and retail. Commercial energy sales are expected to grow 0.8% per year over the forecast horizon.

The Industrial class is forecasted by a standard econometric model, with drivers such as total manufacturing output, textile output, and the price of electricity. Overall, Industrial sales are expected to grow 0.5% per year over the forecast horizon.

Weather impacts are incorporated into the models by using Heating Degree Days with a base temperature of 59 and Cooling Degree Days with a base temperature of 65. The forecast of degree days is based on a 30-year average, which is updated every year.

The appliance saturation and efficiency trends are developed by Itron using data from the Energy Information Administration (EIA). Itron is a recognized firm providing forecasting services to the electric utility industry. These appliance trends are used in the residential and commercial sales models.

Peak demands were projected using the SAE approach. The peak forecast was developed using a monthly SAE model, similar to the sales SAE models, which includes monthly appliance saturations and efficiencies, interacted with weather and the fraction of each appliance type that is in use at the time of monthly peak.

Forecast Enhancements

In 2013, as referenced above, the Company began using the SAE model projections to forecast sales and peaks. The end use models provide a better platform to recognize trends in equipment /appliance saturation and changes to efficiencies, and how those trends interact with heating, cooling, and "other" or non-weather-related sales. These appliance trends are used in the residential and commercial sales models. In conjunction with peer utilities and ITRON, the company continually looks for refinements to its modeling procedures to make better use of the forecasting tools, and develop more reliable forecasts.

Each time the forecast is updated, the most currently available historical and projected data is used. The current 2019 forecast utilizes:

- Moody's Analytics January 2019 base and consensus economic projections.
- End use equipment and appliance indexes reflect the 2018 update of ITRON's end-use data, which is consistent with the Energy Information Administration's 2018 Annual Energy Outlook
- A calculation of normal weather using the period 1988-2017

The Company also researches weather sensitivity of summer and winter peaks, hourly shaping of sales, and load research data in a continuous effort to improve forecast accuracy.

Assumptions

Below are the projected average annual growth rates of several key drivers from DEP's Spring 2019 Forecast.

	2020-2034
Real Income	2.7%
Manufacturing Industrial Production Index (IPI)	1.1%
Population	1.6%

In addition to economic, demographic, and efficiency trends, the forecast also incorporates the expected impacts of UEE, as well as projected effects of electric vehicles and behind the meter solar technology.

Utility Energy Efficiency

UEE Programs continue to have a large impact in the acceleration of the adoption of energy efficiency. When including the impacts of UEE on energy and peaks, careful attention must be paid to avoid the double counting of UEE efficiencies with the naturally occurring efficiencies included in the SAE modeling approach. To ensure there is not a double counting of these efficiencies, the forecast "rolls off" the UEE savings at the conclusion of its measure life. For example, if the accelerated benefit of a residential UEE program is expected to have occurred 7 years before the energy reduction program would have been otherwise adopted, then the UEE effects after year 7 are subtracted ("rolled off") from the total cumulative UEE. With the SAE model's framework, the naturally occurring appliance efficiency trends replace the rolled off UEE benefits serving to continue to reduce the forecasted load resulting from energy efficiency adoption.

The table below illustrates this process on sales:

Table 5-A UEE Program Life Process (GWh)

	A	B	C	D	E	F	G
Year	Forecast Before UEE	Historical UEE Roll Off	Forecast With Historical Roll Off	Forecasted UEE Incremental Roll on	Forecasted UEE Incremental Roll Off	UEE to Subtract From Forecast	Forecast After UEE
2020	64,293	9	64,302	(454)	116	(338)	63,964
2021	64,556	32	64,587	(663)	116	(547)	64,040
2022	65,142	81	65,223	(875)	116	(759)	64,465
2023	65,852	164	66,016	(1,090)	117	(973)	65,043
2024	66,632	277	66,910	(1,303)	118	(1,186)	65,724
2025	67,312	409	67,722	(1,511)	119	(1,392)	66,330
2026	68,035	543	68,578	(1,710)	122	(1,588)	66,990
2027	68,833	658	69,491	(1,901)	128	(1,773)	67,718
2028	69,779	743	70,522	(2,084)	149	(1,936)	68,586
2029	70,554	798	71,352	(2,259)	202	(2,057)	69,295
2030	71,493	825	72,319	(2,430)	274	(2,156)	70,163
2031	72,652	837	73,488	(2,600)	353	(2,247)	71,241
2032	74,030	840	74,870	(2,772)	454	(2,318)	72,552
2033	74,907	840	75,747	(2,945)	573	(2,372)	73,374
2034	75,852	840	76,692	(3,120)	734	(2,386)	74,306

Customer Growth

Tables 5-B and 5-C show the history and projections for DEP customers

Table 5-B Retail Customers (annual average in thousands)

Year	Residential Customers	Commercial Customers	Industrial Customers	Other Customers	Retail Customers
2009	1,207	215	5	2	1,429
2010	1,216	216	5	2	1,439
2011	1,221	217	4	2	1,445
2012	1,231	219	4	2	1,457
2013	1,242	222	4	2	1,470
2014	1,257	223	4	2	1,486
2015	1,275	226	4	2	1,507
2016	1,292	229	4	2	1,527
2017	1,310	232	4	1	1,547
2018	1,331	235	4	1	1,571
Avg. Annual Growth Rate	1.1%	1.0%	-1.3%	-8.1%	1.1%

Table 5-C Retail Customers (annual average in thousands)

Year	Residential Customers	Commercial Customers	Industrial Customers	Other Customers	Retail Customers
2020	1,358	240	4	1	1,603
2021	1,372	240	4	1	1,618
2022	1,388	240	4	1	1,633
2023	1,403	241	4	1	1,650
2024	1,420	242	4	1	1,667
2025	1,436	244	4	1	1,685
2026	1,451	245	4	1	1,702
2027	1,467	247	4	1	1,719
2028	1,482	248	4	1	1,735
2029	1,496	250	4	1	1,751
2030	1,511	251	4	1	1,767
2031	1,525	253	4	1	1,782
2032	1,538	254	4	1	1,797
2033	1,551	255	4	1	1,811
2034	1,565	256	4	1	1,826
Avg. Annual Growth Rate	1.0%	0.5%	-0.8%	0.0%	0.9%

Electricity Sales

Table 5-D shows the actual historical gigawatt hour (GWh) sales. As a note, the values in Table 5-D are not weather adjusted Sales.

Table 5-D Electricity sales (GWh)

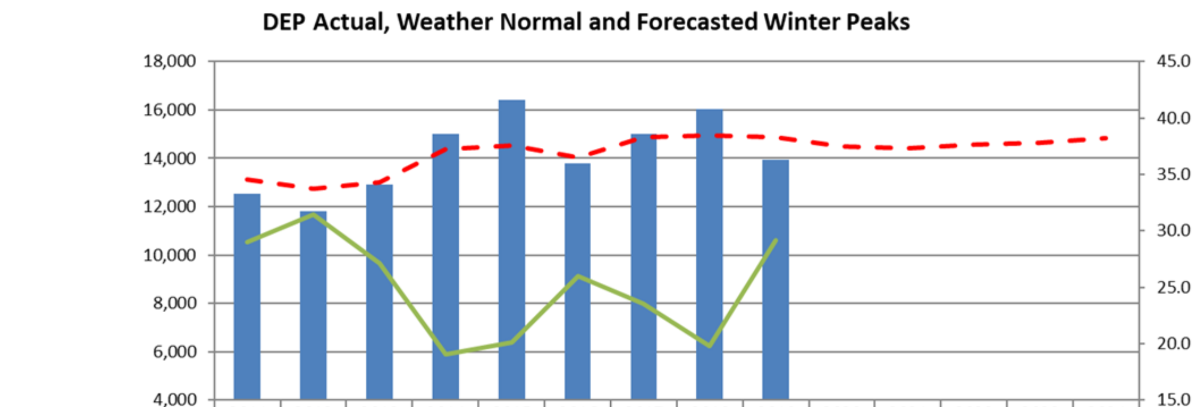
Year	Residential GWh	Commercial GWh	Industrial GWh	Military & Other GWh	Retail GWh	Wholesale GWh	Total System GWh
2009	17,000	13,940	11,216	1,467	43,622	12,868	56,489
2010	17,117	13,639	10,375	1,497	42,628	12,772	55,400
2011	19,108	14,184	10,677	1,574	45,544	12,772	58,316
2012	17,764	13,709	10,573	1,591	43,637	12,267	55,903
2013	16,663	13,581	10,508	1,602	42,355	12,676	55,031
2014	18,201	13,887	10,321	1,614	44,023	13,578	57,601
2015	17,954	14,039	10,288	1,597	43,876	15,782	59,658
2016	17,686	14,082	10,274	1,563	43,606	18,676	62,282
2017	17,228	13,903	10,391	1,531	43,053	18,242	61,295
2018	18,182	14,025	10,407	1,541	44,155	19,331	63,486
Avg. Annual Growth Rate	0.8%	0.1%	-0.8%	0.6%	0.1%	4.6%	1.3%

Note: The wholesale values in Table 5-D exclude NCEMPA sales for all years before 2015, and is only partially included in 2015.

System Peaks

Charts 5-E and 5-F show the historical actual and weather normalized peaks for the system:

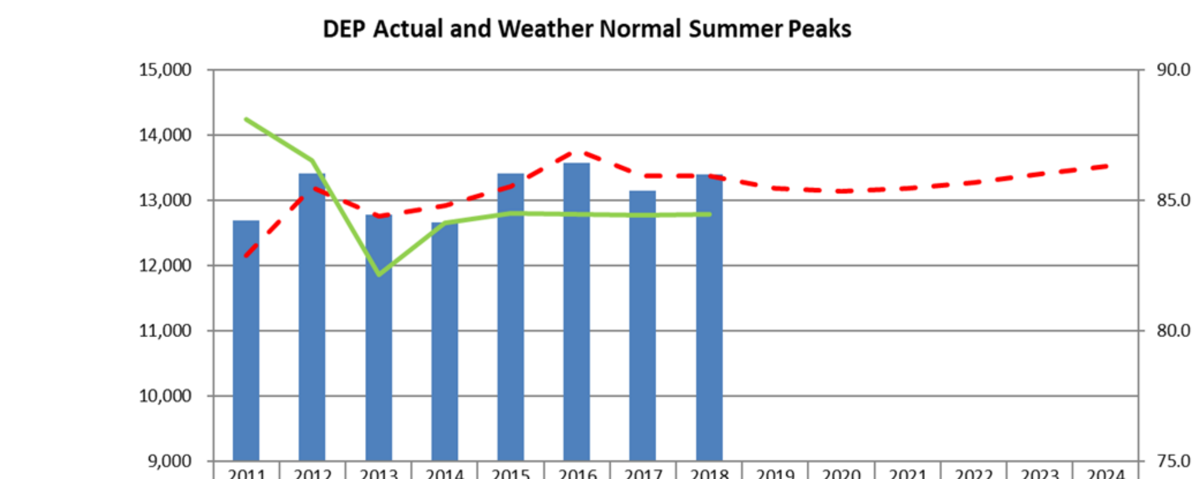
Chart 5-E Winter Peaks



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Actual	12,522	11,826	12,897	14,993	16,429	13,801	15,020	16,016	13,942					
WN Peak/Forecast	13,107	12,760	12,994	14,374	14,519	14,026	14,857	14,967	14,858	14,473	14,434	14,557	14,649	14,843
Temp	29.0	31.5	27.1	19.1	20.1	26.0	23.5	19.8	29.2					

Note: WN Peak/Forecast values in years 2020-2024 are forecasted peak values from the 2019 Spring Forecast. The Temperatures are the average daily temperature on the day of the peak.

Chart 5-F Summer Peaks



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Actual	12,686	13,405	12,785	12,663	13,415	13,578	13,143	13,403						
WN Peak/Forecast	12,146	13,198	12,757	12,922	13,206	13,777	13,375	13,381	13,181	13,133	13,182	13,274	13,404	13,529
Temp	88.1	86.5	82.2	84.1	84.5	84.5	84.4	84.5						

Note: WN Peak/Forecast values in years 2019-2024 are forecasted peak values from the 2019 Spring Forecast. The Temperatures are the average daily temperature on the day of the peak.

Forecast Results

A tabulation of the utility's sales and peak forecasts are shown as charts below:

- Table 5-G: Forecasted energy sales by class (Including the impacts of UEE, rooftop solar, and electric vehicles)
- Table 5-H: Summary of the load forecast without UEE programs and excluding any impacts from demand reduction programs
- Table 5-I: Summary of the load forecast with UEE programs and excluding any impacts from demand reduction programs

These projections include Wholesale, and all the loads and energy in the tables and charts below are at generation, except for the class sales forecast, which is at the meter.

Load duration curves, with and without UEE programs are shown as Charts 5-A and 5-B.
The values in these tables reflect the loads that Duke Energy Progress is contractually obligated to provide and cover the period from 2020 to 2034.

Table 5-G Forecasted Energy Sales by Class

Year	Residential GWh	Commercial GWh	Industrial GWh	Other GWh	Retail GWh
2020	18,327	14,245	10,379	1,534	44,484
2021	18,395	14,306	10,424	1,525	44,650
2022	18,562	14,408	10,389	1,514	44,873
2023	18,789	14,538	10,390	1,505	45,222
2024	19,078	14,635	10,427	1,496	45,636
2025	19,353	14,751	10,427	1,486	46,016
2026	19,652	14,868	10,438	1,478	46,436
2027	19,950	14,984	10,516	1,471	46,921
2028	20,282	15,134	10,620	1,465	47,501
2029	20,566	15,265	10,714	1,460	48,004
2030	20,872	15,387	10,805	1,455	48,519
2031	21,189	15,544	10,896	1,450	49,078
2032	21,546	15,663	10,987	1,445	49,641
2033	21,869	15,813	11,094	1,440	50,215
2034	22,242	15,957	11,238	1,437	50,875
Avg. Annual Growth Rate	1.3%	0.8%	0.5%	-0.4%	0.9%

Note: Values are at meter

Table 5-H Summary of the Load Forecast without UEE Programs and Excluding any Impacts from Demand Reduction Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2020	13,194	14,522	64,302
2021	13,281	14,523	64,587
2022	13,409	14,687	65,223
2023	13,574	14,819	66,016
2024	13,732	15,069	66,910
2025	13,902	15,237	67,722
2026	14,143	15,415	68,578
2027	14,304	15,670	69,491
2028	14,536	15,876	70,522
2029	14,723	16,084	71,352
2030	14,936	16,302	72,319
2031	15,138	16,512	73,488
2032	15,355	16,727	74,870
2033	15,569	16,921	75,747
2034	15,799	17,113	76,692
Avg. Annual Growth Rate	1.2%	1.1%	1.2%

Note: Values are at generation level

<u>Chart 5-A</u>
Load Duration Curve without Energy Efficiency Programs and Before Demand Response Programs

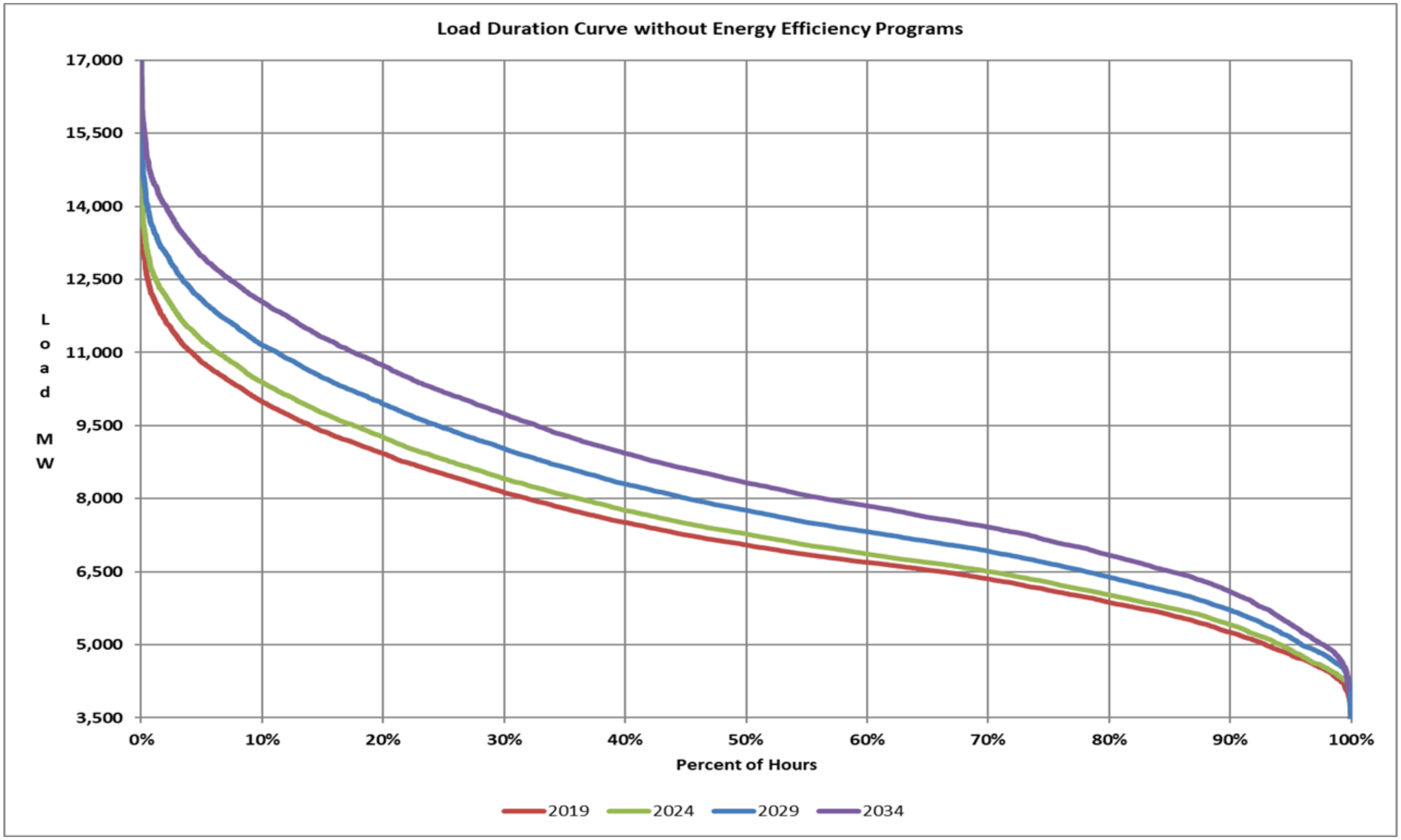
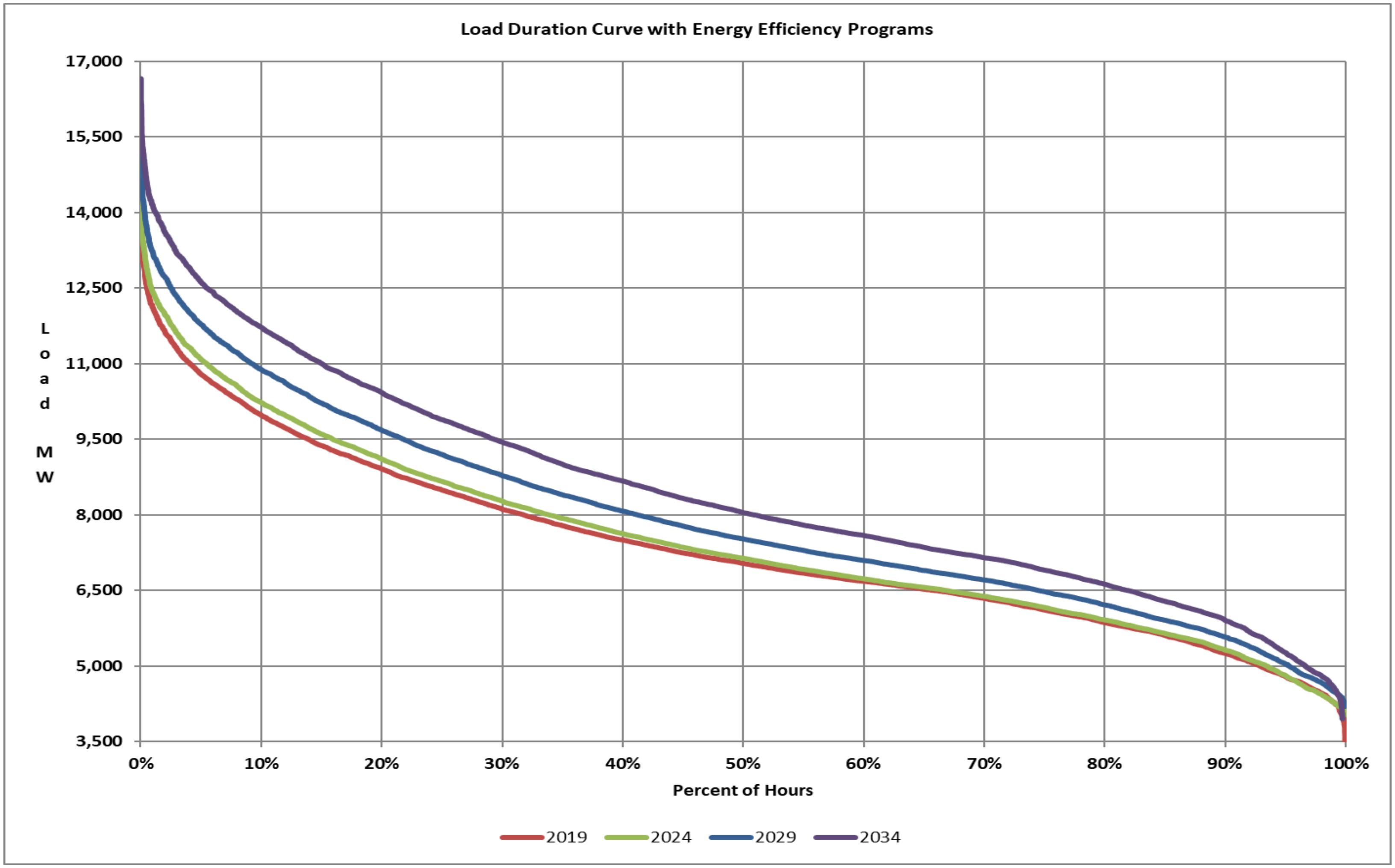


Table 5-I Summary of the Load Forecast with UEE Programs and Excluding any Impacts from Demand Reduction Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2020	13,133	14,473	63,964
2021	13,182	14,434	64,040
2022	13,274	14,557	64,465
2023	13,404	14,649	65,043
2024	13,529	14,843	65,724
2025	13,663	14,965	66,330
2026	13,867	15,106	66,990
2027	13,995	15,326	67,718
2028	14,198	15,502	68,586
2029	14,359	15,690	69,295
2030	14,551	15,883	70,163
2031	14,735	16,073	71,241
2032	14,937	16,276	72,552
2033	15,136	16,461	73,374
2034	15,360	16,654	74,306
Avg. Annual Growth Rate	1.0%	0.9%	1.0%

Note: Values are at generation level
Values differ from Tables 9-A and 9-B due to 150 MW firm sale in years 2020 – 2024.

Chart 5-B
Load Duration Curve with Energy Efficiency Programs & Before Demand Response Programs



6. RENEWABLE ENERGY AND ENERGY STORAGE

The growth of renewable generation in the United States continued in 2018. According to EIA, in 2018, 6.6 GW of wind and 4.9 GW of utility-scale solar capacity were installed nationwide. Green Tech Media, a subsidiary of Wood Mackenzie, estimates 4.5 GW of small scale solar was added as well. Meanwhile, 12.9 GW of coal was retired in 2018 with no new coal-fired generation installed.[4]

North Carolina ranked third in the country in solar capacity added in 2018, and remains second behind only California in total solar capacity online. According to Green Tech Media, South Carolina ranked twelfth in 2018. Duke Energy's compliance with the North Carolina Renewable Energy and Energy Efficiency Portfolio Standards (NC REPS), the South Carolina Distributed Energy Resource Program (SC DER or SC Act 236), the Public Utility Regulatory Policies Act (PURPA) as well as the availability of the Federal Investment Tax Credit (ITC) were key factors behind the high penetration of solar.

The interconnection queue has remained steady compared to 2018, with the DEP and DEC combined solar queue representing approximately 12 GW. Key drivers to queue growth have been North Carolina House Bill 589 (NC HB 589), the implementation of the SC DER Program and anticipated further growth in South Carolina via Act 62 (described below), and favorable avoided cost rates and 15-year contract terms for QFs under PURPA that previously existed in North Carolina pre- NC HB 589.

The implementation of NC HB 589, and the passage of Act 62 in SC are significant to the amount of solar projected to be operational during the planning horizon. Growing customer demand, the federal ITC, and declining installed solar costs make solar capacity the Company's primary renewable energy resource in the 2019 IRP. The following key assumptions regarding renewable energy were included in the 2019 IRP:

- Installed solar capacity increases in DEP from 3,005 MW in 2020 to 4,629 MW in 2034 with approximately 100 MW of usable AC storage coupled with solar included;
- Compliance with NC REPS continues to be met through a combination of solar, other renewables, EE, and Renewable Energy Certificate (REC) purchases;
- Achievement of the SC Act 236 goal of 39 MW of solar capacity located in DEP; and

[4] All renewable energy GW/MW represent GW/MW-AC (alternating current) unless otherwise noted.

- Implementation of NC HB 589 and continuing solar cost declines drive solar capacity growth above and beyond NC REPS requirements and SC Act 236 requirements, and in support of SC Act 62.

NC HB 589 Competitive Procurement of Renewable Energy (CPRE):

NC HB 589 established a competitive solicitation process, known as the Competitive Procurement of Renewable Energy (CPRE), which calls for the addition of 2,660 MW of competitively procured renewable resources across the Duke Energy Balancing Authority Areas over a 45-month period. On July 10, 2018, Duke issued a request for bids for the first tranche of CPRE, requesting 600 MW in DEC and 80 MW in DEP. On April 9, 2019 the independent administrator selected 12 projects totaling 515 MW in DEC and two projects totaling 83 MW in DEP. Both DEP projects are third party owned although one of the DEP projects will be transmission tied in NC and the other will be distribution tied in SC. See the annual CPRE Program Plan included as Attachment II for additional details.

The Companies expect to request the same amount of system capacity in the second tranche of CPRE as the first (600 MW in DEC and 80 MW in DEP). Given continued increases in capacity referred to in this document as the "Transition MW", the Companies will continue to monitor potential impacts on future tranche volumes. These "Transition MW" represent the total capacity of renewable generation projects in the combined Duke Balancing Authority area that are (1) already connected; or (2) have entered into purchase power agreements (PPAs) and interconnection agreements (IAs) as of the end of the 45-month competitive procurement period, and which are not subject to curtailment or economic dispatch. The total CPRE target of 2,660 MW will vary based on the amount of Transition MW at the end of the 45-month period, which NC HB 589 expected to total 3,500 MW. If the aggregate capacity in the Transition MW exceeds 3,500 MW, the competitive procurement volume of 2,660 MW will be reduced by the excess amount. As of August 2019, there are approximately 3,700 MW that currently meet NC HB 589's definition of "Transition MW", meaning CPRE will be reduced by a minimum of 200 MW. The company believes the Transition may exceed 3,500 MW by as much as 1,400 MW, and possibly more depending on the extent to which Act 62 drives new solar growth in SC by the end of the 45-month CPRE period.

NC and SC Interconnection Queues:

Through the end of 2018, DEP had approximately 2,500 MW of utility scale solar on its system, with over 450 MW interconnecting in 2018. When renewable resources were evaluated for the 2019 IRP, DEP reported another approximately 500 MW of third party solar under construction and more than 6,500 MW in the interconnection queue. Table 6-A contains interconnection queue information for renewable resources which provides details on the number of pending projects and pending capacity by state.

Table 6-A: Renewable Interconnection Queue as of 7-31-19

Annual IRP Interconnection Queue

Report as of: 07-31-2019

Report Month End: 07-31-2019

OPCO: DEP

Facility State: NC,SC

Utility	Facility State	Energy Source Type	Number of Pending Projects	Pending Capacity (MW AC)
DEP	NC	Battery	4	864.8
		Biomass	1	4.2
		Other	1	14.0
		Solar	231	4,148.3
	NC Total		**248**	**5,031.3**
	SC	Solar	144	2,494.9
	SC Total		**144**	**2,494.9**
DEP Total			**392**	**7,526.2**

Projecting future solar connections from the interconnection queue presents a significant challenge due to the large number of project cancellations, ownership transfers, interconnection studies required, and the unknown outcome of which projects will be selected through the CPRE program.

DEP's contribution to the Transition depends on many variables including connecting projects under construction, the expected number of projects in the queue with a PPA and IA, SC Act 62, and SC DER Program Tier I. As of May 31, 2019, DEP had approximately 2,700 MW of solar capacity with a PPA and IA, and roughly 100 MW of non-solar renewable capacity with PPAs that extend through the 45-month CPRE period. A number of additional projects in the queue are expected to acquire both a PPA and IA prior to the expiration of the 45-month period defined in NC HB 589, potentially resulting in approximately an additional 800 MW contributing to the Transition. In total, DEP may contribute roughly three-quarters of the Transition MW with DEC accounting for the remaining quarter.

NC REPS Compliance:

DEP remains committed to meeting the requirements of NC REPS, including the poultry waste, swine waste, and solar set-asides, and the general requirement, which will be met with additional renewable and energy efficiency resources. DEP's long-term general compliance needs are expected to be met through a combination of renewable resources, including RECs obtained through the NC HB 589 competitive procurement process. For details of DEP's NC REPS compliance plan, please reference the NC REPS Compliance Plan, included as Attachment I to this IRP.

NC HB-589 Competitive Procurement and Utility-Owned Solar:

DEP continues to evaluate utility-owned solar additions to grow its renewables portfolio. DEP owns and operates four utility-scale solar projects, totaling 141 MW-AC, as part of its efforts to encourage emission free generation resources and help meet its compliance targets:

- Camp Lejeune Solar Facility – 13 MW, located in Onslow County, NC placed in service in November 2015;
- Warsaw Solar Facility – 65 MW, located in Duplin County, NC placed in service in December 2015;
- Fayetteville Solar Facility – 23 MW, located in Bladen County, NC placed in service in December 2015; and
- Elm City Solar Facility – 40 MW, located in Wilson County, NC placed in service in March 2016.

No more than 30% of the CPRE Program requirement may be satisfied through projects in which Duke Energy or its affiliates have an ownership interest at the time of bidding. DEP intends to bid into the second tranche of the CPRE and will also evaluate the potential for acquiring facilities where appropriate. NC HB 589 does not stipulate a limit for DEP's option to acquire projects from third parties that are specifically proposed in the CPRE RFP as acquisition projects, though any such project will not be procured unless determined to be among the most cost-effective projects submitted.

Additional Factors Impacting Future Solar Growth:

A number of factors impact the Company's forecasting of future solar growth in the Carolinas. First, potential changes in the Company's avoided cost in either NC or SC may impact the development of projects under PURPA, NC HB 589, and SC Act 62. Avoided cost forecasts are subject to variability due to changes in factors such as natural gas and coal commodity prices, system energy and demand requirements, the level and cost of generation ancillary service requirements and interconnection costs. PURPA requires utilities to purchase power from QFs at or below the utility's avoided cost rates. NC HB 589 requires that competitive bids are priced below utility's avoided cost rates, as approved by the NCUC, in order to be selected. Therefore, the cost of solar is a critical input for forecasting how much solar will materialize in the future.

Solar costs are also influenced by other variables. Panel prices have historically decreased at a significant rate and are expected to continue to decline. However, in January 2018, President Trump announced a tariff on solar modules and cells with a rate of 30% in year 1, declining 5% per year until the fourth and final year in which the tariff rate is 15%. Additional factors that could put upward pressure on solar costs include direct interconnection costs, as well as costs incurred to maintain the appropriate operational control of the facilities. Finally, as panel prices have decreased, there has been more interest in installing single-axis tracking (SAT) systems (as demonstrated in CPRE tranche 1) and/or systems with higher inverter load ratios (ILR) which change the hourly profile of solar output and increase expected capacity factors. DEP now models fixed tilt and SAT system hourly profiles with a range of ILR's as high as 1.6 (DC/AC ratio).

In summary, there is a great deal of uncertainty in both the future avoided costs applicable to solar and the expected price of solar installations in the years to come. As a result, the Company will continue to closely monitor and report on these changing factors in future IRP and competitive procurement filings.

NC HB 589 Customer Programs:

In addition to the CPRE program, NC HB 589 offers direct renewable energy procurement for major military installations, public universities, and other large customers, as well as a community solar program. These programs will complement the existing SC Act 236 Programs and upcoming SC Act 62 programs.

As part of NC HB 589, the renewable energy procurement program for large customers such as military installations and universities enables large customers to procure renewable energy attributes from new renewable energy resources. The program allows for up to 600 MW of total capacity, with set asides for military installations (100 MW of the 600 MW) and the University of North Carolina

(UNC) system (250 MW of the 600 MW). The 2019 IRP base case assumes all 600 MW of this program materialize, with the DEP/DEC split expected to be roughly 45/55. If all 600 MW are not utilized, the remainder will roll back to the competitive procurement, increasing its volume.

The community solar portion of NC HB 589 calls for up to 20 MW of shared solar in DEP. This program is similar to the SC Act 236 shared solar program, and allows customers who cannot or do not want to put solar on their property to take advantage of the economic and environmental benefits of solar by subscribing to the output of a centralized facility. The 2019 IRP Base Cases assume that all 20 MW of the NC HB 589 shared solar program materializes.

NC HB 589 also calls for a rebate program for rooftop solar. The rebate program opened in July 2018 and the program has spurred greater interest in solar installations and therefore, more net metered customers in NC. Residential and non-residential capacity limits were quickly fully subscribed in 2018 and 2019. In 2018, DEP NC installed approximately 11 MW of rooftop solar, more than triple the capacity installed in 2017. Through June of 2019, installed rooftop solar capacity is approximately 8 MW or only three MW short of 2018 totals.

SC Act 236 and SC Act 62:

Steady progress continues to be made with the first two tiers of the SC DER Program summarized below, completion of which would unlock the third tier:

- Tier I: 13 MW of solar capacity from facilities each >1 MW and < 10 MW in size.
- Tier II: 13 MW of behind-the-meter solar facilities for residential, commercial and industrial customers, each ≤1 MW, 25% of which must be ≤ 20 kilowatts (kW). Since Tier II is behind the meter, the expected solar generation is embedded in the load forecast as a reduction to expected load.
- Tier III: Investment by the utility in 13 MW of solar capacity from facilities each >1 MW and <10 MW in size. Upon completion of Tiers I and II (to occur no later than 2021), the Company may directly invest in additional solar generation to complete Tier III.

DEP has executed two PPAs to complete Tier I which will result in 15 MW, 5 MW of which are currently operational. Tier II incentives have resulted in growth in private solar in DEP, as nearly 16 MW of rooftop solar has been installed in DEP SC.

The Company launched its first Shared Solar program as part of Tier I. Duke Energy designed its initial SC Shared Solar program to have appeal to residential and commercial customers who rent or lease their premises, residential customers who reside in multifamily housing units or shaded housing or for whom the relatively high up-front costs of solar PV make net metering unattainable, and non-profits who cannot monetize the ITC. The program capacity is 1 MW including 200 kW set aside for customers earnings less than 200% of the federal poverty line. As of the end of June 2019, 52 kW was subscribed. The unreserved 800 kW of capacity sold out within 60 days due to the program's strong economic proposition.

SC Act 62 passed in South Carolina on May 16, 2019. SC Act 62 will likely drive additional PURPA solar as DEP must offer fixed price PPAs to certain small power producers at avoided cost for a contract term of 10 years. The 10-year rate is applicable for projects located in SC until DEP has executed IAs and PPAs with aggregated nameplate capacity equal to 20 percent of the previous 5-year average of DEP's SC retail peak load, or roughly 260 MW. After 260 MW have executed IAs and PPAs the Commission will determine conditions, rates, and terms of length for future contracts. Given there is roughly 2,500 MW of solar pending in DEP SC, the Company expects to easily meet 260 MW within the IRP planning period. The Company intends to closely monitor the capacity with executed IAs and PPAs, evaluate impacts on the HB 589 Transition MW and corresponding reduction in CPRE volume.

SC Act 62 also called for additional customer programs, requiring the utilities to file voluntary renewable energy programs within 120 days of the Act passing, encouraging additional community solar. The Company has a proposed voluntary renewable energy program pending before the Commission, which would create a 150 MW program for DEC and DEP SC combined (37 MW in DEP) offering up to 15-year PPA's. The Companies are considering whether additional community solar should be pursued.

Finally, SC Act 62 lifted the cap on net metering, requiring the Company to offer net metering through June 1, 2021. No later than January 1, 2020, the Commission will open a docket to establish a solar choice metering tariff to go into effect for customer applications received after May 31, 2021.

Wind:

DEP considers wind a potential energy resource in the long term to support increased renewables portfolio diversity, long-term general compliance needs, as well as a potential resource for further carbon reduction. However, investing in wind inside of DEP's footprint may be challenging in the short-term, primarily due to a lack of suitable sites, permitting challenges, and more modest capital cost declines relative to other renewable technologies like solar. Opportunities may exist to transmit wind energy into the Carolinas from out of state regions where wind is more cost-effective. The Company will continue to monitor the economic feasibility of offshore wind as well.

Summary of Expected Renewable Resource Capacity Additions:

The 2019 IRP incorporates the Base Case renewable capacity forecast below. This case includes renewable capacity components of the Transition MW of NC HB 589, such as capacity required for compliance with NC REPS, PURPA purchases, the SC DER Program, and the additional three components of NC HB 589 (competitive procurement, renewable energy procurement for large customers, and community solar). The Base Case also includes additional projected solar growth beyond NC HB 589, and in support of expected growth from SC Act 62 and the Company's efforts to reduce carbon emissions. While certain regions of DEP may become saturated with solar, it is the Company's belief that continued declines in the installation cost of solar and storage, will enable solar and coupled "solar plus storage" systems to contribute to growing energy needs. The Company also believes supportive policies for solar and solar plus storage will continue to exist in NC and SC even beyond the NC HB 589 procurement horizon.

Given two DEC projects in the first tranche of CPRE included storage, the Company is projecting a similar ratio of solar capacity coupled with storage in future tranches of CPRE. Additionally, the most recent avoided cost rate structures proposed in both NC and SC provide strong price incentives for QFs to shift energy from lower priced energy-only hours to hours that have higher energy and capacity prices. This new rate design provides appropriate incentives to encourage storage plus solar projects. The Company this year is also projecting that a significant amount of incremental solar beyond NC HB 589 will be coupled with storage. Additional scenarios will be included in the 2020 IRP, but for now the 2019 base case assumes storage is DC coupled with solar, has a four-hour duration, and the maximum capacity of the battery storage is 25% of the max capacity of the solar. In total, DEP expects nearly 100 MW of storage coupled with solar by the end of 2034.

The Company anticipates a diverse portfolio including solar, biomass, hydro, storage, and other resources. Actual results could vary substantially for the reasons discussed previously, as well as other potential changes to legislative requirements, tax policies, technology costs, carbon prices, ancillary costs, interconnection costs, and other market forces. The details of the forecasted capacity additions, including both nameplate and contribution to winter and summer peaks are summarized in Table 6-B below.

While solar is not at its maximum output at the time of DEP's expected peak load in the summer, solar's contribution to summer peak load is large enough that it may push the time of summer peak to a later hour if solar penetration levels continue to increase. However, solar is unlikely to have a similar impact on the morning winter peak due to little solar output in the morning hours. Solar capacity contribution percentages to summer and winter peak demands are assumed to be the same as those used in the 2018 IRP. Note, however the solar contribution to peak values now also include additional contributions provided by storage coupled with solar, assumed to be 80% of the storage capacity installed.

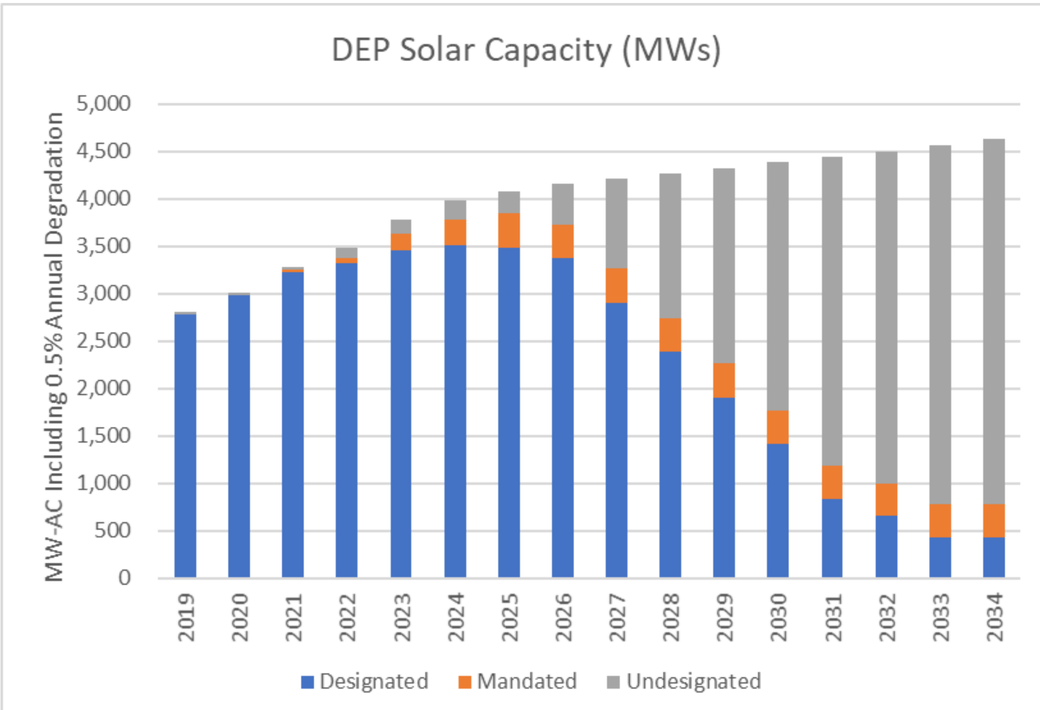
Table 6-B: DEP Base Case Total Renewables

DEP Base Renewables - Compliance + Non-Compliance									
	MW Nameplate			MW Contribution to Summer Peak			MW Contribution to Winter Peak		
	Solar	Biomass/ Hydro	Total	Solar	Biomass/ Hydro	Total	Solar	Biomass/ Hydro	Total
2020	3,005	264	3,269	1,052	264	1,316	30	264	294
2021	3,274	116	3,390	1,111	116	1,227	33	116	149
2022	3,477	116	3,593	1,142	116	1,257	35	116	151
2023	3,784	113	3,897	1,185	113	1,298	40	113	152
2024	3,987	112	4,099	1,206	112	1,318	42	112	154
2025	4,069	105	4,174	1,214	105	1,319	43	105	148
2026	4,157	105	4,262	1,234	105	1,338	54	105	159
2027	4,210	48	4,258	1,246	48	1,294	62	48	110
2028	4,262	44	4,306	1,259	44	1,303	70	44	114
2029	4,325	33	4,359	1,273	33	1,307	79	33	113
2030	4,381	32	4,413	1,287	32	1,319	87	32	120
2031	4,441	32	4,473	1,301	32	1,333	96	32	129
2032	4,491	31	4,522	1,313	31	1,344	104	31	135
2033	4,563	30	4,593	1,330	30	1,360	114	30	144
2034	4,629	30	4,659	1,345	30	1,376	124	30	154
Solar includes 0.5% per year degradation									
Capacity listed excludes REC Only Contracts									
Contribution to peak based on 2018 Astrape analysis plus 80% estimated capacity value for storage that is coupled with solar									

As a number of solar contracts are expected to expire over the IRP planning period, the Company is additionally breaking down its solar forecast into three buckets described below:

- **Designated**: Contracts that are already connected today or those who have yet to connect but have an executed PPA are assumed to be designated for the duration of the purchase power contract.
- **Mandated**: Capacity that is not yet under contract but is required through legislation (examples include future tranches of CPRE, the renewables energy procurement program for large customers, and community solar under NC HB 589 as well as SC Act 236)
- **Undesignated**: Additional capacity projected beyond what is already designated or mandated. Expiring solar contracts are assumed to be replaced in kind with undesignated solar additions. Such additions could include existing providers or new facilities that enter into contracts that have yet to be executed.

The chart below shows DEP's breakdown of these three buckets through the planning period. Note for avoided cost purposes, the Company only includes the Designated and Mandated buckets in the base case. For pricing the second tranche of CPRE, the Company includes the Designated bucket only.



Energy Storage

The Company is assessing the integration of battery storage technology into its portfolio of assets. Battery storage costs are expected to continue to decline, which may make this resource a viable option for grid support services, including frequency regulation, solar smoothing during periods with high incidences of intermittency, as well as, the potential to provide overall energy and capacity value. Energy storage can also provide value to the transmission and distribution (T&D) system by deferring or eliminating traditional upgrades and can be used to improve reliability and power quality to locations on the Company's distribution system. This approach results in stacked benefits which couples value streams from the Transmission, Distribution, and Generation systems. This unique evaluation process falls outside of the Company's traditional IRP process which focuses primarily on meeting future generation needs reliably and at the lowest possible cost. This new approach to evaluating technologies that have generation, transmission and distribution value is being addressed through the ISOP enhancements, discussed further in the following section.

The Company has begun investing in multiple grid-connected storage systems dispersed throughout its North and South Carolina service territories that will be located on property owned by the Company or leased from its customers. These deployments will allow for a more complete evaluation of potential benefits to the distribution, transmission and generation system while also providing actual operations and maintenance cost impacts of batteries deployed at a significant scale. This will allow the Company to explore the nature of new offerings desired by customers and fill knowledge gaps such as how the Company can best integrate battery storage into its daily operations. The Company will work with Generation, Transmission and Distribution organizations in this evaluation process, utilizing the ISOP framework. The goal is to optimize the location to couple localized T&D system benefits with bulk system benefits, and to minimize cost and maximize benefits for its customers. The Company believes such investments are consistent with the direction of state policy in both NC and SC under the NC HB 589 and SC DER Program respectively, as well as the most recently proposed avoided cost rates in both states. Additionally, the Company plans to further study the capacity value of storage in the Carolinas with any learnings to be included in the 2020 IRP

7. INTEGRATED SYSTEM & OPERATIONS PLANNING (ISOP)

The concept of ISOP was introduced in the 2018 IRP filed in NC and SC. Duke continues to view this effort as a natural evolution in the planning process to address continued trends in technology development, declining cost projections for grid-tied technologies, and customer preferences for distributed energy resources such as roof-top solar and end-use electrification such as electric vehicles (EVs). The anticipated growth of energy resources on (or closer to) the grid edge, particularly energy storage, will require utilities to move beyond the traditional utility distribution and transmission planning practice of analysis that considers only a few snapshots of system conditions at discrete points in time. Moving forward, analysis of the distribution and transmission systems will need to account for increasing volatility of net demand (load less variable distributed resources), which will require significant changes to modeling inputs and tools.

Recognizing that development of new tools and analytical methods involve significant uncertainty of timing and outcomes, Duke's goal at this point is to implement the basic elements of ISOP in the 2022 IRPs for the Carolinas. This timeline is based on the Company's perspective that ISOP will provide additional analytic tools and planning processes to support future IRPs as the potential for distributed energy resources grows and as the electrification of the transportation sector and other end-uses begin to have more significant impacts on energy planning, as a whole. To be clear, the ISOP effort is not prejudging the analytical outcome of the effort, but rather is intended to enhance the planning methodology and tool sets to enable a fair and thorough evaluation of resources in an evolving energy marketplace. It should be noted that changed introduced by a stakeholder engagement process or potential rulemaking by NCUC or PSCSC could impact the ISOP timeline.

One of the first steps in this process is development of an hourly forecast of projected load and DER output for each distribution circuit that covers a sufficient time horizon. This granular forecast is required to determine potential operational issues and costs at the circuit level as well as to capture potential benefits of deferred capacity additions for DERs. Given the size of the Company's system, this effort involves a significant time and resource commitment to gather the necessary input data and build the forecasting models required to support this extensive level of granular forecasting. For example, Duke is developing models to enable derivation of hourly forecasts for 4500+ distribution circuits in the Carolinas covering a ten-year horizon.

Additionally, new modeling capabilities are necessary to perform hourly power flow analysis of the effects of DERs. Duke has been working with the Electric Power Research Institute (EPRI), as well as a 3rd party industry leader in distribution modeling, to develop an Advanced Distribution Planning (ADP) tool capable of evaluating both traditional and non-traditional solutions on the distribution system, which requires analyzing distribution circuits for potential violations on an hourly basis. The development and testing effort for the basic ADP functionality is targeted to be rolled out progressively to DEC and DEP Distribution Planners during 2021. Subsequent development efforts will focus on adding more robust capability such as multi-circuit analysis of more complex switching, combinations of traditional and non-traditional solutions, etc.

Basic functionality of the ADP toolset will include the ability to evaluate DERs (including energy storage) as a potential solution, and determine the hourly pattern where the DER would be utilized to address local issues. In the case of energy storage, the unutilized hours of the resource can then be evaluated for additional value at the transmission and bulk generation levels, where feasible. This points out the need for coordination and data integration between the respective models across distribution, transmission, and generation planning disciplines to assess value across multiple use cases for DERs, which will add significant complexity. One practical implication is that the envisioned coordinated modeling processes will likely require more time than the current stand-alone generation planning processes, which could impact the development timeline for future IRPs.

Duke is also testing an established 3rd party DC transmission power flow model to develop an effective hourly power flow analysis process to complement the AC power flow model used for transmission planning today. The DC power flow analysis could be used for screening over much broader time periods to help identify hours and conditions that may warrant more detailed AC power flow analysis in conventional transmission planning processes. As it relates to ISOP modeling coordination, the hourly DC power flow model would be used to develop the need profile where there are opportunities to utilize energy storage as a non-traditional solution on the transmission system. The value of remaining hours of energy storage availability could then be evaluated at the bulk level.

Enhanced generation production cost models are expected to provide additional areas of improvement in the planning process. Duke continues to refine the quantification of ancillary requirements associated with intermittent resources, such as solar and while also working on the development of on-shore and off-shore wind ancillary requirements to evaluate benefits of a more diverse renewable resource mix in the Carolinas. Additionally, enhancements to hourly production cost models can help to better represent the sub-hourly impact of intermittent resources as well as the ability of energy storage to mitigate such costs. Duke is exploring the ability of sub-hourly models to address these challenges, as shown in the filing for the Solar Integration Services Charge (SISC) agreed to between Duke and the NC Public Staff and filed with the NCUC on May 21, 2019.

Finally, it should be noted that outreach has been and remains an important part of the ISOP effort. Over the last several years, the Company's ISOP development team has gathered input from other utilities, national labs, EPRI, consultants, and academic groups to inform our vision and work-scope to better address the challenges of modeling renewables and energy storage at both the distributed and bulk levels. We recognize that there is also interest in these ISOP development efforts from our regulators and customers, as well as environmental advocates, business interest groups and other stakeholders. Duke has initiated outreach to stakeholders in recent months, providing an overview of the ISOP process and inviting feedback regarding a potential stakeholder engagement process to continue the constructive dialog. It is important to note that DEC and DEP Balancing Areas include both NC and SC resources and load obligations, and both states have benefitted from the economies of scale from a large system with a combined planning process. As such, ISOP-related stakeholder engagement requires both NC and SC stakeholder representatives to ensure balanced outcomes for customers in both states. As part of the broader outreach effort, Duke will also support the NARUC-NASEO Task Force on Comprehensive Energy Planning (CEP). The Company views this as an important collaborative effort to support the building up and sharing of knowledge necessary to address the challenges and opportunities of incorporating non-traditional solutions across the respective planning disciplines within varying utility, regulatory, and market structures.

8. WESTERN CAROLINAS MODERNIZATION PROGRAM (WCMP)

The WCMP has five primary components, all of which are moving forward on schedule:

- Complete construction of two 280 MW new combined cycle natural-gas fired units at the Asheville Plant to serve DEP's system in NC and SC.
- Retire the Asheville Coal Plant by Jan. 31, 2020.
- Improvements to the transmission and distribution system.
- Addition of at least 15 MW of solar in DEP-West.
- Addition of at least 5 MW of energy storage in DEP-West.

In 2016, the Energy Innovation Task Force (EITF), comprised of a diverse group of community leaders, was convened by Duke Energy Progress, City of Asheville and Buncombe County to:

1. Avoid or delay the construction of the planned contingent CT.
2. Transition DEP-West to a smarter, cleaner and affordable energy future.

As referenced in the 2018 Integrated Resource Plan, through community collaboration in DEP-West, specifically Buncombe County, the contingent CT has been pushed out beyond the horizon of this 15-year planning analysis.

The Energy Innovation Task Force, through its external-facing movement the Blue Horizons Project, had great success toward both goals during 2018/2019.

Energy Efficiency and Demand-side Management

The group continues to engage and leverage grassroots networks to increase demand-side management with both residential and non-residential customers; increase adoption and uptake in energy efficiency programs; and make purposeful and deliberate investments in renewables and storage.

The EnergyWise Home and Business programs continue to be priority areas to drive peak demand reductions in the region. As evidenced in the goal results, performance on this front has been strong. Following are some of the key drivers of this success:

1. Community advocacy: Several organizations, including those known for their advocacy of clean and sustainable energy solutions, have visibly and tangibly advocated for local home and business participation in EnergyWise. This grass roots support has had both direct and

indirect positive impacts on results that have been achieved. It has increased awareness that the benefits of the programs go far beyond the financial incentives that are offered and it has made Duke Energy's marketing and sales efforts more effective as a result.

2. Duke Energy Marketing/Sales: Aggressive efforts to encourage EnergyWise participation have continued. Co-branding with the Blue Horizons Project has helped make third-party advocacy more effective. A continuation of door-to-door campaigning has also proven to be effective.
3. Multi-Family/Rental Properties: A focused effort has been undertaken to pursue multi-family and rental properties, which has been a relatively underperforming segment for EnergyWise participation. Modifications to the load control switches have been made to enable installation of these applications, and work is underway to engage directly with landlords to encourage participation for their properties.

Additionally, in December 2018, the NCUC approved the Pay for Performance program to be piloted in the Asheville/Buncombe County area. This work is being completed by Community Action Opportunities and the Greenbuilt Alliance. There have been excellent results with the diversity of measures installed and the clear need in the community.

Distributed Energy Resources

Construction is complete on the Company's first DEP-West microgrid (solar and storage) in the Great Smoky Mountains National Park. Construction is underway for a battery storage project adjacent to a company-owned substation in south Asheville, near Rock Hill Road. The Company is starting construction on a large solar/storage microgrid project in Hot Springs, N.C.

In DEP's 2018 Integrated Resource Plan, the Company included a placeholder for 140 MW of battery storage, of which approximately 50 MW are planned to be deployed in the Western Carolinas. These grid-connected battery storage projects are intended to provide solutions for the transmission and distribution systems with the possibility of simultaneously providing benefits to DEP's generation resource portfolio. Since the utility is ultimately responsible for system reliability, DEP is the natural owner and operator of battery storage, which supports this critical objective for its customers.

What's Next

In late 2018, both Asheville (City) and Buncombe County (County) passed 100 percent clean/renewable energy goals, joining several other local governments in North Carolina that have set similar goals. The goals require both the City and County achieve the 100 percent targets for operations by 2030, and for all homes and businesses by 2042.

Considering the 100 percent goals set by the City and County, the EITF determined that its objectives should be updated to reflect achievement of the goals. The Energy Innovation Task Force has started its work to rename itself and redirect its goals toward helping the City of Asheville and Buncombe County meet their aggressive renewable energy goals.

The partnership between the City, County, and Duke Energy, through the EITF will be critical to enable achievement of the very ambitious goals that have been set.

9. DEVELOPMENT OF RESOURCE PLAN

The following section details the Company's expansion plan and resource mix that is required to meet the needs of DEP's customers over the next 15 years. The section also includes a discussion of resource adequacy, the various technologies considered during the development of the IRP, as well as, a summary of the resources required in the No Carbon Case.

Tables 9-A and 9-B represent the winter and summer Load, Capacity, and Reserves (LCR) tables for the Base Case.

Table 9-A Load, Capacity and Reserves Table – Winter

Winter Projections of Load, Capacity, and Reserves
for Duke Energy Progress 2019 Annual Plan

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Load Forecast															
1 DEP System Winter Peak	14,522	14,523	14,687	14,819	15,069	15,237	15,415	15,670	15,876	16,084	16,302	16,512	16,727	16,921	17,113
2 Firm Sale	150	150	150	150	150	0	0	0	0	0	0	0	0	0	0
3 Cumulative New EE Programs	(48)	(90)	(131)	(170)	(226)	(271)	(309)	(344)	(375)	(394)	(419)	(439)	(451)	(460)	(459)
4 Adjusted Duke System Peak	**14,623**	**14,584**	**14,707**	**14,799**	**14,993**	**14,965**	**15,106**	**15,326**	**15,502**	**15,690**	**15,883**	**16,073**	**16,276**	**16,461**	**16,653**
Existing and Designated Resources															
5 Generating Capacity	13,941	14,123	13,626	13,626	13,626	13,626	13,398	13,398	13,398	13,404	12,351	12,361	12,361	12,361	12,361
6 Designated Additions / Uprates	566	0	0	0	0	4	0	0	6	0	10	0	0	0	0
7 Retirements / Derates	(384)	(497)	0	0	0	(232)	0	0	0	(1,053)	0	0	0	0	(1,409)
8 Cumulative Generating Capacity	**14,123**	**13,626**	**13,626**	**13,626**	**13,626**	**13,398**	**13,398**	**13,398**	**13,404**	**12,351**	**12,361**	**12,361**	**12,361**	**12,361**	**10,952**
Purchase Contracts															
9 Cumulative Purchase Contracts	**2,193**	**2,599**	**2,470**	**2,429**	**2,152**	**1,971**	**1,407**	**894**	**552**	**551**	**550**	**550**	**547**	**33**	**32**
Non-Compliance Renewable Purchases	103	35	37	39	41	42	42	39	37	36	35	35	33	33	32
Non-Renewables Purchases	2,090	2,565	2,433	2,389	2,110	1,929	1,365	855	515	515	515	515	514	0	0
Undesignated Future Resources															
10 Nuclear															
11 Combined Cycle						1,341		1,341							
12 Combustion Turbine									470	1,880		470		940	1,410
13 Short-Term Market Purchases	200	100	200	100	500	(200)	(100)	(200)	(100)	(500)					
Renewables															
14 Cumulative Renewables Capacity	**191**	**114**	**114**	**113**	**113**	**106**	**117**	**71**	**77**	**77**	**85**	**94**	**102**	**112**	**121**
Renewables w/o Storage	191	114	114	111	111	104	104	50	48	39	39	40	40	40	40
Solar w/ Storage (Solar Component)	0	0	0	0	0	0	1	1	1	2	2	3	3	3	4
Solar w/ Storage (Storage Component)	0	0	0	2	2	2	13	20	28	36	44	52	59	68	77
15 Combined Heat & Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Grid-connected Energy Storage	12	12	12	14	14	16	16	16	0	0	0	0	0	0	0
17 Cumulative Production Capacity	**16,719**	**16,663**	**16,746**	**16,818**	**17,055**	**17,797**	**17,160**	**17,758**	**17,798**	**18,124**	**18,141**	**18,620**	**18,625**	**19,060**	**19,071**
Demand Side Management (DSM)															
18 Cumulative DSM Capacity	**478**	**487**	**495**	**505**	**514**	**520**	**525**	**530**	**536**	**541**	**547**	**553**	**558**	**564**	**571**
19 Cumulative Capacity w/ DSM	**17,197**	**17,150**	**17,241**	**17,323**	**17,569**	**18,317**	**17,685**	**18,288**	**18,334**	**18,665**	**18,688**	**19,172**	**19,183**	**19,625**	**19,642**
Reserves w/ DSM															
20 Generating Reserves	2,574	2,567	2,534	2,525	2,577	3,352	2,580	2,962	2,833	2,975	2,805	3,100	2,908	3,164	2,988
21 % Reserve Margin	**17.6%**	**17.6%**	**17.2%**	**17.1%**	**17.2%**	**22.4%**	**17.1%**	**19.3%**	**18.3%**	**19.0%**	**17.7%**	**19.3%**	**17.9%**	**19.2%**	**17.9%**

Table 9-B Load, Capacity and Reserves Table – Summer

Summer Projections of Load, Capacity, and Reserves
for Duke Energy Progress 2098 Annual Plan

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Load Forecast															
1 DEP System Summer Peak	13,194	13,281	13,409	13,574	13,732	13,902	14,143	14,304	14,536	14,723	14,936	15,138	15,355	15,569	15,799
2 Firm Sale	150	150	150	150	150	0	0	0	0	0	0	0	0	0	0
3 Cumulative New EE Programs	(62)	(99)	(134)	(170)	(204)	(239)	(276)	(309)	(338)	(364)	(385)	(403)	(418)	(432)	(440)
4 Adjusted Duke System Peak	**13,283**	**13,332**	**13,424**	**13,554**	**13,679**	**13,663**	**13,867**	**13,995**	**14,198**	**14,359**	**14,551**	**14,735**	**14,937**	**15,136**	**15,360**
Existing and Designated Resources															
5 Generating Capacity	12,734	12,852	12,473	12,473	12,473	12,475	12,299	12,299	12,303	12,303	11,262	11,262	11,262	11,262	11,262
6 Designated Additions / Uprates	496	0	0	0	2	0	0	4	0	6	0	0	0	0	0
7 Retirements / Derates	(378)	(379)	0	0	0	(176)	0	0	0	(1,047)	0	0	0	0	(1,392)
8 Cumulative Generating Capacity	**12,852**	**12,473**	**12,473**	**12,473**	**12,475**	**12,299**	**12,299**	**12,303**	**12,303**	**11,262**	**11,262**	**11,262**	**11,262**	**11,262**	**9,870**
Purchase Contracts															
9 Cumulative Purchase Contracts	**2,688**	**3,190**	**3,100**	**3,128**	**2,925**	**2,759**	**1,668**	**1,315**	**1,302**	**1,290**	**1,278**	**1,267**	**1,255**	**759**	**749**
Non-Compliance Renewable Purchases	722	719	765	809	844	859	843	829	817	804	793	782	771	759	749
Non-Renewables Purchases	1,967	2,471	2,335	2,319	2,080	1,899	825	485	485	485	485	485	484	0	0
Undesignated Future Resources															
10 Nuclear															
11 Combined Cycle						1,241		1,241							
12 Combustion Turbine									426	1,278		426		852	1,278
13 Short Term Market Purchases	200	100	200	100	500	(200)	(100)	(200)	(100)	(500)					
Renewables															
14 Cumulative Renewables Capacity	594	507	492	492	477	462	514	493	525	553	587	623	654	693	730
Renewables w/o Storage	594	507	492	487	472	457	482	444	458	466	482	499	514	532	549
Solar w/ Storage (Solar Component)	0	0	0	3	3	3	19	29	39	51	61	72	81	93	104
Solar w/ Storage (Storage Component)	0	0	0	2	2	2	13	20	28	36	44	52	59	68	77
15 Combined Heat & Power	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Grid-connected Energy Storage	12	12	12	14	14	16	16	16	0	0	0	0	0	0	0
17 Cumulative Production Capacity	**16,346**	**16,495**	**16,601**	**16,743**	**17,041**	**17,742**	**16,619**	**17,306**	**17,651**	**17,404**	**17,426**	**17,877**	**17,896**	**18,291**	**18,204**
Demand Side Management (DSM)															
18 Cumulative DSM Capacity	**917**	**941**	**960**	**974**	**982**	**986**	**990**	**995**	**1,000**	**1,005**	**1,009**	**1,015**	**1,020**	**1,025**	**1,031**
19 Cumulative Capacity w/ DSM	**17,263**	**17,436**	**17,561**	**17,717**	**18,022**	**18,728**	**17,609**	**18,301**	**18,651**	**18,408**	**18,435**	**18,891**	**18,915**	**19,316**	**19,235**
Reserves w/ DSM															
20 Generating Reserves	3,981	4,104	4,137	4,163	4,344	5,065	3,742	4,305	4,453	4,049	3,884	4,156	3,979	4,180	3,875
21 % Reserve Margin	**30.0%**	**30.8%**	**30.8%**	**30.7%**	**31.8%**	**37.1%**	**27.0%**	**30.8%**	**31.4%**	**28.2%**	**26.7%**	**28.2%**	**26.6%**	**27.6%**	**25.2%**

DEP - Assumptions of Load, Capacity, and Reserves Table

The following notes are numbered to match the line numbers on the Winter Projections of Load, Capacity, and Reserves table. All values are MW (winter ratings) except where shown as a percent.

1. Planning is done for the Winter peak demand for the Duke Energy Progress System.

2. Firm sale of 150 MW through 2024.

3. Cumulative energy efficiency and conservation programs (does not include demand response programs).

4. Peak load adjusted for firm sales and cumulative energy efficiency.

5. Existing generating capacity reflecting designated additions, planned uprates, retirements and derates as of July 1, 2019.

6. Designated Capacity Additions include:

   Planned nuclear uprates totaling 26 MW in the 2020 - 2030 timeframe.

   560 MW Asheville combined cycle addition in November 2019.

7. Planned Retirements include:

   384 MW Asheville Coal Units 1-2 in November 2019.

   497 MW Darlington CT Units 1-6, 8 and 10 by December 2020.

   232 MW Blewett CT Units 1-4 and Weatherspoon CT units 1-4 in December 2024.

   1,053 MW Roxboro Units 1-2 in December 2028

   1,409 MW Roxboro Units 3-4 in December 2033

   Planning assumptions for nuclear stations assume subsequent license renewal at the end of the current license. 797 MW Robinson 2 is assumed to be relicensed in 2030.

   All retirement dates are subject to review on an ongoing basis. Dates used in the 2019 IRP are for planning purposes only, unless already planned for retirement.

8. Sum of lines 5 through 7.

DEP - Assumptions of Load, Capacity, and Reserves Table (cont.)

9. Cumulative Purchase Contracts including purchased capacity from PURPA Qualifying Facilities.

   Additional line items are shown under the total line item to show the amounts of renewable and traditional QF purchases.

10. New nuclear resources selected to meet load and minimum planning reserve margin

   Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the following year.

   No new nuclear resources were selected in the Base Case in the 15-year study period.

11. New combined cycle resources economically selected to meet load and minimum planning reserve margin.

   Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the next year.

   Addition of 1,341 MW of combined cycle capacity online December 2024

   Addition of 1,341 MW of combined cycle capacity online December 2026.

12. New combustion turbine resources economically selected to meet load and minimum planning reserve margin.

   Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the next year.
   Addition of 470 MW of combustion turbine capacity online December 2027.

   Addition of 1,880 MW of combustion turbine capacity online December 2028.

   Addition of 470 MW of combustion turbine capacity online December 2030.

   Addition of 940 MW of combustion turbine capacity online December 2032.

DEP - Assumptions of Load, Capacity, and Reserves Table (cont.)

Addition of 1,410 MW of combustion turbine capacity online December 2030.

13. Short-term market purchases needed to meet load and minimum planning reserve margin.

14. Resources to comply with NC REPS, NC HB 589 and SC Act 236 along with solar customer product offerings such as Green Source and SC DER Program were input as existing resources. The contribution to peak is subdivided into resources that do not include energy storage, and resources (solar) that are coupled with energy storage. The contribution to peak for solar coupled with energy storage is further subdivided into the contribution from the solar component and contribution from the storage component.

15. No new Combined Heat and Power projects are included.

16. Addition of 113 MW (80% of usable AC capacity) of energy storage over the years 2020 through 2027.

17. Sum of lines 8 through 17.

18. Cumulative Demand Side Management programs including load control and DSDR.

19. Sum of lines 18 and 19.

20. The difference between lines 20 and 4.

21. Reserve Margin = (Cumulative Capacity-System Peak Demand)/System Peak Demand

Line 21 divided by Line 4.

Minimum winter target planning reserve margin is 17%.

<u>Resource Adequacy</u>

Background:

Resource adequacy refers to the ability of the electric system to supply the aggregate electrical demand and energy requirements of the end-use customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements. Utilities require a margin of reserve generating capacity in order to provide reliable service. Periodic scheduled outages are required to perform maintenance, inspections of generating plant equipment, and to refuel nuclear plants. Unanticipated mechanical failures may occur at any given time, which may require shutdown of equipment to repair failed components. Adequate reserve capacity must be available to accommodate these unplanned outages and to compensate for higher than projected peak demand due to forecast uncertainty and weather extremes. DEP utilizes a reserve margin target in its IRP process to ensure resource adequacy. Reserve margin is defined as total resources minus peak demand, divided by peak demand. The reserve margin target is established based on probabilistic assessments of resource adequacy.

2016 Resource Adequacy Study:

DEP retained Astrapé Consulting in 2016 to conduct an updated resource adequacy study.[5] The updated study was warranted to account for the extreme weather experienced in the service territory in recent winter periods, and the significant amount of solar capacity that has been added to the system and in the interconnection queue. Solar resources provide meaningful capacity benefits in the summer since peak demand typically occurs in afternoon hours when the sun is shining and solar resources are available. However, solar resources contribute very little capacity value to help meet winter peak demands that typically occur in early morning hours.

Based on results of the 2016 resource adequacy assessment, the Company adopted a 17% minimum winter reserve margin target for scheduling new resource additions and incorporated this planning criterion beginning with the 2016 IRP. The Company plans to update all inputs and assumptions and conduct a new resource adequacy study to support the development of its 2020 IRP.

[5] Astrapé Consulting is an energy consulting firm with expertise in resource adequacy and integrated resource planning. Astrapé conducted resource adequacy studies for DEC and DEP in 2012 and 2016.

Adequacy of Projected Reserves:

The IRP provides general guidance in the type and timing of resource additions. Projected reserve margins will often be somewhat higher than the minimum target in years immediately following new generation additions since capacity is generally added in large blocks to take advantage of economies of scale. Large resource additions are deemed economic only if they have a lower Present Value Revenue Requirement (PVRR) over the life of the asset as compared to smaller resources that better fit the short-term reserve margin need.

DEP's resource plan reflects winter reserve margins ranging from approximately 17.1% to 22.4%. Reserves projected in DEP's IRP meet the minimum planning reserve margin target and thus satisfy the one day in 10 years LOLE criterion. Projected reserve margins exceed the minimum 17% winter target by 3% or more in 2025 as a result of a large combined cycle addition. Reserves projected in the Company's IRP are appropriate for providing an economic and reliable power supply.

16% Winter Reserve Margin Sensitivity:

The NCUC's April 16, 2018 Order Accepting Filing of 2017 Update Reports and Accepting 2017 REPS Compliance Plans in Docket No. E-100, Sub 147, concluded that DEC and DEP may continue to utilize the minimum 17% winter reserve margin for planning purposes in their 2018 IRPs. The Commission also required the Companies to present a sensitivity analysis in their 2018 IRPs that illustrates the impact of a 16% winter reserve margin, including the specific risk impact (LOLE) of using a 16% minimum reserve margin versus a 17% minimum reserve margin. For information purposes, the Company has also included a 16% reserve margin scenario in its 2019 IRP.

Table 9-C below shows a comparison of DEP's base case resource additions using a 17% winter reserve margin compared to a scenario using a 16% winter reserve margin. As illustrated in the table, use of a 16% reserve margin would result in changes to the short-term market purchases, a one-year deferral of a CT block from 2031 to 2032 and a one-year deferral of a CT block from 2033 to 2034. The reserve margins resulting from these changes are depicted in the table.

The 2016 resource adequacy study recommendation used a consensus of the DEC and DEP study results to establish a minimum 17% winter reserve margin target for the two companies. This minimum reserve margin target is needed to maintain an LOLE of one day in ten years (0.1 days/year). Based on results from the 2016 study, allowing the DEP reserve margin to decline to 16% for a given year would increase the loss of load expectation to approximately 0.13 days/year for DEP, which equates to one expected firm load shed event approximately every 7.7 years.

Table 9-C: 16% Reserve Margin Sensitivity

Winter Projections of Load, Capacity, and Reserves
for Duke Energy Progress 2019 Annual Plan

(17% Reserve Margin Base Case)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Adjusted System Peak Load (MW)	14,623	14,584	14,707	14,799	14,993	14,965	15,106	15,326	15,502	15,690	15,883	16,073	16,276	16,461	16,653
Undesignated Future Resources (MW)															
Combined Cycle						1,341		1,341							
Combustion Turbine									470	1,880		470		940	1,410
Short-Term Market Purchase	200	100	200	100	500	(200)	(100)	(200)	(100)	(500)					
Generating Reserves	2,574	2,567	2,534	2,525	2,577	3,352	2,580	2,962	2,833	2,975	2,805	3,100	2,908	3,164	2,988
% Reserve Margin	**17.6%**	**17.6%**	**17.2%**	**17.1%**	**17.2%**	**22.4%**	**17.1%**	**19.3%**	**18.3%**	**19.0%**	**17.7%**	**19.3%**	**17.9%**	**19.2%**	**17.9%**

(16% Reserve Margin Scenario)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Adjusted System Peak Load (MW)	14,623	14,584	14,707	14,799	14,993	14,965	15,106	15,326	15,502	15,690	15,883	16,073	16,276	16,461	16,653
Undesignated Future Resources (MW)															
Combined Cycle						1,341		1,341							
Combustion Turbine									470	1,880			470	470	1,880
Short-Term Market Purchase		100	300	100	500		(100)	(300)	(100)	(500)					
Generating Reserves	2,374	2,367	2,434	2,425	2,477	3,452	2,680	2,962	2,833	2,975	2,805	2,630	2,908	2,694	2,988
% Reserve Margin	**16.2%**	**16.2%**	**16.6%**	**16.4%**	**16.5%**	**23.1%**	**17.7%**	**19.3%**	**18.3%**	**19.0%**	**17.7%**	**16.4%**	**17.9%**	**16.4%**	**17.9%**

Technologies Considered

Similar to the 2018 IRP, the Company considered a diverse range of technology choices utilizing a variety of different fuels in order to meet future generation needs in the 2019 IRP. The Company conducted an economic screening analysis of various technologies as part of the 2019 IRP, with changes from the 2018 IRP highlighted below.

Dispatchable (Winter Ratings)

- Base load – 782 MW Ultra-Supercritical Pulverized Coal with CCS
- Base load – 557 MW 2x1 IGCC with CCS
- Base load – 2 x 1,117 MW Nuclear Units (AP1000)
- Base load – **672 MW** – 1x1x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – **1,341 MW** – 2x2x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 22 MW – Combined Heat & Power (Combustion Turbine)
- Base load – 9 MW – Combined Heat & Power (Reciprocating Engine)
- Base load – **720 MW** – Small Modular Reactor (SMR)
- **Peaking/Intermediate – 18 MW 2 x Reciprocating Engine Plant**
- Peaking/Intermediate – **197 MW** 4 x LM6000 Combustion Turbines (CTs)
- Peaking/Intermediate – **201 MW** 12 x Reciprocating Engine Plant
- Peaking/Intermediate – **756 MW** 2 x J-Class Combustion Turbines (CTs)
- Peaking/Intermediate – **940 MW** 4 x 7FA.05 Combustion Turbines (CTs)
- Storage – **10 MW / 10 MWh** Li-ion Battery
- **Storage – 10 MW / 20 MWh Li-ion Battery**
- **Storage – 10 MW / 40 MWh Li-ion Battery**
- Storage – **50 MW / 200 MWh** Li-ion Battery
- **Storage – 50 MW / 300 MWh Li-ion Battery**
- **Storage – 102 MW / 816 MWh Redox Flow Battery**
- Storage – 1,400 MW Pumped Storage Hydro (PSH)
- Renewable – 75 MW Wood Bubbling Fluidized Bed (BFB, biomass)
- Renewable – 5 MW Landfill Gas

Non-Dispatchable (Nameplate)

- Renewable – 150 MW Wind - On-Shore
- Renewable – **75 MW** Solar PV, Fixed-tilt (FT)
- Renewable – **75 MW** Solar PV, Single Axis Tracking (SAT)
- Renewable – **75 MW Solar PV plus 20 MW / 80 MWh** Li-ion Battery

Combined Cycle base capacities: Based on proprietary third-party engineering studies, the Advanced CC saw minor increases in base load output. The 1x1x1 Advanced CC increased 5 MW while the 2x2x1 Advanced CC increased 2 MW.

Small Modular Reactor base capacities: As described in Appendix F of the 2018 IRP, the leading SMR design increased from 600 MW to 720 MW due to a 20% upgrade in the design. The 2019 update reflects the new 720 MW output of the proposed design.

Combustion Turbine base capacities and technologies: Based on proprietary third-party engineering studies, the CT technologies saw a minor change in winter capacity. The most significant change was the F-Frame CT, which increased 21 MW. Additionally, a smaller Reciprocating Engine of 18 MW was considered in addition to the 201 MW design. The G/H-Frame CTs were not considered in the updated IRP. However, as the Company begins the process of evaluating particular technologies for future undesignated generation needs, these technologies, along with other new technologies, may be considered based on factors such as generation requirements, plot size, new environmental regulations, etc.

Energy Storage capacities and technologies: Energy storage solutions, in particular batteries, continue to be viewed as an increasing necessity for support of grid services, including frequency regulation, solar smoothing, and/or energy shifting from localized renewable energy sources with a high incidence of intermittency (i.e. solar and wind). These technologies are capable of providing resiliency benefits and economic value for the utility and its customers. Duke Energy is committed to supporting emerging technologies that can complement more conventional technologies and is in a prime position to optimize the investment in batteries by dispatching them in a manner that directly benefits customers.

The updated IRP includes additional battery options, reflecting the continued change in the industry, to allow for larger batteries with increasing durations. The additional sizes allow for greater flexibility in deployment, and the increased capacities take advantage of economies of scale. Additionally, a Redox Flow Battery is now considered in addition to the Lithium-Ion options. Although Redox Flow Batteries are still in an immature state compared to Lithium-Ion batteries, the high cycling ability of Redox Flow Batteries and longer duration of storage shows promise to meet future grid requirements.

Solar PV Capacity: Solar PV continues to evolve as the industry matures. The capacity of solar PV was increased from 50 MW to 75 MW to reflect typical industry deployments.

Solar PV Plus Storage Capacity and Usage: Hybrid solar and storage projects have been deployed more frequently in the last year and continue to be announced across the country. The energy storage component of such a system can be dispatched in a variety of ways depending on price signals and needs of the broader DEP system. For instance, during winter months, DEP's peak demand occurs during mornings when there is little to no solar energy being generated, but a solar facility coupled with energy storage can store solar energy from the previous day when that energy is less valued on the DEP system and dispatch it during those high-value, early winter morning hours. Additionally, there is value for the battery to supplement solar energy during times of cloud cover to "smooth" the output of the solar plus storage facility thereby reducing the effects of solar intermittency on the DEP system. The ability for a solar plus storage facility to both shift energy and smooth output may be limited based on the design of the hybrid facility, the terms of the battery warranty, and other constraints. For the purposes of the 2019 Update IRP, solar PV plus storage is modeled at 75 MW solar alongside a 20 MW battery with a 4-hour duration. This ratio of nameplate storage capacity to nameplate solar capacity is consistent with recent projects evaluated on the DEC and DEP systems.

Expansion Plan and Resource Mix

A tabular presentation of the 2019 Base Case resource plan represented in the above LCR table is shown below:

Table 9-D DEP Base Case Resources– Winter (with CO_2)

Duke Energy Progress Resource Plan [1]
Base Case - Winter

Year	Resource				MW			
2020	Asheville CC	Nuclear Uprates	Solar	Energy Storage	560	6	204	15
2021	Solar	Energy Storage			269	15		
2022	Solar	Energy Storage			203	15		
2023	Solar + Storage	Solar	Energy Storage		10 (2)	297	18	
2024	Solar	Energy Storage			203	18		
2025	Nuclear Uprates	New CC	Solar	Energy Storage	4	1,341	82	20
2026	Solar + Storage	Solar	Energy Storage		54 (14)	34	20	
2027	Solar + Storage	New CC	Solar	Energy Storage	37 (9)	1,341	16	20
2028	Nuclear Uprates	New CT	Solar + Storage	Solar	6	470	36 (9)	16
2029	New CT	Solar + Storage	Solar		1880	42 (11)	22	
2030	Nuclear Uprates	Solar + Storage	Solar		10	38 (10)	18	
2031	New CT	Solar + Storage	Solar		470	40 (10)	20	
2032	Solar + Storage	Solar			35 (9)	15		
2033	New CT	Solar + Storage	Solar		940	45 (12)	26	
2034	New CT	Solar + Storage	Solar		1410	43 (11)	23	

Notes: (1) Table includes both designated and undesignated capacity additions

(2) Incremental solar additions represent nameplate ratings and do not include solar coupled with storage

(3) Incremental Energy Storage additions represent useable AC MW capacity

(4) Solar + Storage values in ( ) represent useable AC MW storage behind solar inverter

(5) Future additions of other renewables, EE and DSM not included

(6) Table does not include short term PPA purchases in 2020 through 2024.

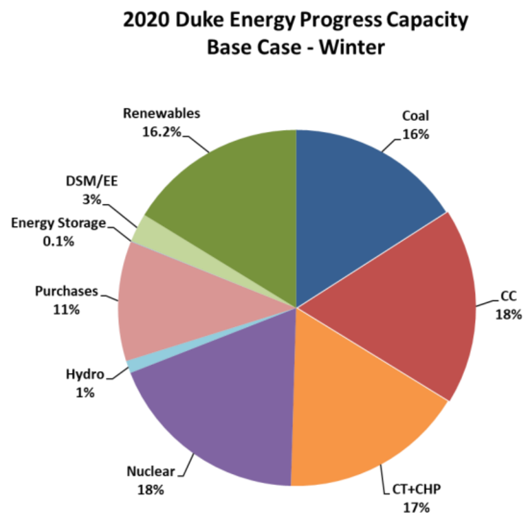
Table 9-E DEP Base Case Resources (with CO_2) Cumulative Winter Totals

DEP Base Case Resources
Cumulative Winter Totals - 2020 - 2034

Nuclear	26
Solar	1,448
Solar + Storage	380 (97)
CC	3,242
CT	5,170
CHP	0
Energy Storage	141
Total	10,407

The following charts illustrate both the current and forecasted capacity by fuel type for the DEP system, as projected in the Base Case. As demonstrated in Chart 9-A, the capacity mix for the DEP system changes with the passage of time. In 2034, the Base Case projects that DEP will have a smaller percentage reliance on coal, nuclear and external purchases, and a higher reliance on gas-fired resources, renewable resources, energy storage and EE as compared to the current state.

Chart 9-A 2020 & 2034 Base Case Winter Capacity Mix [7]



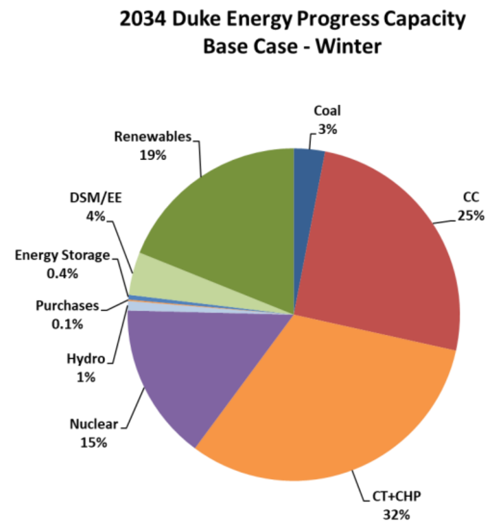
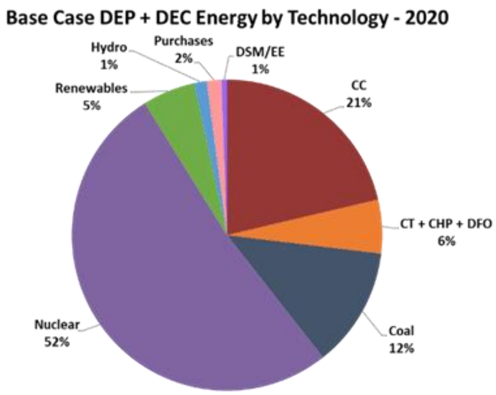
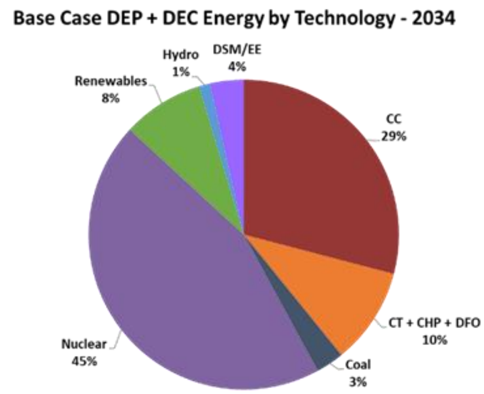


Chart 9-B represents the energy of both the DEC and DEP Base Case over time. Due to the joint dispatch agreement (JDA), it is prudent to combine the energy of both utilities to develop a meaningful energy figure. From 2020 to 2034, the figure shows that nuclear resources will continue to serve almost half of DEC and DEP energy needs, a reduction in the energy served by coal, and an increase in the energy served by natural gas, renewables and EE.

[7] EE represents incremental EE and does not reflect impacts of historical efforts.

Chart 9-B 2020 & 2034 DEC and DEP Energy – Base Case





As discussed earlier, the Company developed one additional case which represents a variation of the Base Case that assumes no carbon regulations. The expansion plan for this case is shown below in Table 9-F.

Table 9-F No Carbon Case - Winter

Duke Energy Progress Resource Plan [(1)]
No CO_2 Case - Winter

Year	Resource				MW			
2020	Asheville CC	Nuclear Uprates	Solar	Energy Storage	560	6	204	15
2021	Solar	Energy Storage			269	15		
2022	Solar	Energy Storage			203	15		
2023	Solar + Storage	Solar	Energy Storage		10 (2)	297	18	
2024	Solar	Energy Storage			203	18		
2025	Nuclear Uprates	New CC	Solar	Energy Storage	4	1,341	82	20
2026	Solar + Storage	Solar	Energy Storage		54 (14)	34	20	
2027	Solar + Storage	New CC	Solar	Energy Storage	37 (9)	1,341	16	20
2028	Nuclear Uprates	New CT	Solar + Storage	Solar	6	470	36 (9)	16
2029	New CT	Solar + Storage	Solar		1880	42 (11)	22	
2030	Nuclear Uprates	Solar + Storage	Solar		10	38 (10)	18	
2031	New CT	Solar + Storage	Solar		470	40 (10)	20	
2032	Solar + Storage	Solar			35 (9)	15		
2033	New CT	Solar + Storage	Solar		940	45 (12)	26	
2034	New CT	Solar + Storage	Solar		1410	43 (11)	23	

Notes: (1) Table includes both designated and undesignated capacity additions
(2) Incremental solar additions represent nameplate ratings and do not include solar coupled with storage
(3) Incremental Energy Storage additions represent useable AC MW capacity
(4) Solar + Storage values in ( ) represent useable AC MW storage behind solar inverter
(5) Future additions of other renewables, EE and DSM not included
(6) Table does not include short term PPA purchases in 2020 through 2024.

10. DEP FIRST RESOURCE NEED

The IRP process provides a resource plan to most economically and reliably meet the projected load requirements and a reasonable reserve margin throughout the 15-year study period. In addition to load growth, planned unit retirements and expiring purchase power contracts contribute to the need for new generation resources.

The resources used to meet the load requirements fall into two categories: Designated and Undesignated. Designated resources are those resources that are in service, projects that have been granted a Certificate of Public Convenience and Necessity (CPCN) or Certificate of Environmental Compatibility and Public Convenience and Necessity (CECPCN), smaller capacity additions that are a result of unit uprates that are in the Companies' planning budget, firm market purchases over the duration of the signed contract or DSM/EE programs.

Undesignated resources include purchase power contracts that have not yet been executed and projected resources in the IRP that do not have a CPCN or CECPCN granted.

Additionally, firm market purchases, which include wholesale contracts, including renewable contracts, are assumed to end at the end of the currently contracted period. There is no guarantee that the counterparty will choose to sell, or the Company will agree to purchase its capacity after the contracted timeframe. Beyond the contract period the seller may elect to retire the resource or sell the output to an entity other than the Company. As such, contracted resources are deemed designated only for the duration of their legally enforceable contract.

Further, solar renewable contracts are broken down into three categories: Designated, Mandated and Undesignated. As discussed in Chapter 6, the definitions of each bucket are below:

- **Designated**: Contracts that are already connected today or those who have yet to connect but have an executed PPA are assumed to be designated for the duration of the purchase power contract.
- **Mandated**: Capacity that is not yet under contract but is required through legislation (examples include future tranches of CPRE, the renewables energy procurement program for large customers, and community solar under NC HB 589 as well as SC Act 236).
- **Undesignated**: Additional capacity projected beyond what is already designated or mandated. Expiring solar contracts are assumed to be replaced in kind with undesignated solar additions. Such additions could include existing providers or new facilities that enter into contracts that have yet to be executed.

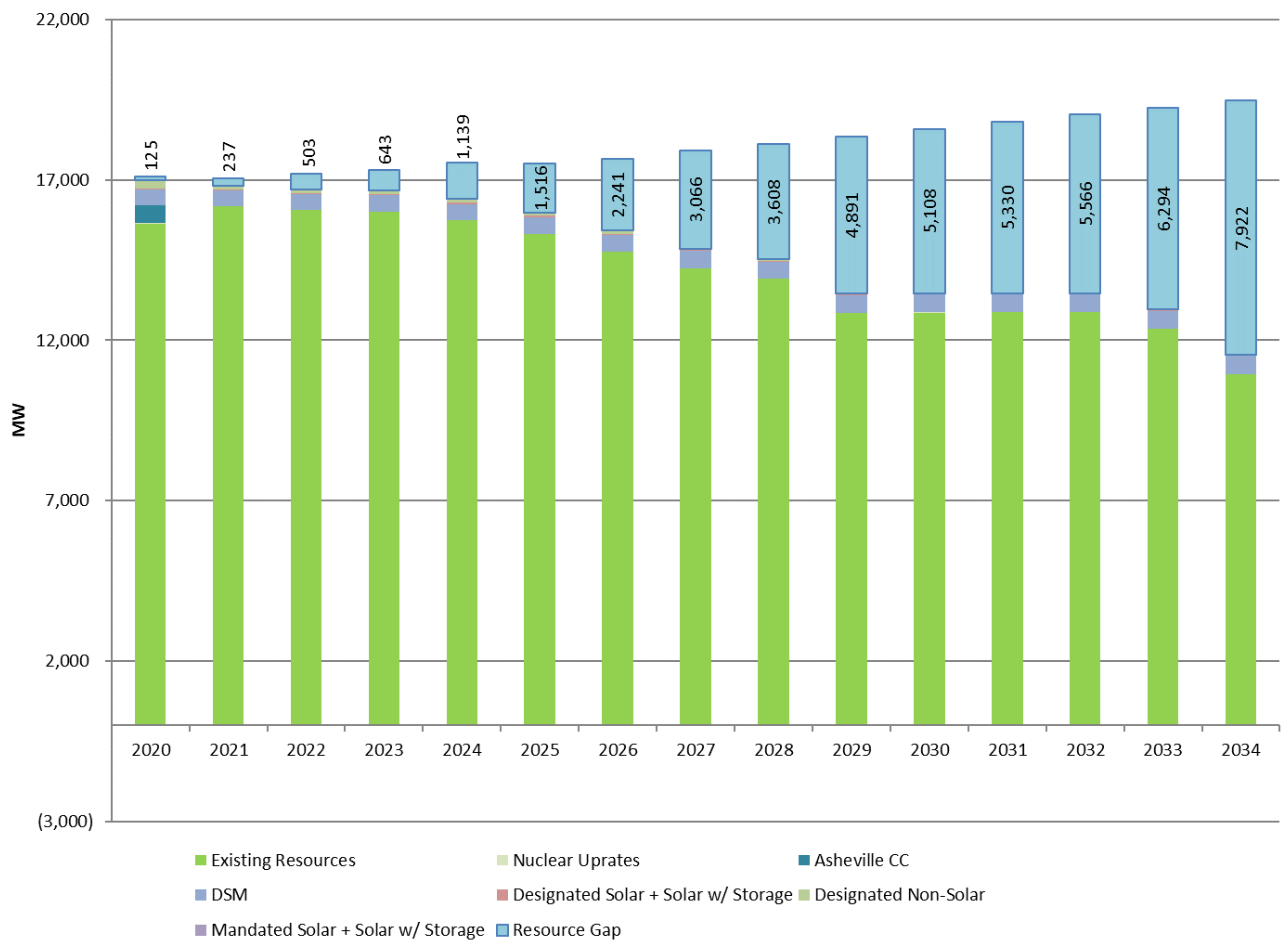
Only designated and mandated resources are considered when determining the first need for purposes of the determination of standard offer avoided capacity rates.

Designated resources have an impact on the determination of the first resource need in the IRP. A list of designated resources for DEP is below:

- Asheville Combined Cycle
- Designated and mandated renewable resources
- Nuclear Uprates
- Designated wholesale contracts
- DSM/EE programs

Including only the designated and mandated resources, Chart 10-A demonstrates the first need for DEP is in 2020. To the extent current contracts under negotiation become executed and move from an undesignated to a designated resource, the timing of the first need will change accordingly.

Chart 10-A Load Resource Balance for DEP First Need



11. SHORT-TERM ACTION PLAN

The Company's Short-Term Action Plan, which identifies accomplishments in the past year and actions to be taken over the next five years, is summarized below:

Continued Reliance on EE and DSM Resources

The Company is committed to continuing to grow the amount of EE and DSM resources utilized to meet customer growth. The following are the ways in which DEP will increase these resources:

- Continue to execute the Company's EE and DSM plan, which includes a diverse portfolio of EE and DSM programs spanning the residential, commercial, and industrial classes.

- Continue on-going collaborative work to develop and implement additional cost-effective EE and DSM products and services.

- Continue to seek enhancements to the Company's EE/DSM portfolio by: (1) adding new or expanding existing programs to include additional measures, (2) program modifications to account for changing market conditions and new measurement and verification (M&V) results and (3) other EE research & development pilots.

- Continue to seek additional DSM programs that will specifically benefit during winter peak situations.

Continued Focus on Renewable Energy Resources

DEP is committed to the addition of significant renewable generation in its resource portfolio. Supporting policies such as SC Act 236, NC REPS, NC HB 589, and the newly signed SC Act 62 have all contributed to DEP's aggressive plans to grow its renewable resources. DEP is also committed to meeting its targets for the SC DER Program.

Under NC HB 589, DEP and DEC successfully procured approximately 550 MW of solar capacity through tranche one of CPRE and intend to request another 680 MW of solar capacity in the second tranche. The Companies also launched shared solar programs in SC and have proposed a voluntary renewable energy program totaling 150 MW pending before the SC Commission. These activities will be done in a manner that allows the Companies to continue to reliably and cost-effectively serve customers' future energy needs. For further details, refer to Chapter 6, as well as Attachments I and II.

DEP continues to pursue CHP opportunities, as appropriate, and placeholders will be included in future IRPs.

Integration of Battery Storage on System

The Company continues to identify locations to deploy energy storage on the DEP system. These deployments will allow for a more complete evaluation of potential benefits to the distribution, transmission and generation system while also providing actual operations and maintenance cost impacts of batteries deployed at a significant scale. The Company will work with generation, transmission and distribution departments in this evaluation process, utilizing the ISOP framework. The goal is to optimize the location to couple localized T&D system benefits with bulk system benefits, and to minimize cost and maximize benefits for its customers.

In line with these objectives, DEP will complete construction of a 9 MW battery storage project adjacent to a company-owned substation in south Asheville, near Rock Hill Road that will be used to help the electric system operate more efficiently and reliably for customers in that area. Additionally, the company is beginning construction on a 2 MW solar / 4 MW battery storage system microgrid project in Hot Springs, N.C. that was approved by the NCUC in May 2019. This asset will be used to improve reliability of the Hot Springs community while also provide benefits to allow the bulk system to operate more efficiently. There are a number of additional projects under development on both the transmission and distribution systems. The Company also plans to further study the capacity value of storage in the Carolinas and will include any learnings in the 2020 IRP.

Addition of Clean Natural Gas Resources

- Continue to evaluate older CTs on the DEP system. The Company is evaluating the condition and economic viability of the older CTs on the system. In doing so, DEP is preparing for the potential retirement of these units. This includes determining the type of resources needed to reliably replace these units to maintain a minimum planning reserve margin.

  - Darlington CT Unit 5 was officially retired in May 2018.

  - Darlington CT Units1-4, 6-8 and 10 are projected to retire in 2020.

  - Weatherspoon and Blewett CT Units are projected to retire in 2024.

- Complete construction and commission the new combined cycle units at the Asheville facility (560 MW/ 495 MW winter/summer) by year-end 2019 as part of the Western Carolinas Modernization Project (WCMP).

  - Asheville Coal Units will retire upon the commercial operation of the Asheville combined cycle.

- Take actions to ensure capacity need beginning in the winter of 2025 is met. The 2019 IRP continues to project that the best resources to meet this 2025 demand are combined cycle units.

Expiration of Wholesale Purchase Contracts and Short-Term Need

The 2018 IRP reflected the impact of approximately 1,500 MW of purchase power contract expirations by 2025. The expiration of these contracts, along with the increase in the winter peak demand forecast and the planned retirement of nearly 500 MW of aging CT units at the Darlington CT Complex, created a significant short-term resource need. The Company has worked diligently to address this short-term need by issuing a Request for Proposals (RFP) resource solicitation in 2018. DEP received a significant response to the solicitation, and as a result, DEP is currently in the process of negotiating contracts with short-listed bidders to fulfill its near-term needs.

As discussed in Section 10, contracts that have been executed as part of this solicitation as of August 1, 2019 are included as firm designated resources in this year's IRP while others are still under negotiation. Contracts that have yet to be executed are not included as designated resources in the IRP and, as such, the IRP continues to reflect a resource need as early as the winter of 2020. The Company fully expects to fill this resource gap through future execution of these contracts.

Subsequent License Renewal for Nuclear Power Plants

Duke Energy will continue to evaluate SLR for all its nuclear plants and is actively working on DEC's Oconee Nuclear Station SLR application to extend the licenses to 80 years. The remaining nuclear sites will do likewise where the cost/benefit balance proves acceptable.

Continued Focus on System Reliability and Resource Adequacy for the DEP System

Based on results of the 2016 resource adequacy assessment, the Company adopted a 17% minimum winter reserve margin target for scheduling new resource additions and incorporated this planning criterion beginning with the 2016 IRP. The Company plans to work with the state regulatory staffs to update all inputs and assumptions and conduct a new resource adequacy study to support the development of its 2020 IRP.

Continued Transition Toward Integrated System & Operations Planning:

As introduced in the 2018 IRP and discussed in Chapter 7 of this Updated IRP, the traditional methods of utility resource planning are continuing to evolve. DEP is committed to moving toward an integrated planning process to meet the changing needs of planning in the future. The traditional methods of utility resource planning will be enhanced through an ISOP effort.

One key goal of ISOP is for the planning models to reasonably mimic the future operational realities to allow DEP to serve its customers with newer technologies. These enhancements in planning are being addressed and will be incorporated over the next several years, as soon as the modeling tools, processes and data development will allow.

Continued Focus on Evolving Regulations and Environmental Compliance:

- As of December 2013, all of DEP's older, un-scrubbed coal units have been retired. In total, DEP has retired 1,600 MW of older vintage coal units since 2011. Additionally, over the same period DEP has retired approximately 400 MW of older vintage fuel-oil turbines bringing total retirements to 2,000 MW.

- The 2019 IRP shows more than 1,100 MW of additional retirements over the 5-year duration of the short-term action plan with nearly 400 MW of coal being retired at the Asheville site and over 700 MW of combustion turbines being retired at the Darlington, Weatherspoon, and Blewett sites. Weatherspoon and Blewett are expected to retire in December 2024, making them unavailable for the winter of 2025. As such, they are not represented in Table 11-A. Additionally, nearly 2,500 MW of coal are expected to be retired at the Roxboro site over the remainder of the 15-year IRP horizon.

- Engage with state environmental agencies to determine the plan to implement the Affordable Clean Energy (ACE) Rule. The ACE Rule was published by the US EPA on July 8, 2019. The rule revokes and replaces the Clean Power Plan and establishes a requirement for states to develop carbon dioxide emissions standards for coal-fired electric utility generating units based on evaluation of certain heat rate improvement (efficiency) measures. ACE requires states to submit plans to the EPA by July 8, 2022, and facilities are required to demonstrate compliance within 2 years of that date (July 8, 2024). Various parties (including the State of North Carolina) have filed litigation opposing EPA's action to replace the Clean Power Plan. However, unless the federal courts take action to stay the rule pending judgment, states and affected industry will be obligated to meet the deadlines established by the ACE Rule. Duke Energy does not have sufficient information to determine the impact of the ACE Rule on its facilities.

- Continue to stay informed of changes and updates to with existing and potential environmental regulations such as the Mercury and Air Toxics Standards (MATS), the Coal Combustion Residuals Rule (CCR), the Cross-State Air Pollution Rule (CSAPR), and the new Ozone National Ambient Air Quality Standard (NAAQS). The Company will comply with any regulatory requirements associated with these regulations.

- Evaluate and monitor the draft NC Clean Energy Plan Issued on August 16, 2019, as it is finalized.

Regulatory:

- Continue to monitor energy-related statutory and regulatory activities.
- Continue to examine the benefits of joint capacity planning and pursue appropriate regulatory actions.
- Comply with all NCUC and PSCSC orders resulting from state specific legislation and pending regulatory dockets.

A summarization of the capacity resources over the next five years for the base plan in the 2019 IRP is shown in Table 11-A below. Capacity retirements and additions are presented as incremental values in the year in which the change is projected to impact the winter peak. The values shown for renewable resources, EE and DSM represent cumulative totals.

Table 11-A DEP Short-Term Action Plan

2019 Duke Energy Progress Short-Term Action Plan (1) (2)								
			Renewable Resources (Cumulative Nameplate MW)					
Year	Retirements	Additions (3)	Solar (4)	Solar w/ Storage (5)	Biomass/ Hydro	Cumulative EE	DSM (6)
2020	384 MW Asheville 1-2	560 MW Asheville CC 6 MW Nuc Uprate 15 MW Energy Storage 200 MW Short-Term PPA	3,005	0	264	48	478
2021	497 MW Darlington CT 1-4, 6-8, 10	15 MW Energy Storage 100 MW Short-Term PPA	3,274	0	116	90	487
2022		15 MW Energy Storage 200 MW Short-Term PPA	3,477	0	116	131	495
2023		18 MW Energy Storage 100 MW Short-Term PPA	3,774	10 w/ 2 Storage	113	170	505
2024		18 MW Energy Storage 500 MW Short-Term PPA	3,977	10 w/ 2 Storage	112	226	514

Notes:
(1) Capacities shown in winter ratings unless otherwise noted.
(2) Dates represent when the project impacts the winter peak.
(3) Energy storage is grid-tied storage and represents total usable MW
(4) Capacity is shown in nameplate ratings and does not include solar coupled with energy storage.
(5) Solar coupled with storage; storage only charged from solar
(6) Includes impacts of grid modernization.

12. CONCLUSIONS

DEP continues to focus on the needs of customers by meeting the growing demand in the most economical and reliable manner possible while improving the environmental footprint of its resource portfolio. The Company continues to improve the IRP process by determining best practices and making changes to more accurately and realistically represent the DEP System in its planning practices. The 2019 IRP represents a 15-year projection of the Company's plan to balance future customer demand and supply resources to meet this demand plus a 17% minimum winter planning reserve margin. Over the 15-year planning horizon, DEP expects to add 10,407 MW of generating resources in addition to the incremental EE and DSM already in the resource plan.

The Company focuses on the needs of the short-term, while keeping a close watch on market trends and technology advancements to meet the demands of customers in the long-term. The Company's short-term and long-term plans are summarized below:

Short-Term

Over the next 5 years, DEP's 2019 IRP focuses on the following:

- Continue construction of the two new combined cycle units at the Asheville facility in the 2019 timeframe as part of the WCMP.
- Pursue investment in a limited number of battery storage projects to gain additional operational and technical experience with evolving utility-scale storage technologies.
- Take actions to ensure short-term system capacity needs beginning in 2020 are met.
- Take necessary steps to ensure that the combined cycle capacity need in 2025 is met.
- Procure CHP resources as cost-effective and diverse generation sources, as appropriate.
- Continue to meet NC REPS, SC Act 236 and NC HB 589 compliance plans.
- Implement requirements of SC Act 62.
- Continue to invest in EE and DSM in the Carolinas region.
- Continue to seek additional DSM programs that will specifically benefit during winter peak situations.
- Continue to transition toward Integrated System & Operations Planning.
- Conduct new resource adequacy study to support the development of 2020 IRP.
- Continue to study energy storage and solar plus storage capacity value.
- Retire Asheville coal units and Darlington 1-4, 6-8, and 10.
- Continue with plan for subsequent license renewal of existing nuclear units.

Long-Term

Beyond the next 5 years, DEP's 2019 IRP focuses on the following:

- Continue to seek the most cost-effective, reliable resources to meet the growing customer demand in the service territory. Currently, those are new combined cycle units and combustion turbine units in the 15-year planning horizon.
- Continue evaluating and deploying storage and zero-emitting-load-following resources in order to better integrate increasing levels of intermittent renewable resources on the DEP system.
- Continue to reduce the carbon footprint of the Company's generation portfolio.
- Continue discussions with other potential steam hosts to pursue CHP opportunities, as appropriate.
- Continue to meet NC REPS, SC Act 236 and NC HB 589 compliance plans and invest in additional cost-effective and diverse renewable resources.
- Continue implementing all portions of the NC HB 589 bill.
- Continue to grow and enhance cost-effective EE and DSM in the Carolinas region.
- Plan for the retirements of Weatherspoon and Blewett CTs and Roxboro 1-4 coal units.

DEP's goal is to continue to diversify the DEP system by adding a variety of cost-effective, reliable, clean resources to meet customer demand. Over the next 15 years, the Company projects filling the increasing demand with investments in natural gas, renewables, storage, EE and DSM.

13. DUKE ENERGY PROGRESS OWNED GENERATION

Duke Energy Progress' generation portfolio includes a balanced mix of resources with different operating and fuel characteristics. This mix is designed to provide energy at the lowest reasonable cost to meet the Company's obligation to serve its customers. Duke Energy Progress-owned generation, as well as purchased power, is evaluated on a real-time basis to select and dispatch the lowest-cost resources to meet system load requirements.

The tables below list the Duke Energy Progress' plants in service in North Carolina (NC) and South Carolina (SC) with plant statistics, and the system's total generating capability.

Existing Generating Units and Ratings [1, 3]
All Generating Unit Ratings are as of January 1, 2019 unless otherwise noted.

Coal						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Asheville	1	192	189	Arden, NC	Coal	Intermediate
Asheville	2	192	189	Arden, NC	Coal	Intermediate
Mayo [2]	1	746	727	Roxboro, NC	Coal	Intermediate
Roxboro	1	380	379	Semora, NC	Coal	Intermediate
Roxboro	2	673	668	Semora, NC	Coal	Intermediate
Roxboro [2]	3	698	694	Semora, NC	Coal	Intermediate
Roxboro [2]	4	711	698	Semora, NC	Coal	Intermediate
Total Coal		3,592	3,544			

Combustion Turbines						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Asheville	3	185	160	Arden, NC	Natural Gas/Oil	Peaking
Asheville	4	185	160	Arden, NC	Natural Gas/Oil	Peaking
Blewett	1	17	13	Lilesville, NC	Oil	Peaking
Blewett	2	17	13	Lilesville, NC	Oil	Peaking
Blewett	3	17	13	Lilesville, NC	Oil	Peaking
Blewett	4	17	13	Lilesville, NC	Oil	Peaking
Darlington	1	63	50	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	2	61	48	Hartsville, SC	Oil	Peaking
Darlington	3	63	50	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	4	60	48	Hartsville, SC	Oil	Peaking
Darlington	6	62	43	Hartsville, SC	Oil	Peaking
Darlington	7	61	47	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	8	62	44	Hartsville, SC	Oil	Peaking
Darlington	10	65	49	Hartsville, SC	Oil	Peaking
Darlington	12	133	118	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	13	133	116	Hartsville, SC	Natural Gas/Oil	Peaking
Smith [4]	1	189	157	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	2	187	156	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	3	185	155	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	4	186	159	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	6	187	145	Hamlet, NC	Natural Gas/Oil	Peaking
Sutton	4	49	39	Wilmington, NC	Natural Gas/Oil	Peaking
Sutton	5	49	39	Wilmington, NC	Natural Gas/Oil	Peaking
Wayne	1/10	192	177	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	2/11	192	174	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	3/12	193	173	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	4/13	191	170	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	5/14	195	163	Goldsboro, NC	Oil/Natural Gas	Peaking
Weatherspoon	1	41	31	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	2	41	31	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	3	41	32	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	4	41	30	Lumberton, NC	Natural Gas/Oil	Peaking
Total NC		2,597	2,203			
Total SC		763	613			
Total CT		3,360	2,816			

Combined Cycle						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Lee	CT1A	225	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	CT1B	227	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	CT1C	228	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	ST1	379	378	Goldsboro, NC	Natural Gas/Oil	Base
Smith [4]	CT7	194	154	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT8	194	153	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	ST4	182	169	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT9	216	174	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT10	216	175	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	ST5	248	248	Hamlet, NC	Natural Gas/Oil	Base
Sutton	CT1A	224	170	Wilmington, NC	Natural Gas/Oil	Base
Sutton	CT1B	224	171	Wilmington, NC	Natural Gas/Oil	Base
Sutton	ST1	271	266	Wilmington, NC	Natural Gas/Oil	Base
Total CC		3,028	2,568			

Hydro						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Blewett	1	4	4	Lilesville, NC	Water	Intermediate
Blewett	2	4	4	Lilesville, NC	Water	Intermediate
Blewett	3	4	4	Lilesville, NC	Water	Intermediate
Blewett	4	5	5	Lilesville, NC	Water	Intermediate
Blewett	5	5	5	Lilesville, NC	Water	Intermediate
Blewett	6	5	5	Lilesville, NC	Water	Intermediate
Marshall	1	2	2	Marshall, NC	Water	Intermediate
Marshall	2	2	2	Marshall, NC	Water	Intermediate
Tillery	1	21	21	Mt. Gilead, NC	Water	Intermediate
Tillery	2	18	18	Mt. Gilead, NC	Water	Intermediate
Tillery	3	21	21	Mt. Gilead, NC	Water	Intermediate
Tillery	4	24	24	Mt. Gilead, NC	Water	Intermediate
Walters	1	36	36	Waterville, NC	Water	Intermediate
Walters	2	40	40	Waterville, NC	Water	Intermediate
Walters	3	36	36	Waterville, NC	Water	Intermediate
Total Hydro		227	227			

Nuclear						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Brunswick [2]	1	975	938	Southport, NC	Uranium	Base
Brunswick[2]	2	953	932	Southport, NC	Uranium	Base
Harris [2]	1	1009	964	New Hill, NC	Uranium	Base
Robinson	2	797	741	Hartsville, SC	Uranium	Base
Total NC		2,937	2,834			
Total SC		797	741			
Total Nuclear		3,734	3,575			

Solar [5]						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
NC Solar		1.4	49.3	NC	Solar	Intermittent

Total Generation Capability		
	Winter Capacity (MW)	**Summer Capacity (MW)**
TOTAL DEP SYSTEM - N.C.	12,382	11,425
TOTAL DEP SYSTEM - S.C.	1,560	1,354
TOTAL DEP SYSTEM	13,942	12,779

Note 1: Ratings reflect compliance with NERC reliability standards.

Note 2: Duke Energy Progress completed the purchase from NCEMC of jointly owned Roxboro 4, Mayo 1, Brunswick 1 & 2 and Harris 1units effective 7/31/2015.

Note 3: Resource type based on NERC capacity factor classifications which may alternate over the forecast period.

Note 4: Richmond County Plant renamed to Sherwood H. Smith Jr. Energy Complex.

Note 5: Solar capacity ratings reflect contribution to winter and summer peak values.

Planned Uprates			
Unit	Completion Date	Winter MW	Summer MW
Brunswick 1 [1]	Spring 2024	4	2
Brunswick 2 [1]	Spring 2027	6	4
Brunswick 2 [1]	Spring 2029	4	2
Brunswick 2 [1]	Spring 2029	6	4

Note 1: Capacity not reflected in Existing Generating Units and Ratings section.

Retirements					
Unit & Plant Name	Location	Capacity (MW) Winter / Summer		Fuel Type	Retirement Date
Cape Fear 5	Moncure, NC	148	144	Coal	10/1/12
Cape Fear 6	Moncure, NC	175	172	Coal	10/1/12
Cape Fear 1A	Moncure, NC	14	11	Combustion Turbine	3/31/13
Cape Fear 1B	Moncure, NC	14	12	Combustion Turbine	3/31/13
Cape Fear 2A	Moncure, NC	15	12	Combustion Turbine	3/31/13
Cape Fear 2B	Moncure, NC	14	11	Combustion Turbine	10/1/12
Cape Fear 1	Moncure, NC	12	11	Steam Turbine	3/31/11
Cape Fear 2	Moncure, NC	12	7	Steam Turbine	3/31/11
Darlington 5	Hartsville, SC	66	51	Combustion Turbine	5/31/18
Darlington 9	Hartsville, SC	65	50	Combustion Turbine	6/30/17
Darlington 11	Hartsville, SC	67	52	Combustion Turbine	11/8/15
Lee 1	Goldsboro, NC	80	74	Coal	9/15/12
Lee 2	Goldsboro, NC	80	68	Coal	9/15/12
Lee 3	Goldsboro, NC	252	240	Coal	9/15/12
Lee 1	Goldsboro, NC	15	12	Combustion Turbine	10/1/12
Lee 2	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Lee 3	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Lee 4	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Morehead 1	Morehead City, NC	15	12	Combustion Turbine	10/1/12
Robinson 1	Hartsville, SC	179	177	Coal	10/1/12
Robinson 1	Hartsville, SC	15	11	Combustion Turbine	3/31/13
Weatherspoon 1	Lumberton, NC	49	48	Coal	9/30/11
Weatherspoon 2	Lumberton, NC	49	48	Coal	9/30/11
Weatherspoon 3	Lumberton, NC	79	74	Coal	9/30/11

Retirements (cont.)					
Unit & Plant Name	**Location**	**Capacity (MW) Winter / Summer**	**Fuel Type**	**Retirement Date**	**Unit & Plant Name**
Sutton 1	Wilmington, NC	98	97	Coal	11/27/13
Sutton 2	Wilmington, NC	95	90	Coal	11/27/13
Sutton 3	Wilmington, NC	389	366	Coal	11/4/13
Sutton GT1	Wilmington, NC	12	11	Combustion Turbine	3/1/17
Sutton GTA	Wilmington, NC	31	23	Combustion Turbine	7/8/17
Sutton GTB	Wilmington, NC	33	25	Combustion Turbine	7/8/17
Total		2,154 MW	1,972 MW		

Planning Assumptions – Unit Retirements [a, b]					
Unit & Plant Name	**Location**	**Winter Capacity (MW)**	**Summer Capacity (MW)**	**Fuel Type**	**Expected Retirement**
Asheville 1	Arden, N.C.	192	189	Coal	11/2019
Asheville 2	Arden, N.C.	192	189	Coal	11/2019
Mayo 1	Roxboro, N.C.	746	727	Coal	12/2035
Roxboro 1	Semora, N.C.	380	379	Coal	12/2028
Roxboro 2	Semora, N.C.	673	665	Coal	12/2028
Roxboro 3	Semora, N.C.	698	691	Coal	12/2033
Roxboro 4	Semora, N.C.	711	698	Coal	12/2033
Darlington 1	Hartsville, S.C.	63	52	Natural Gas/Oil	12/2020
Darlington 2	Hartsville, S.C.	64	48	Oil	12/2020
Darlington 3	Hartsville, S.C.	63	52	Natural Gas/Oil	12/2020
Darlington 4	Hartsville, S.C.	66	50	Oil	12/2020
Darlington 6	Hartsville, S.C.	62	45	Oil	12/2020
Darlington 7	Hartsville, S.C.	65	51	Natural Gas/Oil	12/2020
Darlington 8	Hartsville, S.C.	66	48	Oil	12/2020
Darlington 10	Hartsville, S.C.	65	51	Oil	12/2020
Blewett 1	Lilesville, N.C.	17	13	Oil	12/2024
Blewett 2	Lilesville, N.C.	17	13	Oil	12/2024
Blewett 3	Lilesville, N.C.	17	13	Oil	12/2024
Blewett 4	Lilesville, N.C.	17	13	Oil	12/2024
Weatherspoon 1	Lumberton, N.C.	41	32	Natural Gas/Oil	12/2024
Weatherspoon 2	Lumberton, N.C.	41	32	Natural Gas/Oil	12/2024
Weatherspoon 3	Lumberton, N.C.	41	33	Natural Gas/Oil	12/2024
Weatherspoon 4	Lumberton, N.C.	41	31	Natural Gas/Oil	12/2024
Total		4,338	4,115		

Note a: Retirement assumptions are for planning purposes only; retirement dates are based on the depreciation study approved as part of the most recent DEP rate case.

Note b: For planning purposes, the 2019 IRP Base Case assumes subsequent license renewal for existing nuclear facilities beginning at end of current operating licenses.

Planning Assumptions – Unit Additions					
Unit & Plant Name	**Location**	**Winter Capacity (MW)**	**Summer Capacity (MW)**	**Fuel Type**	**Expected Commercial Date**
Asheville CC	Arden, N.C.	560	495	Natural Gas	11/2019

Operating License Renewal

Planned Operating License Renewal				
Unit & Plant Name	**Location**	**Original Operating License Expiration**	**Date of Approval**	**Extended Operating License Expiration**
Blewett #1-6 [1]	Lilesville, NC	04/30/08	April 2015	2055
Tillery #1-4 [1]	Mr. Gilead, NC	04/30/08	April 2015	2055
Robinson #2	Hartsville, SC	07/31/10	04/19/2004	07/31/2030
Brunswick #2	Southport, NC	12/27/14	06/26/2006	12/27/2034
Brunswick #1	Southport, NC	09/08/16	06/26/2006	09/08/2036
Harris #1	New Hill, NC	10/24/26	12/12/2008	10/24/2046

Note 1: The license renewal for the Blewett and Tillery Plants was received in April 2015. The license extension was granted for 40 years.

14. NON-UTILITY GENERATION AND WHOLESALE

The following information describes the tables included in this chapter.

Wholesale Sales Contracts

This aggregated table includes wholesale sales contracts that are included in the Spring 2019 Load Forecast.

Wholesale Purchase Contracts

This aggregated table includes all wholesale purchase contracts that are included as resources in the 2019 IRP.

Non-Utility Generation Contracts

This table includes all Non-Utility Generation (NUG) contracts that have been signed since June 1, 2014, as this was the date utilized in the tables in Appendix H in the 2018 IRP. This list is up to date as of July 31, 2019. This information is confidential, so the customer names have been redacted.

Table 14-A Wholesale Sales Contracts

DEP Aggregated Wholesale Sales Contracts									
Commitment (MW)									
2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
3,750	4,107	4,100	4,148	4,199	4,249	4,045	4,095	4,043	4,094

Notes:

- For wholesale contracts, Duke Energy Progress/Duke Energy Carolinas assume all wholesale sales contracts will renew unless there is an indication that the contract will not be renewed.
- Table represents winter capacity.

Table 14-B Firm Wholesale Purchase Power Contracts

Purchased Power Contract	Summer Capacity (MW)	Location	Volume of Purchases (MWh) Jul 17-Jun 18
Peaking / Gas	1583	NC/SC	2,518,800
Intermediate / Gas	150	NC	1,342,585

Notes:

- Data represented above represents contractual agreements. These resources may be modeled differently in the IRP.

Table 14-C
DEP Non-Utility Generator Listing
North Carolina Facilities

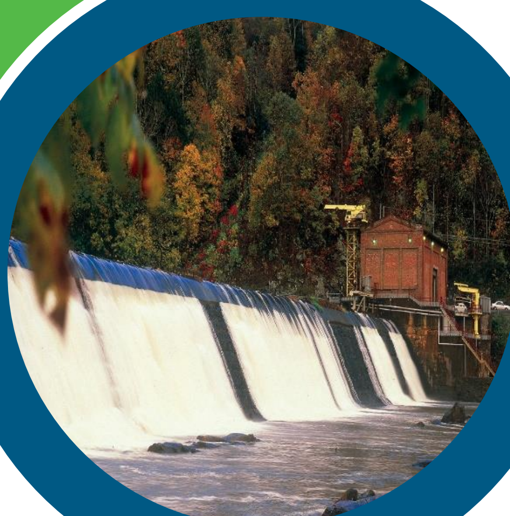


Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1	Leasburg	NC	Solar	Intermediate	Yes	4.0
Facility 2	Warsaw	NC	Solar	Intermediate	Yes	630.0
Facility 3	Candler	NC	Solar	Intermediate	Yes	134.4
Facility 4	Sanford	NC	Solar	Intermediate	Yes	4950.0
Facility 5	Grifton	NC	Solar	Intermediate	Yes	4950.0
Facility 6	Trenton	NC	Solar	Intermediate	Yes	4950.0
Facility 7	Troy	NC	Solar	Intermediate	Yes	5000.0
Facility 8	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 9	Siler City	NC	Solar	Intermediate	Yes	5000.0
Facility 10	Sanford	NC	Solar	Intermediate	Yes	4924.0
Facility 11	Warrenton	NC	Solar	Intermediate	Yes	4998.0
Facility 12	Siler City	NC	Solar	Intermediate	Yes	4498.0
Facility 13	Henderson	NC	Solar	Intermediate	Yes	4998.0
Facility 14	Garner	NC	Solar	Intermediate	Yes	4998.0
Facility 15	Moncure	NC	Solar	Intermediate	Yes	4747.0
Facility 16	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 17	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 18	Siler City	NC	Solar	Intermediate	Yes	4.8
Facility 19	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 20	Asheboro	NC	Solar	Intermediate	Yes	2.0
Facility 21	Weaverville	NC	Solar	Intermediate	Yes	3.8
Facility 22	Hollister	NC	Solar	Intermediate	Yes	2.6
Facility 23	Waynesville	NC	Solar	Intermediate	Yes	5.0
Facility 24	Spring Hope	NC	Solar	Intermediate	Yes	176.0
Facility 25	Spring Hope	NC	Solar	Intermediate	Yes	85.0
Facility 26	Spring Hope	NC	Solar	Intermediate	Yes	93.0
Facility 27	Raleigh	NC	Solar	Intermediate	Yes	400.0
Facility 28	Holly Springs	NC	Solar	Intermediate	Yes	400.0
Facility 29	Southport	NC	Other	Intermediate	Yes	4950.0
Facility 30	Morrisville	NC	Solar	Intermediate	Yes	150.0
Facility 31	Sanford	NC	Solar	Intermediate	Yes	25.0
Facility 32	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 33	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 34	Asheville	NC	Solar	Intermediate	Yes	11.0
Facility 35	Roseboro	NC	Solar	Intermediate	Yes	1980.0
Facility 36	New Bern	NC	Solar	Intermediate	Yes	5000.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 37	Angier	NC	Solar	Intermediate	Yes	4400.0
Facility 38	Snow Hill	NC	Solar	Intermediate	Yes	1999.0
Facility 39	Arden	NC	Solar	Intermediate	Yes	23.0
Facility 40	Asheboro	NC	Solar	Intermediate	Yes	500.0
Facility 41	Cary	NC	Solar	Intermediate	Yes	190.0
Facility 42	Warrenton	NC	Solar	Intermediate	Yes	383.0
Facility 43	Laurinburg	NC	Solar	Intermediate	Yes	193.0
Facility 44	Fairview	NC	Solar	Intermediate	Yes	34.0
Facility 45	Rose Hill	NC	Solar	Intermediate	Yes	5000.0
Facility 46	Beulaville	NC	Solar	Intermediate	Yes	4998.0
Facility 47	Cameron	NC	Solar	Intermediate	Yes	9.0
Facility 48	Asheville	NC	Solar	Intermediate	Yes	9.6
Facility 49	Bailey	NC	Solar	Intermediate	Yes	4950.0
Facility 50	Raleigh	NC	Solar	Intermediate	Yes	32.0
Facility 51	Sanford	NC	Solar	Intermediate	Yes	5000.0
Facility 52	Apex	NC	Solar	Intermediate	Yes	20.0
Facility 53	Clayton	NC	Solar	Intermediate	Yes	17.5
Facility 54	Burgaw	NC	Solar	Intermediate	Yes	5000.0
Facility 55	Burgaw	NC	Solar	Intermediate	Yes	5000.0
Facility 56	Henderson	NC	Solar	Intermediate	Yes	4990.0
Facility 57	Chocowinity	NC	Solar	Intermediate	Yes	15000.0
Facility 58	Four Oaks	NC	Solar	Intermediate	Yes	798.0
Facility 59	Beulaville	NC	Solar	Intermediate	Yes	1999.0
Facility 60	Clayton	NC	Solar	Intermediate	Yes	407.0
Facility 61	Asheville	NC	Solar	Intermediate	Yes	1500.0
Facility 62	Biscoe	NC	Solar	Intermediate	Yes	5000.0
Facility 63	Selma	NC	Solar	Intermediate	Yes	5000.0
Facility 64	Selma	NC	Solar	Intermediate	Yes	4950.0
Facility 65	Bladenboro	NC	Solar	Intermediate	Yes	4975.0
Facility 66	Greensboro	NC	Solar	Intermediate	Yes	5000.0
Facility 67	Grantham	NC	Solar	Intermediate	Yes	5000.0
Facility 68	Fuquay Varina	NC	Solar	Intermediate	Yes	385.0
Facility 69	Warrenton	NC	Solar	Intermediate	Yes	4975.0
Facility 70	Oxford	NC	Solar	Intermediate	Yes	5000.0
Facility 71	Chadbourn	NC	Solar	Intermediate	Yes	5000.0
Facility 72	Moncure	NC	ic	Baseload	Yes	1500.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 73	Alexander	NC	Biomass	Intermediate	Yes	1415.0
Facility 74	Bunnlevel	NC	Solar	Intermediate	Yes	4998.0
Facility 75	Princeton	NC	Solar	Intermediate	Yes	5000.0
Facility 76	Asheboro	NC	Solar	Intermediate	Yes	4938.0
Facility 77	Troy	NC	Solar	Intermediate	Yes	4950.0
Facility 78	Timberlake	NC	Solar	Intermediate	Yes	520.0
Facility 79	Raleigh	NC	Solar	Intermediate	Yes	40.0
Facility 80	Candor	NC	Solar	Intermediate	Yes	4890.0
Facility 81	Raleigh	NC	Solar	Intermediate	Yes	200.0
Facility 82	Asheville	NC	Solar	Intermediate	Yes	193.0
Facility 83	Castalia	NC	Solar	Intermediate	Yes	1999.0
Facility 84	Garner	NC	Solar	Intermediate	Yes	2500.0
Facility 85	Garner	NC	Solar	Intermediate	Yes	1050.0
Facility 86	Raleigh	NC	Solar	Intermediate	Yes	43.0
Facility 87	Beulaville	NC	Solar	Intermediate	Yes	5000.0
Facility 88	Raleigh	NC	Solar	Intermediate	Yes	134.0
Facility 89	Whiteville	NC	Solar	Intermediate	Yes	5000.0
Facility 90	Lake Waccamaw	NC	Solar	Intermediate	Yes	4975.0
Facility 91	Middlesex	NC	Solar	Intermediate	Yes	5000.0
Facility 92	Chocowinity	NC	Solar	Intermediate	Yes	5000.0
Facility 93	Unknown	NC	ic	Baseload	Yes	80.0
Facility 94	Smithfield	NC	Biomass	Intermediate	Yes	1760.0
Facility 95	Bunn	NC	Solar	Intermediate	Yes	5000.0
Facility 96	Raleigh	NC	Solar	Intermediate	Yes	12.1
Facility 97	Raleigh	NC	Solar	Intermediate	Yes	11.0
Facility 98	Raleigh	NC	Solar	Intermediate	Yes	39.0
Facility 99	Raleigh	NC	Solar	Intermediate	Yes	19.0
Facility 100	Raleigh	NC	Solar	Intermediate	Yes	23.0
Facility 101	Elizabethtown	NC	Solar	Intermediate	Yes	4800.0
Facility 102	Clinton	NC	Solar	Intermediate	Yes	4950.0
Facility 103	Pollocksville	NC	Solar	Intermediate	Yes	300.0
Facility 104	Coats	NC	Solar	Intermediate	Yes	4998.0
Facility 105	Zebulon	NC	Solar	Intermediate	Yes	257.0
Facility 106	Oxford	NC	Solar	Intermediate	Yes	4999.0
Facility 107	Cedar Falls	NC	ic	Baseload	Yes	400.0
Facility 108	Oxford	NC	Solar	Intermediate	Yes	4999.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 109	Kinston	NC	Solar	Intermediate	Yes	4998.0
Facility 110	Oxford	NC	Solar	Intermediate	Yes	5000.0
Facility 111	Raleigh	NC	Solar	Intermediate	Yes	65.0
Facility 112	Arden	NC	Solar	Intermediate	Yes	160.0
Facility 113	Raleigh	NC	Solar	Intermediate	Yes	57.0
Facility 114	Raleigh	NC	Solar	Intermediate	Yes	73.0
Facility 115	Castle Hayne	NC	Solar	Intermediate	Yes	58.0
Facility 116	Ramseur	NC	ic	Baseload	Yes	675.0
Facility 117	Delco	NC	Solar	Intermediate	Yes	5000.0
Facility 118	Asheville	NC	Solar	Intermediate	Yes	44.0
Facility 119	Henderson	NC	Solar	Intermediate	Yes	4975.0
Facility 120	Chadbourn	NC	Solar	Intermediate	Yes	5000.0
Facility 121	Raleigh	NC	Solar	Intermediate	Yes	16.0
Facility 122	Dunn	NC	Solar	Intermediate	Yes	1999.0
Facility 123	Kenansville	NC	Solar	Intermediate	Yes	5000.0
Facility 124	Warsaw	NC	Solar	Intermediate	Yes	5000.0
Facility 125	Goldsboro	NC	Solar	Intermediate	Yes	1999.0
Facility 126	Cary	NC	Solar	Intermediate	Yes	8.8
Facility 127	Laurinburg	NC	Solar	Intermediate	Yes	5000.0
Facility 128	Weaverville	NC	Solar	Intermediate	Yes	42.0
Facility 129	Troy	NC	Biomass	Intermediate	Yes	6400.0
Facility 130	Sanford	NC	Solar	Intermediate	Yes	5000.0
Facility 131	Dunn	NC	Solar	Intermediate	Yes	4950.0
Facility 132	Four Oaks	NC	Solar	Intermediate	Yes	5000.0
Facility 133	Fletcher	NC	Solar	Intermediate	Yes	424.0
Facility 134	Newton Grove	NC	Solar	Intermediate	Yes	1980.0
Facility 135	Princeton	NC	Solar	Intermediate	Yes	5000.0
Facility 136	New Bern	NC	Solar	Intermediate	Yes	977.9
Facility 137	Leland	NC	Solar	Intermediate	Yes	53.0
Facility 138	Troy	NC	ic	Baseload	Yes	792.0
Facility 139	Raleigh	NC	Solar	Intermediate	Yes	452.8
Facility 140	Garner	NC	Solar	Intermediate	Yes	24.0
Facility 141	Faison	NC	Solar	Intermediate	Yes	1900.0
Facility 142	Chapel Hill	NC	Solar	Intermediate	Yes	1000.0
Facility 143	Raleigh	NC	Solar	Intermediate	Yes	565.0
Facility 144	Raleigh	NC	Solar	Intermediate	Yes	1000.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 145	Weaverville	NC	Solar	Intermediate	Yes	19.0
Facility 146	Fairmont	NC	Solar	Intermediate	Yes	4999.0
Facility 147	Canton	NC	Solar	Intermediate	Yes	440.0
Facility 148	Apex	NC	Solar	Intermediate	Yes	1500.0
Facility 149	Clyde	NC	Solar	Intermediate	Yes	77.0
Facility 150	Canton	NC	Solar	Intermediate	Yes	66.0
Facility 151	Fairmont	NC	Solar	Intermediate	Yes	4320.0
Facility 152	Ellerbe	NC	Solar	Intermediate	Yes	1999.0
Facility 153	Lumberton	NC	Solar	Intermediate	Yes	1999.0
Facility 154	Raleigh	NC	Solar	Intermediate	Yes	204.0
Facility 155	Raleigh	NC	Solar	Intermediate	Yes	81.0
Facility 156	Raleigh	NC	Solar	Intermediate	Yes	8.5
Facility 157	Lumberton	NC	Solar	Intermediate	Yes	4320.0
Facility 158	Albertson	NC	Solar	Intermediate	Yes	4800.0
Facility 159	Orrum	NC	Solar	Intermediate	Yes	4999.0
Facility 160	Atlantic Beach	NC	Diesel	Peak	Yes	400.0
Facility 161	Wilmington	NC	Diesel	Peak	Yes	400.0
Facility 162	Rocky Point	NC	Diesel	Peak	Yes	400.0
Facility 163	New Bern	NC	Diesel	Peak	Yes	400.0
Facility 164	Wilmington	NC	Diesel	Peak	Yes	350.0
Facility 165	Hope Mills	NC	Diesel	Peak	Yes	350.0
Facility 166	Cary	NC	Diesel	Peak	Yes	350.0
Facility 167	Raleigh	NC	Diesel	Peak	Yes	350.0
Facility 168	Clayton	NC	Diesel	Peak	Yes	438.0
Facility 169	Morrisville	NC	Diesel	Peak	Yes	438.0
Facility 170	Whispering Pines	NC	Diesel	Peak	Yes	438.0
Facility 171	West End	NC	Solar	Intermediate	Yes	5000.0
Facility 172	Louisburg	NC	Solar	Intermediate	Yes	1999.0
Facility 173	Louisburg	NC	Solar	Intermediate	Yes	2000.0
Facility 174	Louisburg	NC	Solar	Intermediate	Yes	5000.0
Facility 175	Fremont	NC	Solar	Intermediate	Yes	4995.0
Facility 176	Snow Hill	NC	Solar	Intermediate	Yes	5000.0
Facility 177	Elm City	NC	Solar	Intermediate	Yes	5000.0
Facility 178	Cordova	NC	Solar	Intermediate	Yes	5000.0
Facility 179	Fayetteville	NC	Solar	Intermediate	Yes	5000.0
Facility 180	Willow Springs	NC	Solar	Intermediate	Yes	5000.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 181	Clarkton	NC	Solar	Intermediate	Yes	1999.0
Facility 182	Chadbourn	NC	Solar	Intermediate	Yes	3800.0
Facility 183	Norlina	NC	Solar	Intermediate	Yes	384.0
Facility 184	Fair Bluff	NC	Solar	Intermediate	Yes	5000.0
Facility 185	Oxford	NC	Solar	Intermediate	Yes	2750.0
Facility 186	Kinston	NC	Solar	Intermediate	Yes	192.5
Facility 187	Garner	NC	Solar	Intermediate	Yes	160.0
Facility 188	Benson	NC	Solar	Intermediate	Yes	4000.0
Facility 189	Mt Olive	NC	Solar	Intermediate	Yes	4999.0
Facility 190	Wilmington	NC	Diesel	Peak	Yes	600.0
Facility 191	Fayetteville	NC	Diesel	Peak	Yes	600.0
Facility 192	Morehead City	NC	Diesel	Peak	Yes	875.0
Facility 193	Wilmington	NC	Diesel	Peak	Yes	750.0
Facility 194	Beulaville	NC	Solar	Intermediate	Yes	2000.0
Facility 195	Henderson	NC	Solar	Intermediate	Yes	100.0
Facility 196	Henderson	NC	Solar	Intermediate	Yes	125.0
Facility 197	Laurinburg	NC	Solar	Intermediate	Yes	5000.0
Facility 198	Rose Hill	NC	Solar	Intermediate	Yes	5000.0
Facility 199	Raleigh	NC	Solar	Intermediate	Yes	45.0
Facility 200	Spruce Pine	NC	Solar	Intermediate	Yes	17.0
Facility 201	Grifton	NC	Solar	Intermediate	Yes	4999.0
Facility 202	Stoney Creek	NC	Solar	Intermediate	Yes	5000.0
Facility 203	Maxton	NC	Solar	Intermediate	Yes	19800.0
Facility 204	Rose Hill	NC	Biomass	Intermediate	Yes	100.0
Facility 205	High Falls	NC	ic	Baseload	Yes	600.0
Facility 206	Greensboro	NC	ic	Baseload	Yes	990.0
Facility 207	Oxford	NC	Solar	Intermediate	Yes	200.0
Facility 208	Oxford	NC	Solar	Intermediate	Yes	158.0
Facility 209	New Bern	NC	Biomass	Intermediate	Yes	4000.0
Facility 210	Apex	NC	Biomass	Intermediate	Yes	7300.0
Facility 211	Leicester	NC	Solar	Intermediate	Yes	800.0
Facility 212	Canton	NC	Solar	Intermediate	Yes	1500.0
Facility 213	Leicester	NC	Solar	Intermediate	Yes	800.0
Facility 214	Albertson	NC	Solar	Intermediate	Yes	1981.0
Facility 215	Shannon	NC	Solar	Intermediate	Yes	4999.0
Facility 216	Maxton	NC	Solar	Intermediate	Yes	4999.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 217	Pembroke	NC	Solar	Intermediate	Yes	4995.0
Facility 218	Nashville	NC	Solar	Intermediate	Yes	1980.0
Facility 219	Leicester	NC	Solar	Intermediate	Yes	1990.0
Facility 220	Nashville	NC	Solar	Intermediate	Yes	1981.0
Facility 221	Snow Hill	NC	Solar	Intermediate	Yes	4995.0
Facility 222	Clinton	NC	Solar	Intermediate	Yes	5000.0
Facility 223	Laurinburg	NC	Solar	Intermediate	Yes	4995.0
Facility 224	Dudley	NC	Solar	Intermediate	Yes	22.3
Facility 225	New Hill	NC	ic	Baseload	Yes	4400.0
Facility 226	Raleigh	NC	Solar	Intermediate	Yes	1000.0
Facility 227	Asheville	NC	Solar	Intermediate	Yes	22.5
Facility 228	Asheville	NC	Solar	Intermediate	Yes	22.5
Facility 229	Four Oaks	NC	Solar	Intermediate	Yes	5000.0
Facility 230	Kenansville	NC	Solar	Intermediate	Yes	1999.0
Facility 231	Kenansville	NC	Solar	Intermediate	Yes	4500.0
Facility 232	Warsaw	NC	Solar	Intermediate	Yes	1999.0
Facility 233	Warsaw	NC	Solar	Intermediate	Yes	4999.0
Facility 234	Warrenton	NC	Solar	Intermediate	Yes	3000.0
Facility 235	Kinston	NC	Solar	Intermediate	Yes	4998.0
Facility 236	Hookerton	NC	Solar	Intermediate	Yes	1999.0
Facility 237	Warsaw	NC	Solar	Intermediate	Yes	5000.0
Facility 238	Bailey	NC	Solar	Intermediate	Yes	5000.0
Facility 239	Franklinville	NC	ic	Baseload	Yes	550.0
Facility 240	Parkton	NC	ic	Baseload	Yes	800.0
Facility 241	LaGrange	NC	Solar	Intermediate	Yes	4998.0
Facility 242	Four Oaks	NC	Solar	Intermediate	Yes	5000.0
Facility 243	Beulaville	NC	Solar	Intermediate	Yes	5000.0
Facility 244	Laurinburg	NC	Solar	Intermediate	Yes	1999.0
Facility 245	Grifton	NC	Solar	Intermediate	Yes	5000.0
Facility 246	Kinston	NC	Solar	Intermediate	Yes	4975.0
Facility 247	Lillington	NC	Solar	Intermediate	Yes	5000.0
Facility 248	Asheboro	NC	Solar	Intermediate	Yes	5000.0
Facility 249	Pembroke	NC	Solar	Intermediate	Yes	4000.0
Facility 250	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 251	Asheville	NC	Solar	Intermediate	Yes	21.0
Facility 252	Cary	NC	Solar	Intermediate	Yes	43.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 253	Marshall	NC	ic	Baseload	Yes	1000.0
Facility 254	Cary	NC	Solar	Intermediate	Yes	9.0
Facility 255	Kenly	NC	Solar	Intermediate	Yes	123.0
Facility 256	Fletcher	NC	Solar	Intermediate	Yes	20.0
Facility 257	Raleigh	NC	Solar	Intermediate	Yes	12.0
Facility 258	Henderson	NC	Solar	Intermediate	Yes	3000.0
Facility 259	Maxton	NC	Solar	Intermediate	Yes	4998.0
Facility 260	Asheville	NC	Solar	Intermediate	Yes	18.9
Facility 261	Asheville	NC	Solar	Intermediate	Yes	16.2
Facility 262	Rowland	NC	Solar	Intermediate	Yes	5000.0
Facility 263	Lumber Bridge	NC	Solar	Intermediate	Yes	4950.0
Facility 264	Cary	NC	Solar	Intermediate	Yes	552.0
Facility 265	Whiteville	NC	Solar	Intermediate	Yes	4950.0
Facility 266	Kenly	NC	Solar	Intermediate	Yes	75.0
Facility 267	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 268	Asheville	NC	ic	Baseload	Yes	2500.0
Facility 269	Rougemont	NC	Solar	Intermediate	Yes	5000.0
Facility 270	Lilesville	NC	Solar	Intermediate	Yes	5000.0
Facility 271	Moncure	NC	Solar	Intermediate	Yes	3.3
Facility 272	Biscoe	NC	Solar	Intermediate	Yes	20000.0
Facility 273	LaGrange	NC	Solar	Intermediate	Yes	5000.0
Facility 274	La Grange	NC	Solar	Intermediate	Yes	4975.0
Facility 275	Louisburg	NC	Solar	Intermediate	Yes	5000.0
Facility 276	Mt Olive	NC	Solar	Intermediate	Yes	4998.0
Facility 277	Dudley	NC	Biomass	Intermediate	Yes	3180.0
Facility 278	Mt Olive	NC	Solar	Intermediate	Yes	4999.0
Facility 279	Mount Olive	NC	Solar	Intermediate	Yes	4975.0
Facility 280	Mt Olive	NC	Solar	Intermediate	Yes	1999.0
Facility 281	Clayton	NC	Solar	Intermediate	Yes	4000.0
Facility 282	Nashville	NC	Solar	Intermediate	Yes	4950.0
Facility 283	Spring Hope	NC	Solar	Intermediate	Yes	4950.0
Facility 284	Middlesex	NC	Solar	Intermediate	Yes	5000.0
Facility 285	Nashville	NC	Solar	Intermediate	Yes	2000.0
Facility 286	Smyrna	NC	Solar	Intermediate	Yes	9.6
Facility 287	Vass	NC	Solar	Intermediate	Yes	13.0
Facility 288	Raleigh	NC	Solar	Intermediate	Yes	1040.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 289	Ernul	NC	Solar	Intermediate	Yes	4975.0
Facility 290	Smithfield	NC	Solar	Intermediate	Yes	5000.0
Facility 291	Laurinburg	NC	Solar	Intermediate	Yes	2000.0
Facility 292	Laurinburg	NC	Solar	Intermediate	Yes	2000.0
Facility 293	Gibson	NC	Solar	Intermediate	Yes	5000.0
Facility 294	Castalia	NC	Solar	Intermediate	Yes	4998.0
Facility 295	Marston	NC	Solar	Intermediate	Yes	4999.0
Facility 296	Wilmington	NC	Solar	Intermediate	Yes	46.0
Facility 297	Laurinburg	NC	Solar	Intermediate	Yes	4950.0
Facility 298	Raleigh	NC	Diesel	Peak	Yes	500.0
Facility 299	Spring Hope	NC	ic	Baseload	Yes	350.0
Facility 300	Jacksonville	NC	Biomass	Intermediate	Yes	1753.0
Facility 301	Red Springs	NC	Solar	Intermediate	Yes	4950.0
Facility 302	Louisburg	NC	Solar	Intermediate	Yes	48.0
Facility 303	Timberlake	NC	Solar	Intermediate	Yes	1000.0
Facility 304	Aurora	NC	-	-	Yes	10000.0
Facility 305	Timberlake	NC	Solar	Intermediate	Yes	2400.0
Facility 306	Pittsboro	NC	Solar	Intermediate	Yes	11.0
Facility 307	Sanford	NC	Other	Intermediate	Yes	250.0
Facility 308	Pikeville	NC	Solar	Intermediate	Yes	4998.0
Facility 309	Bynum	NC	ic	Baseload	Yes	500.0
Facility 310	Pollocksville	NC	Solar	Intermediate	Yes	5000.0
Facility 311	Ernul	NC	Solar	Intermediate	Yes	4999.0
Facility 312	Clinton	NC	Biomass	Intermediate	Yes	150.0
Facility 313	Sanford	NC	Diesel	Peak	Yes	1562.0
Facility 314	Bunn	NC	Solar	Intermediate	Yes	4000.0
Facility 315	Fairmont	NC	Solar	Intermediate	Yes	3500.0
Facility 316	Maxton	NC	Solar	Intermediate	Yes	3600.0
Facility 317	Wilmington	NC	Solar	Intermediate	Yes	383.0
Facility 318	Fayetteville	NC	Solar	Intermediate	Yes	4000.0
Facility 319	Raeford	NC	Solar	Intermediate	Yes	4975.0
Facility 320	St Pauls	NC	Solar	Intermediate	Yes	4998.0
Facility 321	Saint Pauls	NC	Solar	Intermediate	Yes	4975.0
Facility 322	Warrenton	NC	Solar	Intermediate	Yes	4990.0
Facility 323	Fuquay Varina	NC	Solar	Intermediate	Yes	410.0
Facility 324	Cary	NC	Solar	Intermediate	Yes	192.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 325	Cary	NC	Solar	Intermediate	Yes	17.5
Facility 326	Marston	NC	Solar	Intermediate	Yes	4975.0
Facility 327	Rocky Mount	NC	ic	Baseload	Yes	600.0
Facility 328	Swannanoa	NC	Solar	Intermediate	Yes	18.0
Facility 329	Rose Hill	NC	Solar	Intermediate	Yes	1900.0
Facility 330	Roxboro	NC	Solar	Intermediate	Yes	4975.0
Facility 331	Oxford	NC	Solar	Intermediate	Yes	5000.0
Facility 332	Godwin	NC	Solar	Intermediate	Yes	4999.0
Facility 333	Biscoe	NC	Solar	Intermediate	Yes	5000.0
Facility 334	Roseboro	NC	Solar	Intermediate	Yes	1980.0
Facility 335	Asheville	NC	Solar	Intermediate	Yes	20.0
Facility 336	Elm City	NC	Solar	Intermediate	Yes	1200.0
Facility 337	Louisburg	NC	Solar	Intermediate	Yes	5000.0
Facility 338	Cary	NC	Solar	Intermediate	Yes	72.0
Facility 339	Cary	NC	Solar	Intermediate	Yes	800.0
Facility 340	Cary	NC	Solar	Intermediate	Yes	1200.0
Facility 341	Carthage	NC	Solar	Intermediate	Yes	5000.0
Facility 342	Selma	NC	Solar	Intermediate	Yes	5000.0
Facility 343	Shannon	NC	Solar	Intermediate	Yes	5000.0
Facility 344	Shannon	NC	Solar	Intermediate	Yes	4975.0
Facility 345	Gibson	NC	Solar	Intermediate	Yes	5000.0
Facility 346	Snow Hill	NC	Solar	Intermediate	Yes	1990.0
Facility 347	Mt Olive	NC	Solar	Intermediate	Yes	1980.0
Facility 348	Raleigh	NC	Solar	Intermediate	Yes	385.0
Facility 349	Newton Grove	NC	Solar	Intermediate	Yes	4872.0
Facility 350	Clarkton	NC	Solar	Intermediate	Yes	4950.0
Facility 351	Dunn	NC	Solar	Intermediate	Yes	5000.0
Facility 352	Dunn	NC	Solar	Intermediate	Yes	3400.0
Facility 353	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 354	Norlina	NC	Solar	Intermediate	Yes	3500.0
Facility 355	Wilmington	NC	Solar	Intermediate	Yes	100.0
Facility 356	Wilmington	NC	Solar	Intermediate	Yes	1600.0
Facility 357	Louisburg	NC	Solar	Intermediate	Yes	5000.0
Facility 358	Rowland	NC	Solar	Intermediate	Yes	4975.0
Facility 359	Fletcher	NC	Solar	Intermediate	Yes	1000.0
Facility 360	Eagle Springs	NC	Solar	Intermediate	Yes	4950.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 361	Henderson	NC	Solar	Intermediate	Yes	4995.0
Facility 362	St Pauls	NC	Solar	Intermediate	Yes	4998.0
Facility 363	St Pauls	NC	Solar	Intermediate	Yes	4998.0
Facility 364	Henderson	NC	Solar	Intermediate	Yes	4999.0
Facility 365	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 366	Smyrna	NC	Solar	Intermediate	Yes	5000.0
Facility 367	Garland	NC	Solar	Intermediate	Yes	4998.0
Facility 368	Littleton	NC	Solar	Intermediate	Yes	5000.0
Facility 369	Wilmington	NC	Solar	Intermediate	Yes	1000.0
Facility 370	Albertson	NC	Solar	Intermediate	Yes	5000.0
Facility 371	Albertson	NC	Solar	Intermediate	Yes	5000.0
Facility 372	Weaverville	NC	Solar	Intermediate	Yes	193.0
Facility 373	Willow Springs	NC	Solar	Intermediate	Yes	4950.0
Facility 374	Black Mountain	NC	Solar	Intermediate	Yes	40.0
Facility 375	Sanford	NC	Solar	Intermediate	Yes	5000.0
Facility 376	Southern Pines	NC	Solar	Intermediate	Yes	19.9
Facility 377	Godwin	NC	Solar	Intermediate	Yes	4998.0
Facility 378	Raleigh	NC	Solar	Intermediate	Yes	515.0
Facility 379	Asheboro	NC	Solar	Intermediate	Yes	340.0
Facility 380	Wrightsville Beach	NC	Solar	Intermediate	Yes	16.0
Facility 381	Cary	NC	Solar	Intermediate	Yes	20.0
Facility 382	Bailey	NC	Solar	Intermediate	Yes	10000.0
Facility 383	Asheville	NC	Solar	Intermediate	Yes	18.0
Facility 384	Fairmont	NC	Solar	Intermediate	Yes	5000.0
Facility 385	Chocowinity	NC	Solar	Intermediate	Yes	4500.0
Facility 386	Kinston	NC	Solar	Intermediate	Yes	5000.0
Facility 387	Laurinburg	NC	Solar	Intermediate	Yes	5000.0
Facility 388	New Bern	NC	Solar	Intermediate	Yes	4500.0
Facility 389	Black Mountain	NC	Solar	Intermediate	Yes	30.0
Facility 390	Asheville	NC	Solar	Intermediate	Yes	24.0
Facility 391	Henderson	NC	Solar	Intermediate	Yes	17.5
Facility 392	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 393	Pittsboro	NC	Solar	Intermediate	Yes	48.0
Facility 394	Chapel Hill	NC	Solar	Intermediate	Yes	2000.0
Facility 395	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 396	Rose Hill	NC	Biomass	Intermediate	Yes	120.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 397	Wadesboro	NC	Solar	Intermediate	Yes	4998.0
Facility 398	Wadesboro	NC	Solar	Intermediate	Yes	4998.0
Facility 399	Wadesboro	NC	Solar	Intermediate	Yes	5000.0
Facility 400	Roxboro	NC	Solar	Intermediate	Yes	4975.0
Facility 401	Raleigh	NC	Solar	Intermediate	Yes	308.0
Facility 402	Wallace	NC	Solar	Intermediate	Yes	1990.0
Facility 403	Warrenton	NC	Solar	Intermediate	Yes	4975.0
Facility 404	Warsaw	NC	Solar	Intermediate	Yes	1900.0
Facility 405	Warsaw	NC	Solar	Intermediate	Yes	1990.0
Facility 406	Maxton	NC	Solar	Intermediate	Yes	4975.0
Facility 407	Mt Olive	NC	Solar	Intermediate	Yes	5000.0
Facility 408	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 409	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 410	Smithfield	NC	Solar	Intermediate	Yes	5000.0
Facility 411	Siler City	NC	Solar	Intermediate	Yes	4998.0
Facility 412	Raleigh	NC	Solar	Intermediate	Yes	79.0
Facility 413	Elm City	NC	Solar	Intermediate	Yes	4975.0
Facility 414	Albertson	NC	Solar	Intermediate	Yes	5000.0
Facility 415	Blanch	NC	Solar	Intermediate	Yes	5000.0
Facility 416	Blanch	NC	Solar	Intermediate	Yes	4950.0
Facility 417	Blanch	NC	Solar	Intermediate	Yes	4975.0
Facility 418	Red Springs	NC	Solar	Intermediate	Yes	4998.0
Facility 419	Red Springs	NC	Solar	Intermediate	Yes	4950.0
Facility 420	Red Springs	NC	Solar	Intermediate	Yes	4998.0
Facility 421	Lumberton	NC	Solar	Intermediate	Yes	4998.0
Facility 422	Asheville	NC	Solar	Intermediate	Yes	14.6
Facility 423	Chapel Hill	NC	Solar	Intermediate	Yes	10.3
Facility 424	Black Mountain	NC	Solar	Intermediate	Yes	11.4
Facility 425	Fairmont	NC	Solar	Intermediate	Yes	4999.0
Facility 426	Willow Spring	NC	Solar	Intermediate	Yes	1990.0
Facility 427	Coats	NC	Solar	Intermediate	Yes	2.5
Facility 428	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 429	Angier	NC	Solar	Intermediate	Yes	2.6
Facility 430	Angier	NC	Solar	Intermediate	Yes	5.8
Facility 431	Black Mountain	NC	Solar	Intermediate	Yes	5.3
Facility 432	Weaverville	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 433	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 434	Fairview	NC	Solar	Intermediate	Yes	8.0
Facility 435	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 436	Troy	NC	Solar	Intermediate	Yes	4998.0
Facility 437	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 438	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 439	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 440	Asheville	NC	Solar	Intermediate	Yes	2.1
Facility 441	Middlesex	NC	Solar	Intermediate	Yes	4973.0
Facility 442	Pinehurst	NC	Solar	Intermediate	Yes	8.0
Facility 443	Asheboro	NC	Solar	Intermediate	Yes	5.2
Facility 444	Asheville	NC	Solar	Intermediate	Yes	6.9
Facility 445	Henderson	NC	Solar	Intermediate	Yes	5000.0
Facility 446	Black Mountain	NC	Solar	Intermediate	Yes	6.0
Facility 447	Vass	NC	Solar	Intermediate	Yes	6.2
Facility 448	Fairview	NC	Solar	Intermediate	Yes	7.7
Facility 449	Cary	NC	Solar	Intermediate	Yes	2.5
Facility 450	Louisburg	NC	Solar	Intermediate	Yes	4.7
Facility 451	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 452	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 453	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 454	Candler	NC	Solar	Intermediate	Yes	0.9
Facility 455	Garner	NC	Solar	Intermediate	Yes	7.3
Facility 456	Leicester	NC	Solar	Intermediate	Yes	7.7
Facility 457	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 458	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 459	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 460	Pinehurst	NC	Solar	Intermediate	Yes	6.8
Facility 461	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 462	Pittsboro	NC	Solar	Intermediate	Yes	2.2
Facility 463	Leland	NC	Solar	Intermediate	Yes	3.4
Facility 464	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 465	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 466	Wilmington	NC	Solar	Intermediate	Yes	4.3
Facility 467	Raleigh	NC	Solar	Intermediate	Yes	1.6
Facility 468	Asheville	NC	Solar	Intermediate	Yes	4.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 469	Apex	NC	Solar	Intermediate	Yes	96.0
Facility 470	Apex	NC	Solar	Intermediate	Yes	15.0
Facility 471	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 472	Canton	NC	Solar	Intermediate	Yes	2.0
Facility 473	Barnardsville	NC	Solar	Intermediate	Yes	7.6
Facility 474	Clayton	NC	Solar	Intermediate	Yes	1999.0
Facility 475	Selma	NC	Solar	Intermediate	Yes	1999.0
Facility 476	Selma	NC	Solar	Intermediate	Yes	1999.0
Facility 477	Angier	NC	Solar	Intermediate	Yes	5.0
Facility 478	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 479	Asheboro	NC	Solar	Intermediate	Yes	2.4
Facility 480	Farmville	NC	Solar	Intermediate	Yes	5000.0
Facility 481	Pittsboro	NC	Solar	Intermediate	Yes	3.1
Facility 482	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 483	Wake Forest	NC	Solar	Intermediate	Yes	5.9
Facility 484	Louisburg	NC	Solar	Intermediate	Yes	2.5
Facility 485	Rocky Point	NC	Solar	Intermediate	Yes	3.0
Facility 486	Apex	NC	Solar	Intermediate	Yes	3.7
Facility 487	Asheville	NC	Solar	Intermediate	Yes	250.0
Facility 488	Southern Pines	NC	Solar	Intermediate	Yes	1.6
Facility 489	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 490	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 491	Chapel Hill	NC	Solar	Intermediate	Yes	14.0
Facility 492	Black Mtn	NC	Solar	Intermediate	Yes	20.0
Facility 493	Hampstead	NC	Solar	Intermediate	Yes	3.0
Facility 494	Pittsboro	NC	Solar	Intermediate	Yes	8.0
Facility 495	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 496	Laurel Hill	NC	Solar	Intermediate	Yes	5000.0
Facility 497	Raleigh	NC	Solar	Intermediate	Yes	7.7
Facility 498	Asheville	NC	Solar	Intermediate	Yes	5.5
Facility 499	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 500	Asheville	NC	Solar	Intermediate	Yes	1.9
Facility 501	Cary	NC	Solar	Intermediate	Yes	7.0
Facility 502	Lumberton	NC	Solar	Intermediate	Yes	4973.0
Facility 503	Nashville	NC	Solar	Intermediate	Yes	4998.0
Facility 504	Pittsboro	NC	Solar	Intermediate	Yes	5000.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 505	Fuquay Varnia	NC	Solar	Intermediate	Yes	2.5
Facility 506	Star	NC	Solar	Intermediate	Yes	2.3
Facility 507	Candler	NC	Solar	Intermediate	Yes	3.0
Facility 508	Sanford	NC	Solar	Intermediate	Yes	5.8
Facility 509	Cary	NC	Solar	Intermediate	Yes	1.8
Facility 510	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 511	Louisburg	NC	Solar	Intermediate	Yes	9.1
Facility 512	Morrisville	NC	Solar	Intermediate	Yes	1.3
Facility 513	Candler	NC	Solar	Intermediate	Yes	7.3
Facility 514	Rockingham	NC	Solar	Intermediate	Yes	4938.0
Facility 515	Fayetville	NC	Solar	Intermediate	Yes	5.7
Facility 516	Fairview	NC	Solar	Intermediate	Yes	2.5
Facility 517	Spring Hope	NC	Solar	Intermediate	Yes	13.0
Facility 518	Raleigh	NC	Solar	Intermediate	Yes	24.0
Facility 519	Wilmington	NC	Solar	Intermediate	Yes	60.0
Facility 520	Wilmington	NC	Solar	Intermediate	Yes	24.0
Facility 521	Pittsboro	NC	Solar	Intermediate	Yes	77.0
Facility 522	Raleigh	NC	Solar	Intermediate	Yes	273.0
Facility 523	Wilmington	NC	Solar	Intermediate	Yes	40.0
Facility 524	Sanford	NC	Solar	Intermediate	Yes	4998.0
Facility 525	Wallace	NC	Solar	Intermediate	Yes	4998.0
Facility 526	Siler City	NC	Solar	Intermediate	Yes	4973.0
Facility 527	Wallace	NC	Solar	Intermediate	Yes	4998.0
Facility 528	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 529	Raeford	NC	Solar	Intermediate	Yes	5000.0
Facility 530	Alexander	NC	Solar	Intermediate	Yes	2.9
Facility 531	Weaverville	NC	Solar	Intermediate	Yes	1.5
Facility 532	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 533	Delco	NC	Solar	Intermediate	Yes	4500.0
Facility 534	Wilmington	NC	Solar	Intermediate	Yes	1.0
Facility 535	Asheville	NC	Solar	Intermediate	Yes	0.9
Facility 536	Wagram	NC	Solar	Intermediate	Yes	15.4
Facility 537	Smyrna	NC	Wind	Intermediate	Yes	10.0
Facility 538	Wake Forest	NC	Solar	Intermediate	Yes	34.2
Facility 539	Raleigh	NC	Solar	Intermediate	Yes	8.6
Facility 540	Roxboro	NC	Solar	Intermediate	Yes	11.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 541	Aberdeen	NC	Solar	Intermediate	Yes	4.1
Facility 542	Broadway	NC	Solar	Intermediate	Yes	8.6
Facility 543	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 544	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 545	Weaverville	NC	Solar	Intermediate	Yes	3.0
Facility 546	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 547	Bladenboro	NC	Solar	Intermediate	Yes	4550.0
Facility 548	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 549	Pollocksville	NC	Solar	Intermediate	Yes	5000.0
Facility 550	Fuquay Varina	NC	Solar	Intermediate	Yes	5000.0
Facility 551	Pembroke	NC	Solar	Intermediate	Yes	4995.0
Facility 552	Black Mountain	NC	Solar	Intermediate	Yes	15.2
Facility 553	Black Mountain	NC	Solar	Intermediate	Yes	20.0
Facility 554	Dunn	NC	Solar	Intermediate	Yes	4998.0
Facility 555	Semora	NC	Solar	Intermediate	Yes	5.3
Facility 556	Candler	NC	Solar	Intermediate	Yes	2.4
Facility 557	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 558	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 559	Coats	NC	Solar	Intermediate	Yes	3.8
Facility 560	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 561	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 562	Asheville	NC	Solar	Intermediate	Yes	30.0
Facility 563	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 564	Raeford	NC	Solar	Intermediate	Yes	3.0
Facility 565	Asheville	NC	Solar	Intermediate	Yes	8.6
Facility 566	Calypso	NC	Solar	Intermediate	Yes	3400.0
Facility 567	Liberty	NC	Solar	Intermediate	Yes	5000.0
Facility 568	Wake Forest	NC	Solar	Intermediate	Yes	10.0
Facility 569	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 570	Durham	NC	Solar	Intermediate	Yes	5.0
Facility 571	Wilmington	NC	Solar	Intermediate	Yes	2.9
Facility 572	Garner	NC	Solar	Intermediate	Yes	15.0
Facility 573	Zebulon	NC	Solar	Intermediate	Yes	5.0
Facility 574	Whiteville	NC	Solar	Intermediate	Yes	4998.0
Facility 575	Raleigh	NC	Solar	Intermediate	Yes	0.3
Facility 576	Weaverville	NC	Solar	Intermediate	Yes	10.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 577	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 578	Ashville	NC	Solar	Intermediate	Yes	3.8
Facility 579	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 580	Roxboro	NC	Solar	Intermediate	Yes	1998.0
Facility 581	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 582	Pittsboro	NC	Solar	Intermediate	Yes	2.0
Facility 583	Asheville	NC	Solar	Intermediate	Yes	1.9
Facility 584	Apex	NC	Solar	Intermediate	Yes	6.3
Facility 585	Fremont	NC	Solar	Intermediate	Yes	6.0
Facility 586	Chapel Hill	NC	Solar	Intermediate	Yes	7.0
Facility 587	Wilmington	NC	Solar	Intermediate	Yes	8.8
Facility 588	Maggie Valley	NC	Solar	Intermediate	Yes	7.7
Facility 589	Lillington	NC	Solar	Intermediate	Yes	2.9
Facility 590	Lakes	NC	Solar	Intermediate	Yes	3.8
Facility 591	Asheville	NC	Solar	Intermediate	Yes	2.2
Facility 592	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 593	Morrisville	NC	Solar	Intermediate	Yes	3.0
Facility 594	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 595	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 596	Chapel Hill	NC	Solar	Intermediate	Yes	2.1
Facility 597	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 598	Hurdle Mills	NC	Solar	Intermediate	Yes	20.0
Facility 599	Benson	NC	Solar	Intermediate	Yes	4340.0
Facility 600	Canton	NC	Solar	Intermediate	Yes	11.5
Facility 601	Vass	NC	Solar	Intermediate	Yes	4.8
Facility 602	Laurinburg	NC	Solar	Intermediate	Yes	1.7
Facility 603	Raleigh	NC	Solar	Intermediate	Yes	7.5
Facility 604	Asheville	NC	Solar	Intermediate	Yes	45.0
Facility 605	Raleigh	NC	Solar	Intermediate	Yes	180.0
Facility 606	Asheville	NC	Solar	Intermediate	Yes	1.5
Facility 607	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 608	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 609	Asheville	NC	Solar	Intermediate	Yes	5.8
Facility 610	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 611	Raleigh	NC	Solar	Intermediate	Yes	1.9
Facility 612	Black Mountain	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 613	Wilmington	NC	Solar	Intermediate	Yes	6.5
Facility 614	Climax	NC	Solar	Intermediate	Yes	7.7
Facility 615	Castalia	NC	Solar	Intermediate	Yes	3.0
Facility 616	Siler City	NC	Solar	Intermediate	Yes	8.0
Facility 617	Fayetteville	NC	Solar	Intermediate	Yes	7.5
Facility 618	Benson	NC	Solar	Intermediate	Yes	3.0
Facility 619	Raleigh	NC	Solar	Intermediate	Yes	40.0
Facility 620	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 621	Pittsboro	NC	Solar	Intermediate	Yes	4.2
Facility 622	Raleigh	NC	Solar	Intermediate	Yes	68.0
Facility 623	New Bern	NC	Solar	Intermediate	Yes	3.0
Facility 624	Fairview	NC	Solar	Intermediate	Yes	40.0
Facility 625	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 626	Humpstead	NC	Solar	Intermediate	Yes	4.0
Facility 627	Raleigh	NC	Solar	Intermediate	Yes	51.0
Facility 628	Atlantic Beach	NC	Solar	Intermediate	Yes	3.0
Facility 629	Wilmington	NC	Solar	Intermediate	Yes	4.1
Facility 630	Black Mountain	NC	Solar	Intermediate	Yes	5.0
Facility 631	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 632	Raleigh	NC	Solar	Intermediate	Yes	5.9
Facility 633	Raleigh	NC	Solar	Intermediate	Yes	9.8
Facility 634	Southport	NC	Solar	Intermediate	Yes	11.5
Facility 635	Asheville	NC	Solar	Intermediate	Yes	1.4
Facility 636	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 637	Leicester	NC	Solar	Intermediate	Yes	6.9
Facility 638	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 639	Waynesville	NC	Solar	Intermediate	Yes	3.8
Facility 640	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 641	Chapel Hill	NC	Solar	Intermediate	Yes	6.8
Facility 642	Lumberton	NC	Solar	Intermediate	Yes	1000.0
Facility 643	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 644	Lumberton	NC	Solar	Intermediate	Yes	1000.0
Facility 645	Louisburg	NC	Solar	Intermediate	Yes	7.7
Facility 646	Cary	NC	Solar	Intermediate	Yes	36.0
Facility 647	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 648	Raleigh	NC	Solar	Intermediate	Yes	3.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 649	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 650	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 651	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 652	Bailey	NC	Solar	Intermediate	Yes	3.9
Facility 653	Henderson	NC	Solar	Intermediate	Yes	16.0
Facility 654	Selma	NC	Solar	Intermediate	Yes	4.0
Facility 655	Clinton	NC	Solar	Intermediate	Yes	5000.0
Facility 656	Bear Creek	NC	Solar	Intermediate	Yes	2.5
Facility 657	Wilmington	NC	Solar	Intermediate	Yes	3.5
Facility 658	Raleigh	NC	Solar	Intermediate	Yes	9.8
Facility 659	Semora	NC	Solar	Intermediate	Yes	20.0
Facility 660	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 661	Apex	NC	Solar	Intermediate	Yes	4.0
Facility 662	Asheville	NC	Solar	Intermediate	Yes	9.8
Facility 663	Wearverville	NC	Solar	Intermediate	Yes	6.0
Facility 664	Wilmington	NC	Solar	Intermediate	Yes	7.1
Facility 665	West End	NC	Solar	Intermediate	Yes	2.5
Facility 666	Goldsboro	NC	Solar	Intermediate	Yes	255.2
Facility 667	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 668	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 669	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 670	Goldsboro	NC	Solar	Intermediate	Yes	2.6
Facility 671	West End	NC	Solar	Intermediate	Yes	3.6
Facility 672	Atlantic Beach	NC	Solar	Intermediate	Yes	2.9
Facility 673	Goldsboro	NC	Solar	Intermediate	Yes	185.6
Facility 674	Cary	NC	Solar	Intermediate	Yes	2.0
Facility 675	Kenansville	NC	Solar	Intermediate	Yes	3.0
Facility 676	Canton	NC	Solar	Intermediate	Yes	6.9
Facility 677	Weaverville	NC	Solar	Intermediate	Yes	3.8
Facility 678	Arden	NC	Solar	Intermediate	Yes	4.0
Facility 679	Weaverville	NC	Solar	Intermediate	Yes	7.2
Facility 680	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 681	Holly Springs	NC	Solar	Intermediate	Yes	420.0
Facility 682	Asheville	NC	Solar	Intermediate	Yes	392.0
Facility 683	Morrisville	NC	Solar	Intermediate	Yes	392.0
Facility 684	Raleigh	NC	Solar	Intermediate	Yes	532.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 685	Cary	NC	Solar	Intermediate	Yes	2.6
Facility 686	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 687	Wilmingotn	NC	Solar	Intermediate	Yes	3.8
Facility 688	Willow Springs	NC	Solar	Intermediate	Yes	3.0
Facility 689	Lilesville	NC	Solar	Intermediate	Yes	1.7
Facility 690	Asheville	NC	Solar	Intermediate	Yes	2.5
Facility 691	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 692	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 693	West End	NC	Solar	Intermediate	Yes	0.9
Facility 694	Sanford	NC	Solar	Intermediate	Yes	9.4
Facility 695	Jacksonville	NC	Solar	Intermediate	Yes	14.0
Facility 696	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 697	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 698	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 699	Southport	NC	Solar	Intermediate	Yes	2.9
Facility 700	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 701	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 702	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 703	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 704	Morrisville	NC	Solar	Intermediate	Yes	2.8
Facility 705	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 706	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 707	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 708	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 709	Maggie Valley	NC	Solar	Intermediate	Yes	7.6
Facility 710	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 711	Asheville	NC	Solar	Intermediate	Yes	15.2
Facility 712	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 713	Cary	NC	Solar	Intermediate	Yes	64.0
Facility 714	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 715	Cary	NC	Solar	Intermediate	Yes	4.9
Facility 716	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 717	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 718	Cary	NC	Solar	Intermediate	Yes	64.0
Facility 719	Wendell	NC	Solar	Intermediate	Yes	3.0
Facility 720	Goldsboro	NC	Solar	Intermediate	Yes	2.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 721	Raleigh	NC	Solar	Intermediate	Yes	9.0
Facility 722	Pittsboro	NC	Solar	Intermediate	Yes	2.0
Facility 723	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 724	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 725	Leicester	NC	Solar	Intermediate	Yes	9.0
Facility 726	Laurinburg	NC	Solar	Intermediate	Yes	4990.0
Facility 727	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 728	Henderson	NC	Solar	Intermediate	Yes	152.0
Facility 729	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 730	Waynesville	NC	Solar	Intermediate	Yes	6.0
Facility 731	Henderson	NC	Solar	Intermediate	Yes	50.4
Facility 732	Jacksonville	NC	Solar	Intermediate	Yes	4.0
Facility 733	New Bern	NC	Solar	Intermediate	Yes	10.0
Facility 734	Louisburg	NC	Solar	Intermediate	Yes	5.0
Facility 735	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 736	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 737	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 738	Asheville	NC	Solar	Intermediate	Yes	1.8
Facility 739	Wilmington	NC	Solar	Intermediate	Yes	360.0
Facility 740	Cary	NC	Solar	Intermediate	Yes	396.0
Facility 741	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 742	Raleigh	NC	Solar	Intermediate	Yes	6.9
Facility 743	Arden	NC	Solar	Intermediate	Yes	396.0
Facility 744	Carolina Beach	NC	Solar	Intermediate	Yes	5.7
Facility 745	Fletcher	NC	Solar	Intermediate	Yes	6.1
Facility 746	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 747	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 748	Asheville	NC	Solar	Intermediate	Yes	6.8
Facility 749	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 750	Maxton	NC	Solar	Intermediate	Yes	3.0
Facility 751	Raleigh	NC	Solar	Intermediate	Yes	9.0
Facility 752	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 753	Cameron	NC	Solar	Intermediate	Yes	2.6
Facility 754	Bahama	NC	Solar	Intermediate	Yes	6.0
Facility 755	Zebulon	NC	Solar	Intermediate	Yes	7.5
Facility 756	Little Switzerland	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 757	Clinton	NC	Biomass	Intermediate	Yes	1610.0
Facility 758	Apex	NC	Solar	Intermediate	Yes	3.8
Facility 759	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 760	Swannanoa	NC	Solar	Intermediate	Yes	6.0
Facility 761	Asheboro	NC	Solar	Intermediate	Yes	5.0
Facility 762	La Grange	NC	Solar	Intermediate	Yes	11.4
Facility 763	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 764	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 765	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 766	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 767	Cary	NC	Solar	Intermediate	Yes	324.0
Facility 768	Tabor City	NC	Solar	Intermediate	Yes	5000.0
Facility 769	Raleigh	NC	Solar	Intermediate	Yes	360.0
Facility 770	Goldsboro	NC	Solar	Intermediate	Yes	360.0
Facility 771	Angier	NC	Solar	Intermediate	Yes	4998.0
Facility 772	Asheville	NC	Solar	Intermediate	Yes	110.0
Facility 773	Pinehurst	NC	Solar	Intermediate	Yes	160.0
Facility 774	Asheville	NC	Solar	Intermediate	Yes	8.8
Facility 775	Asheville	NC	Solar	Intermediate	Yes	15.9
Facility 776	Oxford	NC	Solar	Intermediate	Yes	5.4
Facility 777	Wilmington	NC	Solar	Intermediate	Yes	81.0
Facility 778	West End	NC	Solar	Intermediate	Yes	4996.0
Facility 779	Cameron	NC	Solar	Intermediate	Yes	9.5
Facility 780	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 781	Knightdale	NC	Solar	Intermediate	Yes	1.0
Facility 782	Wendell	NC	Solar	Intermediate	Yes	5.8
Facility 783	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 784	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 785	Aberdeen	NC	Solar	Intermediate	Yes	12.0
Facility 786	Candler	NC	Solar	Intermediate	Yes	1.0
Facility 787	Weaverville	NC	Solar	Intermediate	Yes	3.0
Facility 788	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 789	Asheville	NC	Solar	Intermediate	Yes	45.0
Facility 790	New Hanover	NC	Solar	Intermediate	Yes	4.3
Facility 791	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 792	Southern Pines	NC	Solar	Intermediate	Yes	9.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 793	Southern Pines	NC	Solar	Intermediate	Yes	5.5
Facility 794	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 795	Asheville	NC	Solar	Intermediate	Yes	8.4
Facility 796	Weaverville	NC	Solar	Intermediate	Yes	5.5
Facility 797	Spring Hope	NC	Solar	Intermediate	Yes	73.4
Facility 798	Spring Hope	NC	Solar	Intermediate	Yes	138.2
Facility 799	Apex	NC	Solar	Intermediate	Yes	70.7
Facility 800	Vass	NC	Solar	Intermediate	Yes	8.0
Facility 801	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 802	Leicester	NC	Solar	Intermediate	Yes	7.5
Facility 803	Biltmore	NC	Solar	Intermediate	Yes	1.7
Facility 804	Robbins	NC	Solar	Intermediate	Yes	2.3
Facility 805	Raleigh	NC	Solar	Intermediate	Yes	28.0
Facility 806	Pittsboro	NC	Solar	Intermediate	Yes	2.0
Facility 807	Roseboro	NC	Biomass	Intermediate	Yes	9000.0
Facility 808	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 809	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 810	Aberdeen	NC	Solar	Intermediate	Yes	11.6
Facility 811	Raleigh	NC	Solar	Intermediate	Yes	28.0
Facility 812	Weaverville	NC	Solar	Intermediate	Yes	4.5
Facility 813	New Bern	NC	Solar	Intermediate	Yes	5000.0
Facility 814	Jackson Spring	NC	Solar	Intermediate	Yes	47700.0
Facility 815	Willow Springs	NC	Solar	Intermediate	Yes	1666.0
Facility 816	Morven	NC	Solar	Intermediate	Yes	78700.0
Facility 817	Candler	NC	Solar	Intermediate	Yes	12.0
Facility 818	Fairview	NC	Solar	Intermediate	Yes	4.0
Facility 819	Asheville	NC	Solar	Intermediate	Yes	84.0
Facility 820	Fayetteville	NC	Solar	Intermediate	Yes	50000.0
Facility 821	Manson	NC	Solar	Intermediate	Yes	50000.0
Facility 822	Middlesex	NC	Solar	Intermediate	Yes	50200.0
Facility 823	Louisburg	NC	Solar	Intermediate	Yes	50200.0
Facility 824	Bladenboro	NC	Solar	Intermediate	Yes	34200.0
Facility 825	Fayetteville	NC	Solar	Intermediate	Yes	72900.0
Facility 826	Ivanhoe	NC	Solar	Intermediate	Yes	38900.0
Facility 827	Maxton	NC	Solar	Intermediate	Yes	33800.0
Facility 828	Kinston	NC	Solar	Intermediate	Yes	48900.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 829	Willard	NC	Solar	Intermediate	Yes	34200.0
Facility 830	Laurinburg	NC	Solar	Intermediate	Yes	64480.0
Facility 831	Weaverville	NC	Solar	Intermediate	Yes	3.3
Facility 832	Rose Hill	NC	Biomass	Intermediate	Yes	350.0
Facility 833	Wadesboro	NC	Solar	Intermediate	Yes	5000.0
Facility 834	Maysville	NC	Solar	Intermediate	Yes	4998.0
Facility 835	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 836	Asheville	NC	Solar	Intermediate	Yes	6.8
Facility 837	Oriental	NC	Solar	Intermediate	Yes	3.6
Facility 838	Wadesboro	NC	Solar	Intermediate	Yes	2200.0
Facility 839	Goldsboro	NC	Solar	Intermediate	Yes	5000.0
Facility 840	Hampstead	NC	Solar	Intermediate	Yes	4590.0
Facility 841	Moncure	NC	Solar	Intermediate	Yes	5000.0
Facility 842	Smyrna	NC	Solar	Intermediate	Yes	2.2
Facility 843	Broadway	NC	Solar	Intermediate	Yes	5.8
Facility 844	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 845	Raleigh	NC	Solar	Intermediate	Yes	2.2
Facility 846	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 847	Weaverville	NC	Solar	Intermediate	Yes	4.9
Facility 848	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 849	Zebulon	NC	Solar	Intermediate	Yes	3.4
Facility 850	Apex	NC	Solar	Intermediate	Yes	3.1
Facility 851	Pinehurst	NC	Solar	Intermediate	Yes	4.3
Facility 852	Alexander	NC	Solar	Intermediate	Yes	2.0
Facility 853	Weaverville	NC	Solar	Intermediate	Yes	6.2
Facility 854	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 855	Wilmington	NC	Solar	Intermediate	Yes	6.3
Facility 856	Wilmington	NC	Solar	Intermediate	Yes	2.8
Facility 857	Wilmington	NC	Solar	Intermediate	Yes	3.4
Facility 858	Chapel Hill	NC	Solar	Intermediate	Yes	5.4
Facility 859	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 860	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 861	Morrisville	NC	Solar	Intermediate	Yes	2.8
Facility 862	Cary	NC	Solar	Intermediate	Yes	2.6
Facility 863	Clayton	NC	Solar	Intermediate	Yes	3.5
Facility 864	Pinehurst	NC	Solar	Intermediate	Yes	4.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 865	Wilmington	NC	Solar	Intermediate	Yes	2.4
Facility 866	West End	NC	Solar	Intermediate	Yes	4.3
Facility 867	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 868	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 869	Rolesville	NC	Solar	Intermediate	Yes	4.0
Facility 870	Pittsboro	NC	Solar	Intermediate	Yes	3.2
Facility 871	Wilmington	NC	Solar	Intermediate	Yes	3.4
Facility 872	Henderson	NC	Solar	Intermediate	Yes	5.3
Facility 873	Weaverville	NC	Solar	Intermediate	Yes	3.1
Facility 874	Laurinburg	NC	Solar	Intermediate	Yes	2.2
Facility 875	Chapel Hill	NC	Solar	Intermediate	Yes	2.0
Facility 876	Candler	NC	Solar	Intermediate	Yes	2.3
Facility 877	Raleigh	NC	Solar	Intermediate	Yes	9.0
Facility 878	Alexander	NC	Solar	Intermediate	Yes	3.4
Facility 879	Candler	NC	Solar	Intermediate	Yes	9.5
Facility 880	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 881	Wilmington	NC	Solar	Intermediate	Yes	4.9
Facility 882	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 883	Black Mountain	NC	Solar	Intermediate	Yes	4.8
Facility 884	Sanford	NC	Solar	Intermediate	Yes	6.1
Facility 885	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 886	Holly Springs	NC	Solar	Intermediate	Yes	3.3
Facility 887	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 888	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 889	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 890	Siler City	NC	Solar	Intermediate	Yes	8.6
Facility 891	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 892	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 893	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 894	Pittsboro	NC	Solar	Intermediate	Yes	2.6
Facility 895	Cary	NC	Solar	Intermediate	Yes	2.6
Facility 896	Asheville	NC	Solar	Intermediate	Yes	7.3
Facility 897	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 898	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 899	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 900	Arden	NC	Solar	Intermediate	Yes	2.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 901	Oxford	NC	Solar	Intermediate	Yes	4.2
Facility 902	Wilmington	NC	Solar	Intermediate	Yes	3.5
Facility 903	Holly Springs	NC	Solar	Intermediate	Yes	4.1
Facility 904	Hampstead	NC	Solar	Intermediate	Yes	3.4
Facility 905	Cary	NC	Solar	Intermediate	Yes	6.8
Facility 906	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 907	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 908	Vass	NC	Solar	Intermediate	Yes	3.7
Facility 909	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 910	Arden	NC	Solar	Intermediate	Yes	3.7
Facility 911	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 912	Apex	NC	Solar	Intermediate	Yes	3.6
Facility 913	Chapel Hill	NC	Solar	Intermediate	Yes	2.3
Facility 914	Chapel Hill	NC	Solar	Intermediate	Yes	2.0
Facility 915	Holly Springs	NC	Solar	Intermediate	Yes	3.3
Facility 916	Weaverville	NC	Solar	Intermediate	Yes	4.4
Facility 917	Kenly	NC	Solar	Intermediate	Yes	3.8
Facility 918	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 919	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 920	Asheville	NC	Solar	Intermediate	Yes	5.9
Facility 921	Cary	NC	Solar	Intermediate	Yes	3.6
Facility 922	Black Mountain	NC	Solar	Intermediate	Yes	4.3
Facility 923	Raleigh	NC	Solar	Intermediate	Yes	7.7
Facility 924	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 925	Fletcher	NC	Solar	Intermediate	Yes	7.0
Facility 926	Bahama	NC	Solar	Intermediate	Yes	3.7
Facility 927	New Bern	NC	Solar	Intermediate	Yes	4.4
Facility 928	Chapel Hill	NC	Solar	Intermediate	Yes	2.5
Facility 929	Clayton	NC	Solar	Intermediate	Yes	3.5
Facility 930	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 931	Morrisville	NC	Solar	Intermediate	Yes	3.5
Facility 932	Fletcher	NC	Solar	Intermediate	Yes	3.9
Facility 933	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 934	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 935	Hampstead	NC	Solar	Intermediate	Yes	2.3
Facility 936	Barnardsville	NC	Solar	Intermediate	Yes	2.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 937	Cary	NC	Solar	Intermediate	Yes	4.1
Facility 938	Asheville	NC	Solar	Intermediate	Yes	3.5
Facility 939	Wilmington	NC	Solar	Intermediate	Yes	2.0
Facility 940	Cary	NC	Solar	Intermediate	Yes	2.5
Facility 941	Manson	NC	Solar	Intermediate	Yes	3.9
Facility 942	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 943	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 944	Carolina Beach	NC	Solar	Intermediate	Yes	4.4
Facility 945	Chapel Hill	NC	Solar	Intermediate	Yes	6.8
Facility 946	Cary	NC	Solar	Intermediate	Yes	5.2
Facility 947	Clayton	NC	Solar	Intermediate	Yes	4.6
Facility 948	Asheboro	NC	Solar	Intermediate	Yes	6.2
Facility 949	Morehead City	NC	Solar	Intermediate	Yes	2.2
Facility 950	Wilmington	NC	Solar	Intermediate	Yes	2.4
Facility 951	Garner	NC	Solar	Intermediate	Yes	6.3
Facility 952	Carolina Beach	NC	Solar	Intermediate	Yes	4.3
Facility 953	Wilmington	NC	Solar	Intermediate	Yes	5.9
Facility 954	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 955	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 956	Asheville	NC	Solar	Intermediate	Yes	2.1
Facility 957	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 958	Hampstead	NC	Solar	Intermediate	Yes	2.3
Facility 959	Fairview	NC	Solar	Intermediate	Yes	5.3
Facility 960	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 961	Wilmington	NC	Solar	Intermediate	Yes	5.5
Facility 962	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 963	Apex	NC	Solar	Intermediate	Yes	3.1
Facility 964	Carolina Beach	NC	Solar	Intermediate	Yes	2.5
Facility 965	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 966	Candler	NC	Solar	Intermediate	Yes	5.6
Facility 967	Wilmington	NC	Solar	Intermediate	Yes	2.5
Facility 968	Lakes	NC	Solar	Intermediate	Yes	2.5
Facility 969	Wilmington	NC	Solar	Intermediate	Yes	2.5
Facility 970	Morehead City	NC	Solar	Intermediate	Yes	2.4
Facility 971	Garner	NC	Solar	Intermediate	Yes	3.1
Facility 972	Cary	NC	Solar	Intermediate	Yes	3.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 973	Southport	NC	Solar	Intermediate	Yes	2.3
Facility 974	Lillington	NC	Solar	Intermediate	Yes	3.2
Facility 975	Apex	NC	Solar	Intermediate	Yes	4.1
Facility 976	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 977	Apex	NC	Solar	Intermediate	Yes	4.6
Facility 978	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 979	Southern Pines	NC	Solar	Intermediate	Yes	4.3
Facility 980	Lakes	NC	Solar	Intermediate	Yes	2.4
Facility 981	Wilmington	NC	Solar	Intermediate	Yes	2.8
Facility 982	Wilmington	NC	Solar	Intermediate	Yes	2.5
Facility 983	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 984	Clayton	NC	Solar	Intermediate	Yes	2.4
Facility 985	Pinehurst	NC	Solar	Intermediate	Yes	3.9
Facility 986	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 987	Youngsville	NC	Solar	Intermediate	Yes	3.6
Facility 988	Wilmington	NC	Solar	Intermediate	Yes	2.4
Facility 989	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 990	Bayboro	NC	Solar	Intermediate	Yes	10.0
Facility 991	Wilmington	NC	Solar	Intermediate	Yes	2.4
Facility 992	Wilmington	NC	Solar	Intermediate	Yes	4.6
Facility 993	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 994	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 995	Clayton	NC	Solar	Intermediate	Yes	2.5
Facility 996	Wendell	NC	Solar	Intermediate	Yes	4.1
Facility 997	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 998	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 999	Cary	NC	Solar	Intermediate	Yes	2.5
Facility 1000	Wilmington	NC	Solar	Intermediate	Yes	2.5
Facility 1001	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 1002	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 1003	Wilmington	NC	Solar	Intermediate	Yes	4.5
Facility 1004	Beaufort	NC	Solar	Intermediate	Yes	2.6
Facility 1005	Selma	NC	Solar	Intermediate	Yes	4.7
Facility 1006	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 1007	Morehead City	NC	Solar	Intermediate	Yes	2.5
Facility 1008	Cary	NC	Solar	Intermediate	Yes	3.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1009	Wendell	NC	Solar	Intermediate	Yes	4.2
Facility 1010	Wilmington	NC	Solar	Intermediate	Yes	2.3
Facility 1011	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1012	Sanford	NC	Solar	Intermediate	Yes	4.4
Facility 1013	Asheboro	NC	Solar	Intermediate	Yes	5.3
Facility 1014	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 1015	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1016	Pinehurst	NC	Solar	Intermediate	Yes	2.3
Facility 1017	Pittsboro	NC	Solar	Intermediate	Yes	5.1
Facility 1018	Cameron	NC	Solar	Intermediate	Yes	3.4
Facility 1019	Apex	NC	Solar	Intermediate	Yes	27.7
Facility 1020	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1021	Raeford	NC	Solar	Intermediate	Yes	7.2
Facility 1022	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1023	Chapel Hill	NC	Solar	Intermediate	Yes	3.5
Facility 1024	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 1025	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 1026	Cary	NC	Solar	Intermediate	Yes	2.2
Facility 1027	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 1028	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1029	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1030	Apex	NC	Solar	Intermediate	Yes	5.6
Facility 1031	West End	NC	Solar	Intermediate	Yes	4.2
Facility 1032	Chapel Hill	NC	Solar	Intermediate	Yes	3.3
Facility 1033	Hampstead	NC	Solar	Intermediate	Yes	2.7
Facility 1034	Wilmington	NC	Solar	Intermediate	Yes	4.8
Facility 1035	Holly Springs	NC	Solar	Intermediate	Yes	2.5
Facility 1036	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 1037	Pinehurst	NC	Solar	Intermediate	Yes	4.3
Facility 1038	Cary	NC	Solar	Intermediate	Yes	3.5
Facility 1039	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 1040	Raleigh	NC	Solar	Intermediate	Yes	2.3
Facility 1041	Barnardsville	NC	Solar	Intermediate	Yes	7.6
Facility 1042	Apex	NC	Solar	Intermediate	Yes	4.1
Facility 1043	Cary	NC	Solar	Intermediate	Yes	4.2
Facility 1044	Pittsboro	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1045	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 1046	Hampstead	NC	Solar	Intermediate	Yes	4.3
Facility 1047	Hampstead	NC	Solar	Intermediate	Yes	3.0
Facility 1048	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 1049	Asheville	NC	Solar	Intermediate	Yes	4.4
Facility 1050	Cary	NC	Solar	Intermediate	Yes	5.8
Facility 1051	Rocky Point	NC	Solar	Intermediate	Yes	2.3
Facility 1052	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 1053	Henderson	NC	Solar	Intermediate	Yes	5.5
Facility 1054	Chapel Hill	NC	Solar	Intermediate	Yes	2.6
Facility 1055	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 1056	Chapel Hill	NC	Solar	Intermediate	Yes	4.2
Facility 1057	Morehead City	NC	Solar	Intermediate	Yes	3.3
Facility 1058	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 1059	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 1060	Clyde	NC	Solar	Intermediate	Yes	2.9
Facility 1061	Princeton	NC	Solar	Intermediate	Yes	4.0
Facility 1062	Eagle Springs	NC	Solar	Intermediate	Yes	4.1
Facility 1063	New Hill	NC	Solar	Intermediate	Yes	2.9
Facility 1064	Cary	NC	Solar	Intermediate	Yes	5.1
Facility 1065	Wilmington	NC	Solar	Intermediate	Yes	3.2
Facility 1066	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 1067	Wilmington	NC	Solar	Intermediate	Yes	4.6
Facility 1068	Asheville	NC	Solar	Intermediate	Yes	2.1
Facility 1069	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1070	Leland	NC	Solar	Intermediate	Yes	3.0
Facility 1071	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1072	Arden	NC	Solar	Intermediate	Yes	6.2
Facility 1073	Hampstead	NC	Solar	Intermediate	Yes	3.1
Facility 1074	Wilmington	NC	Solar	Intermediate	Yes	2.3
Facility 1075	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 1076	Oxford	NC	Solar	Intermediate	Yes	4.6
Facility 1077	Cary	NC	Solar	Intermediate	Yes	5.4
Facility 1078	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1079	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1080	Asheville	NC	Solar	Intermediate	Yes	2.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1081	Apex	NC	Solar	Intermediate	Yes	2.4
Facility 1082	Holly Springs	NC	Solar	Intermediate	Yes	4.2
Facility 1083	Chapel Hill	NC	Solar	Intermediate	Yes	4.5
Facility 1084	Raleigh	NC	Solar	Intermediate	Yes	4.9
Facility 1085	Pittsboro	NC	Solar	Intermediate	Yes	6.9
Facility 1086	Arden	NC	Solar	Intermediate	Yes	4.4
Facility 1087	Cary	NC	Solar	Intermediate	Yes	2.1
Facility 1088	Kure Beach	NC	Solar	Intermediate	Yes	2.6
Facility 1089	Fuquay Varina	NC	Solar	Intermediate	Yes	5.6
Facility 1090	Wilmington	NC	Solar	Intermediate	Yes	5.2
Facility 1091	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 1092	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 1093	Willow Spring	NC	Solar	Intermediate	Yes	5.5
Facility 1094	Wilmington	NC	Solar	Intermediate	Yes	4.3
Facility 1095	Wilmington	NC	Solar	Intermediate	Yes	4.9
Facility 1096	Holly Springs	NC	Solar	Intermediate	Yes	5.1
Facility 1097	Sanford	NC	Solar	Intermediate	Yes	3.8
Facility 1098	Garner	NC	Solar	Intermediate	Yes	4.9
Facility 1099	Clayton	NC	Solar	Intermediate	Yes	4.2
Facility 1100	Semora	NC	Solar	Intermediate	Yes	3.6
Facility 1101	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 1102	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 1103	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 1104	Arden	NC	Solar	Intermediate	Yes	4.5
Facility 1105	Asheville	NC	Solar	Intermediate	Yes	4.7
Facility 1106	Smithfield	NC	Solar	Intermediate	Yes	5.5
Facility 1107	Black Mountain	NC	Solar	Intermediate	Yes	4.7
Facility 1108	Black Mountain	NC	Solar	Intermediate	Yes	5.3
Facility 1109	Wilmington	NC	Solar	Intermediate	Yes	5.2
Facility 1110	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1111	Jacksonville	NC	Solar	Intermediate	Yes	5.7
Facility 1112	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 1113	Fayetteville	NC	Solar	Intermediate	Yes	3.3
Facility 1114	Kure Beach	NC	Solar	Intermediate	Yes	2.4
Facility 1115	Morrisville	NC	Solar	Intermediate	Yes	5.2
Facility 1116	Asheville	NC	Solar	Intermediate	Yes	2.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1117	Fairview	NC	Solar	Intermediate	Yes	3.5
Facility 1118	Wilmington	NC	Solar	Intermediate	Yes	4.2
Facility 1119	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 1120	Wilmington	NC	Solar	Intermediate	Yes	4.3
Facility 1121	Wilmington	NC	Solar	Intermediate	Yes	2.5
Facility 1122	Nashville	NC	Solar	Intermediate	Yes	4.5
Facility 1123	Wilmington	NC	Solar	Intermediate	Yes	4.8
Facility 1124	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1125	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1126	Hampstead	NC	Solar	Intermediate	Yes	4.8
Facility 1127	Pinehurst	NC	Solar	Intermediate	Yes	4.4
Facility 1128	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1129	Apex	NC	Solar	Intermediate	Yes	4.3
Facility 1130	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 1131	Rocky Point	NC	Solar	Intermediate	Yes	2.5
Facility 1132	Chapel Hill	NC	Solar	Intermediate	Yes	3.5
Facility 1133	Willow Spring	NC	Solar	Intermediate	Yes	2.0
Facility 1134	Wilmington	NC	Solar	Intermediate	Yes	2.4
Facility 1135	West End	NC	Solar	Intermediate	Yes	5.6
Facility 1136	Pinehurst	NC	Solar	Intermediate	Yes	5.0
Facility 1137	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 1138	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1139	Raleigh	NC	Solar	Intermediate	Yes	5.4
Facility 1140	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 1141	Chapel Hill	NC	Solar	Intermediate	Yes	4.6
Facility 1142	Raleigh	NC	Solar	Intermediate	Yes	6.2
Facility 1143	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1144	Pinehurst	NC	Solar	Intermediate	Yes	5.1
Facility 1145	Wilmington	NC	Solar	Intermediate	Yes	4.1
Facility 1146	Linden	NC	Solar	Intermediate	Yes	4.2
Facility 1147	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1148	Raleigh	NC	Solar	Intermediate	Yes	5.2
Facility 1149	Candler	NC	Solar	Intermediate	Yes	6.1
Facility 1150	Weaverville	NC	Solar	Intermediate	Yes	6.3
Facility 1151	Black Mountain	NC	Solar	Intermediate	Yes	6.2
Facility 1152	Cary	NC	Solar	Intermediate	Yes	6.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1153	Garner	NC	Solar	Intermediate	Yes	4.3
Facility 1154	Arden	NC	Solar	Intermediate	Yes	3.2
Facility 1155	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 1156	Hampstead	NC	Solar	Intermediate	Yes	4.2
Facility 1157	New Hill	NC	Solar	Intermediate	Yes	5.5
Facility 1158	Pittsboro	NC	Solar	Intermediate	Yes	7.1
Facility 1159	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1160	Cary	NC	Solar	Intermediate	Yes	5.7
Facility 1161	Arden	NC	Solar	Intermediate	Yes	5.3
Facility 1162	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 1163	Fletcher	NC	Solar	Intermediate	Yes	7.4
Facility 1164	Chapel Hill	NC	Solar	Intermediate	Yes	4.0
Facility 1165	Cary	NC	Solar	Intermediate	Yes	2.8
Facility 1166	Cary	NC	Solar	Intermediate	Yes	2.0
Facility 1167	Asheville	NC	Solar	Intermediate	Yes	5.4
Facility 1168	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 1169	Bear Creek	NC	Solar	Intermediate	Yes	7.3
Facility 1170	Fairview	NC	Solar	Intermediate	Yes	5.9
Facility 1171	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1172	Cary	NC	Solar	Intermediate	Yes	4.4
Facility 1173	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 1174	Wilmington	NC	Solar	Intermediate	Yes	4.1
Facility 1175	Pinehurst	NC	Solar	Intermediate	Yes	2.9
Facility 1176	Asheville	NC	Solar	Intermediate	Yes	2.0
Facility 1177	Pinehurst	NC	Solar	Intermediate	Yes	4.8
Facility 1178	Willard	NC	Solar	Intermediate	Yes	4.1
Facility 1179	Wilmington	NC	Solar	Intermediate	Yes	4.3
Facility 1180	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 1181	Apex	NC	Solar	Intermediate	Yes	5.4
Facility 1182	Cary	NC	Solar	Intermediate	Yes	5.6
Facility 1183	Swansboro	NC	Solar	Intermediate	Yes	2.1
Facility 1184	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1185	Chapel Hill	NC	Solar	Intermediate	Yes	4.1
Facility 1186	Wilmington	NC	Solar	Intermediate	Yes	5.1
Facility 1187	Bald Head Island	NC	Solar	Intermediate	Yes	4.6
Facility 1188	Raleigh	NC	Solar	Intermediate	Yes	3.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1189	Leland	NC	Solar	Intermediate	Yes	4.9
Facility 1190	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1191	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1192	Wake Forest	NC	Solar	Intermediate	Yes	2.8
Facility 1193	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1194	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1195	Vass	NC	Solar	Intermediate	Yes	8.6
Facility 1196	Wilmington	NC	Solar	Intermediate	Yes	6.4
Facility 1197	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 1198	Vass	NC	Solar	Intermediate	Yes	4.0
Facility 1199	Pittsboro	NC	Solar	Intermediate	Yes	2.2
Facility 1200	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 1201	Youngsville	NC	Solar	Intermediate	Yes	2.6
Facility 1202	Candler	NC	Solar	Intermediate	Yes	5.5
Facility 1203	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1204	Fairview	NC	Solar	Intermediate	Yes	8.7
Facility 1205	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 1206	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1207	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 1208	Cary	NC	Solar	Intermediate	Yes	7.8
Facility 1209	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 1210	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 1211	Wilmington	NC	Solar	Intermediate	Yes	4.2
Facility 1212	Apex	NC	Solar	Intermediate	Yes	7.2
Facility 1213	Asheville	NC	Solar	Intermediate	Yes	3.5
Facility 1214	Holly Springs	NC	Solar	Intermediate	Yes	4.1
Facility 1215	Roxboro	NC	Solar	Intermediate	Yes	3.3
Facility 1216	Apex	NC	Solar	Intermediate	Yes	4.1
Facility 1217	Candler	NC	Solar	Intermediate	Yes	2.2
Facility 1218	Benson	NC	Solar	Intermediate	Yes	3.8
Facility 1219	Willow Spring	NC	Solar	Intermediate	Yes	2.6
Facility 1220	Garner	NC	Solar	Intermediate	Yes	4.3
Facility 1221	Fuquay Varina	NC	Solar	Intermediate	Yes	5.3
Facility 1222	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1223	Sanford	NC	Solar	Intermediate	Yes	4.6
Facility 1224	Asheville	NC	Solar	Intermediate	Yes	4.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1225	Wake Forest	NC	Solar	Intermediate	Yes	3.4
Facility 1226	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 1227	Cary	NC	Solar	Intermediate	Yes	4.4
Facility 1228	Holly Springs	NC	Solar	Intermediate	Yes	4.9
Facility 1229	Fuquay Varina	NC	Solar	Intermediate	Yes	3.9
Facility 1230	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1231	Zebulon	NC	Solar	Intermediate	Yes	5.4
Facility 1232	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 1233	Raleigh	NC	Solar	Intermediate	Yes	9.1
Facility 1234	Cary	NC	Solar	Intermediate	Yes	9.9
Facility 1235	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 1236	Candler	NC	Solar	Intermediate	Yes	5.3
Facility 1237	Wilmington	NC	Solar	Intermediate	Yes	3.9
Facility 1238	Carthage	NC	Solar	Intermediate	Yes	5.7
Facility 1239	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 1240	Sanford	NC	Solar	Intermediate	Yes	4.2
Facility 1241	Cary	NC	Solar	Intermediate	Yes	4.6
Facility 1242	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 1243	Wilmington	NC	Solar	Intermediate	Yes	8.2
Facility 1244	Raleigh	NC	Solar	Intermediate	Yes	2.2
Facility 1245	Castle Hayne	NC	Solar	Intermediate	Yes	3.3
Facility 1246	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1247	Wake Forest	NC	Solar	Intermediate	Yes	2.7
Facility 1248	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 1249	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 1250	Fuquay Varina	NC	Solar	Intermediate	Yes	6.5
Facility 1251	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 1252	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 1253	Knightdale	NC	Solar	Intermediate	Yes	2.0
Facility 1254	Wilmington	NC	Solar	Intermediate	Yes	5.2
Facility 1255	Mount Olive	NC	Solar	Intermediate	Yes	2.3
Facility 1256	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 1257	Ramseur	NC	Solar	Intermediate	Yes	4.5
Facility 1258	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 1259	Raleigh	NC	Solar	Intermediate	Yes	4.7
Facility 1260	Asheville	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1261	Fairview	NC	Solar	Intermediate	Yes	4.2
Facility 1262	Wendell	NC	Solar	Intermediate	Yes	3.8
Facility 1263	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1264	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 1265	Morrisville	NC	Solar	Intermediate	Yes	3.9
Facility 1266	Raleigh	NC	Solar	Intermediate	Yes	7.1
Facility 1267	Zebulon	NC	Solar	Intermediate	Yes	5.7
Facility 1268	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1269	Cary	NC	Solar	Intermediate	Yes	2.6
Facility 1270	Weaverville	NC	Solar	Intermediate	Yes	3.7
Facility 1271	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 1272	Pittsboro	NC	Solar	Intermediate	Yes	6.9
Facility 1273	Leland	NC	Solar	Intermediate	Yes	3.6
Facility 1274	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 1275	Wade	NC	Solar	Intermediate	Yes	7.2
Facility 1276	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 1277	Willow Spring	NC	Solar	Intermediate	Yes	4.0
Facility 1278	Raleigh	NC	Solar	Intermediate	Yes	4.9
Facility 1279	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 1280	Morrisville	NC	Solar	Intermediate	Yes	5.3
Facility 1281	Fayetteville	NC	Solar	Intermediate	Yes	4.1
Facility 1282	Rocky Point	NC	Solar	Intermediate	Yes	2.7
Facility 1283	Hampstead	NC	Solar	Intermediate	Yes	6.3
Facility 1284	Wilmington	NC	Solar	Intermediate	Yes	4.4
Facility 1285	Clayton	NC	Solar	Intermediate	Yes	3.7
Facility 1286	Hampstead	NC	Solar	Intermediate	Yes	5.7
Facility 1287	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 1288	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1289	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1290	Wilmington	NC	Solar	Intermediate	Yes	5.1
Facility 1291	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 1292	Clayton	NC	Solar	Intermediate	Yes	5.2
Facility 1293	Pinehurst	NC	Solar	Intermediate	Yes	4.8
Facility 1294	Leland	NC	Solar	Intermediate	Yes	3.4
Facility 1295	Kure Beach	NC	Solar	Intermediate	Yes	5.3
Facility 1296	Asheville	NC	Solar	Intermediate	Yes	3.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1297	Fuquay Varina	NC	Solar	Intermediate	Yes	3.5
Facility 1298	Raleigh	NC	Solar	Intermediate	Yes	2.2
Facility 1299	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 1300	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 1301	Cary	NC	Solar	Intermediate	Yes	7.9
Facility 1302	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 1303	Raleigh	NC	Solar	Intermediate	Yes	6.1
Facility 1304	Goldsboro	NC	Solar	Intermediate	Yes	4.6
Facility 1305	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 1306	Whispering Pines	NC	Solar	Intermediate	Yes	3.7
Facility 1307	Apex	NC	Solar	Intermediate	Yes	4.8
Facility 1308	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 1309	Aberdeen	NC	Solar	Intermediate	Yes	3.9
Facility 1310	Asheville	NC	Solar	Intermediate	Yes	4.5
Facility 1311	Wilmington	NC	Solar	Intermediate	Yes	2.8
Facility 1312	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 1313	Pittsboro	NC	Solar	Intermediate	Yes	2.7
Facility 1314	Goldsboro	NC	Solar	Intermediate	Yes	4.8
Facility 1315	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 1316	Cary	NC	Solar	Intermediate	Yes	5.8
Facility 1317	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 1318	Angier	NC	Solar	Intermediate	Yes	4.5
Facility 1319	Pittsboro	NC	Solar	Intermediate	Yes	4.7
Facility 1320	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 1321	Vass	NC	Solar	Intermediate	Yes	2.0
Facility 1322	Hampstead	NC	Solar	Intermediate	Yes	4.8
Facility 1323	Moncure	NC	Solar	Intermediate	Yes	3.6
Facility 1324	Benson	NC	Solar	Intermediate	Yes	6.4
Facility 1325	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 1326	Leland	NC	Solar	Intermediate	Yes	3.8
Facility 1327	Wilmington	NC	Solar	Intermediate	Yes	5.3
Facility 1328	Pinehurst	NC	Solar	Intermediate	Yes	3.8
Facility 1329	Pinehurst	NC	Solar	Intermediate	Yes	6.7
Facility 1330	Pinehurst	NC	Solar	Intermediate	Yes	3.2
Facility 1331	Clayton	NC	Solar	Intermediate	Yes	4.0
Facility 1332	Cary	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1333	Chapel Hill	NC	Solar	Intermediate	Yes	2.7
Facility 1334	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 1335	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 1336	West End	NC	Solar	Intermediate	Yes	4.9
Facility 1337	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 1338	Apex	NC	Solar	Intermediate	Yes	3.5
Facility 1339	Southern Pines	NC	Solar	Intermediate	Yes	6.0
Facility 1340	Cary	NC	Solar	Intermediate	Yes	3.6
Facility 1341	Hampstead	NC	Solar	Intermediate	Yes	4.2
Facility 1342	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 1343	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 1344	Rougemont	NC	Solar	Intermediate	Yes	4.1
Facility 1345	Hampstead	NC	Solar	Intermediate	Yes	3.0
Facility 1346	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 1347	Fayetteville	NC	Solar	Intermediate	Yes	3.9
Facility 1348	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 1349	Wilmington	NC	Solar	Intermediate	Yes	5.3
Facility 1350	Pittsboro	NC	Solar	Intermediate	Yes	4.6
Facility 1351	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 1352	Asheville	NC	Solar	Intermediate	Yes	4.4
Facility 1353	Apex	NC	Solar	Intermediate	Yes	5.8
Facility 1354	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 1355	Angier	NC	Solar	Intermediate	Yes	4.8
Facility 1356	Asheville	NC	Solar	Intermediate	Yes	8.4
Facility 1357	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1358	Cary	NC	Solar	Intermediate	Yes	4.2
Facility 1359	Pittsboro	NC	Solar	Intermediate	Yes	3.4
Facility 1360	Wendell	NC	Solar	Intermediate	Yes	4.3
Facility 1361	Apex	NC	Solar	Intermediate	Yes	5.1
Facility 1362	Angier	NC	Solar	Intermediate	Yes	4.8
Facility 1363	West End	NC	Solar	Intermediate	Yes	3.3
Facility 1364	Siler City	NC	Solar	Intermediate	Yes	2.7
Facility 1365	Apex	NC	Solar	Intermediate	Yes	3.4
Facility 1366	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 1367	Barnardsville	NC	Solar	Intermediate	Yes	3.6
Facility 1368	Cary	NC	Solar	Intermediate	Yes	2.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1369	Pinehurst	NC	Solar	Intermediate	Yes	3.1
Facility 1370	Morrisville	NC	Solar	Intermediate	Yes	4.1
Facility 1371	Weaverville	NC	Solar	Intermediate	Yes	7.3
Facility 1372	Cary	NC	Solar	Intermediate	Yes	3.1
Facility 1373	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 1374	Apex	NC	Solar	Intermediate	Yes	4.2
Facility 1375	Rougemont	NC	Solar	Intermediate	Yes	2.8
Facility 1376	Willow Spring	NC	Solar	Intermediate	Yes	4.5
Facility 1377	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 1378	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 1379	Wake Forest	NC	Solar	Intermediate	Yes	2.4
Facility 1380	Benson	NC	Solar	Intermediate	Yes	3.5
Facility 1381	Knightdale	NC	Solar	Intermediate	Yes	3.0
Facility 1382	Carolina Beach	NC	Solar	Intermediate	Yes	6.9
Facility 1383	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1384	Biltmore Lake	NC	Solar	Intermediate	Yes	3.5
Facility 1385	Cary	NC	Solar	Intermediate	Yes	6.1
Facility 1386	Pittsboro	NC	Solar	Intermediate	Yes	3.5
Facility 1387	Garner	NC	Solar	Intermediate	Yes	4.0
Facility 1388	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 1389	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 1390	Raleigh	NC	Solar	Intermediate	Yes	4.7
Facility 1391	Siler City	NC	Solar	Intermediate	Yes	3.5
Facility 1392	Pittsboro	NC	Solar	Intermediate	Yes	4.9
Facility 1393	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1394	Raleigh	NC	Solar	Intermediate	Yes	6.8
Facility 1395	Raleigh	NC	Solar	Intermediate	Yes	7.5
Facility 1396	Fuquay Varina	NC	Solar	Intermediate	Yes	4.3
Facility 1397	Southern Pines	NC	Solar	Intermediate	Yes	6.0
Facility 1398	Apex	NC	Solar	Intermediate	Yes	9.1
Facility 1399	Siler City	NC	Solar	Intermediate	Yes	7.0
Facility 1400	New Bern	NC	Solar	Intermediate	Yes	6.7
Facility 1401	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1402	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 1403	Siler City	NC	Solar	Intermediate	Yes	2.3
Facility 1404	Apex	NC	Solar	Intermediate	Yes	2.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1405	Raleigh	NC	Solar	Intermediate	Yes	8.1
Facility 1406	Cary	NC	Solar	Intermediate	Yes	5.7
Facility 1407	Cary	NC	Solar	Intermediate	Yes	5.7
Facility 1408	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 1409	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 1410	Apex	NC	Solar	Intermediate	Yes	7.2
Facility 1411	Cary	NC	Solar	Intermediate	Yes	5.7
Facility 1412	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 1413	Raleigh	NC	Solar	Intermediate	Yes	4.9
Facility 1414	Leland	NC	Solar	Intermediate	Yes	4.0
Facility 1415	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 1416	Jacksonville	NC	Solar	Intermediate	Yes	2.5
Facility 1417	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1418	New Hill	NC	Solar	Intermediate	Yes	6.2
Facility 1419	Selma	NC	Solar	Intermediate	Yes	4.3
Facility 1420	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 1421	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1422	Knightdale	NC	Solar	Intermediate	Yes	6.4
Facility 1423	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 1424	Pittsboro	NC	Solar	Intermediate	Yes	7.0
Facility 1425	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 1426	Cary	NC	Solar	Intermediate	Yes	2.8
Facility 1427	Biltmore Lakes	NC	Solar	Intermediate	Yes	5.5
Facility 1428	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 1429	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 1430	Wilmington	NC	Solar	Intermediate	Yes	4.2
Facility 1431	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 1432	Cary	NC	Solar	Intermediate	Yes	5.6
Facility 1433	Clayton	NC	Solar	Intermediate	Yes	5.3
Facility 1434	Pittsboro	NC	Solar	Intermediate	Yes	2.9
Facility 1435	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1436	Wilmington	NC	Solar	Intermediate	Yes	4.5
Facility 1437	Pinehurst	NC	Solar	Intermediate	Yes	2.9
Facility 1438	Weaverville	NC	Solar	Intermediate	Yes	3.5
Facility 1439	Chapel Hill	NC	Solar	Intermediate	Yes	5.1
Facility 1440	Asheville	NC	Solar	Intermediate	Yes	4.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1441	Leicester	NC	Solar	Intermediate	Yes	4.9
Facility 1442	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 1443	Pittsboro	NC	Solar	Intermediate	Yes	2.4
Facility 1444	Apex	NC	Solar	Intermediate	Yes	3.1
Facility 1445	New Hill	NC	Solar	Intermediate	Yes	8.0
Facility 1446	Cary	NC	Solar	Intermediate	Yes	4.8
Facility 1447	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1448	Cary	NC	Solar	Intermediate	Yes	4.1
Facility 1449	Fuquay Varina	NC	Solar	Intermediate	Yes	4.6
Facility 1450	Apex	NC	Solar	Intermediate	Yes	2.6
Facility 1451	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 1452	Raleigh	NC	Solar	Intermediate	Yes	2.3
Facility 1453	Wilmington	NC	Solar	Intermediate	Yes	2.6
Facility 1454	New Bern	NC	Solar	Intermediate	Yes	4.7
Facility 1455	Raleigh	NC	Solar	Intermediate	Yes	6.1
Facility 1456	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1457	Holly Springs	NC	Solar	Intermediate	Yes	9.2
Facility 1458	Chapel Hill	NC	Solar	Intermediate	Yes	4.3
Facility 1459	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 1460	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 1461	Cary	NC	Solar	Intermediate	Yes	5.6
Facility 1462	Pittsboro	NC	Solar	Intermediate	Yes	2.2
Facility 1463	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1464	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 1465	Pittsboro	NC	Solar	Intermediate	Yes	4.1
Facility 1466	Siler City	NC	Solar	Intermediate	Yes	4.7
Facility 1467	Clayton	NC	Solar	Intermediate	Yes	7.3
Facility 1468	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 1469	Fayetteville	NC	Solar	Intermediate	Yes	3.5
Facility 1470	Pittsboro	NC	Solar	Intermediate	Yes	3.1
Facility 1471	Pittsboro	NC	Solar	Intermediate	Yes	3.9
Facility 1472	Pittsboro	NC	Solar	Intermediate	Yes	4.5
Facility 1473	Holly Springs	NC	Solar	Intermediate	Yes	4.8
Facility 1474	Raleigh	NC	Solar	Intermediate	Yes	6.3
Facility 1475	Pittsboro	NC	Solar	Intermediate	Yes	5.7
Facility 1476	Chapel Hill	NC	Solar	Intermediate	Yes	3.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1477	Pittsboro	NC	Solar	Intermediate	Yes	4.9
Facility 1478	Pittsboro	NC	Solar	Intermediate	Yes	3.1
Facility 1479	Pittsboro	NC	Solar	Intermediate	Yes	3.2
Facility 1480	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 1481	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1482	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 1483	Wilmington	NC	Solar	Intermediate	Yes	2.3
Facility 1484	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 1485	Raleigh	NC	Solar	Intermediate	Yes	4.7
Facility 1486	Pittsboro	NC	Solar	Intermediate	Yes	2.7
Facility 1487	Raeford	NC	Solar	Intermediate	Yes	4.0
Facility 1488	Pittsboro	NC	Solar	Intermediate	Yes	6.9
Facility 1489	Pittsboro	NC	Solar	Intermediate	Yes	3.3
Facility 1490	Pittsboro	NC	Solar	Intermediate	Yes	3.3
Facility 1491	Siler City	NC	Solar	Intermediate	Yes	3.9
Facility 1492	Chapel Hill	NC	Solar	Intermediate	Yes	2.4
Facility 1493	Cary	NC	Solar	Intermediate	Yes	5.2
Facility 1494	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 1495	Pittsboro	NC	Solar	Intermediate	Yes	4.8
Facility 1496	Chapel Hill	NC	Solar	Intermediate	Yes	8.5
Facility 1497	Apex	NC	Solar	Intermediate	Yes	6.9
Facility 1498	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1499	Apex	NC	Solar	Intermediate	Yes	3.4
Facility 1500	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 1501	Swannanoa	NC	Solar	Intermediate	Yes	4.2
Facility 1502	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 1503	Zebulon	NC	Solar	Intermediate	Yes	3.0
Facility 1504	Black Mountain	NC	Solar	Intermediate	Yes	6.0
Facility 1505	Pittsboro	NC	Solar	Intermediate	Yes	4.8
Facility 1506	Fuquay Varina	NC	Solar	Intermediate	Yes	4.1
Facility 1507	Siler City	NC	Solar	Intermediate	Yes	9.8
Facility 1508	Pittsboro	NC	Solar	Intermediate	Yes	3.4
Facility 1509	Fuquay Varina	NC	Solar	Intermediate	Yes	5.6
Facility 1510	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 1511	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 1512	Raleigh	NC	Solar	Intermediate	Yes	2.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1513	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 1514	Fuquay Varina	NC	Solar	Intermediate	Yes	5.4
Facility 1515	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 1516	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 1517	Willow Spring	NC	Solar	Intermediate	Yes	5.5
Facility 1518	Pittsboro	NC	Solar	Intermediate	Yes	3.3
Facility 1519	Wilmington	NC	Solar	Intermediate	Yes	4.7
Facility 1520	Chapel Hill	NC	Solar	Intermediate	Yes	4.8
Facility 1521	Cary	NC	Solar	Intermediate	Yes	5.7
Facility 1522	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 1523	Chapel Hill	NC	Solar	Intermediate	Yes	4.3
Facility 1524	Alexander	NC	Solar	Intermediate	Yes	6.6
Facility 1525	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1526	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 1527	Chapel Hill	NC	Solar	Intermediate	Yes	4.2
Facility 1528	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 1529	Holly Springs	NC	Solar	Intermediate	Yes	5.9
Facility 1530	Carolina Beach	NC	Solar	Intermediate	Yes	3.4
Facility 1531	Chapel Hill	NC	Solar	Intermediate	Yes	9.5
Facility 1532	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1533	Pittsboro	NC	Solar	Intermediate	Yes	2.2
Facility 1534	Chapel Hill	NC	Solar	Intermediate	Yes	5.8
Facility 1535	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1536	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 1537	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1538	Clayton	NC	Solar	Intermediate	Yes	3.3
Facility 1539	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 1540	Robbins	NC	Solar	Intermediate	Yes	3.1
Facility 1541	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 1542	Apex	NC	Solar	Intermediate	Yes	3.9
Facility 1543	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 1544	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 1545	Zebulon	NC	Solar	Intermediate	Yes	8.1
Facility 1546	Leland	NC	Solar	Intermediate	Yes	5.0
Facility 1547	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 1548	Angier	NC	Solar	Intermediate	Yes	3.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1549	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 1550	Raleigh	NC	Solar	Intermediate	Yes	6.6
Facility 1551	Pittsboro	NC	Solar	Intermediate	Yes	5.2
Facility 1552	Benson	NC	Solar	Intermediate	Yes	6.0
Facility 1553	Pittsboro	NC	Solar	Intermediate	Yes	2.7
Facility 1554	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1555	Pittsboro	NC	Solar	Intermediate	Yes	2.3
Facility 1556	Cary	NC	Solar	Intermediate	Yes	6.7
Facility 1557	Chapel Hill	NC	Solar	Intermediate	Yes	5.1
Facility 1558	Raleigh	NC	Solar	Intermediate	Yes	6.4
Facility 1559	Pittsboro	NC	Solar	Intermediate	Yes	2.1
Facility 1560	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1561	Pittsboro	NC	Solar	Intermediate	Yes	4.7
Facility 1562	Wilmington	NC	Solar	Intermediate	Yes	3.3
Facility 1563	Southern Pines	NC	Solar	Intermediate	Yes	3.1
Facility 1564	Siler City	NC	Solar	Intermediate	Yes	8.8
Facility 1565	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1566	Roxboro	NC	Solar	Intermediate	Yes	3.8
Facility 1567	Wilmington	NC	Solar	Intermediate	Yes	3.3
Facility 1568	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 1569	Wilmington	NC	Solar	Intermediate	Yes	4.6
Facility 1570	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1571	Pittsboro	NC	Solar	Intermediate	Yes	6.6
Facility 1572	Morrisville	NC	Solar	Intermediate	Yes	5.2
Facility 1573	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 1574	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1575	Raleigh	NC	Solar	Intermediate	Yes	6.3
Facility 1576	Goldsboro	NC	Solar	Intermediate	Yes	4.6
Facility 1577	Biltmore Lake	NC	Solar	Intermediate	Yes	3.4
Facility 1578	Lillington	NC	Solar	Intermediate	Yes	3.1
Facility 1579	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1580	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 1581	Raleigh	NC	Solar	Intermediate	Yes	2.3
Facility 1582	Apex	NC	Solar	Intermediate	Yes	3.8
Facility 1583	Cary	NC	Solar	Intermediate	Yes	4.7
Facility 1584	Cary	NC	Solar	Intermediate	Yes	3.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1585	Apex	NC	Solar	Intermediate	Yes	2.9
Facility 1586	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 1587	Raleigh	NC	Solar	Intermediate	Yes	9.3
Facility 1588	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 1589	Black Mountain	NC	Solar	Intermediate	Yes	8.0
Facility 1590	Apex	NC	Solar	Intermediate	Yes	6.6
Facility 1591	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1592	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1593	Kure Beach	NC	Solar	Intermediate	Yes	5.4
Facility 1594	Cary	NC	Solar	Intermediate	Yes	4.2
Facility 1595	Wrightsville Beach	NC	Solar	Intermediate	Yes	7.9
Facility 1596	Spring Hope	NC	Solar	Intermediate	Yes	7.8
Facility 1597	Raleigh	NC	Solar	Intermediate	Yes	5.9
Facility 1598	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 1599	Raleigh	NC	Solar	Intermediate	Yes	5.4
Facility 1600	Zebulon	NC	Solar	Intermediate	Yes	2.0
Facility 1601	Henderson	NC	Solar	Intermediate	Yes	3.7
Facility 1602	New Bern	NC	Solar	Intermediate	Yes	3.5
Facility 1603	Bahama	NC	Solar	Intermediate	Yes	5.8
Facility 1604	Willow Spring	NC	Solar	Intermediate	Yes	4.6
Facility 1605	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1606	Pinehurst	NC	Solar	Intermediate	Yes	2.6
Facility 1607	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 1608	Prospect Hill	NC	Solar	Intermediate	Yes	5.1
Facility 1609	Leland	NC	Solar	Intermediate	Yes	5.6
Facility 1610	Chapel Hill	NC	Solar	Intermediate	Yes	5.8
Facility 1611	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 1612	Elm City	NC	Solar	Intermediate	Yes	2.0
Facility 1613	Weaverville	NC	Solar	Intermediate	Yes	5.2
Facility 1614	Cary	NC	Solar	Intermediate	Yes	5.2
Facility 1615	Fuquay Varina	NC	Solar	Intermediate	Yes	2.1
Facility 1616	Clayton	NC	Solar	Intermediate	Yes	6.6
Facility 1617	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 1618	Pinehurst	NC	Solar	Intermediate	Yes	2.9
Facility 1619	Clayton	NC	Solar	Intermediate	Yes	2.3
Facility 1620	Fairview	NC	Solar	Intermediate	Yes	4.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1621	Cary	NC	Solar	Intermediate	Yes	7.4
Facility 1622	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 1623	Raleigh	NC	Solar	Intermediate	Yes	4.5
Facility 1624	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 1625	Garner	NC	Solar	Intermediate	Yes	2.4
Facility 1626	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 1627	Wilmington	NC	Solar	Intermediate	Yes	5.9
Facility 1628	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1629	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 1630	Cary	NC	Solar	Intermediate	Yes	3.1
Facility 1631	Wrightsville Beach	NC	Solar	Intermediate	Yes	4.1
Facility 1632	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 1633	Hampstead	NC	Solar	Intermediate	Yes	7.9
Facility 1634	Holly Springs	NC	Solar	Intermediate	Yes	4.5
Facility 1635	Cary	NC	Solar	Intermediate	Yes	4.2
Facility 1636	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1637	Wilmington	NC	Solar	Intermediate	Yes	8.8
Facility 1638	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 1639	Clayton	NC	Solar	Intermediate	Yes	2.2
Facility 1640	Chapel Hill	NC	Solar	Intermediate	Yes	3.8
Facility 1641	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1642	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 1643	Wilmington	NC	Solar	Intermediate	Yes	7.3
Facility 1644	Black Mountain	NC	Solar	Intermediate	Yes	3.7
Facility 1645	Holly Springs	NC	Solar	Intermediate	Yes	3.3
Facility 1646	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1647	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 1648	Saint Pauls	NC	Solar	Intermediate	Yes	2.3
Facility 1649	Nashville	NC	Solar	Intermediate	Yes	4.2
Facility 1650	Pinehurst	NC	Solar	Intermediate	Yes	2.0
Facility 1651	Wilmington	NC	Solar	Intermediate	Yes	2.3
Facility 1652	Raleigh	NC	Solar	Intermediate	Yes	4.7
Facility 1653	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 1654	Raleigh	NC	Solar	Intermediate	Yes	8.6
Facility 1655	Pittsboro	NC	Solar	Intermediate	Yes	5.9
Facility 1656	Cary	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1657	Pittsboro	NC	Solar	Intermediate	Yes	3.2
Facility 1658	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 1659	Fuquay Varina	NC	Solar	Intermediate	Yes	9.6
Facility 1660	Apex	NC	Solar	Intermediate	Yes	4.6
Facility 1661	Pinehurst	NC	Solar	Intermediate	Yes	2.5
Facility 1662	Rose Hill	NC	Solar	Intermediate	Yes	6.5
Facility 1663	Chapel Hill	NC	Solar	Intermediate	Yes	3.9
Facility 1664	Apex	NC	Solar	Intermediate	Yes	5.3
Facility 1665	Raleigh	NC	Solar	Intermediate	Yes	5.2
Facility 1666	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 1667	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 1668	Holly Springs	NC	Solar	Intermediate	Yes	5.3
Facility 1669	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1670	Asheville	NC	Solar	Intermediate	Yes	6.8
Facility 1671	Cary	NC	Solar	Intermediate	Yes	6.8
Facility 1672	Raleigh	NC	Solar	Intermediate	Yes	6.9
Facility 1673	Wilmington	NC	Solar	Intermediate	Yes	6.3
Facility 1674	Raleigh	NC	Solar	Intermediate	Yes	4.9
Facility 1675	Hampstead	NC	Solar	Intermediate	Yes	9.9
Facility 1676	Pittsboro	NC	Solar	Intermediate	Yes	2.3
Facility 1677	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 1678	Chapel Hill	NC	Solar	Intermediate	Yes	4.3
Facility 1679	Pinehurst	NC	Solar	Intermediate	Yes	9.3
Facility 1680	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1681	Cary	NC	Solar	Intermediate	Yes	6.4
Facility 1682	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 1683	Angier	NC	Solar	Intermediate	Yes	5.6
Facility 1684	Chapel Hill	NC	Solar	Intermediate	Yes	6.1
Facility 1685	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 1686	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1687	Pittsboro	NC	Solar	Intermediate	Yes	3.5
Facility 1688	Pittsboro	NC	Solar	Intermediate	Yes	3.3
Facility 1689	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1690	Cary	NC	Solar	Intermediate	Yes	4.2
Facility 1691	Pittsboro	NC	Solar	Intermediate	Yes	4.9
Facility 1692	Morrisville	NC	Solar	Intermediate	Yes	3.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1693	Henderson	NC	Solar	Intermediate	Yes	9.0
Facility 1694	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 1695	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 1696	Clinton	NC	Solar	Intermediate	Yes	4.4
Facility 1697	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 1698	Cary	NC	Solar	Intermediate	Yes	5.4
Facility 1699	Morrisville	NC	Solar	Intermediate	Yes	5.6
Facility 1700	Cary	NC	Solar	Intermediate	Yes	5.9
Facility 1701	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 1702	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1703	Wilmington	NC	Solar	Intermediate	Yes	5.4
Facility 1704	Fuquay Varina	NC	Solar	Intermediate	Yes	6.2
Facility 1705	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 1706	Knightdale	NC	Solar	Intermediate	Yes	6.2
Facility 1707	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1708	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 1709	Pittsboro	NC	Solar	Intermediate	Yes	4.7
Facility 1710	Raleigh	NC	Solar	Intermediate	Yes	6.3
Facility 1711	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 1712	Holly Springs	NC	Solar	Intermediate	Yes	7.8
Facility 1713	Raleigh	NC	Solar	Intermediate	Yes	4.7
Facility 1714	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1715	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 1716	Garner	NC	Solar	Intermediate	Yes	8.4
Facility 1717	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 1718	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 1719	Pittsboro	NC	Solar	Intermediate	Yes	5.8
Facility 1720	Chapel Hill	NC	Solar	Intermediate	Yes	4.7
Facility 1721	Newland	NC	Solar	Intermediate	Yes	5.9
Facility 1722	Cary	NC	Solar	Intermediate	Yes	4.8
Facility 1723	Princeton	NC	Solar	Intermediate	Yes	6.9
Facility 1724	Raleigh	NC	Solar	Intermediate	Yes	6.5
Facility 1725	Fuquay Varina	NC	Solar	Intermediate	Yes	5.9
Facility 1726	Raleigh	NC	Solar	Intermediate	Yes	6.6
Facility 1727	Angier	NC	Solar	Intermediate	Yes	3.0
Facility 1728	Cary	NC	Solar	Intermediate	Yes	4.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1729	Wilmington	NC	Solar	Intermediate	Yes	2.9
Facility 1730	Aberdeen	NC	Solar	Intermediate	Yes	1998.0
Facility 1731	Zebulon	NC	Solar	Intermediate	Yes	5000.0
Facility 1732	Chapel Hill	NC	Solar	Intermediate	Yes	3.3
Facility 1733	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 1734	Hope Mill	NC	Solar	Intermediate	Yes	78500.0
Facility 1735	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 1736	Weaverville	NC	Solar	Intermediate	Yes	2.7
Facility 1737	New Bern	NC	Biomass	Intermediate	Yes	48800.0
Facility 1738	Roxboro	NC	Biomass	Intermediate	Yes	42000.0
Facility 1739	Southport	NC	Biomass	Intermediate	Yes	80000.0
Facility 1740	Lumberton	NC	Biomass	Intermediate	Yes	36000.0
Facility 1741	Black Mountain	NC	Solar	Intermediate	Yes	2.3
Facility 1742	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 1743	Robbins	NC	Solar	Intermediate	Yes	5000.0
Facility 1744	Raleigh	NC	Solar	Intermediate	Yes	7.9
Facility 1745	Grifton	NC	Solar	Intermediate	Yes	52100.0
Facility 1746	Raleigh	NC	Solar	Intermediate	Yes	48.0
Facility 1747	Kure Beach	NC	Solar	Intermediate	Yes	2.1
Facility 1748	Benson	NC	Solar	Intermediate	Yes	4.0
Facility 1749	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1750	Rocky Mount	NC	Solar	Intermediate	Yes	5.3
Facility 1751	Raleigh	NC	Solar	Intermediate	Yes	60.0
Facility 1752	Alliance	NC	Solar	Intermediate	Yes	4998.0
Facility 1753	Chocowinity	NC	Solar	Intermediate	Yes	4950.0
Facility 1754	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 1755	Hampstead	NC	Solar	Intermediate	Yes	2.6
Facility 1756	Pinehurst	NC	Solar	Intermediate	Yes	5.0
Facility 1757	Asheville	NC	Solar	Intermediate	Yes	8.0
Facility 1758	Oxford	NC	Solar	Intermediate	Yes	5000.0
Facility 1759	Liberty	NC	Solar	Intermediate	Yes	5000.0
Facility 1760	Maysville	NC	Solar	Intermediate	Yes	5000.0
Facility 1761	Pembroke	NC	Solar	Intermediate	Yes	1998.0
Facility 1762	Roxboro	NC	Solar	Intermediate	Yes	1998.0
Facility 1763	Asheboro	NC	Solar	Intermediate	Yes	2000.0
Facility 1764	Vanceboro	NC	Biomass	Intermediate	Yes	5000.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1765	Kenansville	NC	Biomass	Intermediate	Yes	25000.0
Facility 1766	Wilmington	NC	Solar	Intermediate	Yes	96.0
Facility 1767	Newton Grove	NC	Solar	Intermediate	Yes	5000.0
Facility 1768	Raleigh	NC	Solar	Intermediate	Yes	413.0
Facility 1769	Raleigh	NC	Solar	Intermediate	Yes	52.2
Facility 1770	Gerton	NC	Solar	Intermediate	Yes	2.5
Facility 1771	Raleigh	NC	Solar	Intermediate	Yes	375.0
Facility 1772	Weaverville	NC	Solar	Intermediate	Yes	4.5
Facility 1773	Raleigh	NC	Solar	Intermediate	Yes	1.6
Facility 1774	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 1775	Raleigh	NC	Solar	Intermediate	Yes	7.5
Facility 1776	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1777	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 1778	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1779	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 1780	Hampstead	NC	Solar	Intermediate	Yes	10.0
Facility 1781	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 1782	Southern Pines	NC	Solar	Intermediate	Yes	3.0
Facility 1783	Weaverville	NC	Solar	Intermediate	Yes	3.0
Facility 1784	Spruce Pine	NC	Solar	Intermediate	Yes	1.0
Facility 1785	Asheville	NC	Solar	Intermediate	Yes	2.0
Facility 1786	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 1787	Raleigh	NC	Solar	Intermediate	Yes	1.1
Facility 1788	Fuquay Varina	NC	Solar	Intermediate	Yes	2.1
Facility 1789	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 1790	Apex	NC	Solar	Intermediate	Yes	20.0
Facility 1791	Asheville	NC	Solar	Intermediate	Yes	2.5
Facility 1792	Oxford	NC	Solar	Intermediate	Yes	7.4
Facility 1793	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1794	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 1795	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 1796	Asheville	NC	Solar	Intermediate	Yes	1.4
Facility 1797	Black Mountain	NC	Solar	Intermediate	Yes	3.2
Facility 1798	Apex	NC	Solar	Intermediate	Yes	3.9
Facility 1799	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 1800	Fairview	NC	Solar	Intermediate	Yes	2.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1801	Balsam	NC	Solar	Intermediate	Yes	3.8
Facility 1802	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 1803	Black Mountain	NC	Solar	Intermediate	Yes	6.1
Facility 1804	Morehead City	NC	Solar	Intermediate	Yes	1.2
Facility 1805	Sanford	NC	Solar	Intermediate	Yes	3.0
Facility 1806	Pittsboro	NC	Solar	Intermediate	Yes	0.7
Facility 1807	Chapel Hill	NC	Solar	Intermediate	Yes	3.1
Facility 1808	Wilmington	NC	Solar	Intermediate	Yes	2.2
Facility 1809	Cameron	NC	Solar	Intermediate	Yes	8.5
Facility 1810	Wilmington	NC	Solar	Intermediate	Yes	1.4
Facility 1811	Pittsboro	NC	Solar	Intermediate	Yes	2.6
Facility 1812	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 1813	Asheville	NC	Solar	Intermediate	Yes	4.7
Facility 1814	Wilmington	NC	Solar	Intermediate	Yes	9.9
Facility 1815	Apex	NC	Solar	Intermediate	Yes	2.0
Facility 1816	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 1817	Raleigh	NC	Solar	Intermediate	Yes	2.3
Facility 1818	Wilmington	NC	Solar	Intermediate	Yes	5.4
Facility 1819	Franklinton	NC	Solar	Intermediate	Yes	3.9
Facility 1820	Hampstead	NC	Solar	Intermediate	Yes	3.0
Facility 1821	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 1822	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1823	Fairview	NC	Solar	Intermediate	Yes	2.9
Facility 1824	Chapel Hill	NC	Solar	Intermediate	Yes	1.6
Facility 1825	Wilmington	NC	Solar	Intermediate	Yes	6.3
Facility 1826	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 1827	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 1828	Nashville	NC	Solar	Intermediate	Yes	4.5
Facility 1829	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 1830	Chapel Hill	NC	Solar	Intermediate	Yes	3.6
Facility 1831	Asheville	NC	Solar	Intermediate	Yes	2.6
Facility 1832	Candler	NC	Solar	Intermediate	Yes	0.7
Facility 1833	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 1834	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 1835	Holly Springs	NC	Solar	Intermediate	Yes	3.2
Facility 1836	Raleigh	NC	Solar	Intermediate	Yes	3.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1837	Asheville	NC	Solar	Intermediate	Yes	4.7
Facility 1838	Cary	NC	Solar	Intermediate	Yes	7.3
Facility 1839	Weaverville	NC	Solar	Intermediate	Yes	2.1
Facility 1840	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1841	Morehead City	NC	Solar	Intermediate	Yes	3.9
Facility 1842	Nashville	NC	Solar	Intermediate	Yes	3.4
Facility 1843	Chapel Hill	NC	Solar	Intermediate	Yes	2.3
Facility 1844	Waynesville	NC	Solar	Intermediate	Yes	2.9
Facility 1845	Chapel Hill	NC	Solar	Intermediate	Yes	6.3
Facility 1846	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 1847	Morehead City	NC	Solar	Intermediate	Yes	9.0
Facility 1848	Apex	NC	Solar	Intermediate	Yes	3.7
Facility 1849	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 1850	Vass	NC	Solar	Intermediate	Yes	7.4
Facility 1851	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 1852	Asheville	NC	Solar	Intermediate	Yes	7.4
Facility 1853	Garner	NC	Solar	Intermediate	Yes	4.0
Facility 1854	Pittsboro	NC	Solar	Intermediate	Yes	6.4
Facility 1855	Fairview	NC	Solar	Intermediate	Yes	7.8
Facility 1856	Burnsville	NC	Solar	Intermediate	Yes	2.0
Facility 1857	Burnsville	NC	Solar	Intermediate	Yes	5.0
Facility 1858	Fuquay Varina	NC	Solar	Intermediate	Yes	8.5
Facility 1859	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 1860	Asheville	NC	Solar	Intermediate	Yes	2.7
Facility 1861	Weaverville	NC	Solar	Intermediate	Yes	3.8
Facility 1862	Asheboro	NC	Solar	Intermediate	Yes	4.1
Facility 1863	Cary	NC	Solar	Intermediate	Yes	4.7
Facility 1864	Willow Springs	NC	Solar	Intermediate	Yes	2.1
Facility 1865	Roxboro	NC	Solar	Intermediate	Yes	2.4
Facility 1866	Asheville	NC	Solar	Intermediate	Yes	2.7
Facility 1867	Pittsboro	NC	Solar	Intermediate	Yes	1.8
Facility 1868	Fairview	NC	Solar	Intermediate	Yes	2.8
Facility 1869	Cary	NC	Solar	Intermediate	Yes	3.4
Facility 1870	Chapel Hill	NC	Solar	Intermediate	Yes	3.1
Facility 1871	Fletcher	NC	Solar	Intermediate	Yes	6.5
Facility 1872	Wendell	NC	Solar	Intermediate	Yes	2.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1873	Zebulon	NC	Solar	Intermediate	Yes	5.5
Facility 1874	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 1875	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 1876	Barnardsville	NC	Solar	Intermediate	Yes	2.7
Facility 1877	Fairview	NC	Solar	Intermediate	Yes	9.0
Facility 1878	Fletcher	NC	Solar	Intermediate	Yes	2.5
Facility 1879	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 1880	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 1881	Arden	NC	Solar	Intermediate	Yes	1.4
Facility 1882	Pittsboro	NC	Solar	Intermediate	Yes	2.8
Facility 1883	Spruce Pine	NC	Solar	Intermediate	Yes	3.8
Facility 1884	Marshall	NC	Wind	Intermediate	Yes	1.8
Facility 1885	Raleigh	NC	Solar	Intermediate	Yes	4.9
Facility 1886	Spruce Pine	NC	Solar	Intermediate	Yes	4.6
Facility 1887	Apex	NC	Solar	Intermediate	Yes	6.4
Facility 1888	Carolina Beach	NC	Solar	Intermediate	Yes	1.0
Facility 1889	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 1890	Roxboro	NC	Solar	Intermediate	Yes	1.9
Facility 1891	Broadway	NC	Solar	Intermediate	Yes	8.5
Facility 1892	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 1893	Candler	NC	Solar	Intermediate	Yes	3.4
Facility 1894	Clayton	NC	Solar	Intermediate	Yes	2.7
Facility 1895	Fuquay Varina	NC	Solar	Intermediate	Yes	6.6
Facility 1896	Fairview	NC	Solar	Intermediate	Yes	3.0
Facility 1897	Goldsboro	NC	Solar	Intermediate	Yes	5.8
Facility 1898	Fairview	NC	Solar	Intermediate	Yes	3.8
Facility 1899	Clayton	NC	Solar	Intermediate	Yes	3.6
Facility 1900	Asheville	NC	Solar	Intermediate	Yes	4.4
Facility 1901	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 1902	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 1903	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 1904	New Hill	NC	Solar	Intermediate	Yes	2.9
Facility 1905	Raleigh	NC	Solar	Intermediate	Yes	1.5
Facility 1906	Swannanoa	NC	Solar	Intermediate	Yes	3.8
Facility 1907	Wilmington	NC	Solar	Intermediate	Yes	1.8
Facility 1908	Raleigh	NC	Solar	Intermediate	Yes	1.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1909	Fuquay Varina	NC	Solar	Intermediate	Yes	4.4
Facility 1910	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 1911	Alexander	NC	Solar	Intermediate	Yes	5.0
Facility 1912	Henderson	NC	Solar	Intermediate	Yes	3.0
Facility 1913	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 1914	Wake Forest	NC	Solar	Intermediate	Yes	2.4
Facility 1915	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1916	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 1917	Barnardsville	NC	Solar	Intermediate	Yes	3.6
Facility 1918	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 1919	Zebulon	NC	Solar	Intermediate	Yes	9.9
Facility 1920	Asheville	NC	Solar	Intermediate	Yes	1.6
Facility 1921	Cary	NC	Solar	Intermediate	Yes	2.3
Facility 1922	Siler City	NC	Solar	Intermediate	Yes	2.5
Facility 1923	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 1924	Wilmington	NC	Solar	Intermediate	Yes	1.0
Facility 1925	Fairview	NC	Solar	Intermediate	Yes	2.7
Facility 1926	Henderson	NC	Solar	Intermediate	Yes	4.7
Facility 1927	Goldsboro	NC	Solar	Intermediate	Yes	4.1
Facility 1928	Aberdeen	NC	Solar	Intermediate	Yes	10.0
Facility 1929	Pinehurst	NC	Solar	Intermediate	Yes	8.2
Facility 1930	Alexander	NC	Solar	Intermediate	Yes	3.1
Facility 1931	Leicester	NC	Solar	Intermediate	Yes	6.0
Facility 1932	Arden	NC	Solar	Intermediate	Yes	3.0
Facility 1933	Weaverville	NC	Solar	Intermediate	Yes	3.7
Facility 1934	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 1935	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 1936	Zebulon	NC	Solar	Intermediate	Yes	1.6
Facility 1937	Chapel Hill	NC	Solar	Intermediate	Yes	1.0
Facility 1938	Cary	NC	Solar	Intermediate	Yes	2.5
Facility 1939	Cary	NC	Solar	Intermediate	Yes	6.6
Facility 1940	Black Mountain	NC	Solar	Intermediate	Yes	2.9
Facility 1941	Rougemont	NC	Solar	Intermediate	Yes	3.0
Facility 1942	Pinehurst	NC	Solar	Intermediate	Yes	2.8
Facility 1943	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 1944	Cary	NC	Solar	Intermediate	Yes	2.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1945	Asheville	NC	Solar	Intermediate	Yes	0.8
Facility 1946	Weaverville	NC	Solar	Intermediate	Yes	3.2
Facility 1947	Pittsboro	NC	Solar	Intermediate	Yes	2.8
Facility 1948	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 1949	Pittsboro	NC	Solar	Intermediate	Yes	4.9
Facility 1950	Weaverville	NC	Solar	Intermediate	Yes	1.0
Facility 1951	Robbins	NC	Solar	Intermediate	Yes	2.8
Facility 1952	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 1953	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 1954	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 1955	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 1956	Raleigh	NC	Solar	Intermediate	Yes	1.6
Facility 1957	Raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 1958	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 1959	Wilmington	NC	Solar	Intermediate	Yes	1.4
Facility 1960	Wilmington	NC	Solar	Intermediate	Yes	3.4
Facility 1961	Holly Springs	NC	Solar	Intermediate	Yes	1.6
Facility 1962	Holly Springs	NC	Solar	Intermediate	Yes	1.8
Facility 1963	Apex	NC	Solar	Intermediate	Yes	1.1
Facility 1964	Pittsboro	NC	Solar	Intermediate	Yes	1.8
Facility 1965	Chapel Hill	NC	Solar	Intermediate	Yes	2.1
Facility 1966	Middlesex	NC	Solar	Intermediate	Yes	2.2
Facility 1967	Apex	NC	Solar	Intermediate	Yes	1.6
Facility 1968	Asheville	NC	Solar	Intermediate	Yes	3.2
Facility 1969	Pittsboro	NC	Solar	Intermediate	Yes	2.6
Facility 1970	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 1971	Liberty	NC	Solar	Intermediate	Yes	3.3
Facility 1972	Asheville	NC	Solar	Intermediate	Yes	2.5
Facility 1973	Clinton	NC	Wind	Intermediate	Yes	1.9
Facility 1974	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 1975	Black Mountain	NC	Solar	Intermediate	Yes	1.9
Facility 1976	Siler City	NC	Solar	Intermediate	Yes	2.7
Facility 1977	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 1978	Raleigh	NC	Solar	Intermediate	Yes	5.4
Facility 1979	Wilmington	NC	Solar	Intermediate	Yes	3.6
Facility 1980	Raleigh	NC	Solar	Intermediate	Yes	3.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1981	Jacksonville	NC	Solar	Intermediate	Yes	4.6
Facility 1982	Pinehurst	NC	Solar	Intermediate	Yes	3.8
Facility 1983	Zebulon	NC	Solar	Intermediate	Yes	1.1
Facility 1984	Pittsboro	NC	Solar	Intermediate	Yes	1.9
Facility 1985	Asheville	NC	Solar	Intermediate	Yes	1.0
Facility 1986	Wendell	NC	Solar	Intermediate	Yes	3.0
Facility 1987	Asheville	NC	Solar	Intermediate	Yes	1.0
Facility 1988	Morrisville	NC	Solar	Intermediate	Yes	6.4
Facility 1989	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 1990	Wilmington	NC	Wind	Intermediate	Yes	4.2
Facility 1991	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 1992	Wilmington	NC	Solar	Intermediate	Yes	3.9
Facility 1993	Raleigh	NC	Solar	Intermediate	Yes	1.6
Facility 1994	Louisburg	NC	Solar	Intermediate	Yes	7.6
Facility 1995	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 1996	Wendell	NC	Solar	Intermediate	Yes	1.9
Facility 1997	Fletcher	NC	Solar	Intermediate	Yes	11.0
Facility 1998	Fletcher	NC	Solar	Intermediate	Yes	11.0
Facility 1999	Barnardsville	NC	Solar	Intermediate	Yes	4.9
Facility 2000	Benson	NC	Solar	Intermediate	Yes	4.6
Facility 2001	Swansboro	NC	Solar	Intermediate	Yes	2.5
Facility 2002	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 2003	Kure Beach	NC	Solar	Intermediate	Yes	2.0
Facility 2004	Semora	NC	Solar	Intermediate	Yes	4.2
Facility 2005	Wilmington	NC	Solar	Intermediate	Yes	9.9
Facility 2006	Wilmington	NC	Solar	Intermediate	Yes	2.0
Facility 2007	Candler	NC	Solar	Intermediate	Yes	2.4
Facility 2008	Fuquay Varina	NC	Solar	Intermediate	Yes	3.1
Facility 2009	Fletcher	NC	Solar	Intermediate	Yes	2.3
Facility 2010	Wilmington	NC	Solar	Intermediate	Yes	3.6
Facility 2011	Weaverville	NC	Solar	Intermediate	Yes	3.8
Facility 2012	Vass	NC	Solar	Intermediate	Yes	3.6
Facility 2013	Raleigh	NC	Solar	Intermediate	Yes	7.5
Facility 2014	Raleigh	NC	Solar	Intermediate	Yes	1.9
Facility 2015	Laurinburg	NC	Solar	Intermediate	Yes	5.0
Facility 2016	Raleigh	NC	Solar	Intermediate	Yes	3.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2017	Spring Lake	NC	Solar	Intermediate	Yes	3.9
Facility 2018	Franklinton	NC	Solar	Intermediate	Yes	2.3
Facility 2019	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2020	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 2021	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 2022	Laurinburg	NC	Solar	Intermediate	Yes	11.0
Facility 2023	Laurinburg	NC	Solar	Intermediate	Yes	10.0
Facility 2024	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 2025	Apex	NC	Solar	Intermediate	Yes	3.4
Facility 2026	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2027	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 2028	Rocky Mount	NC	Solar	Intermediate	Yes	4.7
Facility 2029	Cary	NC	Solar	Intermediate	Yes	8.7
Facility 2030	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 2031	Castle Hayne	NC	Solar	Intermediate	Yes	5.4
Facility 2032	Pinehurst	NC	Solar	Intermediate	Yes	3.6
Facility 2033	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 2034	Wilmington	NC	Solar	Intermediate	Yes	7.7
Facility 2035	Cary	NC	Solar	Intermediate	Yes	1.7
Facility 2036	Leicester	NC	Solar	Intermediate	Yes	3.1
Facility 2037	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 2038	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 2039	Asheville	NC	Solar	Intermediate	Yes	1.7
Facility 2040	Southern Pines	NC	Solar	Intermediate	Yes	1.8
Facility 2041	Henderson	NC	Solar	Intermediate	Yes	6.8
Facility 2042	Leicester	NC	Solar	Intermediate	Yes	4.8
Facility 2043	Asheville	NC	Solar	Intermediate	Yes	1.5
Facility 2044	Wilmington	NC	Solar	Intermediate	Yes	1.0
Facility 2045	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 2046	Raleigh	NC	Solar	Intermediate	Yes	6.5
Facility 2047	Black Mountain	NC	Solar	Intermediate	Yes	1.4
Facility 2048	Asheville	NC	Solar	Intermediate	Yes	2.6
Facility 2049	Weaverville	NC	Solar	Intermediate	Yes	3.3
Facility 2050	Pinehurst	NC	Solar	Intermediate	Yes	1.0
Facility 2051	Pittsboro	NC	Solar	Intermediate	Yes	2.3
Facility 2052	Swannanoa	NC	Solar	Intermediate	Yes	9.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 2053	Cameron	NC	Solar	Intermediate	Yes	4.6
Facility 2054	Goldsboro	NC	Solar	Intermediate	Yes	4.0
Facility 2055	Knightdale	NC	Solar	Intermediate	Yes	0.5
Facility 2056	Barnardsville	NC	Solar	Intermediate	Yes	2.6
Facility 2057	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 2058	Waynesville	NC	Solar	Intermediate	Yes	5.7
Facility 2059	Vass	NC	Solar	Intermediate	Yes	4.7
Facility 2060	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 2061	Fremont	NC	Solar	Intermediate	Yes	1.5
Facility 2062	Wilmington	NC	Solar	Intermediate	Yes	3.5
Facility 2063	Barnardsville	NC	Solar	Intermediate	Yes	0.9
Facility 2064	Asheville	NC	Solar	Intermediate	Yes	3.1
Facility 2065	Black Mountain	NC	Solar	Intermediate	Yes	1.9
Facility 2066	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 2067	Asheville	NC	Solar	Intermediate	Yes	1.7
Facility 2068	Barnardsville	NC	Solar	Intermediate	Yes	1.9
Facility 2069	Pinehurst	NC	Solar	Intermediate	Yes	3.1
Facility 2070	Pittsboro	NC	Solar	Intermediate	Yes	1.4
Facility 2071	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 2072	Hot Springs	NC	Solar	Intermediate	Yes	6.0
Facility 2073	Asheville	NC	Solar	Intermediate	Yes	1.7
Facility 2074	Barnardsville	NC	Solar	Intermediate	Yes	4.6
Facility 2075	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2076	Cameron	NC	Solar	Intermediate	Yes	4.7
Facility 2077	Wake Forest	NC	Solar	Intermediate	Yes	1.8
Facility 2078	Wake Forest	NC	Solar	Intermediate	Yes	1.8
Facility 2079	Wake Forest	NC	Solar	Intermediate	Yes	1.8
Facility 2080	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 2081	Leicester	NC	Solar	Intermediate	Yes	2.4
Facility 2082	Asheville	NC	Solar	Intermediate	Yes	2.2
Facility 2083	Siler City	NC	Solar	Intermediate	Yes	4.1
Facility 2084	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2085	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2086	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 2087	Willow Spring	NC	Solar	Intermediate	Yes	1.0
Facility 2088	Asheville	NC	Solar	Intermediate	Yes	3.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2089	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 2090	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 2091	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 2092	Fletcher	NC	Solar	Intermediate	Yes	3.7
Facility 2093	Spring Hope	NC	Solar	Intermediate	Yes	10.0
Facility 2094	Leicester	NC	Solar	Intermediate	Yes	4.6
Facility 2095	Barnardsville	NC	Solar	Intermediate	Yes	3.6
Facility 2096	Louisburg	NC	Solar	Intermediate	Yes	3.7
Facility 2097	Pinehurst	NC	Solar	Intermediate	Yes	0.6
Facility 2098	Morehead City	NC	Solar	Intermediate	Yes	2.0
Facility 2099	Black Mountain	NC	Solar	Intermediate	Yes	4.7
Facility 2100	Asheville	NC	Solar	Intermediate	Yes	7.4
Facility 2101	Pittsboro	NC	Solar	Intermediate	Yes	3.6
Facility 2102	Barnardsville	NC	Solar	Intermediate	Yes	4.7
Facility 2103	Black Mountain	NC	Solar	Intermediate	Yes	4.7
Facility 2104	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 2105	Bakersville	NC	Solar	Intermediate	Yes	3.2
Facility 2106	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 2107	Carolina Beach	NC	Solar	Intermediate	Yes	4.3
Facility 2108	Alexander	NC	Solar	Intermediate	Yes	1.5
Facility 2109	Black Mountain	NC	Solar	Intermediate	Yes	2.8
Facility 2110	Candler	NC	Solar	Intermediate	Yes	4.0
Facility 2111	Asheville	NC	Solar	Intermediate	Yes	4.9
Facility 2112	Biscoe	NC	Solar	Intermediate	Yes	3.4
Facility 2113	Southern Pines	NC	Solar	Intermediate	Yes	1.9
Facility 2114	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 2115	Pittsboro	NC	Solar	Intermediate	Yes	1.7
Facility 2116	Chapel Hill	NC	Solar	Intermediate	Yes	1.2
Facility 2117	Weaverville	NC	Solar	Intermediate	Yes	4.0
Facility 2118	Canton	NC	Solar	Intermediate	Yes	9.2
Facility 2119	Wilmington	NC	Solar	Intermediate	Yes	1.4
Facility 2120	Black Mountain	NC	Solar	Intermediate	Yes	3.2
Facility 2121	Canton	NC	Solar	Intermediate	Yes	2.6
Facility 2122	Asheville	NC	Solar	Intermediate	Yes	5.9
Facility 2123	Asheville	NC	Solar	Intermediate	Yes	8.0
Facility 2124	Rougemont	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2125	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2126	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 2127	Pittsboro	NC	Solar	Intermediate	Yes	1.8
Facility 2128	Black Mountain	NC	Solar	Intermediate	Yes	9.6
Facility 2129	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 2130	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 2131	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 2132	Pittsboro	NC	Solar	Intermediate	Yes	2.9
Facility 2133	Fletcher	NC	Solar	Intermediate	Yes	1.7
Facility 2134	Asheville	NC	Solar	Intermediate	Yes	0.8
Facility 2135	Kure Beach	NC	Solar	Intermediate	Yes	6.5
Facility 2136	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 2137	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 2138	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 2139	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 2140	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 2141	Sanford	NC	Solar	Intermediate	Yes	5.6
Facility 2142	Morehead City	NC	Solar	Intermediate	Yes	3.4
Facility 2143	Arden	NC	Solar	Intermediate	Yes	7.2
Facility 2144	Pinehurst	NC	Solar	Intermediate	Yes	3.4
Facility 2145	Pittsboro	NC	Solar	Intermediate	Yes	2.5
Facility 2146	Beaufort	NC	Solar	Intermediate	Yes	2.1
Facility 2147	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 2148	Cary	NC	Solar	Intermediate	Yes	3.4
Facility 2149	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 2150	Cary	NC	Solar	Intermediate	Yes	1.4
Facility 2151	Garner	NC	Solar	Intermediate	Yes	5.2
Facility 2152	Williston	NC	Solar	Intermediate	Yes	4.0
Facility 2153	Alexander	NC	Solar	Intermediate	Yes	2.8
Facility 2154	Alexander	NC	Solar	Intermediate	Yes	3.9
Facility 2155	Asheville	NC	Solar	Intermediate	Yes	6.8
Facility 2156	New Hill	NC	Solar	Intermediate	Yes	5.1
Facility 2157	Chapel Hill	NC	Solar	Intermediate	Yes	3.2
Facility 2158	Weaverville	NC	Solar	Intermediate	Yes	4.1
Facility 2159	Asheville	NC	Solar	Intermediate	Yes	3.5
Facility 2160	Franklinton	NC	Solar	Intermediate	Yes	3.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2161	Asheboro	NC	Solar	Intermediate	Yes	2.6
Facility 2162	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 2163	Clayton	NC	Solar	Intermediate	Yes	5.9
Facility 2164	Pinehurst	NC	Solar	Intermediate	Yes	4.9
Facility 2165	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2166	Carolina Beach	NC	Solar	Intermediate	Yes	3.0
Facility 2167	Leland	NC	Solar	Intermediate	Yes	5.9
Facility 2168	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2169	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2170	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2171	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2172	Raleigh	NC	Solar	Intermediate	Yes	5.2
Facility 2173	Bear Creek	NC	Solar	Intermediate	Yes	7.0
Facility 2174	Fuquay Varina	NC	Solar	Intermediate	Yes	14.6
Facility 2175	Hampstead	NC	Solar	Intermediate	Yes	4.0
Facility 2176	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2177	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2178	Asheville	NC	Solar	Intermediate	Yes	6.9
Facility 2179	Asheville	NC	Solar	Intermediate	Yes	4.4
Facility 2180	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 2181	Garner	NC	Solar	Intermediate	Yes	4.0
Facility 2182	Clyde	NC	Solar	Intermediate	Yes	9.0
Facility 2183	Fuquay Varina	NC	Solar	Intermediate	Yes	2.6
Facility 2184	Goldsboro	NC	Solar	Intermediate	Yes	4.6
Facility 2185	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 2186	CAMERON	NC	Solar	Intermediate	Yes	4.3
Facility 2187	ASHEVILLE	NC	Solar	Intermediate	Yes	4.3
Facility 2188	Raleigh	NC	Solar	Intermediate	Yes	1.7
Facility 2189	Cary	NC	Solar	Intermediate	Yes	2.7
Facility 2190	Raleigh	NC	Solar	Intermediate	Yes	1.7
Facility 2191	Cary	NC	Solar	Intermediate	Yes	1.7
Facility 2192	Cameron	NC	Solar	Intermediate	Yes	8.6
Facility 2193	FAIRVIEW	NC	Solar	Intermediate	Yes	3.4
Facility 2194	ASHEVILLE	NC	Solar	Intermediate	Yes	5.2
Facility 2195	Cary	NC	Solar	Intermediate	Yes	1.5
Facility 2196	GARNER	NC	Solar	Intermediate	Yes	6.0

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NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2197	Cary	NC	Solar	Intermediate	Yes	1.5
Facility 2198	Cary	NC	Solar	Intermediate	Yes	3.3
Facility 2199	Chapel Hill	NC	Solar	Intermediate	Yes	5.2
Facility 2200	Hampstead	NC	Solar	Intermediate	Yes	4.3
Facility 2201	Cary	NC	Solar	Intermediate	Yes	1.5
Facility 2202	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2203	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 2204	Cary	NC	Solar	Intermediate	Yes	1.5
Facility 2205	Knightdale	NC	Solar	Intermediate	Yes	2.8
Facility 2206	Four Oaks	NC	Solar	Intermediate	Yes	2.6
Facility 2207	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 2208	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 2209	Chapel Hill	NC	Solar	Intermediate	Yes	2.5
Facility 2210	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2211	Candler	NC	Solar	Intermediate	Yes	2.4
Facility 2212	Youngsville	NC	Solar	Intermediate	Yes	5.0
Facility 2213	Pittsboro	NC	Solar	Intermediate	Yes	1.5
Facility 2214	Raleigh	NC	Solar	Intermediate	Yes	3.2
Facility 2215	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2216	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2217	Raleigh	NC	Solar	Intermediate	Yes	1.7
Facility 2218	Calypso	NC	Solar	Intermediate	Yes	5.6
Facility 2219	Cary	NC	Solar	Intermediate	Yes	1.5
Facility 2220	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2221	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 2222	Hamptead	NC	Solar	Intermediate	Yes	2.6
Facility 2223	Weaverville	NC	Solar	Intermediate	Yes	4.3
Facility 2224	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2225	Apex	NC	Solar	Intermediate	Yes	4.0
Facility 2226	Raleigh	NC	Solar	Intermediate	Yes	1.9
Facility 2227	Lillington	NC	Solar	Intermediate	Yes	2.6
Facility 2228	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2229	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 2230	Asheville	NC	Solar	Intermediate	Yes	3.2
Facility 2231	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2232	Asheville	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2233	Fletcher	NC	Solar	Intermediate	Yes	9.5
Facility 2234	Asheville	NC	Solar	Intermediate	Yes	2.0
Facility 2235	Wilmington	NC	Solar	Intermediate	Yes	9.6
Facility 2236	Leicester	NC	Solar	Intermediate	Yes	2.1
Facility 2237	Weaverville	NC	Solar	Intermediate	Yes	4.0
Facility 2238	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 2239	Pittsboro	NC	Solar	Intermediate	Yes	4.1
Facility 2240	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2241	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2242	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2243	Pittsboro	NC	Solar	Intermediate	Yes	1.7
Facility 2244	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2245	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2246	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 2247	Asheville	NC	Solar	Intermediate	Yes	4.7
Facility 2248	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2249	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2250	Southern Pines	NC	Solar	Intermediate	Yes	7.8
Facility 2251	Baltimore Lake	NC	Solar	Intermediate	Yes	6.0
Facility 2252	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2253	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2254	Holly Springs	NC	Solar	Intermediate	Yes	1.8
Facility 2255	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 2256	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 2257	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2258	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 2259	Weaverville	NC	Solar	Intermediate	Yes	4.5
Facility 2260	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2261	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2262	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2263	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 2264	Angier	NC	Solar	Intermediate	Yes	7.5
Facility 2265	Southern Pines	NC	Solar	Intermediate	Yes	2.2
Facility 2266	Weaverville	NC	Solar	Intermediate	Yes	5.2
Facility 2267	Southern Pines	NC	Solar	Intermediate	Yes	7.3
Facility 2268	Asheville	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2269	Asheville	NC	Solar	Intermediate	Yes	7.5
Facility 2270	Cameron	NC	Solar	Intermediate	Yes	4.9
Facility 2271	Benson	NC	Solar	Intermediate	Yes	2.6
Facility 2272	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 2273	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2274	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2275	Louisburg	NC	Solar	Intermediate	Yes	5.2
Facility 2276	Angier	NC	Solar	Intermediate	Yes	1.7
Facility 2277	Lillington	NC	Solar	Intermediate	Yes	2.3
Facility 2278	Chandler	NC	Solar	Intermediate	Yes	3.2
Facility 2279	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2280	Asheville	NC	Solar	Intermediate	Yes	6.5
Facility 2281	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 2282	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2283	Asheville	NC	Solar	Intermediate	Yes	8.0
Facility 2284	Pinehurst	NC	Solar	Intermediate	Yes	10.1
Facility 2285	Pinehurst	NC	Solar	Intermediate	Yes	2.6
Facility 2286	Fuquay Varina	NC	Solar	Intermediate	Yes	4.0
Facility 2287	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2288	Asheville	NC	Solar	Intermediate	Yes	0.8
Facility 2289	Jacksonville	NC	Solar	Intermediate	Yes	2.6
Facility 2290	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 2291	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 2292	Fayetteville	NC	Solar	Intermediate	Yes	2.6
Facility 2293	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2294	Carolina Beach	NC	Solar	Intermediate	Yes	3.5
Facility 2295	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 2296	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2297	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 2298	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2299	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 2300	CAMERON	NC	Solar	Intermediate	Yes	4.3
Facility 2301	Kinston	NC	Solar	Intermediate	Yes	3.0
Facility 2302	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2303	Godwin	NC	Solar	Intermediate	Yes	5.0
Facility 2304	Asheville	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2305	Chapel Hill	NC	Solar	Intermediate	Yes	4.2
Facility 2306	Asheville	NC	Solar	Intermediate	Yes	3.1
Facility 2307	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 2308	Weaverville	NC	Solar	Intermediate	Yes	2.9
Facility 2309	Raleigh	NC	Solar	Intermediate	Yes	7.8
Facility 2310	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2311	Waynesville	NC	Solar	Intermediate	Yes	7.0
Facility 2312	Fletcher	NC	Solar	Intermediate	Yes	3.2
Facility 2313	Pittsboro	NC	Solar	Intermediate	Yes	1.6
Facility 2314	Asheville	NC	Solar	Intermediate	Yes	3.1
Facility 2315	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 2316	Montreat	NC	Solar	Intermediate	Yes	2.5
Facility 2317	Leasburg	NC	Solar	Intermediate	Yes	8.5
Facility 2318	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 2319	Candler	NC	Solar	Intermediate	Yes	10.1
Facility 2320	Fairview	NC	Solar	Intermediate	Yes	7.1
Facility 2321	Fairview	NC	Solar	Intermediate	Yes	2.8
Facility 2322	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2323	Wilmington	NC	Solar	Intermediate	Yes	7.2
Facility 2324	Pittsboro	NC	Solar	Intermediate	Yes	5.2
Facility 2325	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 2326	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2327	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2328	Swannanoa	NC	Solar	Intermediate	Yes	1.5
Facility 2329	Pittsboro	NC	Solar	Intermediate	Yes	2.6
Facility 2330	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 2331	Asheville	NC	Solar	Intermediate	Yes	6.5
Facility 2332	Fairview	NC	Solar	Intermediate	Yes	5.4
Facility 2333	Newport	NC	Solar	Intermediate	Yes	7.6
Facility 2334	Siler City	NC	Solar	Intermediate	Yes	4.2
Facility 2335	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 2336	Fayetteville	NC	Solar	Intermediate	Yes	5.0
Facility 2337	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 2338	Asheville	NC	Solar	Intermediate	Yes	3.2
Facility 2339	Asheville	NC	Solar	Intermediate	Yes	7.0
Facility 2340	Goldsboro	NC	Solar	Intermediate	Yes	4.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2341	Asheboro	NC	Solar	Intermediate	Yes	6.9
Facility 2342	Wilmington	NC	Solar	Intermediate	Yes	1.6
Facility 2343	Lumberton	NC	Solar	Intermediate	Yes	4998.0
Facility 2344	Clarkton	NC	Solar	Intermediate	Yes	4998.0
Facility 2345	Sanford	NC	Solar	Intermediate	Yes	1965.4
Facility 2346	Roxboro	NC	Solar	Intermediate	Yes	5000.0
Facility 2347	Pinehurst	NC	Solar	Intermediate	Yes	2.0
Facility 2348	Beulaville	NC	Solar	Intermediate	Yes	1990.0
Facility 2349	Cary	NC	Solar	Intermediate	Yes	8.0
Facility 2350	Clayton	NC	Solar	Intermediate	Yes	2.6
Facility 2351	Apex	NC	Solar	Intermediate	Yes	6.2
Facility 2352	Fletcher	NC	Solar	Intermediate	Yes	6.1
Facility 2353	Angier	NC	Solar	Intermediate	Yes	2.6
Facility 2354	Barnardsville	NC	Solar	Intermediate	Yes	4.4
Facility 2355	Fletcher	NC	Solar	Intermediate	Yes	2.8
Facility 2356	Asheville	NC	Solar	Intermediate	Yes	2.3
Facility 2357	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 2358	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 2359	Asheville	NC	Solar	Intermediate	Yes	7.1
Facility 2360	Waynesville	NC	Solar	Intermediate	Yes	3.6
Facility 2361	Asheville	NC	Solar	Intermediate	Yes	96.0
Facility 2362	Oxford	NC	Solar	Intermediate	Yes	5000.0
Facility 2363	Pittsboro	NC	Solar	Intermediate	Yes	8.0
Facility 2364	Raleigh	NC	Solar	Intermediate	Yes	24.0
Facility 2365	Asheville	NC	Solar	Intermediate	Yes	22.8
Facility 2366	Cary	NC	Solar	Intermediate	Yes	30.0
Facility 2367	Raleigh	NC	Solar	Intermediate	Yes	1.5
Facility 2368	Siler City	NC	Solar	Intermediate	Yes	1.5
Facility 2369	Swannanoa	NC	Solar	Intermediate	Yes	1.5
Facility 2370	Southport	NC	Solar	Intermediate	Yes	1.5
Facility 2371	Cary	NC	Solar	Intermediate	Yes	950.0
Facility 2372	Wilmington	NC	Solar	Intermediate	Yes	22.1
Facility 2373	Dunn	NC	Solar	Intermediate	Yes	37.8
Facility 2374	Asheville	NC	Solar	Intermediate	Yes	28.8
Facility 2375	Wilmington	NC	Solar	Intermediate	Yes	28.8
Facility 2376	Raleigh	NC	Solar	Intermediate	Yes	43.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2377	Fairview	NC	Solar	Intermediate	Yes	22.9
Facility 2378	Morehead City	NC	Solar	Intermediate	Yes	40.0
Facility 2379	Morrisville	NC	-	-	Yes	10.4
Facility 2380	Selma	NC	Solar	Intermediate	Yes	100.0
Facility 2381	Raleigh	NC	Solar	Intermediate	Yes	57.6
Facility 2382	Mount Gilead	NC	Biomass	Intermediate	Yes	9900.0
Facility 2383	Asheville	NC	Solar	Intermediate	Yes	34.5
Facility 2384	Fayetteville	NC	Gas	Intermediate	Yes	273000.0
Facility 2385	Fletcher	NC	Solar	Intermediate	Yes	49.4
Facility 2386	Raleigh	NC	Solar	Intermediate	Yes	28.8
Facility 2387	Wilmington	NC	Solar	Intermediate	Yes	100.0
Facility 2388	Wilmington	NC	Solar	Intermediate	Yes	100.0
Facility 2389	Chapel Hill	NC	Solar	Intermediate	Yes	34.1
Facility 2390	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 2391	Raleigh	NC	Solar	Intermediate	Yes	7.7
Facility 2392	Chapel Hill	NC	Solar	Intermediate	Yes	5.2
Facility 2393	Asheville	NC	Solar	Intermediate	Yes	4.9
Facility 2394	Raleigh	NC	Solar	Intermediate	Yes	6.4
Facility 2395	Garner	NC	Solar	Intermediate	Yes	7.1
Facility 2396	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 2397	Bahama	NC	Solar	Intermediate	Yes	3.8
Facility 2398	Raleigh	NC	Solar	Intermediate	Yes	6.4
Facility 2399	Morrisville	NC	Solar	Intermediate	Yes	3.6
Facility 2400	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2401	Chapel Hill	NC	Solar	Intermediate	Yes	4.9
Facility 2402	Hampstead	NC	Solar	Intermediate	Yes	8.3
Facility 2403	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2404	Garner	NC	Solar	Intermediate	Yes	6.9
Facility 2405	Wilmington	NC	Solar	Intermediate	Yes	3.2
Facility 2406	Sanford	NC	Solar	Intermediate	Yes	10.3
Facility 2407	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 2408	Cary	NC	Solar	Intermediate	Yes	7.3
Facility 2409	Apex	NC	Solar	Intermediate	Yes	6.4
Facility 2410	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 2411	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 2412	Asheville	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2413	Asheville	NC	Solar	Intermediate	Yes	12.5
Facility 2414	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 2415	Raleigh	NC	Solar	Intermediate	Yes	5.1
Facility 2416	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 2417	Asheville	NC	Solar	Intermediate	Yes	16.5
Facility 2418	HOLLY SPRINGS	NC	Solar	Intermediate	Yes	4.1
Facility 2419	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 2420	Cary	NC	Solar	Intermediate	Yes	8.9
Facility 2421	Godwin	NC	Solar	Intermediate	Yes	5.1
Facility 2422	Raleigh	NC	Solar	Intermediate	Yes	7.5
Facility 2423	Clayton	NC	Solar	Intermediate	Yes	6.4
Facility 2424	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 2425	Candler	NC	Solar	Intermediate	Yes	4.0
Facility 2426	Biltmore Lake	NC	Solar	Intermediate	Yes	3.8
Facility 2427	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 2428	Chapel Hill	NC	Solar	Intermediate	Yes	8.2
Facility 2429	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 2430	Fairview	NC	Solar	Intermediate	Yes	3.4
Facility 2431	Asheville	NC	Solar	Intermediate	Yes	1.6
Facility 2432	Cary	NC	Solar	Intermediate	Yes	2.7
Facility 2433	Garner	NC	Solar	Intermediate	Yes	2.4
Facility 2434	Wilmington	NC	Solar	Intermediate	Yes	3.1
Facility 2435	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 2436	Pittsboro	NC	Solar	Intermediate	Yes	4.7
Facility 2437	Biltmore Lake	NC	Solar	Intermediate	Yes	6.7
Facility 2438	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 2439	Biltmore Lake	NC	Solar	Intermediate	Yes	7.1
Facility 2440	Asheville	NC	Solar	Intermediate	Yes	5.6
Facility 2441	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 2442	Wilmington	NC	Solar	Intermediate	Yes	6.5
Facility 2443	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 2444	Cary	NC	Solar	Intermediate	Yes	4.4
Facility 2445	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 2446	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 2447	Raleigh	NC	Solar	Intermediate	Yes	6.9
Facility 2448	Raleigh	NC	Solar	Intermediate	Yes	6.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2449	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 2450	Asheville	NC	Solar	Intermediate	Yes	4.7
Facility 2451	Candler	NC	Solar	Intermediate	Yes	9.9
Facility 2452	Sanford	NC	Solar	Intermediate	Yes	9.6
Facility 2453	Cary	NC	Solar	Intermediate	Yes	4.9
Facility 2454	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2455	Weaverville	NC	Solar	Intermediate	Yes	3.0
Facility 2456	apex	NC	Solar	Intermediate	Yes	3.7
Facility 2457	Asheville	NC	Solar	Intermediate	Yes	9.1
Facility 2458	Asheville	NC	Solar	Intermediate	Yes	6.9
Facility 2459	Asheboro	NC	Solar	Intermediate	Yes	2.4
Facility 2460	Weaverville	NC	Solar	Intermediate	Yes	4.5
Facility 2461	Raleigh	NC	Solar	Intermediate	Yes	8.1
Facility 2462	Cary	NC	Solar	Intermediate	Yes	5.9
Facility 2463	Asheville	NC	Solar	Intermediate	Yes	7.1
Facility 2464	Cary	NC	Solar	Intermediate	Yes	6.5
Facility 2465	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 2466	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 2467	Morrisville	NC	Solar	Intermediate	Yes	6.6
Facility 2468	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 2469	Morrisville	NC	Solar	Intermediate	Yes	5.1
Facility 2470	Asheville	NC	Solar	Intermediate	Yes	1.0
Facility 2471	Pittsboro	NC	Solar	Intermediate	Yes	6.4
Facility 2472	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 2473	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 2474	Fuquay Varina	NC	Solar	Intermediate	Yes	8.7
Facility 2475	Zebulon	NC	Solar	Intermediate	Yes	13.3
Facility 2476	Cary	NC	Solar	Intermediate	Yes	2.9
Facility 2477	Morrisville	NC	Solar	Intermediate	Yes	2.4
Facility 2478	Asheville	NC	Solar	Intermediate	Yes	13.1
Facility 2479	Raleigh	NC	Solar	Intermediate	Yes	13.5
Facility 2480	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2481	Pinehurst	NC	Solar	Intermediate	Yes	4.9
Facility 2482	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2483	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 2484	Whiteville	NC	Solar	Intermediate	Yes	5.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2485	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 2486	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 2487	Clayton	NC	Solar	Intermediate	Yes	2.9
Facility 2488	Chapel Hill	NC	Solar	Intermediate	Yes	3.2
Facility 2489	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 2490	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 2491	Pittsboro	NC	Solar	Intermediate	Yes	3.5
Facility 2492	Ashville	NC	Solar	Intermediate	Yes	5.9
Facility 2493	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 2494	Weaverville	NC	Solar	Intermediate	Yes	3.8
Facility 2495	Asheville	NC	Solar	Intermediate	Yes	7.1
Facility 2496	Fletcher	NC	Solar	Intermediate	Yes	6.8
Facility 2497	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 2498	Asheville	NC	Solar	Intermediate	Yes	6.5
Facility 2499	Ashville	NC	Solar	Intermediate	Yes	5.3
Facility 2500	Benson	NC	Solar	Intermediate	Yes	4.9
Facility 2501	Peachland	NC	Solar	Intermediate	Yes	2.6
Facility 2502	Leland	NC	Solar	Intermediate	Yes	5.8
Facility 2503	Raleigh	NC	Solar	Intermediate	Yes	1.9
Facility 2504	Weaverville	NC	Solar	Intermediate	Yes	5.3
Facility 2505	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 2506	Wrightsville Beach	NC	Solar	Intermediate	Yes	6.6
Facility 2507	Woodfin	NC	Solar	Intermediate	Yes	5.3
Facility 2508	Asheville	NC	Solar	Intermediate	Yes	6.1
Facility 2509	Weaverville	NC	Solar	Intermediate	Yes	3.5
Facility 2510	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 2511	Weaverville	NC	Solar	Intermediate	Yes	4.8
Facility 2512	Apex	NC	Solar	Intermediate	Yes	2.4
Facility 2513	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 2514	Wilmington	NC	Solar	Intermediate	Yes	20.8
Facility 2515	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 2516	Fairview	NC	Solar	Intermediate	Yes	7.3
Facility 2517	Pinehurst	NC	Solar	Intermediate	Yes	4.4
Facility 2518	Cary	NC	Solar	Intermediate	Yes	4.7
Facility 2519	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 2520	Rocky Mount	NC	Solar	Intermediate	Yes	2.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2521	Hampstead	NC	Solar	Intermediate	Yes	4.2
Facility 2522	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 2523	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 2524	Roxboro	NC	Solar	Intermediate	Yes	4.5
Facility 2525	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 2526	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 2527	Spring Lake	NC	Solar	Intermediate	Yes	4.6
Facility 2528	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 2529	Clinton	NC	Solar	Intermediate	Yes	5.8
Facility 2530	Weaverville	NC	Solar	Intermediate	Yes	9.0
Facility 2531	CARY	NC	Solar	Intermediate	Yes	4.5
Facility 2532	Willow Springs	NC	Solar	Intermediate	Yes	8.5
Facility 2533	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 2534	New Hill	NC	Solar	Intermediate	Yes	9.6
Facility 2535	Siler City	NC	Solar	Intermediate	Yes	6.5
Facility 2536	Southport	NC	Solar	Intermediate	Yes	5.2
Facility 2537	Wilmington	NC	Solar	Intermediate	Yes	6.9
Facility 2538	Asheville	NC	Solar	Intermediate	Yes	12.3
Facility 2539	Clayton	NC	Solar	Intermediate	Yes	6.5
Facility 2540	Asheville	NC	Solar	Intermediate	Yes	8.2
Facility 2541	Asheville	NC	Solar	Intermediate	Yes	14.4
Facility 2542	Roxboro	NC	Solar	Intermediate	Yes	2.9
Facility 2543	Asheville	NC	Solar	Intermediate	Yes	8.1
Facility 2544	Cary	NC	Solar	Intermediate	Yes	4.1
Facility 2545	Morrisville	NC	Solar	Intermediate	Yes	5.0
Facility 2546	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 2547	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2548	Raleigh	NC	Solar	Intermediate	Yes	7.4
Facility 2549	Pittsboro	NC	Solar	Intermediate	Yes	9.5
Facility 2550	raleigh	NC	Solar	Intermediate	Yes	2.1
Facility 2551	Cary	NC	Solar	Intermediate	Yes	5.5
Facility 2552	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 2553	Raleigh	NC	Solar	Intermediate	Yes	5.4
Facility 2554	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 2555	Chapel Hill	NC	Solar	Intermediate	Yes	2.4
Facility 2556	Raleigh	NC	Solar	Intermediate	Yes	4.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2557	Black Mountain	NC	Solar	Intermediate	Yes	4.1
Facility 2558	Weaverville	NC	Solar	Intermediate	Yes	6.6
Facility 2559	Asheville	NC	Solar	Intermediate	Yes	6.1
Facility 2560	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2561	Apex	NC	Solar	Intermediate	Yes	2.4
Facility 2562	Wilmington	NC	Solar	Intermediate	Yes	4.5
Facility 2563	ASHEVILLE	NC	Solar	Intermediate	Yes	5.0
Facility 2564	Weaverville	NC	Solar	Intermediate	Yes	3.4
Facility 2565	Raleigh	NC	Solar	Intermediate	Yes	8.2
Facility 2566	Morrisville	NC	Solar	Intermediate	Yes	3.5
Facility 2567	asheboro	NC	Solar	Intermediate	Yes	12.2
Facility 2568	Cary	NC	Solar	Intermediate	Yes	4.8
Facility 2569	Jacksonville	NC	Solar	Intermediate	Yes	8.9
Facility 2570	Cary	NC	Solar	Intermediate	Yes	8.3
Facility 2571	CARY	NC	Solar	Intermediate	Yes	4.4
Facility 2572	Cary	NC	Solar	Intermediate	Yes	9.1
Facility 2573	Asheville	NC	Solar	Intermediate	Yes	18.0
Facility 2574	Cary	NC	Solar	Intermediate	Yes	2.4
Facility 2575	Candler	NC	Solar	Intermediate	Yes	1.7
Facility 2576	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 2577	Biscoe	NC	Solar	Intermediate	Yes	4.2
Facility 2578	Asheville	NC	Solar	Intermediate	Yes	8.3
Facility 2579	Raleigh	NC	Solar	Intermediate	Yes	7.3
Facility 2580	Wilmington	NC	Solar	Intermediate	Yes	4.9
Facility 2581	Waynesville	NC	Solar	Intermediate	Yes	4.1
Facility 2582	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 2583	Cary	NC	Solar	Intermediate	Yes	7.9
Facility 2584	Angier	NC	Solar	Intermediate	Yes	3.4
Facility 2585	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2586	Asheville	NC	Solar	Intermediate	Yes	4.4
Facility 2587	Weaverville	NC	Solar	Intermediate	Yes	5.1
Facility 2588	Southern Pines	NC	Solar	Intermediate	Yes	8.2
Facility 2589	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 2590	Asheville	NC	Solar	Intermediate	Yes	7.8
Facility 2591	Biltmore Forest	NC	Solar	Intermediate	Yes	6.9
Facility 2592	Raleigh	NC	Solar	Intermediate	Yes	12.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2593	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 2594	Angier	NC	Solar	Intermediate	Yes	6.3
Facility 2595	Pinehurst	NC	Solar	Intermediate	Yes	7.6
Facility 2596	Wake Forest	NC	Solar	Intermediate	Yes	8.7
Facility 2597	Candler	NC	Solar	Intermediate	Yes	4.8
Facility 2598	Biltmore Lake	NC	Solar	Intermediate	Yes	5.8
Facility 2599	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 2600	Asheville	NC	Solar	Intermediate	Yes	7.1
Facility 2601	Louisburg	NC	Solar	Intermediate	Yes	4.9
Facility 2602	Fairview	NC	Solar	Intermediate	Yes	9.1
Facility 2603	Asheville	NC	Solar	Intermediate	Yes	5.6
Facility 2604	Wilmington	NC	Solar	Intermediate	Yes	5.9
Facility 2605	Oxford	NC	Solar	Intermediate	Yes	4.9
Facility 2606	Four Oaks	NC	Solar	Intermediate	Yes	4.1
Facility 2607	Pikeville	NC	Solar	Intermediate	Yes	16.6
Facility 2608	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2609	Middlesex	NC	Solar	Intermediate	Yes	9.1
Facility 2610	Wilmington	NC	Solar	Intermediate	Yes	5.9
Facility 2611	Wilmington	NC	Solar	Intermediate	Yes	4.7
Facility 2612	Raleigh	NC	Solar	Intermediate	Yes	8.1
Facility 2613	Waynesville	NC	Solar	Intermediate	Yes	5.7
Facility 2614	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 2615	Newport	NC	Solar	Intermediate	Yes	9.2
Facility 2616	Asheville	NC	Solar	Intermediate	Yes	1.7
Facility 2617	Goldston	NC	Solar	Intermediate	Yes	7.0
Facility 2618	Asheville	NC	Solar	Intermediate	Yes	1.8
Facility 2619	Wilmington	NC	Solar	Intermediate	Yes	2.9
Facility 2620	Angier	NC	Solar	Intermediate	Yes	12.0
Facility 2621	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 2622	Asheville	NC	Solar	Intermediate	Yes	7.9
Facility 2623	Vass	NC	Solar	Intermediate	Yes	5.5
Facility 2624	Asheville	NC	Solar	Intermediate	Yes	4.5
Facility 2625	Wilmington	NC	Solar	Intermediate	Yes	2.9
Facility 2626	JACKSONVILLE	NC	Solar	Intermediate	Yes	7.7
Facility 2627	Cary	NC	Solar	Intermediate	Yes	1.8
Facility 2628	Randleman	NC	Solar	Intermediate	Yes	4.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2629	Lumberton	NC	Solar	Intermediate	Yes	7.0
Facility 2630	Asheboro	NC	Solar	Intermediate	Yes	3.7
Facility 2631	Wilmington	NC	Solar	Intermediate	Yes	4.1
Facility 2632	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.6
Facility 2633	Laurinburg	NC	Solar	Intermediate	Yes	2.9
Facility 2634	Pinehurst	NC	Solar	Intermediate	Yes	4.4
Facility 2635	Canton	NC	Solar	Intermediate	Yes	9.9
Facility 2636	Garner	NC	Solar	Intermediate	Yes	4.0
Facility 2637	Cary	NC	Solar	Intermediate	Yes	3.9
Facility 2638	Fayetteville	NC	Solar	Intermediate	Yes	6.2
Facility 2639	Southern Pines	NC	Solar	Intermediate	Yes	6.5
Facility 2640	Semora	NC	Solar	Intermediate	Yes	4.6
Facility 2641	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 2642	Waynesville	NC	Solar	Intermediate	Yes	2.8
Facility 2643	Asheville	NC	Solar	Intermediate	Yes	10.7
Facility 2644	Holly Springs	NC	Solar	Intermediate	Yes	5.7
Facility 2645	Wilmington	NC	Solar	Intermediate	Yes	12.8
Facility 2646	Cary	NC	Solar	Intermediate	Yes	4.1
Facility 2647	Wake Forest	NC	Solar	Intermediate	Yes	5.6
Facility 2648	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2649	Leicester	NC	Solar	Intermediate	Yes	4.6
Facility 2650	Leland	NC	Solar	Intermediate	Yes	7.6
Facility 2651	Pittsboro	NC	Solar	Intermediate	Yes	8.0
Facility 2652	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 2653	Cary	NC	Solar	Intermediate	Yes	5.1
Facility 2654	Pittsboro	NC	Solar	Intermediate	Yes	4.5
Facility 2655	Black Mountain	NC	Solar	Intermediate	Yes	0.4
Facility 2656	Asheville	NC	Solar	Intermediate	Yes	1.6
Facility 2657	Black Mtn	NC	Solar	Intermediate	Yes	3.5
Facility 2658	Southern Pines	NC	Solar	Intermediate	Yes	9.8
Facility 2659	Durham	NC	Solar	Intermediate	Yes	5.6
Facility 2660	Pinehurst	NC	Solar	Intermediate	Yes	3.5
Facility 2661	angier	NC	Solar	Intermediate	Yes	6.9
Facility 2662	Fayetteville	NC	Solar	Intermediate	Yes	16.1
Facility 2663	Rocky Mount	NC	Solar	Intermediate	Yes	6.4
Facility 2664	Garner	NC	Solar	Intermediate	Yes	3.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2665	Wilmington	NC	Solar	Intermediate	Yes	4.5
Facility 2666	La Grange	NC	Solar	Intermediate	Yes	5.1
Facility 2667	Dunn	NC	Solar	Intermediate	Yes	10.7
Facility 2668	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 2669	Weaverville	NC	Solar	Intermediate	Yes	6.9
Facility 2670	Asheville	NC	Solar	Intermediate	Yes	2.9
Facility 2671	Carthage	NC	Solar	Intermediate	Yes	6.3
Facility 2672	Goldsboro	NC	Solar	Intermediate	Yes	5.0
Facility 2673	Raleigh	NC	Solar	Intermediate	Yes	7.3
Facility 2674	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 2675	Raleigh	NC	Solar	Intermediate	Yes	5.2
Facility 2676	Roxboro	NC	Solar	Intermediate	Yes	11.5
Facility 2677	Zebulon	NC	Solar	Intermediate	Yes	11.3
Facility 2678	Wilmington	NC	Solar	Intermediate	Yes	4.4
Facility 2679	Raleigh	NC	Solar	Intermediate	Yes	6.9
Facility 2680	Roxboro	NC	Solar	Intermediate	Yes	5.7
Facility 2681	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2682	Pittsboro	NC	Solar	Intermediate	Yes	2.1
Facility 2683	Wilmington	NC	Solar	Intermediate	Yes	7.3
Facility 2684	Dunn	NC	Solar	Intermediate	Yes	6.8
Facility 2685	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 2686	CAry	NC	Solar	Intermediate	Yes	3.6
Facility 2687	Apex	NC	Solar	Intermediate	Yes	6.2
Facility 2688	Raeford	NC	Solar	Intermediate	Yes	7.6
Facility 2689	Carthage	NC	Solar	Intermediate	Yes	4.5
Facility 2690	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 2691	Fuquay-Varina	NC	Solar	Intermediate	Yes	11.8
Facility 2692	Waynesville	NC	Solar	Intermediate	Yes	5.3
Facility 2693	Raleigh	NC	Solar	Intermediate	Yes	18.4
Facility 2694	Pittsboro	NC	Solar	Intermediate	Yes	5.4
Facility 2695	Wilmington	NC	Solar	Intermediate	Yes	5.5
Facility 2696	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 2697	Asheboro	NC	Solar	Intermediate	Yes	3.7
Facility 2698	Angier	NC	Solar	Intermediate	Yes	11.3
Facility 2699	Fuquay-Varina	NC	Solar	Intermediate	Yes	2.3
Facility 2700	Chapel Hill	NC	Solar	Intermediate	Yes	2.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 2701	Roxboro	NC	Solar	Intermediate	Yes	5.4
Facility 2702	Clayton	NC	Solar	Intermediate	Yes	11.2
Facility 2703	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 2704	Zebulon	NC	Solar	Intermediate	Yes	8.7
Facility 2705	Raleigh	NC	Solar	Intermediate	Yes	10.6
Facility 2706	RAleigh	NC	Solar	Intermediate	Yes	5.4
Facility 2707	Sanford	NC	Solar	Intermediate	Yes	5.8
Facility 2708	Apex	NC	Solar	Intermediate	Yes	6.3
Facility 2709	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 2710	Angier	NC	Solar	Intermediate	Yes	6.0
Facility 2711	Garner	NC	Solar	Intermediate	Yes	2.7
Facility 2712	Apex	NC	Solar	Intermediate	Yes	5.1
Facility 2713	Angier	NC	Solar	Intermediate	Yes	4.4
Facility 2714	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 2715	West End	NC	Solar	Intermediate	Yes	9.0
Facility 2716	raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 2717	Leicester	NC	Solar	Intermediate	Yes	3.0
Facility 2718	Black Mountain	NC	Solar	Intermediate	Yes	1.6
Facility 2719	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 2720	Goldsboro	NC	Solar	Intermediate	Yes	9.7
Facility 2721	Raleigh	NC	Solar	Intermediate	Yes	6.6
Facility 2722	Raleigh	NC	Solar	Intermediate	Yes	3.9
Facility 2723	Clayton	NC	Solar	Intermediate	Yes	4.7
Facility 2724	Raleigh	NC	Solar	Intermediate	Yes	2.7
Facility 2725	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 2726	Spring Hope	NC	Solar	Intermediate	Yes	9.4
Facility 2727	Hubert	NC	Solar	Intermediate	Yes	7.0
Facility 2728	Pittsboro	NC	Solar	Intermediate	Yes	4.5
Facility 2729	Lumberton	NC	Solar	Intermediate	Yes	3.3
Facility 2730	Leland	NC	Solar	Intermediate	Yes	2.4
Facility 2731	Carolina Bch	NC	Solar	Intermediate	Yes	2.8
Facility 2732	Fuquay-Varina	NC	Solar	Intermediate	Yes	4.5
Facility 2733	Cary	NC	Solar	Intermediate	Yes	3.2
Facility 2734	Roxboro	NC	Solar	Intermediate	Yes	11.9
Facility 2735	Fayetteville	NC	Solar	Intermediate	Yes	2.8
Facility 2736	Asheville	NC	Solar	Intermediate	Yes	9.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2737	Lillington	NC	Solar	Intermediate	Yes	12.0
Facility 2738	FUQUAY VARINA	NC	Solar	Intermediate	Yes	3.0
Facility 2739	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 2740	Hurdle Mills	NC	Solar	Intermediate	Yes	5.0
Facility 2741	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 2742	Holly Springs	NC	Solar	Intermediate	Yes	4.0
Facility 2743	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 2744	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 2745	Clayton	NC	Solar	Intermediate	Yes	2.4
Facility 2746	Star	NC	Solar	Intermediate	Yes	6.0
Facility 2747	Castalia	NC	Solar	Intermediate	Yes	4.4
Facility 2748	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 2749	Hamlet	NC	Solar	Intermediate	Yes	3.8
Facility 2750	Fairview	NC	Solar	Intermediate	Yes	2.0
Facility 2751	Raleigh	NC	Solar	Intermediate	Yes	10.1
Facility 2752	Zebulon	NC	Solar	Intermediate	Yes	6.4
Facility 2753	Siler City	NC	Solar	Intermediate	Yes	3.0
Facility 2754	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 2755	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 2756	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2757	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 2758	Angier	NC	Solar	Intermediate	Yes	5.2
Facility 2759	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 2760	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2761	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 2762	RALEIGH	NC	Solar	Intermediate	Yes	4.0
Facility 2763	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 2764	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2765	Timberlake,	NC	Solar	Intermediate	Yes	3.0
Facility 2766	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 2767	Pinebluff	NC	Solar	Intermediate	Yes	3.0
Facility 2768	Norlina	NC	Solar	Intermediate	Yes	7.6
Facility 2769	Black Mountain	NC	Solar	Intermediate	Yes	14.5
Facility 2770	New Bern	NC	Solar	Intermediate	Yes	5.1
Facility 2771	Apex	NC	Solar	Intermediate	Yes	1.6
Facility 2772	Waynesville	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2773	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 2774	Lake Waccamaw	NC	Solar	Intermediate	Yes	5.1
Facility 2775	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 2776	Staley	NC	Solar	Intermediate	Yes	4.8
Facility 2777	Spruce Pine	NC	Solar	Intermediate	Yes	2.0
Facility 2778	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 2779	Nashville	NC	Solar	Intermediate	Yes	5.0
Facility 2780	Chapel Hill	NC	Solar	Intermediate	Yes	1.2
Facility 2781	Wilmington	NC	Solar	Intermediate	Yes	7.8
Facility 2782	Goldsboro	NC	Solar	Intermediate	Yes	6.0
Facility 2783	Pittsboro	NC	Solar	Intermediate	Yes	4.0
Facility 2784	Swannanoa	NC	Solar	Intermediate	Yes	3.1
Facility 2785	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 2786	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 2787	Wilmington	NC	Solar	Intermediate	Yes	9.3
Facility 2788	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 2789	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2790	Oxford	NC	Solar	Intermediate	Yes	3.8
Facility 2791	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 2792	Asheville	NC	Solar	Intermediate	Yes	18.0
Facility 2793	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2794	Pikeville	NC	Solar	Intermediate	Yes	4.0
Facility 2795	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 2796	Aberdeen	NC	Solar	Intermediate	Yes	5.2
Facility 2797	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 2798	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2799	Asheville	NC	Solar	Intermediate	Yes	6.4
Facility 2800	Princeton	NC	Solar	Intermediate	Yes	4.8
Facility 2801	Carolina Beach	NC	Solar	Intermediate	Yes	6.4
Facility 2802	Chapel Hill	NC	Solar	Intermediate	Yes	3.8
Facility 2803	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 2804	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 2805	Henderson	NC	Solar	Intermediate	Yes	5.0
Facility 2806	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2807	Clinton	NC	Solar	Intermediate	Yes	5.0
Facility 2808	Raleigh	NC	Solar	Intermediate	Yes	2.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2809	Lillington	NC	Solar	Intermediate	Yes	6.0
Facility 2810	Pittsboro	NC	Solar	Intermediate	Yes	6.8
Facility 2811	Carthage	NC	Solar	Intermediate	Yes	8.4
Facility 2812	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2813	Cary	NC	Solar	Intermediate	Yes	6.5
Facility 2814	Leciester	NC	Solar	Intermediate	Yes	5.0
Facility 2815	Carolina Beach	NC	Solar	Intermediate	Yes	3.0
Facility 2816	Youngsville	NC	Solar	Intermediate	Yes	6.8
Facility 2817	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 2818	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 2819	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 2820	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 2821	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 2822	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 2823	New Hill	NC	Solar	Intermediate	Yes	5.0
Facility 2824	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 2825	Raleigh	NC	Solar	Intermediate	Yes	6.9
Facility 2826	Stedman	NC	Solar	Intermediate	Yes	3.0
Facility 2827	Canton	NC	Solar	Intermediate	Yes	2.4
Facility 2828	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 2829	Zebulon	NC	Solar	Intermediate	Yes	5.0
Facility 2830	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2831	Asheville	NC	Solar	Intermediate	Yes	4.8
Facility 2832	Cary	NC	Solar	Intermediate	Yes	8.7
Facility 2833	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 2834	Wilmington	NC	Solar	Intermediate	Yes	1.2
Facility 2835	Seagrove	NC	Solar	Intermediate	Yes	5.0
Facility 2836	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 2837	Chapel Hill	NC	Solar	Intermediate	Yes	2.9
Facility 2838	Asheboro	NC	Solar	Intermediate	Yes	3.2
Facility 2839	Asheville	NC	Solar	Intermediate	Yes	13.6
Facility 2840	Wilmington	NC	Solar	Intermediate	Yes	10.8
Facility 2841	Raleigh	NC	Solar	Intermediate	Yes	1.8
Facility 2842	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 2843	Fletcher	NC	Solar	Intermediate	Yes	1.6
Facility 2844	Asheboro	NC	Solar	Intermediate	Yes	3.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2845	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 2846	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2847	Battleboro	NC	Solar	Intermediate	Yes	9.9
Facility 2848	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2849	Willow Spring	NC	Solar	Intermediate	Yes	5.0
Facility 2850	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 2851	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 2852	Rockingham	NC	Solar	Intermediate	Yes	6.0
Facility 2853	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 2854	Cary	NC	Solar	Intermediate	Yes	4.0
Facility 2855	Four Oaks	NC	Solar	Intermediate	Yes	5.0
Facility 2856	Zebulon	NC	Solar	Intermediate	Yes	10.0
Facility 2857	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 2858	Barnardsville	NC	Solar	Intermediate	Yes	6.0
Facility 2859	Barnardsville	NC	Solar	Intermediate	Yes	3.8
Facility 2860	Barnardsville	NC	Solar	Intermediate	Yes	7.6
Facility 2861	Swannanoa	NC	Solar	Intermediate	Yes	7.6
Facility 2862	Fuquay-Varina	NC	Solar	Intermediate	Yes	2.8
Facility 2863	Alexander	NC	Solar	Intermediate	Yes	7.6
Facility 2864	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2865	Asheboro	NC	Solar	Intermediate	Yes	3.2
Facility 2866	Asheville	NC	Solar	Intermediate	Yes	2.0
Facility 2867	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 2868	ANGIER	NC	Solar	Intermediate	Yes	7.6
Facility 2869	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 2870	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 2871	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 2872	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 2873	Leland	NC	Solar	Intermediate	Yes	8.4
Facility 2874	Asheville	NC	Solar	Intermediate	Yes	1.6
Facility 2875	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 2876	Princeton	NC	Solar	Intermediate	Yes	6.0
Facility 2877	Willow Spring	NC	Solar	Intermediate	Yes	6.0
Facility 2878	Wake Forest	NC	Solar	Intermediate	Yes	0.3
Facility 2879	Pinehurst	NC	Solar	Intermediate	Yes	9.6
Facility 2880	Swansboro	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2881	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2882	Clayton	NC	Solar	Intermediate	Yes	4.6
Facility 2883	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 2884	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2885	Goldsboro	NC	Solar	Intermediate	Yes	9.9
Facility 2886	HOLLY SPRINGS	NC	Solar	Intermediate	Yes	3.0
Facility 2887	Beaufort	NC	Solar	Intermediate	Yes	6.0
Facility 2888	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 2889	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 2890	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 2891	Willow Spring	NC	Solar	Intermediate	Yes	7.0
Facility 2892	Cary	NC	Solar	Intermediate	Yes	9.0
Facility 2893	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 2894	Laurinburg	NC	Solar	Intermediate	Yes	6.0
Facility 2895	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2896	Wilmington	NC	Solar	Intermediate	Yes	7.8
Facility 2897	Willow Spring	NC	Solar	Intermediate	Yes	10.8
Facility 2898	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2899	Stem	NC	Solar	Intermediate	Yes	7.6
Facility 2900	Blanch	NC	Solar	Intermediate	Yes	5.0
Facility 2901	Biscoe	NC	Solar	Intermediate	Yes	3.0
Facility 2902	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 2903	Rockingham	NC	Solar	Intermediate	Yes	3.8
Facility 2904	Alexander	NC	Solar	Intermediate	Yes	5.0
Facility 2905	Asheville	NC	Solar	Intermediate	Yes	9.9
Facility 2906	Wilmington	NC	Solar	Intermediate	Yes	9.6
Facility 2907	Fayetteville	NC	Solar	Intermediate	Yes	3.8
Facility 2908	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2909	Blanch	NC	Solar	Intermediate	Yes	5.0
Facility 2910	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 2911	SOUTHPORT	NC	Solar	Intermediate	Yes	3.6
Facility 2912	Henderson	NC	Solar	Intermediate	Yes	3.8
Facility 2913	Rocky Mount	NC	Solar	Intermediate	Yes	5.0
Facility 2914	Linden	NC	Solar	Intermediate	Yes	3.8
Facility 2915	Kure Beach	NC	Solar	Intermediate	Yes	3.3
Facility 2916	Asheville	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2917	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 2918	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 2919	Goldsboro	NC	Solar	Intermediate	Yes	11.4
Facility 2920	Youngsville	NC	Solar	Intermediate	Yes	6.0
Facility 2921	Asheboro	NC	Solar	Intermediate	Yes	3.2
Facility 2922	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 2923	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 2924	Lillington	NC	Solar	Intermediate	Yes	7.6
Facility 2925	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 2926	Sanford	NC	Solar	Intermediate	Yes	5.1
Facility 2927	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 2928	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 2929	Aberdeen	NC	Solar	Intermediate	Yes	3.0
Facility 2930	Pikeville	NC	Solar	Intermediate	Yes	7.6
Facility 2931	Fletcher	NC	Solar	Intermediate	Yes	4.0
Facility 2932	Southern Pines	NC	Solar	Intermediate	Yes	2.4
Facility 2933	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 2934	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 2935	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 2936	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 2937	Arden	NC	Solar	Intermediate	Yes	7.6
Facility 2938	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2939	Fuquay Varina	NC	Solar	Intermediate	Yes	3.0
Facility 2940	Pinebluff	NC	Solar	Intermediate	Yes	7.2
Facility 2941	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 2942	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 2943	Louisburg	NC	Solar	Intermediate	Yes	5.2
Facility 2944	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 2945	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 2946	Asheville	NC	Solar	Intermediate	Yes	9.9
Facility 2947	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 2948	Wilmington	NC	Solar	Intermediate	Yes	7.2
Facility 2949	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 2950	Fuquay Varina	NC	Solar	Intermediate	Yes	4.0
Facility 2951	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 2952	Henderson	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2953	rALEIGH	NC	Solar	Intermediate	Yes	6.0
Facility 2954	Raleigh	NC	Solar	Intermediate	Yes	0.4
Facility 2955	Selma	NC	Solar	Intermediate	Yes	3.8
Facility 2956	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2957	Wilmington	NC	Solar	Intermediate	Yes	7.8
Facility 2958	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 2959	Ramseur	NC	Solar	Intermediate	Yes	5.0
Facility 2960	Fayetteville	NC	Solar	Intermediate	Yes	7.0
Facility 2961	Beaufort	NC	Solar	Intermediate	Yes	3.6
Facility 2962	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 2963	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 2964	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 2965	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 2966	Wilmington	NC	Solar	Intermediate	Yes	7.2
Facility 2967	Clayton	NC	Solar	Intermediate	Yes	3.6
Facility 2968	Asheville	NC	Solar	Intermediate	Yes	19.8
Facility 2969	Carolina Beach	NC	Solar	Intermediate	Yes	1.0
Facility 2970	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 2971	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2972	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 2973	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 2974	Zebulon	NC	Solar	Intermediate	Yes	9.9
Facility 2975	New Hill	NC	Solar	Intermediate	Yes	7.6
Facility 2976	Micaville	NC	Solar	Intermediate	Yes	7.6
Facility 2977	Whiteville	NC	Solar	Intermediate	Yes	11.4
Facility 2978	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 2979	Willow Springs	NC	Solar	Intermediate	Yes	7.6
Facility 2980	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 2981	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 2982	Rolesville	NC	Solar	Intermediate	Yes	3.0
Facility 2983	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2984	Norwood	NC	Solar	Intermediate	Yes	5.0
Facility 2985	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 2986	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2987	Henderson	NC	Solar	Intermediate	Yes	3.2
Facility 2988	Raleigh	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 2989	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 2990	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 2991	Lake Junaluska	NC	Solar	Intermediate	Yes	3.8
Facility 2992	Arden	NC	Solar	Intermediate	Yes	7.6
Facility 2993	Rocky Mount	NC	Solar	Intermediate	Yes	5.0
Facility 2994	Lake Junaluska	NC	Solar	Intermediate	Yes	3.0
Facility 2995	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 2996	Wilmington	NC	Solar	Intermediate	Yes	7.2
Facility 2997	Barnardsvillle	NC	Solar	Intermediate	Yes	3.0
Facility 2998	Willow Spring	NC	Solar	Intermediate	Yes	3.6
Facility 2999	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3000	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 3001	Southport	NC	Solar	Intermediate	Yes	3.8
Facility 3002	Cove City	NC	Solar	Intermediate	Yes	9.2
Facility 3003	Pittsboro	NC	Solar	Intermediate	Yes	11.4
Facility 3004	Candler	NC	Solar	Intermediate	Yes	4.8
Facility 3005	Pinehurst	NC	Solar	Intermediate	Yes	10.5
Facility 3006	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3007	Fuquay Varina	NC	Solar	Intermediate	Yes	3.6
Facility 3008	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 3009	Atlantic beach	NC	Solar	Intermediate	Yes	7.6
Facility 3010	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3011	Zebulon	NC	Solar	Intermediate	Yes	15.2
Facility 3012	Black Mountain	NC	Solar	Intermediate	Yes	3.0
Facility 3013	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3014	Leland	NC	Solar	Intermediate	Yes	5.0
Facility 3015	Wilmington	NC	Solar	Intermediate	Yes	3.1
Facility 3016	Wilmington	NC	Solar	Intermediate	Yes	9.8
Facility 3017	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 3018	Chapel Hill	NC	Solar	Intermediate	Yes	13.0
Facility 3019	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 3020	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3021	Clayton	NC	Solar	Intermediate	Yes	7.2
Facility 3022	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 3023	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 3024	Montreat	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3025	Morrisville	NC	Solar	Intermediate	Yes	12.0
Facility 3026	Atlantic	NC	Solar	Intermediate	Yes	7.6
Facility 3027	Angier	NC	Solar	Intermediate	Yes	5.0
Facility 3028	GOLDSBORO	NC	Solar	Intermediate	Yes	10.0
Facility 3029	Leicester	NC	Solar	Intermediate	Yes	7.6
Facility 3030	Spruce Pine	NC	Solar	Intermediate	Yes	6.0
Facility 3031	Middlesex	NC	Solar	Intermediate	Yes	7.6
Facility 3032	Goldsboro	NC	Solar	Intermediate	Yes	3.6
Facility 3033	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3034	Raleigh	NC	Solar	Intermediate	Yes	4.4
Facility 3035	Pittsboro	NC	Solar	Intermediate	Yes	9.0
Facility 3036	Pinehurst	NC	Solar	Intermediate	Yes	0.2
Facility 3037	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 3038	FUQUAY VARINA	NC	Solar	Intermediate	Yes	14.5
Facility 3039	Canton	NC	Solar	Intermediate	Yes	6.0
Facility 3040	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3041	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 3042	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 3043	Knightdale	NC	Solar	Intermediate	Yes	5.0
Facility 3044	raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 3045	Chapel HIll	NC	Solar	Intermediate	Yes	5.0
Facility 3046	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 3047	Cary	NC	Solar	Intermediate	Yes	9.9
Facility 3048	Whispering Pines	NC	Solar	Intermediate	Yes	7.6
Facility 3049	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 3050	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3051	Morrisville	NC	Solar	Intermediate	Yes	3.8
Facility 3052	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 3053	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3054	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 3055	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 3056	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3057	Morrisville	NC	Solar	Intermediate	Yes	3.0
Facility 3058	Fairview	NC	Solar	Intermediate	Yes	4.0
Facility 3059	Hope Mills	NC	Solar	Intermediate	Yes	5.0
Facility 3060	Red Springs	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3061	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 3062	Fuquay Varina	NC	Solar	Intermediate	Yes	3.4
Facility 3063	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 3064	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3065	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3066	Sanford	NC	Solar	Intermediate	Yes	3.8
Facility 3067	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3068	GOLDSBORO	NC	Solar	Intermediate	Yes	10.0
Facility 3069	Chocowinity	NC	Solar	Intermediate	Yes	5.0
Facility 3070	Chocowinity	NC	Solar	Intermediate	Yes	6.1
Facility 3071	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 3072	Arden	NC	Solar	Intermediate	Yes	5.0
Facility 3073	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 3074	Nashville	NC	Solar	Intermediate	Yes	5.0
Facility 3075	Maggie Valley	NC	Solar	Intermediate	Yes	6.0
Facility 3076	Leicester	NC	Solar	Intermediate	Yes	6.0
Facility 3077	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3078	Clayton	NC	Solar	Intermediate	Yes	3.4
Facility 3079	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3080	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3081	carthage	NC	Solar	Intermediate	Yes	4.6
Facility 3082	Henderson	NC	Solar	Intermediate	Yes	5.0
Facility 3083	Garner	NC	Solar	Intermediate	Yes	4.2
Facility 3084	Apex	NC	Solar	Intermediate	Yes	2.0
Facility 3085	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3086	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3087	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 3088	Wilmington	NC	Solar	Intermediate	Yes	9.7
Facility 3089	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3090	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3091	Waynesville	NC	Solar	Intermediate	Yes	3.8
Facility 3092	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 3093	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3094	Asheboro	NC	Solar	Intermediate	Yes	3.6
Facility 3095	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3096	Candler	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3097	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 3098	Benson	NC	Solar	Intermediate	Yes	3.9
Facility 3099	Siler City	NC	Solar	Intermediate	Yes	5.0
Facility 3100	FUQUAY-VARINA	NC	Solar	Intermediate	Yes	6.0
Facility 3101	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 3102	Arden	NC	Solar	Intermediate	Yes	4.0
Facility 3103	Raleigh	NC	Solar	Intermediate	Yes	18.0
Facility 3104	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 3105	Wilmington	NC	Solar	Intermediate	Yes	4.5
Facility 3106	Biltmore Lake	NC	Solar	Intermediate	Yes	3.8
Facility 3107	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 3108	Pikeville	NC	Solar	Intermediate	Yes	7.6
Facility 3109	Weaverville	NC	Solar	Intermediate	Yes	7.7
Facility 3110	Fuquay-Varina	NC	Solar	Intermediate	Yes	5.0
Facility 3111	Black Mountain	NC	Solar	Intermediate	Yes	5.0
Facility 3112	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3113	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 3114	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 3115	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3116	Rocky Mount	NC	Solar	Intermediate	Yes	3.0
Facility 3117	Staley	NC	Solar	Intermediate	Yes	5.0
Facility 3118	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3119	Pittsboro	NC	Solar	Intermediate	Yes	5.5
Facility 3120	Vass	NC	Solar	Intermediate	Yes	6.0
Facility 3121	Black Mountain	NC	Solar	Intermediate	Yes	9.9
Facility 3122	Leland	NC	Solar	Intermediate	Yes	5.8
Facility 3123	Siler City	NC	Solar	Intermediate	Yes	3.8
Facility 3124	raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3125	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 3126	Wilmington	NC	Solar	Intermediate	Yes	17.6
Facility 3127	Coats	NC	Solar	Intermediate	Yes	6.0
Facility 3128	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3129	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3130	Leicester	NC	Solar	Intermediate	Yes	6.0
Facility 3131	Pikeville	NC	Solar	Intermediate	Yes	7.6
Facility 3132	Raleigh	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3133	Fayetteville	NC	Solar	Intermediate	Yes	5.0
Facility 3134	Beulaville	NC	Solar	Intermediate	Yes	5.0
Facility 3135	Black Mountain	NC	Solar	Intermediate	Yes	3.0
Facility 3136	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 3137	Zebulon	NC	Solar	Intermediate	Yes	6.0
Facility 3138	Montreat	NC	Solar	Intermediate	Yes	11.4
Facility 3139	Cary	NC	Solar	Intermediate	Yes	4.3
Facility 3140	Wake Forest	NC	Solar	Intermediate	Yes	7.0
Facility 3141	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3142	Littleton	NC	Solar	Intermediate	Yes	5.0
Facility 3143	Pikeville	NC	Solar	Intermediate	Yes	3.7
Facility 3144	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 3145	RALEIGH	NC	Solar	Intermediate	Yes	6.0
Facility 3146	Goldsboro	NC	Solar	Intermediate	Yes	3.4
Facility 3147	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3148	Norwood	NC	Solar	Intermediate	Yes	7.6
Facility 3149	Canton	NC	Solar	Intermediate	Yes	3.0
Facility 3150	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 3151	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3152	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 3153	Carthage	NC	Solar	Intermediate	Yes	16.6
Facility 3154	Chapel Hill	NC	Solar	Intermediate	Yes	7.0
Facility 3155	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 3156	Wilmington	NC	Solar	Intermediate	Yes	3.0
Facility 3157	Zebulon	NC	Solar	Intermediate	Yes	3.4
Facility 3158	Chapel Hill	NC	Solar	Intermediate	Yes	2.6
Facility 3159	Fletcher	NC	Solar	Intermediate	Yes	3.0
Facility 3160	Chapel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 3161	Pittsboro	NC	Solar	Intermediate	Yes	9.9
Facility 3162	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3163	Biltmore Lake	NC	Solar	Intermediate	Yes	7.6
Facility 3164	Weaverville	NC	Solar	Intermediate	Yes	4.0
Facility 3165	Asheville	NC	Solar	Intermediate	Yes	2.5
Facility 3166	Holly Springs	NC	Solar	Intermediate	Yes	3.0
Facility 3167	Middlesex	NC	Solar	Intermediate	Yes	6.0
Facility 3168	Semora	NC	Solar	Intermediate	Yes	6.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3169	Candler	NC	Solar	Intermediate	Yes	15.2
Facility 3170	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3171	Apex	NC	Solar	Intermediate	Yes	1.8
Facility 3172	Siler City	NC	Solar	Intermediate	Yes	7.6
Facility 3173	Nashville	NC	Solar	Intermediate	Yes	4.3
Facility 3174	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3175	Wendell	NC	Solar	Intermediate	Yes	11.4
Facility 3176	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 3177	Chocowinity	NC	Solar	Intermediate	Yes	7.6
Facility 3178	Rolesville	NC	Solar	Intermediate	Yes	3.0
Facility 3179	New Bern	NC	Solar	Intermediate	Yes	7.6
Facility 3180	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 3181	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3182	Linden	NC	Solar	Intermediate	Yes	5.0
Facility 3183	Asheville	NC	Solar	Intermediate	Yes	7.2
Facility 3184	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3185	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3186	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3187	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3188	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3189	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 3190	Fairview	NC	Solar	Intermediate	Yes	15.2
Facility 3191	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3192	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3193	Saint Pauls	NC	Solar	Intermediate	Yes	2.8
Facility 3194	Wilmington	NC	Solar	Intermediate	Yes	4.2
Facility 3195	Mount Gilead	NC	Solar	Intermediate	Yes	7.6
Facility 3196	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 3197	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 3198	Asheville	NC	Solar	Intermediate	Yes	3.5
Facility 3199	CARY	NC	Solar	Intermediate	Yes	6.0
Facility 3200	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3201	Fayetteville	NC	Solar	Intermediate	Yes	6.0
Facility 3202	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 3203	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 3204	Zebulon	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3205	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3206	Sanford	NC	Solar	Intermediate	Yes	3.0
Facility 3207	SPRING LAKE	NC	Solar	Intermediate	Yes	11.4
Facility 3208	Pinehurst	NC	Solar	Intermediate	Yes	3.0
Facility 3209	Cary	NC	Solar	Intermediate	Yes	8.0
Facility 3210	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 3211	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 3212	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 3213	Wilmington	NC	Solar	Intermediate	Yes	7.5
Facility 3214	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3215	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3216	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3217	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 3218	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 3219	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3220	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3221	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 3222	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3223	Mount Gilead	NC	Solar	Intermediate	Yes	7.6
Facility 3224	RALEIGH	NC	Solar	Intermediate	Yes	5.0
Facility 3225	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3226	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3227	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3228	Cary	NC	Solar	Intermediate	Yes	4.5
Facility 3229	Waynesville	NC	Solar	Intermediate	Yes	6.0
Facility 3230	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3231	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3232	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3233	Kinston	NC	Solar	Intermediate	Yes	3.0
Facility 3234	Fuquay-Varina	NC	Solar	Intermediate	Yes	5.0
Facility 3235	Leicester	NC	Solar	Intermediate	Yes	10.0
Facility 3236	Claredon	NC	Solar	Intermediate	Yes	7.6
Facility 3237	Carolina Beach	NC	Solar	Intermediate	Yes	5.0
Facility 3238	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 3239	siler city	NC	Solar	Intermediate	Yes	5.1
Facility 3240	SMITHFIELD	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3241	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 3242	Asheville	NC	Solar	Intermediate	Yes	3.9
Facility 3243	Louisburg	NC	Solar	Intermediate	Yes	3.7
Facility 3244	Sanford	NC	Solar	Intermediate	Yes	3.0
Facility 3245	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3246	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3247	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3248	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 3249	Canton	NC	Solar	Intermediate	Yes	5.0
Facility 3250	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3251	Lillington	NC	Solar	Intermediate	Yes	11.4
Facility 3252	Kinston	NC	Solar	Intermediate	Yes	3.8
Facility 3253	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3254	Wilmngton	NC	Solar	Intermediate	Yes	4.2
Facility 3255	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3256	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 3257	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3258	Castle Hayne	NC	Solar	Intermediate	Yes	3.8
Facility 3259	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 3260	Fairview	NC	Solar	Intermediate	Yes	11.4
Facility 3261	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3262	Fayetteville	NC	Solar	Intermediate	Yes	5.8
Facility 3263	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3264	Swannanoa	NC	Solar	Intermediate	Yes	3.0
Facility 3265	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3266	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3267	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 3268	Spring Lake	NC	Solar	Intermediate	Yes	5.0
Facility 3269	Roseboro	NC	Solar	Intermediate	Yes	7.6
Facility 3270	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3271	Fuquay varina	NC	Solar	Intermediate	Yes	5.0
Facility 3272	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3273	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3274	Pittsboro	NC	Solar	Intermediate	Yes	19.8
Facility 3275	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3276	Apex	NC	Solar	Intermediate	Yes	4.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3277	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 3278	Sims	NC	Solar	Intermediate	Yes	7.6
Facility 3279	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3280	Pinehurst	NC	Solar	Intermediate	Yes	3.8
Facility 3281	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3282	Asheville	NC	Solar	Intermediate	Yes	2.1
Facility 3283	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 3284	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3285	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 3286	Asheville	NC	Solar	Intermediate	Yes	2.2
Facility 3287	Morrisville	NC	Solar	Intermediate	Yes	5.0
Facility 3288	Leland	NC	Solar	Intermediate	Yes	3.7
Facility 3289	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3290	Morrisville	NC	Solar	Intermediate	Yes	5.0
Facility 3291	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 3292	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 3293	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3294	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3295	Southport	NC	Solar	Intermediate	Yes	3.8
Facility 3296	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3297	Candler	NC	Solar	Intermediate	Yes	3.8
Facility 3298	Apex	NC	Solar	Intermediate	Yes	5.0
Facility 3299	Wilmington	NC	Solar	Intermediate	Yes	4.0
Facility 3300	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 3301	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 3302	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3303	Asheville,	NC	Solar	Intermediate	Yes	3.2
Facility 3304	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 3305	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3306	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 3307	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 3308	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 3309	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 3310	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 3311	Willow Spring	NC	Solar	Intermediate	Yes	6.0
Facility 3312	Knightdale	NC	Solar	Intermediate	Yes	3.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3313	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3314	Roxboro	NC	Solar	Intermediate	Yes	7.6
Facility 3315	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 3316	Roxboro	NC	Solar	Intermediate	Yes	5.0
Facility 3317	Willmington	NC	Solar	Intermediate	Yes	5.0
Facility 3318	Wilmington	NC	Solar	Intermediate	Yes	7.8
Facility 3319	Hampsted	NC	Solar	Intermediate	Yes	9.9
Facility 3320	Biltmore Lake	NC	Solar	Intermediate	Yes	7.6
Facility 3321	Raleigh	NC	Solar	Intermediate	Yes	2.0
Facility 3322	Willow Spring	NC	Solar	Intermediate	Yes	7.0
Facility 3323	Morrisville	NC	Solar	Intermediate	Yes	4.0
Facility 3324	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3325	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3326	Morrisville	NC	Solar	Intermediate	Yes	3.7
Facility 3327	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3328	Cary	NC	Solar	Intermediate	Yes	10.2
Facility 3329	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3330	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3331	Pinehurst	NC	Solar	Intermediate	Yes	6.0
Facility 3332	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 3333	Southport	NC	Solar	Intermediate	Yes	3.0
Facility 3334	Candler	NC	Solar	Intermediate	Yes	3.0
Facility 3335	Moncure	NC	Solar	Intermediate	Yes	7.6
Facility 3336	Apex	NC	Solar	Intermediate	Yes	3.0
Facility 3337	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 3338	West End	NC	Solar	Intermediate	Yes	10.0
Facility 3339	cary	NC	Solar	Intermediate	Yes	4.0
Facility 3340	Southern Pines	NC	Solar	Intermediate	Yes	6.0
Facility 3341	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3342	New Bern	NC	Solar	Intermediate	Yes	3.8
Facility 3343	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 3344	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3345	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 3346	Chocowinity	NC	Solar	Intermediate	Yes	10.0
Facility 3347	Alexander	NC	Solar	Intermediate	Yes	6.0
Facility 3348	Cary	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3349	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 3350	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3351	Moncure	NC	Solar	Intermediate	Yes	10.0
Facility 3352	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3353	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3354	Middlesex	NC	Solar	Intermediate	Yes	3.0
Facility 3355	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3356	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3357	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3358	Bunnlevel	NC	Solar	Intermediate	Yes	10.9
Facility 3359	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3360	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3361	Oxford	NC	Solar	Intermediate	Yes	11.4
Facility 3362	Swannanoa	NC	Solar	Intermediate	Yes	6.0
Facility 3363	Vass	NC	Solar	Intermediate	Yes	7.6
Facility 3364	Zebulon	NC	Solar	Intermediate	Yes	7.6
Facility 3365	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3366	Franklinville	NC	Solar	Intermediate	Yes	5.0
Facility 3367	Norlina	NC	Solar	Intermediate	Yes	3.0
Facility 3368	Mooresville	NC	Solar	Intermediate	Yes	5.0
Facility 3369	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3370	Cameron	NC	Solar	Intermediate	Yes	7.6
Facility 3371	Pittsboro	NC	Solar	Intermediate	Yes	9.9
Facility 3372	Cary	NC	Solar	Intermediate	Yes	9.9
Facility 3373	Ramseur	NC	Solar	Intermediate	Yes	14.7
Facility 3374	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3375	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3376	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 3377	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3378	MOREHEAD CITY	NC	Solar	Intermediate	Yes	6.0
Facility 3379	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 3380	Castle Hayne	NC	Solar	Intermediate	Yes	6.5
Facility 3381	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3382	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 3383	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3384	Dunn	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3385	CHAPEL HILL	NC	Solar	Intermediate	Yes	3.8
Facility 3386	Carolina Beach	NC	Solar	Intermediate	Yes	5.0
Facility 3387	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 3388	Asheboro	NC	Solar	Intermediate	Yes	5.0
Facility 3389	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3390	Mount Olive	NC	Solar	Intermediate	Yes	5.0
Facility 3391	Clayton	NC	Solar	Intermediate	Yes	9.9
Facility 3392	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3393	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 3394	Barnardsville	NC	Solar	Intermediate	Yes	5.0
Facility 3395	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 3396	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3397	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 3398	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3399	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 3400	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 3401	Kinston	NC	Solar	Intermediate	Yes	3.8
Facility 3402	Siler City	NC	Solar	Intermediate	Yes	3.0
Facility 3403	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3404	Wendell	NC	Solar	Intermediate	Yes	3.0
Facility 3405	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3406	wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3407	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 3408	ASHEBORO	NC	Solar	Intermediate	Yes	5.1
Facility 3409	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 3410	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3411	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 3412	Willow Spring	NC	Solar	Intermediate	Yes	10.0
Facility 3413	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3414	Fairmont	NC	Solar	Intermediate	Yes	6.0
Facility 3415	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 3416	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3417	Southern Pines	NC	Solar	Intermediate	Yes	4.2
Facility 3418	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 3419	Morehead City	NC	Solar	Intermediate	Yes	7.6
Facility 3420	Holly Springs	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3421	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 3422	Southport	NC	Solar	Intermediate	Yes	7.6
Facility 3423	Carolina Beach	NC	Solar	Intermediate	Yes	9.8
Facility 3424	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3425	Cary	NC	Solar	Intermediate	Yes	13.0
Facility 3426	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3427	Wilmington	NC	Solar	Intermediate	Yes	9.4
Facility 3428	Polkton	NC	Solar	Intermediate	Yes	5.0
Facility 3429	Asheville	NC	Solar	Intermediate	Yes	4.2
Facility 3430	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3431	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 3432	Bunnlevel	NC	Solar	Intermediate	Yes	7.6
Facility 3433	Apex	NC	Solar	Intermediate	Yes	5.0
Facility 3434	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3435	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3436	Hope Mills	NC	Solar	Intermediate	Yes	7.6
Facility 3437	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 3438	New Bern	NC	Solar	Intermediate	Yes	3.0
Facility 3439	Hampstead	NC	Solar	Intermediate	Yes	4.3
Facility 3440	Yanceyville	NC	Solar	Intermediate	Yes	10.0
Facility 3441	Bunnlevel	NC	Solar	Intermediate	Yes	7.6
Facility 3442	Hope Mills	NC	Solar	Intermediate	Yes	7.6
Facility 3443	Wake Forest	NC	Solar	Intermediate	Yes	7.6
Facility 3444	Cameron	NC	Solar	Intermediate	Yes	7.6
Facility 3445	Erwin	NC	Solar	Intermediate	Yes	5.0
Facility 3446	Apex	NC	Solar	Intermediate	Yes	4.8
Facility 3447	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 3448	Pinehurst	NC	Solar	Intermediate	Yes	7.0
Facility 3449	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3450	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3451	Wilmington	NC	Solar	Intermediate	Yes	11.4
Facility 3452	Goldsboro	NC	Solar	Intermediate	Yes	2.8
Facility 3453	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 3454	Rolesville	NC	Solar	Intermediate	Yes	5.0
Facility 3455	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3456	Holly Springs	NC	Solar	Intermediate	Yes	4.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3457	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 3458	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3459	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 3460	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 3461	Benson	NC	Solar	Intermediate	Yes	17.6
Facility 3462	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3463	Lumberton	NC	Solar	Intermediate	Yes	6.4
Facility 3464	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 3465	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3466	Wilmington	NC	Solar	Intermediate	Yes	4.2
Facility 3467	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3468	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 3469	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3470	Hampstead	NC	Solar	Intermediate	Yes	3.8
Facility 3471	Fairview	NC	Solar	Intermediate	Yes	7.0
Facility 3472	Newport	NC	Solar	Intermediate	Yes	3.8
Facility 3473	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3474	GARNER	NC	Solar	Intermediate	Yes	10.0
Facility 3475	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 3476	Sanford	NC	Solar	Intermediate	Yes	10.0
Facility 3477	Jacksonville	NC	Solar	Intermediate	Yes	14.4
Facility 3478	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3479	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3480	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3481	Zebulon	NC	Solar	Intermediate	Yes	3.7
Facility 3482	Holly Springs	NC	Solar	Intermediate	Yes	3.7
Facility 3483	Southport	NC	Solar	Intermediate	Yes	9.7
Facility 3484	Benson	NC	Solar	Intermediate	Yes	7.0
Facility 3485	Wilmington	NC	Solar	Intermediate	Yes	6.8
Facility 3486	Bahama	NC	Solar	Intermediate	Yes	7.6
Facility 3487	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 3488	Roxboro	NC	Solar	Intermediate	Yes	10.0
Facility 3489	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 3490	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3491	Asheville	NC	Solar	Intermediate	Yes	3.1
Facility 3492	Asheville	NC	Solar	Intermediate	Yes	3.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3493	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3494	Staley	NC	Solar	Intermediate	Yes	3.8
Facility 3495	Asheville	NC	Solar	Intermediate	Yes	2.8
Facility 3496	Leland	NC	Solar	Intermediate	Yes	9.2
Facility 3497	Raleigh	NC	Solar	Intermediate	Yes	3.7
Facility 3498	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3499	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 3500	Fuquay Varina	NC	Solar	Intermediate	Yes	6.2
Facility 3501	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3502	Henderson	NC	Solar	Intermediate	Yes	3.0
Facility 3503	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3504	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3505	Spruce Pines	NC	Solar	Intermediate	Yes	7.6
Facility 3506	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 3507	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 3508	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3509	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3510	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3511	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3512	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 3513	Hampstead	NC	Solar	Intermediate	Yes	11.4
Facility 3514	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3515	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3516	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3517	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3518	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 3519	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3520	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3521	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3522	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3523	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3524	Cary	NC	Solar	Intermediate	Yes	4.1
Facility 3525	Cary	NC	Solar	Intermediate	Yes	5.3
Facility 3526	Franklinton	NC	Solar	Intermediate	Yes	3.7
Facility 3527	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 3528	Goldsboro	NC	Solar	Intermediate	Yes	5.5

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3529	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3530	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3531	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 3532	Fairview	NC	Solar	Intermediate	Yes	8.0
Facility 3533	Raleigh	NC	Solar	Intermediate	Yes	3.5
Facility 3534	Dunn	NC	Solar	Intermediate	Yes	2.3
Facility 3535	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3536	Goldsboro	NC	Solar	Intermediate	Yes	3.7
Facility 3537	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 3538	Angier	NC	Solar	Intermediate	Yes	4.6
Facility 3539	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 3540	Laurel Hill	NC	Solar	Intermediate	Yes	1.8
Facility 3541	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 3542	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3543	Pittsboro	NC	Solar	Intermediate	Yes	3.0
Facility 3544	Whispering Pines	NC	Solar	Intermediate	Yes	3.9
Facility 3545	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3546	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3547	Pikeville	NC	Solar	Intermediate	Yes	5.0
Facility 3548	Waynesville	NC	Solar	Intermediate	Yes	5.5
Facility 3549	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3550	Fairview	NC	Solar	Intermediate	Yes	11.4
Facility 3551	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3552	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3553	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3554	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3555	Asheville	NC	Solar	Intermediate	Yes	3.3
Facility 3556	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3557	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3558	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3559	Staley	NC	Solar	Intermediate	Yes	7.6
Facility 3560	Kenly	NC	Solar	Intermediate	Yes	10.0
Facility 3561	Henderson	NC	Solar	Intermediate	Yes	15.2
Facility 3562	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3563	Willow Spring	NC	Solar	Intermediate	Yes	3.9
Facility 3564	Cary	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3565	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 3566	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3567	Biscoe	NC	Solar	Intermediate	Yes	20.0
Facility 3568	Asheville	NC	Solar	Intermediate	Yes	10.6
Facility 3569	Raleigh	NC	Solar	Intermediate	Yes	2.8
Facility 3570	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 3571	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 3572	Leicester	NC	Solar	Intermediate	Yes	6.0
Facility 3573	Richlands	NC	Solar	Intermediate	Yes	8.7
Facility 3574	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 3575	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3576	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3577	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 3578	Garner	NC	Solar	Intermediate	Yes	3.7
Facility 3579	Leland	NC	Solar	Intermediate	Yes	7.2
Facility 3580	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 3581	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 3582	Asheville	NC	Solar	Intermediate	Yes	5.5
Facility 3583	Wilmington	NC	Solar	Intermediate	Yes	4.6
Facility 3584	Robbins	NC	Solar	Intermediate	Yes	10.0
Facility 3585	Wilmington	NC	Solar	Intermediate	Yes	6.9
Facility 3586	Leland	NC	Solar	Intermediate	Yes	7.7
Facility 3587	Pikeville	NC	Solar	Intermediate	Yes	13.6
Facility 3588	Alexander	NC	Solar	Intermediate	Yes	7.6
Facility 3589	raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3590	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3591	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3592	Vass	NC	Solar	Intermediate	Yes	6.0
Facility 3593	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 3594	Wrightsville Beach	NC	Solar	Intermediate	Yes	8.3
Facility 3595	GOLDSBORO	NC	Solar	Intermediate	Yes	12.7
Facility 3596	Holly Springs	NC	Solar	Intermediate	Yes	5.1
Facility 3597	Raleigh	NC	Solar	Intermediate	Yes	14.4
Facility 3598	Raleigh	NC	Solar	Intermediate	Yes	18.0
Facility 3599	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3600	Raleigh	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3601	Hendersonville	NC	Solar	Intermediate	Yes	3.0
Facility 3602	Asheville	NC	Solar	Intermediate	Yes	3.1
Facility 3603	Apex	NC	Solar	Intermediate	Yes	5.0
Facility 3604	Candler	NC	Solar	Intermediate	Yes	2.5
Facility 3605	Princeton	NC	Solar	Intermediate	Yes	7.6
Facility 3606	Saint Pauls	NC	Solar	Intermediate	Yes	13.6
Facility 3607	Waynesville	NC	Solar	Intermediate	Yes	5.3
Facility 3608	Wilmington	NC	Solar	Intermediate	Yes	12.2
Facility 3609	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 3610	Fayetteville	NC	Solar	Intermediate	Yes	5.1
Facility 3611	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3612	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 3613	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3614	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3615	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3616	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 3617	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 3618	Whiteville	NC	Solar	Intermediate	Yes	5.0
Facility 3619	Warsaw	NC	Solar	Intermediate	Yes	6.0
Facility 3620	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3621	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 3622	Raliegh	NC	Solar	Intermediate	Yes	16.8
Facility 3623	Raleigh	NC	Solar	Intermediate	Yes	16.8
Facility 3624	Arden	NC	Solar	Intermediate	Yes	6.0
Facility 3625	Wendell	NC	Solar	Intermediate	Yes	5.0
Facility 3626	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 3627	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 3628	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3629	Aberdeen	NC	Solar	Intermediate	Yes	4.6
Facility 3630	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3631	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3632	Troy	NC	Solar	Intermediate	Yes	7.6
Facility 3633	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 3634	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3635	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3636	Wilmington	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3637	Cary	NC	Solar	Intermediate	Yes	10.2
Facility 3638	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3639	Wilmington	NC	Solar	Intermediate	Yes	11.4
Facility 3640	WAYNESVILLE	NC	Solar	Intermediate	Yes	2.5
Facility 3641	Raleigh	NC	Solar	Intermediate	Yes	19.0
Facility 3642	WAYNESVILLE	NC	Solar	Intermediate	Yes	2.5
Facility 3643	Wilmington	NC	Solar	Intermediate	Yes	9.5
Facility 3644	Southern Pines	NC	Solar	Intermediate	Yes	6.7
Facility 3645	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3646	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3647	Morrisville	NC	Solar	Intermediate	Yes	3.0
Facility 3648	Willow Spring	NC	Solar	Intermediate	Yes	6.0
Facility 3649	Willow Spring	NC	Solar	Intermediate	Yes	10.0
Facility 3650	Southern Pines	NC	Solar	Intermediate	Yes	3.8
Facility 3651	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3652	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 3653	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 3654	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3655	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 3656	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3657	Rolesville	NC	Solar	Intermediate	Yes	11.4
Facility 3658	Battleboro	NC	Solar	Intermediate	Yes	4.1
Facility 3659	Snow Hill	NC	Solar	Intermediate	Yes	7.6
Facility 3660	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 3661	Wake Forest	NC	Solar	Intermediate	Yes	1.7
Facility 3662	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3663	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3664	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3665	Rolesville	NC	Solar	Intermediate	Yes	11.4
Facility 3666	Smithfield	NC	Solar	Intermediate	Yes	6.0
Facility 3667	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 3668	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3669	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 3670	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 3671	Willow Spring	NC	Solar	Intermediate	Yes	15.2
Facility 3672	Yanceyville	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3673	Whispering Pines	NC	Solar	Intermediate	Yes	6.0
Facility 3674	Wrightsville Beach	NC	Solar	Intermediate	Yes	19.8
Facility 3675	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3676	New Bern	NC	Solar	Intermediate	Yes	5.0
Facility 3677	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 3678	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 3679	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3680	Pikeville	NC	Solar	Intermediate	Yes	3.8
Facility 3681	Kenly	NC	Solar	Intermediate	Yes	3.8
Facility 3682	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 3683	Selma	NC	Solar	Intermediate	Yes	10.6
Facility 3684	Pittsboro	NC	Solar	Intermediate	Yes	20.0
Facility 3685	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 3686	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 3687	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 3688	Hamlet	NC	Solar	Intermediate	Yes	9.9
Facility 3689	Hampstead	NC	Solar	Intermediate	Yes	5.1
Facility 3690	Hampstead	NC	Solar	Intermediate	Yes	7.6
Facility 3691	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3692	Leland	NC	Solar	Intermediate	Yes	6.8
Facility 3693	Leland	NC	Solar	Intermediate	Yes	7.7
Facility 3694	Wilmington	NC	Solar	Intermediate	Yes	9.7
Facility 3695	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3696	Henderson	NC	Solar	Intermediate	Yes	6.8
Facility 3697	Hampstead	NC	Solar	Intermediate	Yes	7.6
Facility 3698	Asheville	NC	Solar	Intermediate	Yes	9.0
Facility 3699	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 3700	WILMINGTON	NC	Solar	Intermediate	Yes	10.0
Facility 3701	Asheboro	NC	Solar	Intermediate	Yes	6.0
Facility 3702	Swannanoa	NC	Solar	Intermediate	Yes	10.0
Facility 3703	Asheville	NC	Solar	Intermediate	Yes	1.9
Facility 3704	Lillington	NC	Solar	Intermediate	Yes	5.0
Facility 3705	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 3706	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 3707	Asheville	NC	Solar	Intermediate	Yes	10.2
Facility 3708	Asheville	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3709	Arden	NC	Solar	Intermediate	Yes	5.8
Facility 3710	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3711	Pinehurst	NC	Solar	Intermediate	Yes	5.0
Facility 3712	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 3713	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3714	Hampstead	NC	Solar	Intermediate	Yes	7.6
Facility 3715	Wilmington	NC	Solar	Intermediate	Yes	6.5
Facility 3716	Wilmington	NC	Solar	Intermediate	Yes	9.2
Facility 3717	Wilmington	NC	Solar	Intermediate	Yes	7.8
Facility 3718	Fletcher	NC	Solar	Intermediate	Yes	6.0
Facility 3719	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 3720	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3721	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 3722	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3723	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3724	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3725	Oxford	NC	Solar	Intermediate	Yes	3.5
Facility 3726	Wilmington	NC	Solar	Intermediate	Yes	5.8
Facility 3727	Garner	NC	Solar	Intermediate	Yes	2.4
Facility 3728	Spruce Pine	NC	Solar	Intermediate	Yes	5.0
Facility 3729	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3730	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 3731	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 3732	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 3733	CANTON	NC	Solar	Intermediate	Yes	7.6
Facility 3734	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 3735	Vass	NC	Solar	Intermediate	Yes	7.6
Facility 3736	Asheville	NC	Solar	Intermediate	Yes	6.7
Facility 3737	Wilmington	NC	Solar	Intermediate	Yes	6.5
Facility 3738	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3739	Spruce Pine	NC	Solar	Intermediate	Yes	6.0
Facility 3740	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 3741	APEX	NC	Solar	Intermediate	Yes	11.4
Facility 3742	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3743	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 3744	Chapel Hill	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3745	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 3746	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 3747	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 3748	Knightdale	NC	Solar	Intermediate	Yes	5.0
Facility 3749	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3750	Morrisville	NC	Solar	Intermediate	Yes	6.0
Facility 3751	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3752	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3753	Morrisville	NC	Solar	Intermediate	Yes	5.0
Facility 3754	LILLINGTON	NC	Solar	Intermediate	Yes	11.4
Facility 3755	Grimesland	NC	Solar	Intermediate	Yes	6.0
Facility 3756	Benson	NC	Solar	Intermediate	Yes	5.1
Facility 3757	Pittsboro	NC	Solar	Intermediate	Yes	9.0
Facility 3758	Wilmington	NC	Solar	Intermediate	Yes	7.4
Facility 3759	Lillington	NC	Solar	Intermediate	Yes	7.6
Facility 3760	Black Mountain	NC	Solar	Intermediate	Yes	5.0
Facility 3761	Lillington	NC	Solar	Intermediate	Yes	7.6
Facility 3762	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 3763	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3764	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 3765	Black Mtn	NC	Solar	Intermediate	Yes	3.7
Facility 3766	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3767	Southern Pnes	NC	Solar	Intermediate	Yes	10.0
Facility 3768	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3769	Apex	NC	Solar	Intermediate	Yes	11.4
Facility 3770	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 3771	MORRISVILLE	NC	Solar	Intermediate	Yes	7.6
Facility 3772	Raeford	NC	Solar	Intermediate	Yes	6.0
Facility 3773	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3774	Elm City	NC	Solar	Intermediate	Yes	3.8
Facility 3775	Raleigh	NC	Solar	Intermediate	Yes	9.9
Facility 3776	PITTSBORO	NC	Solar	Intermediate	Yes	10.0
Facility 3777	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 3778	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3779	Sanford	NC	Solar	Intermediate	Yes	3.3
Facility 3780	Apex	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 3781	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 3782	Waynesville	NC	Solar	Intermediate	Yes	3.0
Facility 3783	Asheboro	NC	Solar	Intermediate	Yes	3.3
Facility 3784	Jacksonville	NC	Solar	Intermediate	Yes	5.0
Facility 3785	Hampstead	NC	Solar	Intermediate	Yes	7.6
Facility 3786	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 3787	Fuquay Varina	NC	Solar	Intermediate	Yes	11.6
Facility 3788	Pikeville	NC	Solar	Intermediate	Yes	3.7
Facility 3789	Pikeville	NC	Solar	Intermediate	Yes	5.0
Facility 3790	Asheville	NC	Solar	Intermediate	Yes	19.0
Facility 3791	Wilmington	NC	Solar	Intermediate	Yes	11.2
Facility 3792	Leicester	NC	Solar	Intermediate	Yes	12.0
Facility 3793	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3794	Swannanoa	NC	Solar	Intermediate	Yes	5.0
Facility 3795	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 3796	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3797	Jacksonville	NC	Solar	Intermediate	Yes	5.0
Facility 3798	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3799	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 3800	Aberdeen	NC	Solar	Intermediate	Yes	7.6
Facility 3801	CARY	NC	Solar	Intermediate	Yes	7.6
Facility 3802	LILLINGTON	NC	Solar	Intermediate	Yes	7.6
Facility 3803	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 3804	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 3805	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3806	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 3807	Cameron	NC	Solar	Intermediate	Yes	3.3
Facility 3808	Apex	NC	Solar	Intermediate	Yes	2.9
Facility 3809	Semora	NC	Solar	Intermediate	Yes	7.6
Facility 3810	Williston	NC	Solar	Intermediate	Yes	10.0
Facility 3811	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 3812	Wendell	NC	Solar	Intermediate	Yes	10.0
Facility 3813	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 3814	Alexander	NC	Solar	Intermediate	Yes	12.0
Facility 3815	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3816	Raleigh	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3817	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3818	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 3819	Pittsboro	NC	Solar	Intermediate	Yes	3.7
Facility 3820	Goldsboro	NC	Solar	Intermediate	Yes	8.0
Facility 3821	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3822	Asheville	NC	Solar	Intermediate	Yes	7.3
Facility 3823	Wilmington	NC	Solar	Intermediate	Yes	5.8
Facility 3824	Asheville	NC	Solar	Intermediate	Yes	7.7
Facility 3825	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3826	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3827	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 3828	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3829	Cary	NC	Solar	Intermediate	Yes	3.1
Facility 3830	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3831	Asheville	NC	Solar	Intermediate	Yes	3.4
Facility 3832	Fairview	NC	Solar	Intermediate	Yes	10.6
Facility 3833	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3834	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 3835	Kenly	NC	Solar	Intermediate	Yes	7.7
Facility 3836	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 3837	Cary	NC	Solar	Intermediate	Yes	3.5
Facility 3838	GOLDSBORO	NC	Solar	Intermediate	Yes	5.0
Facility 3839	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 3840	Raleigh	NC	Solar	Intermediate	Yes	28.0
Facility 3841	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 3842	Hope Mills	NC	Solar	Intermediate	Yes	11.4
Facility 3843	MORRISVILLE	NC	Solar	Intermediate	Yes	7.6
Facility 3844	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 3845	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 3846	Siler City	NC	Solar	Intermediate	Yes	11.4
Facility 3847	Sanford	NC	Solar	Intermediate	Yes	7.6
Facility 3848	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3849	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 3850	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3851	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3852	Louisburg	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3853	Fuquay-Varina	NC	Solar	Intermediate	Yes	11.4
Facility 3854	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3855	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 3856	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 3857	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 3858	Oxford	NC	Solar	Intermediate	Yes	6.0
Facility 3859	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 3860	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 3861	Canton	NC	Solar	Intermediate	Yes	8.0
Facility 3862	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 3863	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3864	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 3865	Southport	NC	Solar	Intermediate	Yes	5.1
Facility 3866	Wake Forest	NC	Solar	Intermediate	Yes	11.4
Facility 3867	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3868	zebulon	NC	Solar	Intermediate	Yes	10.0
Facility 3869	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 3870	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3871	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3872	Fuquay Varina	NC	Solar	Intermediate	Yes	6.2
Facility 3873	CARY	NC	Solar	Intermediate	Yes	5.0
Facility 3874	Wilmington	NC	Solar	Intermediate	Yes	10.8
Facility 3875	Four Oaks	NC	Solar	Intermediate	Yes	7.6
Facility 3876	Asheville	NC	Solar	Intermediate	Yes	15.2
Facility 3877	Wilmington	NC	Solar	Intermediate	Yes	6.7
Facility 3878	Southern Pines	NC	Solar	Intermediate	Yes	7.6
Facility 3879	Southern Pines	NC	Solar	Intermediate	Yes	7.6
Facility 3880	Rougemont	NC	Solar	Intermediate	Yes	5.0
Facility 3881	St Pauls	NC	Solar	Intermediate	Yes	6.0
Facility 3882	Sims	NC	Solar	Intermediate	Yes	3.5
Facility 3883	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 3884	FUQUAY VARINA	NC	Solar	Intermediate	Yes	5.1
Facility 3885	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 3886	Bailey	NC	Solar	Intermediate	Yes	5.0
Facility 3887	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 3888	Kure Beach	NC	Solar	Intermediate	Yes	11.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3889	Bahama	NC	Solar	Intermediate	Yes	6.0
Facility 3890	Swannanoa	NC	Solar	Intermediate	Yes	7.6
Facility 3891	Carthage	NC	Solar	Intermediate	Yes	5.0
Facility 3892	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3893	Fuquay-Varina	NC	Solar	Intermediate	Yes	11.4
Facility 3894	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3895	Erwin	NC	Solar	Intermediate	Yes	3.0
Facility 3896	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 3897	Chapel Hill	NC	Solar	Intermediate	Yes	14.1
Facility 3898	Chinquapin	NC	Solar	Intermediate	Yes	5.6
Facility 3899	Asheville	NC	Solar	Intermediate	Yes	4.3
Facility 3900	Asheville	NC	Solar	Intermediate	Yes	7.3
Facility 3901	Fayetteville	NC	Solar	Intermediate	Yes	10.0
Facility 3902	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 3903	Biltmore Lake	NC	Solar	Intermediate	Yes	5.2
Facility 3904	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 3905	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3906	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 3907	Apex	NC	Solar	Intermediate	Yes	5.0
Facility 3908	Candler	NC	Solar	Intermediate	Yes	5.1
Facility 3909	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3910	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3911	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3912	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3913	Benson	NC	Solar	Intermediate	Yes	7.6
Facility 3914	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3915	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 3916	CANDLER	NC	Solar	Intermediate	Yes	7.6
Facility 3917	Leland	NC	Solar	Intermediate	Yes	7.7
Facility 3918	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 3919	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 3920	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 3921	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 3922	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3923	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 3924	Wilmington	NC	Solar	Intermediate	Yes	10.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3925	Wilmington	NC	Solar	Intermediate	Yes	7.2
Facility 3926	Leland	NC	Solar	Intermediate	Yes	5.9
Facility 3927	Smithfield	NC	Solar	Intermediate	Yes	15.2
Facility 3928	Raleigh	NC	Solar	Intermediate	Yes	20.0
Facility 3929	Hubert	NC	Solar	Intermediate	Yes	4.2
Facility 3930	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 3931	Bolton	NC	Solar	Intermediate	Yes	4.1
Facility 3932	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3933	Candler	NC	Solar	Intermediate	Yes	5.0
Facility 3934	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3935	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3936	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 3937	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 3938	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3939	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 3940	Asheville	NC	Solar	Intermediate	Yes	11.0
Facility 3941	Smithfield	NC	Solar	Intermediate	Yes	7.6
Facility 3942	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 3943	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3944	Arden	NC	Solar	Intermediate	Yes	7.6
Facility 3945	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3946	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 3947	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 3948	New Bern	NC	Solar	Intermediate	Yes	7.6
Facility 3949	Ernul	NC	Solar	Intermediate	Yes	9.9
Facility 3950	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3951	Fletcher	NC	Solar	Intermediate	Yes	5.0
Facility 3952	LEICESTER	NC	Solar	Intermediate	Yes	5.0
Facility 3953	Zebulon	NC	Solar	Intermediate	Yes	7.6
Facility 3954	ABERDEEN	NC	Solar	Intermediate	Yes	7.6
Facility 3955	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3956	Lillington	NC	Solar	Intermediate	Yes	10.0
Facility 3957	Kinston	NC	Solar	Intermediate	Yes	6.0
Facility 3958	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3959	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 3960	Raleigh	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3961	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 3962	Leicester	NC	Solar	Intermediate	Yes	6.0
Facility 3963	Pittsboro	NC	Solar	Intermediate	Yes	17.5
Facility 3964	Benson	NC	Solar	Intermediate	Yes	3.8
Facility 3965	Candler	NC	Solar	Intermediate	Yes	3.5
Facility 3966	ASHEVILLE	NC	Solar	Intermediate	Yes	7.6
Facility 3967	Manson	NC	Solar	Intermediate	Yes	12.0
Facility 3968	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 3969	Holly Springs	NC	Solar	Intermediate	Yes	3.7
Facility 3970	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3971	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 3972	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 3973	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 3974	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 3975	Spruce Pine	NC	Solar	Intermediate	Yes	1.0
Facility 3976	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 3977	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 3978	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 3979	Raleigh	NC	Solar	Intermediate	Yes	5.2
Facility 3980	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 3981	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3982	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 3983	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3984	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 3985	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 3986	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 3987	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 3988	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 3989	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 3990	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3991	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 3992	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 3993	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 3994	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 3995	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 3996	Asheville	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 3997	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 3998	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 3999	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4000	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 4001	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 4002	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4003	FLETCHER	NC	Solar	Intermediate	Yes	7.6
Facility 4004	Mount olive	NC	Solar	Intermediate	Yes	7.6
Facility 4005	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 4006	Morehead City	NC	Solar	Intermediate	Yes	5.0
Facility 4007	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 4008	Lake Junaluska	NC	Solar	Intermediate	Yes	5.0
Facility 4009	BLACK MTN	NC	Solar	Intermediate	Yes	10.0
Facility 4010	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4011	Garner	NC	Solar	Intermediate	Yes	8.6
Facility 4012	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 4013	Swannanoa	NC	Solar	Intermediate	Yes	5.0
Facility 4014	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4015	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 4016	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 4017	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4018	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4019	Willow Spring	NC	Solar	Intermediate	Yes	6.0
Facility 4020	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 4021	Apex	NC	Solar	Intermediate	Yes	11.4
Facility 4022	Benson	NC	Solar	Intermediate	Yes	3.7
Facility 4023	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4024	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4025	FLETCHER	NC	Solar	Intermediate	Yes	3.8
Facility 4026	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4027	Henderson	NC	Solar	Intermediate	Yes	5.0
Facility 4028	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 4029	Leland	NC	Solar	Intermediate	Yes	3.8
Facility 4030	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 4031	HOLLY SPRINGS	NC	Solar	Intermediate	Yes	6.0
Facility 4032	Raleigh	NC	Solar	Intermediate	Yes	11.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4033	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 4034	Hope Mills	NC	Solar	Intermediate	Yes	13.6
Facility 4035	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4036	Selma	NC	Solar	Intermediate	Yes	12.0
Facility 4037	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 4038	CLAYTON	NC	Solar	Intermediate	Yes	3.8
Facility 4039	New Bern	NC	Solar	Intermediate	Yes	7.6
Facility 4040	PRINCETON	NC	Solar	Intermediate	Yes	5.1
Facility 4041	Morehead City	NC	Solar	Intermediate	Yes	10.0
Facility 4042	CANTON	NC	Solar	Intermediate	Yes	3.8
Facility 4043	CLAYTON	NC	Solar	Intermediate	Yes	5.1
Facility 4044	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 4045	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 4046	Fairview	NC	Solar	Intermediate	Yes	5.1
Facility 4047	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 4048	Hope Mills	NC	Solar	Intermediate	Yes	3.7
Facility 4049	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4050	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4051	Polkton	NC	Solar	Intermediate	Yes	4.0
Facility 4052	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 4053	Lillington	NC	Solar	Intermediate	Yes	10.0
Facility 4054	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4055	Gerton	NC	Solar	Intermediate	Yes	17.5
Facility 4056	Clayton	NC	Solar	Intermediate	Yes	5.1
Facility 4057	Roxboro	NC	Solar	Intermediate	Yes	11.4
Facility 4058	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4059	Hope Mills	NC	Solar	Intermediate	Yes	10.0
Facility 4060	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4061	raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4062	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4063	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 4064	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4065	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 4066	Sanford	NC	Solar	Intermediate	Yes	10.0
Facility 4067	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 4068	RAMSEUR	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4069	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 4070	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 4071	NEW BERN	NC	Solar	Intermediate	Yes	7.6
Facility 4072	Jacksonville	NC	Solar	Intermediate	Yes	7.6
Facility 4073	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 4074	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4075	Sims	NC	Solar	Intermediate	Yes	6.0
Facility 4076	New Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4077	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 4078	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4079	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4080	FLETCHER	NC	Solar	Intermediate	Yes	5.0
Facility 4081	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4082	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4083	Sanford	NC	Solar	Intermediate	Yes	7.6
Facility 4084	New Bern	NC	Solar	Intermediate	Yes	9.9
Facility 4085	Jacksonville	NC	Solar	Intermediate	Yes	5.0
Facility 4086	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4087	Goldsboro	NC	Solar	Intermediate	Yes	3.8
Facility 4088	Aberdeen	NC	Solar	Intermediate	Yes	16.8
Facility 4089	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 4090	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 4091	Sanford	NC	Solar	Intermediate	Yes	3.8
Facility 4092	Hope Mills	NC	Solar	Intermediate	Yes	3.7
Facility 4093	Yanceyville	NC	Solar	Intermediate	Yes	7.6
Facility 4094	Grifton	NC	Solar	Intermediate	Yes	3.8
Facility 4095	Raleigh	NC	Solar	Intermediate	Yes	9.0
Facility 4096	Sanford	NC	Solar	Intermediate	Yes	7.6
Facility 4097	PARKTON	NC	Solar	Intermediate	Yes	7.6
Facility 4098	West End	NC	Solar	Intermediate	Yes	20.0
Facility 4099	ARDEN	NC	Solar	Intermediate	Yes	11.4
Facility 4100	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 4101	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 4102	Holly Springs	NC	Solar	Intermediate	Yes	3.7
Facility 4103	ASHEVILLE	NC	Solar	Intermediate	Yes	3.8
Facility 4104	Candler	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4105	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4106	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 4107	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4108	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4109	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 4110	Knightdale	NC	Solar	Intermediate	Yes	5.1
Facility 4111	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 4112	RALEIGH	NC	Solar	Intermediate	Yes	11.4
Facility 4113	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4114	Wilmington	NC	Solar	Intermediate	Yes	9.5
Facility 4115	NASHVILLE	NC	Solar	Intermediate	Yes	15.2
Facility 4116	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 4117	Bailey	NC	Solar	Intermediate	Yes	7.6
Facility 4118	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4119	West End	NC	Solar	Intermediate	Yes	5.0
Facility 4120	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4121	Selma	NC	Solar	Intermediate	Yes	10.0
Facility 4122	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 4123	NEWPORT	NC	Solar	Intermediate	Yes	5.0
Facility 4124	Chapel Hill	NC	Solar	Intermediate	Yes	13.0
Facility 4125	Pittsboro	NC	Solar	Intermediate	Yes	7.2
Facility 4126	FLETCHER	NC	Solar	Intermediate	Yes	5.0
Facility 4127	FLETCHER	NC	Solar	Intermediate	Yes	3.8
Facility 4128	Erwin	NC	Solar	Intermediate	Yes	10.0
Facility 4129	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4130	Morehead City	NC	Solar	Intermediate	Yes	2.4
Facility 4131	Sanford	NC	Solar	Intermediate	Yes	3.8
Facility 4132	APEX	NC	Solar	Intermediate	Yes	7.6
Facility 4133	Angier	NC	Solar	Intermediate	Yes	3.8
Facility 4134	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 4135	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 4136	HOLLY SPRINGS	NC	Solar	Intermediate	Yes	7.6
Facility 4137	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4138	Wake Forest	NC	Solar	Intermediate	Yes	10.0
Facility 4139	Southern Pines	NC	Solar	Intermediate	Yes	15.2
Facility 4140	Jacksonville	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4141	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4142	Smithfield	NC	Solar	Intermediate	Yes	4.0
Facility 4143	Morrisville	NC	Solar	Intermediate	Yes	3.8
Facility 4144	Chapel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 4145	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4146	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 4147	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4148	Dudley	NC	Solar	Intermediate	Yes	7.6
Facility 4149	Leland	NC	Solar	Intermediate	Yes	7.0
Facility 4150	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4151	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 4152	Kinston	NC	Solar	Intermediate	Yes	3.8
Facility 4153	Bunn Level	NC	Solar	Intermediate	Yes	6.0
Facility 4154	Raleigh	NC	Solar	Intermediate	Yes	2.5
Facility 4155	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4156	Hope Mills	NC	Solar	Intermediate	Yes	5.0
Facility 4157	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4158	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4159	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4160	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4161	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4162	GOLDSBORO	NC	Solar	Intermediate	Yes	7.6
Facility 4163	KINSTON	NC	Solar	Intermediate	Yes	5.0
Facility 4164	Freemont	NC	Solar	Intermediate	Yes	5.3
Facility 4165	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4166	FLETCHER	NC	Solar	Intermediate	Yes	10.0
Facility 4167	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 4168	Vanceboro	NC	Solar	Intermediate	Yes	3.8
Facility 4169	Pittsboro	NC	Solar	Intermediate	Yes	4.1
Facility 4170	Apex	NC	Solar	Intermediate	Yes	5.5
Facility 4171	Morrisville	NC	Solar	Intermediate	Yes	3.8
Facility 4172	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 4173	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4174	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 4175	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4176	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4177	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 4178	Raleigh	NC	Solar	Intermediate	Yes	15.2
Facility 4179	Spruce Pine	NC	Solar	Intermediate	Yes	3.8
Facility 4180	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4181	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 4182	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 4183	Morrisville	NC	Solar	Intermediate	Yes	5.3
Facility 4184	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4185	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 4186	Moncure	NC	Solar	Intermediate	Yes	5.1
Facility 4187	St Pauls	NC	Solar	Intermediate	Yes	5.0
Facility 4188	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4189	Cary	NC	Solar	Intermediate	Yes	15.2
Facility 4190	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4191	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4192	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4193	Dunn	NC	Solar	Intermediate	Yes	10.0
Facility 4194	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4195	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4196	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 4197	Asheville	NC	Solar	Intermediate	Yes	7.0
Facility 4198	Raleigh	NC	Solar	Intermediate	Yes	4.2
Facility 4199	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 4200	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4201	Willow Springs	NC	Solar	Intermediate	Yes	15.2
Facility 4202	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 4203	Louisburg	NC	Solar	Intermediate	Yes	7.6
Facility 4204	Asheville	NC	Solar	Intermediate	Yes	15.2
Facility 4205	Siler City	NC	Solar	Intermediate	Yes	7.6
Facility 4206	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 4207	Southern Pines	NC	Solar	Intermediate	Yes	8.4
Facility 4208	Asheboro	NC	Solar	Intermediate	Yes	11.4
Facility 4209	Lillington	NC	Solar	Intermediate	Yes	7.6
Facility 4210	Kinston	NC	Solar	Intermediate	Yes	5.0
Facility 4211	Holly Springs	NC	Solar	Intermediate	Yes	8.4
Facility 4212	Roxboro	NC	Solar	Intermediate	Yes	6.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4213	Asheboro	NC	Solar	Intermediate	Yes	6.0
Facility 4214	Black Mountain	NC	Solar	Intermediate	Yes	6.0
Facility 4215	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 4216	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4217	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 4218	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 4219	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 4220	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 4221	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 4222	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 4223	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4224	Weaverville	NC	Solar	Intermediate	Yes	10.0
Facility 4225	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4226	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4227	Raleigh	NC	Solar	Intermediate	Yes	9.4
Facility 4228	Benson	NC	Solar	Intermediate	Yes	7.6
Facility 4229	Holly Springs	NC	Solar	Intermediate	Yes	7.7
Facility 4230	Franklinville	NC	Solar	Intermediate	Yes	10.0
Facility 4231	Holly Springs	NC	Solar	Intermediate	Yes	10.6
Facility 4232	Angier	NC	Solar	Intermediate	Yes	6.0
Facility 4233	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 4234	Black Mountain	NC	Solar	Intermediate	Yes	10.0
Facility 4235	Fuquay Varina	NC	Solar	Intermediate	Yes	5.5
Facility 4236	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 4237	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4238	Wendell	NC	Solar	Intermediate	Yes	12.0
Facility 4239	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 4240	Oxford	NC	Solar	Intermediate	Yes	10.0
Facility 4241	Wrightsville Beach	NC	Solar	Intermediate	Yes	6.5
Facility 4242	Black Mountain	NC	Solar	Intermediate	Yes	4.2
Facility 4243	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 4244	Raleigh	NC	Solar	Intermediate	Yes	6.2
Facility 4245	Knightdale	NC	Solar	Intermediate	Yes	8.9
Facility 4246	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 4247	Cary	NC	Solar	Intermediate	Yes	8.9
Facility 4248	Raleigh	NC	Solar	Intermediate	Yes	7.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4249	Leland	NC	Solar	Intermediate	Yes	7.6
Facility 4250	Linden	NC	Solar	Intermediate	Yes	7.6
Facility 4251	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4252	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4253	Leicester	NC	Solar	Intermediate	Yes	7.6
Facility 4254	Waynesville	NC	Solar	Intermediate	Yes	8.7
Facility 4255	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 4256	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 4257	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4258	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 4259	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4260	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4261	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4262	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4263	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4264	Asheboro	NC	Solar	Intermediate	Yes	3.8
Facility 4265	Southern Pines	NC	Solar	Intermediate	Yes	20.0
Facility 4266	Fuquay-Varina	NC	Solar	Intermediate	Yes	3.7
Facility 4267	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4268	Pinehurst	NC	Solar	Intermediate	Yes	10.1
Facility 4269	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4270	Morrisville	NC	Solar	Intermediate	Yes	7.6
Facility 4271	Carolina Beach	NC	Solar	Intermediate	Yes	7.7
Facility 4272	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4273	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 4274	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4275	Wendell	NC	Solar	Intermediate	Yes	3.0
Facility 4276	RALEIGH	NC	Solar	Intermediate	Yes	6.0
Facility 4277	Fletcher	NC	Solar	Intermediate	Yes	6.0
Facility 4278	Raleigh	NC	Solar	Intermediate	Yes	6.2
Facility 4279	Jacksonville	NC	Solar	Intermediate	Yes	7.2
Facility 4280	Pink Hill	NC	Solar	Intermediate	Yes	9.9
Facility 4281	Vass	NC	Solar	Intermediate	Yes	10.0
Facility 4282	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4283	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4284	Cary	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4285	Rockingham	NC	Solar	Intermediate	Yes	3.8
Facility 4286	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4287	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4288	Swannanoa	NC	Solar	Intermediate	Yes	10.0
Facility 4289	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4290	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 4291	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 4292	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4293	FAIRVIEW	NC	Solar	Intermediate	Yes	6.5
Facility 4294	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4295	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4296	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4297	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 4298	Gloucester	NC	Solar	Intermediate	Yes	10.0
Facility 4299	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4300	Jacksonville	NC	Solar	Intermediate	Yes	11.4
Facility 4301	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4302	Wake Forest	NC	Solar	Intermediate	Yes	15.2
Facility 4303	Wendell	NC	Solar	Intermediate	Yes	11.4
Facility 4304	Linden	NC	Solar	Intermediate	Yes	5.0
Facility 4305	Sanford	NC	Solar	Intermediate	Yes	7.6
Facility 4306	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4307	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4308	Chapel Hill	NC	Solar	Intermediate	Yes	10.0
Facility 4309	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4310	Manson	NC	Solar	Intermediate	Yes	7.6
Facility 4311	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4312	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 4313	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 4314	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 4315	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 4316	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4317	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4318	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 4319	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4320	Raleigh	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4321	Goldsboro	NC	Solar	Intermediate	Yes	11.4
Facility 4322	Black Mountain	NC	Solar	Intermediate	Yes	5.2
Facility 4323	Whiteville	NC	Solar	Intermediate	Yes	6.0
Facility 4324	Princeton	NC	Solar	Intermediate	Yes	10.0
Facility 4325	Chapel Hill	NC	Solar	Intermediate	Yes	10.0
Facility 4326	CARY	NC	Solar	Intermediate	Yes	10.0
Facility 4327	FUQUAY VARINA	NC	Solar	Intermediate	Yes	10.0
Facility 4328	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 4329	Chapel Hill	NC	Solar	Intermediate	Yes	10.0
Facility 4330	Wake Forest	NC	Solar	Intermediate	Yes	10.0
Facility 4331	Pittsboro	NC	Solar	Intermediate	Yes	10.0
Facility 4332	Fuquay-Varina	NC	Solar	Intermediate	Yes	11.4
Facility 4333	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 4334	Pittsboro	NC	Solar	Intermediate	Yes	13.6
Facility 4335	CAry	NC	Solar	Intermediate	Yes	6.0
Facility 4336	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 4337	Wake Forest	NC	Solar	Intermediate	Yes	18.0
Facility 4338	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4339	Henderson	NC	Solar	Intermediate	Yes	5.1
Facility 4340	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 4341	New Hill	NC	Solar	Intermediate	Yes	10.0
Facility 4342	Goldston	NC	Solar	Intermediate	Yes	3.8
Facility 4343	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4344	Smithfield	NC	Solar	Intermediate	Yes	3.8
Facility 4345	Kinston	NC	Solar	Intermediate	Yes	3.8
Facility 4346	Hurdle Mills	NC	Solar	Intermediate	Yes	10.0
Facility 4347	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4348	Wilmington	NC	Solar	Intermediate	Yes	4.3
Facility 4349	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4350	Fairview	NC	Solar	Intermediate	Yes	15.2
Facility 4351	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4352	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4353	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 4354	Durham	NC	Solar	Intermediate	Yes	7.6
Facility 4355	Asheville	NC	Solar	Intermediate	Yes	5.7
Facility 4356	Asheville	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4357	Castle Hayne	NC	Solar	Intermediate	Yes	7.5
Facility 4358	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4359	Smithfield	NC	Solar	Intermediate	Yes	11.4
Facility 4360	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4361	RALEIGH	NC	Solar	Intermediate	Yes	10.0
Facility 4362	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4363	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 4364	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 4365	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 4366	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4367	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 4368	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4369	Wilmington	NC	Solar	Intermediate	Yes	4.6
Facility 4370	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4371	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4372	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4373	Kinston	NC	Solar	Intermediate	Yes	7.6
Facility 4374	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4375	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4376	BAHAMA	NC	Solar	Intermediate	Yes	10.0
Facility 4377	Wilmington	NC	Solar	Intermediate	Yes	14.4
Facility 4378	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 4379	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4380	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4381	Wilmington	NC	Solar	Intermediate	Yes	8.6
Facility 4382	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4383	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4384	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4385	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4386	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4387	Fequay-Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4388	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 4389	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4390	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4391	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4392	ASHEVILLE	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4393	Asheville	NC	Solar	Intermediate	Yes	6.4
Facility 4394	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4395	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 4396	Cary	NC	Solar	Intermediate	Yes	15.0
Facility 4397	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4398	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4399	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4400	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4401	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4402	Jacksonville	NC	Solar	Intermediate	Yes	6.2
Facility 4403	Smithfield	NC	Solar	Intermediate	Yes	6.2
Facility 4404	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4405	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4406	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 4407	Morrisville	NC	Solar	Intermediate	Yes	5.8
Facility 4408	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 4409	Burgaw	NC	Solar	Intermediate	Yes	8.5
Facility 4410	Hamlet	NC	Solar	Intermediate	Yes	10.0
Facility 4411	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 4412	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4413	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 4414	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4415	Bunnlevel	NC	Solar	Intermediate	Yes	10.0
Facility 4416	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4417	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4418	Asheville	NC	Solar	Intermediate	Yes	7.0
Facility 4419	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4420	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4421	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 4422	Wilmington	NC	Solar	Intermediate	Yes	0.2
Facility 4423	Garne	NC	Solar	Intermediate	Yes	7.6
Facility 4424	Jacksonville	NC	Solar	Intermediate	Yes	4.8
Facility 4425	Holly Springs	NC	Solar	Intermediate	Yes	8.2
Facility 4426	Clayton	NC	Solar	Intermediate	Yes	7.7
Facility 4427	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 4428	Leland	NC	Solar	Intermediate	Yes	9.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4429	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4430	Seven Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4431	STEDMAN	NC	Solar	Intermediate	Yes	6.0
Facility 4432	Raleigh	NC	Solar	Intermediate	Yes	7.9
Facility 4433	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4434	Cary	NC	Solar	Intermediate	Yes	6.5
Facility 4435	Middlesex	NC	Solar	Intermediate	Yes	7.4
Facility 4436	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4437	Trent Woods	NC	Solar	Intermediate	Yes	5.1
Facility 4438	Lillington	NC	Solar	Intermediate	Yes	5.1
Facility 4439	GOLDSBORO	NC	Solar	Intermediate	Yes	7.6
Facility 4440	New Bern	NC	Solar	Intermediate	Yes	7.6
Facility 4441	Middlesex	NC	Solar	Intermediate	Yes	7.6
Facility 4442	Benson	NC	Solar	Intermediate	Yes	7.6
Facility 4443	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4444	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 4445	Vanceboro	NC	Solar	Intermediate	Yes	5.0
Facility 4446	Cary	NC	Solar	Intermediate	Yes	3.4
Facility 4447	Rocky Mount	NC	Solar	Intermediate	Yes	3.3
Facility 4448	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 4449	Morrisville	NC	Solar	Intermediate	Yes	4.6
Facility 4450	Angier	NC	Solar	Intermediate	Yes	5.8
Facility 4451	KNIGHTDALE	NC	Solar	Intermediate	Yes	7.9
Facility 4452	Morrisville	NC	Solar	Intermediate	Yes	3.6
Facility 4453	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 4454	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4455	New Bern	NC	Solar	Intermediate	Yes	5.0
Facility 4456	Linden	NC	Solar	Intermediate	Yes	7.6
Facility 4457	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 4458	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 4459	Roxboro	NC	Solar	Intermediate	Yes	3.8
Facility 4460	Snow Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4461	MIDDLESEX	NC	Solar	Intermediate	Yes	7.6
Facility 4462	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 4463	Pittsboro	NC	Solar	Intermediate	Yes	6.0
Facility 4464	Knightdale	NC	Solar	Intermediate	Yes	6.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4465	Raleigh	NC	Solar	Intermediate	Yes	10.3
Facility 4466	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4467	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4468	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 4469	Jacksonville	NC	Solar	Intermediate	Yes	3.8
Facility 4470	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 4471	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 4472	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4473	Bunn Level	NC	Solar	Intermediate	Yes	7.6
Facility 4474	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 4475	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4476	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 4477	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 4478	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 4479	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 4480	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 4481	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4482	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4483	Southern Pines	NC	Solar	Intermediate	Yes	10.0
Facility 4484	Cary	NC	Solar	Intermediate	Yes	10.6
Facility 4485	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 4486	Fayetteville	NC	Solar	Intermediate	Yes	10.0
Facility 4487	Fuquay Varina	NC	Solar	Intermediate	Yes	3.0
Facility 4488	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4489	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4490	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4491	Zebulon	NC	Solar	Intermediate	Yes	7.6
Facility 4492	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 4493	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4494	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4495	Liberty	NC	Solar	Intermediate	Yes	6.0
Facility 4496	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 4497	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4498	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 4499	Jacksonville	NC	Solar	Intermediate	Yes	7.7
Facility 4500	Asheville	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4501	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 4502	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4503	Pollocksville	NC	Solar	Intermediate	Yes	5.1
Facility 4504	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 4505	Wilmington	NC	Solar	Intermediate	Yes	10.6
Facility 4506	Wadesboro	NC	Solar	Intermediate	Yes	5.0
Facility 4507	Leland	NC	Solar	Intermediate	Yes	5.0
Facility 4508	Knighdale	NC	Solar	Intermediate	Yes	3.1
Facility 4509	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 4510	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 4511	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4512	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4513	HOLLY SPRINGS	NC	Solar	Intermediate	Yes	15.2
Facility 4514	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4515	Angier	NC	Solar	Intermediate	Yes	5.0
Facility 4516	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4517	Garner	NC	Solar	Intermediate	Yes	10.3
Facility 4518	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4519	Smithfield	NC	Solar	Intermediate	Yes	3.7
Facility 4520	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 4521	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4522	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4523	Leland	NC	Solar	Intermediate	Yes	5.0
Facility 4524	Clayton	NC	Solar	Intermediate	Yes	20.0
Facility 4525	FUQUAY VARINA	NC	Solar	Intermediate	Yes	6.0
Facility 4526	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4527	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 4528	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4529	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4530	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4531	Candler	NC	Solar	Intermediate	Yes	3.0
Facility 4532	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 4533	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4534	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4535	MORRISVILLE	NC	Solar	Intermediate	Yes	6.0
Facility 4536	Asheville	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4537	Hopemills	NC	Solar	Intermediate	Yes	2.3
Facility 4538	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 4539	KNIGHTDALE	NC	Solar	Intermediate	Yes	7.6
Facility 4540	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 4541	Blanch	NC	Solar	Intermediate	Yes	7.6
Facility 4542	Raleigh	NC	Solar	Intermediate	Yes	8.4
Facility 4543	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 4544	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 4545	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 4546	Raleigh	NC	Solar	Intermediate	Yes	4.3
Facility 4547	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4548	Raleigh	NC	Solar	Intermediate	Yes	8.6
Facility 4549	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 4550	Jacksonville	NC	Solar	Intermediate	Yes	7.9
Facility 4551	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 4552	Raleigh	NC	Solar	Intermediate	Yes	7.9
Facility 4553	Willow Spring	NC	Solar	Intermediate	Yes	7.7
Facility 4554	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4555	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4556	RALEIGH	NC	Solar	Intermediate	Yes	10.0
Facility 4557	Swannanoa	NC	Solar	Intermediate	Yes	5.0
Facility 4558	New Bern	NC	Solar	Intermediate	Yes	5.0
Facility 4559	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4560	Leland	NC	Solar	Intermediate	Yes	3.8
Facility 4561	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4562	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4563	Jacksonville	NC	Solar	Intermediate	Yes	11.3
Facility 4564	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 4565	ASHEVILLE	NC	Solar	Intermediate	Yes	7.6
Facility 4566	ARDEN	NC	Solar	Intermediate	Yes	5.0
Facility 4567	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4568	Apex	NC	Solar	Intermediate	Yes	6.5
Facility 4569	Bunn Level	NC	Solar	Intermediate	Yes	3.8
Facility 4570	Sandford	NC	Solar	Intermediate	Yes	3.8
Facility 4571	Milton	NC	Solar	Intermediate	Yes	5.0
Facility 4572	BLACK MOUNTAIN	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4573	Bailey	NC	Solar	Intermediate	Yes	6.5
Facility 4574	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 4575	ASHEVILLE	NC	Solar	Intermediate	Yes	5.0
Facility 4576	Knightdale	NC	Solar	Intermediate	Yes	10.0
Facility 4577	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4578	GOLDSBORO	NC	Solar	Intermediate	Yes	4.6
Facility 4579	Willow Spring	NC	Solar	Intermediate	Yes	10.0
Facility 4580	PITTSBORO	NC	Solar	Intermediate	Yes	4.6
Facility 4581	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 4582	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 4583	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4584	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4585	Jacksonville	NC	Solar	Intermediate	Yes	10.6
Facility 4586	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 4587	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 4588	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4589	PINE LEVEL	NC	Solar	Intermediate	Yes	7.7
Facility 4590	Knightdale	NC	Solar	Intermediate	Yes	6.7
Facility 4591	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 4592	Rolesville	NC	Solar	Intermediate	Yes	7.6
Facility 4593	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 4594	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 4595	Leland	NC	Solar	Intermediate	Yes	7.6
Facility 4596	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4597	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4598	Garner	NC	Solar	Intermediate	Yes	7.4
Facility 4599	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 4600	Louisburg	NC	Solar	Intermediate	Yes	13.6
Facility 4601	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 4602	Raleigh	NC	Solar	Intermediate	Yes	15.2
Facility 4603	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4604	Raleigh	NC	Solar	Intermediate	Yes	1.4
Facility 4605	Roxboro	NC	Solar	Intermediate	Yes	5.0
Facility 4606	Jacksonville	NC	Solar	Intermediate	Yes	8.2
Facility 4607	CANDLER	NC	Solar	Intermediate	Yes	10.0
Facility 4608	Southern Pines	NC	Solar	Intermediate	Yes	4.3

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4609	Fuquay Varina	NC	Solar	Intermediate	Yes	15.2
Facility 4610	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 4611	Fuquay Varina	NC	Solar	Intermediate	Yes	6.7
Facility 4612	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 4613	Siler City	NC	Solar	Intermediate	Yes	6.0
Facility 4614	Siler City	NC	Solar	Intermediate	Yes	13.4
Facility 4615	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 4616	Pikeville	NC	Solar	Intermediate	Yes	6.7
Facility 4617	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 4618	Knightdale	NC	Solar	Intermediate	Yes	4.8
Facility 4619	Raleigh	NC	Solar	Intermediate	Yes	8.4
Facility 4620	Goldsboro	NC	Solar	Intermediate	Yes	10.8
Facility 4621	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 4622	Franklinville	NC	Solar	Intermediate	Yes	10.0
Facility 4623	Fuquay Varina	NC	Solar	Intermediate	Yes	3.8
Facility 4624	Pittsboro	NC	Solar	Intermediate	Yes	3.8
Facility 4625	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4626	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4627	Fuquay Varina	NC	Solar	Intermediate	Yes	7.0
Facility 4628	Hendersonville	NC	Solar	Intermediate	Yes	10.0
Facility 4629	Wilmington	NC	Solar	Intermediate	Yes	5.1
Facility 4630	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 4631	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 4632	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4633	Four Oaks	NC	Solar	Intermediate	Yes	4.3
Facility 4634	Four Oaks	NC	Solar	Intermediate	Yes	7.7
Facility 4635	Raleigh	NC	Solar	Intermediate	Yes	6.5
Facility 4636	Vanceboro	NC	Solar	Intermediate	Yes	5.1
Facility 4637	Alexander	NC	Solar	Intermediate	Yes	5.1
Facility 4638	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4639	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4640	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4641	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 4642	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4643	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4644	Raleigh	NC	Solar	Intermediate	Yes	5.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4645	Jacksonville	NC	Solar	Intermediate	Yes	5.5
Facility 4646	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 4647	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4648	Weaverville	NC	Solar	Intermediate	Yes	10.0
Facility 4649	Lillington	NC	Solar	Intermediate	Yes	10.0
Facility 4650	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4651	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 4652	Holly Springs	NC	Solar	Intermediate	Yes	5.3
Facility 4653	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.0
Facility 4654	Carolina Beach	NC	Solar	Intermediate	Yes	5.4
Facility 4655	Jackson Spgs	NC	Solar	Intermediate	Yes	11.4
Facility 4656	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 4657	FUQUAY VARINA	NC	Solar	Intermediate	Yes	6.0
Facility 4658	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 4659	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 4660	FLETCHER	NC	Solar	Intermediate	Yes	7.6
Facility 4661	Yanceyville	NC	Solar	Intermediate	Yes	5.0
Facility 4662	Roxboro	NC	Solar	Intermediate	Yes	7.6
Facility 4663	Raleigh	NC	Solar	Intermediate	Yes	6.5
Facility 4664	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 4665	Holly Springs	NC	Solar	Intermediate	Yes	4.8
Facility 4666	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 4667	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4668	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4669	Newport	NC	Solar	Intermediate	Yes	17.6
Facility 4670	Four Oaks	NC	Solar	Intermediate	Yes	7.6
Facility 4671	Jacksonville	NC	Solar	Intermediate	Yes	7.7
Facility 4672	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 4673	Willow Spring	NC	Solar	Intermediate	Yes	7.0
Facility 4674	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4675	Pembroke	NC	Solar	Intermediate	Yes	10.0
Facility 4676	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 4677	Waynesville	NC	Solar	Intermediate	Yes	10.0
Facility 4678	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 4679	Apex	NC	Solar	Intermediate	Yes	5.0
Facility 4680	Raleigh	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4681	Apex	NC	Solar	Intermediate	Yes	3.8
Facility 4682	Fayetteville	NC	Solar	Intermediate	Yes	3.8
Facility 4683	Waynesville	NC	Solar	Intermediate	Yes	3.8
Facility 4684	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4685	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4686	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4687	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 4688	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4689	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4690	Benson	NC	Solar	Intermediate	Yes	3.8
Facility 4691	Rockingham	NC	Solar	Intermediate	Yes	7.6
Facility 4692	Sanford	NC	Solar	Intermediate	Yes	11.4
Facility 4693	Garner	NC	Solar	Intermediate	Yes	8.6
Facility 4694	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4695	Knightdale	NC	Solar	Intermediate	Yes	9.6
Facility 4696	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 4697	Raleigh	NC	Solar	Intermediate	Yes	3.3
Facility 4698	Fuquay Varina	NC	Solar	Intermediate	Yes	8.0
Facility 4699	Asheville	NC	Solar	Intermediate	Yes	15.2
Facility 4700	Middlesex	NC	Solar	Intermediate	Yes	4.1
Facility 4701	Knightdale	NC	Solar	Intermediate	Yes	7.0
Facility 4702	Franklinton	NC	Solar	Intermediate	Yes	3.7
Facility 4703	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4704	Asheville	NC	Solar	Intermediate	Yes	4.0
Facility 4705	Nashville	NC	Solar	Intermediate	Yes	7.6
Facility 4706	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 4707	Chapel Hill	NC	Solar	Intermediate	Yes	1.7
Facility 4708	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4709	Fiquay Varina	NC	Solar	Intermediate	Yes	5.1
Facility 4710	Asheville	NC	Solar	Intermediate	Yes	3.6
Facility 4711	St. Pauls	NC	Solar	Intermediate	Yes	7.6
Facility 4712	LEICESTER	NC	Solar	Intermediate	Yes	10.0
Facility 4713	Sanford	NC	Solar	Intermediate	Yes	10.0
Facility 4714	ASHEBORO	NC	Solar	Intermediate	Yes	5.9
Facility 4715	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 4716	Apex	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4717	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 4718	Newland	NC	Solar	Intermediate	Yes	7.6
Facility 4719	Garner	NC	Solar	Intermediate	Yes	9.6
Facility 4720	Apex	NC	Solar	Intermediate	Yes	13.8
Facility 4721	ASHEVILLE	NC	Solar	Intermediate	Yes	3.5
Facility 4722	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 4723	Milton	NC	Solar	Intermediate	Yes	11.4
Facility 4724	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 4725	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.0
Facility 4726	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4727	Leicester	NC	Solar	Intermediate	Yes	5.0
Facility 4728	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 4729	BLACK MTN	NC	Solar	Intermediate	Yes	6.0
Facility 4730	Lillington	NC	Solar	Intermediate	Yes	11.4
Facility 4731	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4732	Apex	NC	Solar	Intermediate	Yes	11.4
Facility 4733	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4734	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 4735	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 4736	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4737	Waynesville	NC	Solar	Intermediate	Yes	3.8
Facility 4738	Carthage	NC	Solar	Intermediate	Yes	10.0
Facility 4739	Zebulon	NC	Solar	Intermediate	Yes	10.0
Facility 4740	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4741	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4742	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4743	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4744	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4745	Waynesville	NC	Solar	Intermediate	Yes	4.4
Facility 4746	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4747	Raleigh	NC	Solar	Intermediate	Yes	6.2
Facility 4748	Fuquay-Varina	NC	Solar	Intermediate	Yes	4.6
Facility 4749	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 4750	Leasburg	NC	Solar	Intermediate	Yes	7.6
Facility 4751	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 4752	Pittsboro	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 4753	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4754	Siler City	NC	Solar	Intermediate	Yes	3.8
Facility 4755	Hope Mills	NC	Solar	Intermediate	Yes	7.6
Facility 4756	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 4757	FLETCHER	NC	Solar	Intermediate	Yes	4.1
Facility 4758	Wearville	NC	Solar	Intermediate	Yes	5.0
Facility 4759	Leicester	NC	Solar	Intermediate	Yes	7.6
Facility 4760	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4761	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 4762	Oxford	NC	Solar	Intermediate	Yes	3.8
Facility 4763	Oxford	NC	Solar	Intermediate	Yes	5.0
Facility 4764	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 4765	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 4766	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4767	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 4768	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 4769	MONTREAT	NC	Solar	Intermediate	Yes	5.0
Facility 4770	CARY	NC	Solar	Intermediate	Yes	5.0
Facility 4771	Vass	NC	Solar	Intermediate	Yes	4.1
Facility 4772	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 4773	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4774	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4775	Pinehurst	NC	Solar	Intermediate	Yes	10.0
Facility 4776	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4777	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 4778	Holly Springs	NC	Solar	Intermediate	Yes	7.8
Facility 4779	WHISPER PINES	NC	Solar	Intermediate	Yes	6.6
Facility 4780	Pinehurst	NC	Solar	Intermediate	Yes	5.6
Facility 4781	Holly springs	NC	Solar	Intermediate	Yes	6.7
Facility 4782	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4783	Fuquay-Varina	NC	Solar	Intermediate	Yes	6.5
Facility 4784	RALEIGH	NC	Solar	Intermediate	Yes	4.3
Facility 4785	Leicester	NC	Solar	Intermediate	Yes	13.5
Facility 4786	Bakersville	NC	Solar	Intermediate	Yes	7.6
Facility 4787	Fletcher	NC	Solar	Intermediate	Yes	3.8
Facility 4788	Newport	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4789	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 4790	Fairview	NC	Solar	Intermediate	Yes	11.4
Facility 4791	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4792	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 4793	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 4794	Black Mountain	NC	Solar	Intermediate	Yes	5.0
Facility 4795	Vanceboro	NC	Solar	Intermediate	Yes	7.6
Facility 4796	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4797	Louisburg	NC	Solar	Intermediate	Yes	11.4
Facility 4798	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 4799	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 4800	Angier	NC	Solar	Intermediate	Yes	6.0
Facility 4801	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4802	Selma	NC	Solar	Intermediate	Yes	7.6
Facility 4803	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 4804	Weaverville	NC	Solar	Intermediate	Yes	7.8
Facility 4805	Asheville	NC	Solar	Intermediate	Yes	5.8
Facility 4806	Morrisville	NC	Solar	Intermediate	Yes	4.8
Facility 4807	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4808	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 4809	Moorisville	NC	Solar	Intermediate	Yes	3.8
Facility 4810	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 4811	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 4812	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4813	Spruce Pine	NC	Solar	Intermediate	Yes	3.8
Facility 4814	Clyde	NC	Solar	Intermediate	Yes	7.6
Facility 4815	Rowland	NC	Solar	Intermediate	Yes	3.7
Facility 4816	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4817	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 4818	Wilmington	NC	Solar	Intermediate	Yes	7.0
Facility 4819	Wendell	NC	Solar	Intermediate	Yes	5.3
Facility 4820	Holly Springs	NC	Solar	Intermediate	Yes	3.4
Facility 4821	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 4822	Navassa	NC	Solar	Intermediate	Yes	4.8
Facility 4823	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 4824	Cary	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4825	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 4826	Cary	NC	Solar	Intermediate	Yes	5.8
Facility 4827	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4828	Whispering Pines	NC	Solar	Intermediate	Yes	10.0
Facility 4829	Holly Springs	NC	Solar	Intermediate	Yes	11.4
Facility 4830	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 4831	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4832	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 4833	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 4834	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 4835	Aberdeen	NC	Solar	Intermediate	Yes	7.6
Facility 4836	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4837	Cary	NC	Solar	Intermediate	Yes	7.9
Facility 4838	Henderson	NC	Solar	Intermediate	Yes	10.0
Facility 4839	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 4840	Siler City	NC	Solar	Intermediate	Yes	3.0
Facility 4841	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4842	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4843	Wilmington	NC	Solar	Intermediate	Yes	10.6
Facility 4844	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4845	Raleigh	NC	Solar	Intermediate	Yes	10.6
Facility 4846	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 4847	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 4848	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 4849	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 4850	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4851	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4852	FLETCHER	NC	Solar	Intermediate	Yes	3.0
Facility 4853	Norwood	NC	Solar	Intermediate	Yes	7.6
Facility 4854	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4855	Dunn	NC	Solar	Intermediate	Yes	11.4
Facility 4856	Fuquay Varina	NC	Solar	Intermediate	Yes	7.2
Facility 4857	Knightdale	NC	Solar	Intermediate	Yes	12.0
Facility 4858	Candler	NC	Solar	Intermediate	Yes	7.0
Facility 4859	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4860	Asheville	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4861	Wilmington	NC	Solar	Intermediate	Yes	5.1
Facility 4862	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4863	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4864	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 4865	Pinehurst	NC	Solar	Intermediate	Yes	3.8
Facility 4866	Snow Hill	NC	Solar	Intermediate	Yes	11.4
Facility 4867	Franklinton	NC	Solar	Intermediate	Yes	5.0
Facility 4868	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4869	Pikeville	NC	Solar	Intermediate	Yes	10.0
Facility 4870	Garner	NC	Solar	Intermediate	Yes	3.8
Facility 4871	Raleigh	NC	Solar	Intermediate	Yes	13.6
Facility 4872	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4873	RALEIGH	NC	Solar	Intermediate	Yes	8.9
Facility 4874	RALEIGH	NC	Solar	Intermediate	Yes	7.6
Facility 4875	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 4876	Wallace	NC	Solar	Intermediate	Yes	5.0
Facility 4877	Siler City	NC	Solar	Intermediate	Yes	3.0
Facility 4878	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4879	Willow Spring	NC	Solar	Intermediate	Yes	10.0
Facility 4880	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4881	Henderson	NC	Solar	Intermediate	Yes	5.0
Facility 4882	Raleigh	NC	Solar	Intermediate	Yes	7.9
Facility 4883	Lumberton	NC	Solar	Intermediate	Yes	17.6
Facility 4884	OXFORD	NC	Solar	Intermediate	Yes	7.4
Facility 4885	Fuquay Varina	NC	Solar	Intermediate	Yes	7.0
Facility 4886	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 4887	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4888	New Hill	NC	Solar	Intermediate	Yes	15.2
Facility 4889	New Hill	NC	Solar	Intermediate	Yes	17.6
Facility 4890	Siler City	NC	Solar	Intermediate	Yes	3.0
Facility 4891	Wilmington	NC	Solar	Intermediate	Yes	4.1
Facility 4892	Apex	NC	Solar	Intermediate	Yes	3.8
Facility 4893	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4894	Garner	NC	Solar	Intermediate	Yes	3.7
Facility 4895	Castle Hayne	NC	Solar	Intermediate	Yes	20.0
Facility 4896	Hampstead	NC	Solar	Intermediate	Yes	19.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4897	Four Oaks	NC	Solar	Intermediate	Yes	9.6
Facility 4898	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4899	Castle Hayne	NC	Solar	Intermediate	Yes	10.0
Facility 4900	Erwin	NC	Solar	Intermediate	Yes	13.6
Facility 4901	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4902	Sanford	NC	Solar	Intermediate	Yes	16.0
Facility 4903	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 4904	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4905	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4906	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4907	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4908	Willow Spring	NC	Solar	Intermediate	Yes	11.4
Facility 4909	Grifton	NC	Solar	Intermediate	Yes	5.0
Facility 4910	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 4911	Smithfield	NC	Solar	Intermediate	Yes	11.4
Facility 4912	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 4913	Fayetteville	NC	Solar	Intermediate	Yes	10.0
Facility 4914	Randleman	NC	Solar	Intermediate	Yes	5.0
Facility 4915	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 4916	Morrisville	NC	Solar	Intermediate	Yes	6.0
Facility 4917	Spruce Pine	NC	Solar	Intermediate	Yes	12.8
Facility 4918	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 4919	Candler	NC	Solar	Intermediate	Yes	6.1
Facility 4920	Garner	NC	Solar	Intermediate	Yes	5.8
Facility 4921	Holly Springs	NC	Solar	Intermediate	Yes	2.4
Facility 4922	Whiteville	NC	Solar	Intermediate	Yes	3.8
Facility 4923	Pinehurst	NC	Solar	Intermediate	Yes	10.0
Facility 4924	Beaufort	NC	Solar	Intermediate	Yes	5.0
Facility 4925	Wake Forest	NC	Solar	Intermediate	Yes	6.7
Facility 4926	Raleigh	NC	Solar	Intermediate	Yes	15.2
Facility 4927	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4928	Elizabethtown	NC	Solar	Intermediate	Yes	5.3
Facility 4929	Kinston	NC	Solar	Intermediate	Yes	15.4
Facility 4930	Apex	NC	Solar	Intermediate	Yes	6.2
Facility 4931	Garner	NC	Solar	Intermediate	Yes	7.7
Facility 4932	Knightdale	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 4933	Asheboro	NC	Solar	Intermediate	Yes	10.0
Facility 4934	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 4935	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4936	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 4937	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 4938	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4939	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 4940	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 4941	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 4942	Hope Mills	NC	Solar	Intermediate	Yes	3.7
Facility 4943	Lillington	NC	Solar	Intermediate	Yes	7.9
Facility 4944	Cary	NC	Solar	Intermediate	Yes	3.0
Facility 4945	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 4946	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 4947	Apex	NC	Solar	Intermediate	Yes	13.6
Facility 4948	Black Mountain	NC	Solar	Intermediate	Yes	7.8
Facility 4949	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4950	Fuquay Varina	NC	Solar	Intermediate	Yes	6.2
Facility 4951	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4952	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 4953	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 4954	Wilmington	NC	Solar	Intermediate	Yes	7.7
Facility 4955	Asheville	NC	Solar	Intermediate	Yes	7.1
Facility 4956	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 4957	Asheville	NC	Solar	Intermediate	Yes	5.9
Facility 4958	Middlesex	NC	Solar	Intermediate	Yes	8.9
Facility 4959	Smithfield	NC	Solar	Intermediate	Yes	7.9
Facility 4960	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 4961	Laurel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 4962	Roxboro	NC	Solar	Intermediate	Yes	10.0
Facility 4963	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 4964	Asheville	NC	Solar	Intermediate	Yes	9.5
Facility 4965	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4966	Manson	NC	Solar	Intermediate	Yes	10.0
Facility 4967	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 4968	Pinehurst	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 4969	Clayton	NC	Solar	Intermediate	Yes	13.6
Facility 4970	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4971	Canton	NC	Solar	Intermediate	Yes	10.0
Facility 4972	Chapel Hill	NC	Solar	Intermediate	Yes	12.0
Facility 4973	Cary	NC	Solar	Intermediate	Yes	13.8
Facility 4974	Maysville	NC	Solar	Intermediate	Yes	7.6
Facility 4975	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 4976	Holly Springs	NC	Solar	Intermediate	Yes	5.3
Facility 4977	Cary	NC	Solar	Intermediate	Yes	11.3
Facility 4978	WAYNESVILLE	NC	Solar	Intermediate	Yes	6.6
Facility 4979	Wilmington	NC	Solar	Intermediate	Yes	4.8
Facility 4980	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 4981	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 4982	Nashville	NC	Solar	Intermediate	Yes	20.0
Facility 4983	Nashville	NC	Solar	Intermediate	Yes	7.6
Facility 4984	Leicester	NC	Solar	Intermediate	Yes	10.0
Facility 4985	SanFord	NC	Solar	Intermediate	Yes	10.0
Facility 4986	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 4987	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 4988	Raleigh	NC	Solar	Intermediate	Yes	2.6
Facility 4989	Goldsboro	NC	Solar	Intermediate	Yes	5.0
Facility 4990	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 4991	Chapel Hill	NC	Solar	Intermediate	Yes	10.0
Facility 4992	New Bern	NC	Solar	Intermediate	Yes	11.4
Facility 4993	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 4994	Asheville	NC	Solar	Intermediate	Yes	6.7
Facility 4995	Sanford	NC	Solar	Intermediate	Yes	6.0
Facility 4996	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 4997	Alexander	NC	Solar	Intermediate	Yes	7.6
Facility 4998	Bunnlevel	NC	Solar	Intermediate	Yes	6.6
Facility 4999	Fuquay Varina	NC	Solar	Intermediate	Yes	13.0
Facility 5000	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5001	Candler	NC	Solar	Intermediate	Yes	7.0
Facility 5002	Fuquay-Varina	NC	Solar	Intermediate	Yes	8.2
Facility 5003	Waynesville	NC	Solar	Intermediate	Yes	7.6
Facility 5004	Asheville	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5005	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5006	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 5007	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 5008	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5009	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5010	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5011	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 5012	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 5013	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5014	WILMINGTON	NC	Solar	Intermediate	Yes	7.7
Facility 5015	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 5016	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5017	Ashville	NC	Solar	Intermediate	Yes	7.6
Facility 5018	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5019	Swannanoa	NC	Solar	Intermediate	Yes	18.0
Facility 5020	Weaverville	NC	Solar	Intermediate	Yes	7.5
Facility 5021	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5022	Four Oaks	NC	Solar	Intermediate	Yes	3.5
Facility 5023	Garner	NC	Solar	Intermediate	Yes	7.4
Facility 5024	Cary	NC	Solar	Intermediate	Yes	7.1
Facility 5025	Raleigh	NC	Solar	Intermediate	Yes	5.3
Facility 5026	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 5027	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 5028	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 5029	Southport	NC	Solar	Intermediate	Yes	7.6
Facility 5030	Willow Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5031	Franklinton	NC	Solar	Intermediate	Yes	5.0
Facility 5032	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 5033	Newland	NC	Solar	Intermediate	Yes	7.6
Facility 5034	Zebulon	NC	Solar	Intermediate	Yes	10.0
Facility 5035	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5036	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5037	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5038	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 5039	Arden	NC	Solar	Intermediate	Yes	7.6
Facility 5040	Morrisville	NC	Solar	Intermediate	Yes	11.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5041	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5042	Wake Forest	NC	Solar	Intermediate	Yes	17.6
Facility 5043	Cove City	NC	Solar	Intermediate	Yes	7.6
Facility 5044	Hamlet	NC	Solar	Intermediate	Yes	5.0
Facility 5045	Bahama	NC	Solar	Intermediate	Yes	3.8
Facility 5046	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5047	Wendell	NC	Solar	Intermediate	Yes	2.9
Facility 5048	Knightdale	NC	Solar	Intermediate	Yes	9.4
Facility 5049	Holly Springs	NC	Solar	Intermediate	Yes	4.1
Facility 5050	Waynesville	NC	Solar	Intermediate	Yes	5.0
Facility 5051	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 5052	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5053	Asheville	NC	Solar	Intermediate	Yes	8.0
Facility 5054	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 5055	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5056	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5057	Willow Spring	NC	Solar	Intermediate	Yes	7.6
Facility 5058	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5059	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5060	Leicester	NC	Solar	Intermediate	Yes	10.0
Facility 5061	Richlands	NC	Solar	Intermediate	Yes	7.6
Facility 5062	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5063	Fuquay-Varina	NC	Solar	Intermediate	Yes	2.4
Facility 5064	Chapel Hill	NC	Solar	Intermediate	Yes	4.0
Facility 5065	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5066	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5067	Asheville	NC	Solar	Intermediate	Yes	15.2
Facility 5068	Asheville	NC	Solar	Intermediate	Yes	5.2
Facility 5069	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5070	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5071	Asheville	NC	Solar	Intermediate	Yes	10.7
Facility 5072	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5073	Selma	NC	Solar	Intermediate	Yes	5.3
Facility 5074	Coats	NC	Solar	Intermediate	Yes	4.0
Facility 5075	Arden	NC	Solar	Intermediate	Yes	10.7
Facility 5076	Sanford	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5077	BLACK MTN	NC	Solar	Intermediate	Yes	4.4
Facility 5078	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 5079	Angier	NC	Solar	Intermediate	Yes	6.7
Facility 5080	Raleigh	NC	Solar	Intermediate	Yes	4.6
Facility 5081	Cary	NC	Solar	Intermediate	Yes	9.6
Facility 5082	Rolesville	NC	Solar	Intermediate	Yes	10.0
Facility 5083	Holly Springs	NC	Solar	Intermediate	Yes	13.8
Facility 5084	Maysville	NC	Solar	Intermediate	Yes	7.6
Facility 5085	Weaverville	NC	Solar	Intermediate	Yes	7.6
Facility 5086	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 5087	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5088	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 5089	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5090	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5091	Cary	NC	Solar	Intermediate	Yes	5.5
Facility 5092	Raleigh	NC	Solar	Intermediate	Yes	10.6
Facility 5093	Knightdale	NC	Solar	Intermediate	Yes	5.5
Facility 5094	Garner	NC	Solar	Intermediate	Yes	6.2
Facility 5095	Wendell	NC	Solar	Intermediate	Yes	5.5
Facility 5096	Goldsboro	NC	Solar	Intermediate	Yes	4.1
Facility 5097	Roxboro	NC	Solar	Intermediate	Yes	7.6
Facility 5098	Lumberton	NC	Solar	Intermediate	Yes	3.5
Facility 5099	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5100	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5101	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 5102	Leland	NC	Solar	Intermediate	Yes	10.2
Facility 5103	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5104	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 5105	Newland	NC	Solar	Intermediate	Yes	7.6
Facility 5106	Goldsboro	NC	Solar	Intermediate	Yes	20.0
Facility 5107	Candler	NC	Solar	Intermediate	Yes	6.8
Facility 5108	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5109	Wrightsville Beach	NC	Solar	Intermediate	Yes	15.4
Facility 5110	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5111	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5112	Raleigh	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5113	Pittsboro	NC	Solar	Intermediate	Yes	10.0
Facility 5114	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5115	Swannanoa	NC	Solar	Intermediate	Yes	10.0
Facility 5116	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5117	Knightdale	NC	Solar	Intermediate	Yes	5.5
Facility 5118	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 5119	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5120	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 5121	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 5122	Angier	NC	Solar	Intermediate	Yes	15.2
Facility 5123	Smithfield	NC	Solar	Intermediate	Yes	7.0
Facility 5124	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 5125	Cary	NC	Solar	Intermediate	Yes	9.8
Facility 5126	Raleigh	NC	Solar	Intermediate	Yes	2.9
Facility 5127	Wilmington	NC	Solar	Intermediate	Yes	7.7
Facility 5128	Swannanoa	NC	Solar	Intermediate	Yes	4.4
Facility 5129	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5130	Wilmington	NC	Solar	Intermediate	Yes	8.6
Facility 5131	Southport	NC	Solar	Intermediate	Yes	7.6
Facility 5132	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5133	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 5134	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 5135	Middlesex	NC	Solar	Intermediate	Yes	10.0
Facility 5136	Parkton	NC	Solar	Intermediate	Yes	11.9
Facility 5137	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5138	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5139	Broadway	NC	Solar	Intermediate	Yes	3.8
Facility 5140	Raleigh	NC	Solar	Intermediate	Yes	5.9
Facility 5141	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5142	Watha	NC	Solar	Intermediate	Yes	8.0
Facility 5143	Leland	NC	Solar	Intermediate	Yes	5.8
Facility 5144	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5145	Fayetteville	NC	Solar	Intermediate	Yes	5.9
Facility 5146	Southern Pines	NC	Solar	Intermediate	Yes	6.2
Facility 5147	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5148	Chapel Hill	NC	Solar	Intermediate	Yes	15.2

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5149	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5150	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5151	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5152	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5153	Fuquay Varina	NC	Solar	Intermediate	Yes	12.0
Facility 5154	New Hill	NC	Solar	Intermediate	Yes	10.0
Facility 5155	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5156	Black Mountain	NC	Solar	Intermediate	Yes	11.4
Facility 5157	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5158	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5159	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 5160	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5161	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5162	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5163	Henderson	NC	Solar	Intermediate	Yes	15.0
Facility 5164	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5165	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5166	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 5167	Stem	NC	Solar	Intermediate	Yes	17.6
Facility 5168	Benson	NC	Solar	Intermediate	Yes	10.6
Facility 5169	Knightdale	NC	Solar	Intermediate	Yes	8.4
Facility 5170	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 5171	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5172	Rolesville	NC	Solar	Intermediate	Yes	3.8
Facility 5173	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5174	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5175	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5176	Linden	NC	Solar	Intermediate	Yes	10.0
Facility 5177	ZEBULON	NC	Solar	Intermediate	Yes	7.5
Facility 5178	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 5179	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5180	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5181	Rolesville	NC	Solar	Intermediate	Yes	6.5
Facility 5182	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 5183	Fuquay-Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5184	Hampstead	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5185	Fayetteville	NC	Solar	Intermediate	Yes	5.0
Facility 5186	Hampstead	NC	Solar	Intermediate	Yes	5.0
Facility 5187	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 5188	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 5189	Chocowinity	NC	Solar	Intermediate	Yes	5.0
Facility 5190	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 5191	Carolina Beach	NC	Solar	Intermediate	Yes	8.0
Facility 5192	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 5193	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 5194	Black Mountain	NC	Solar	Intermediate	Yes	6.0
Facility 5195	Morrisville	NC	Solar	Intermediate	Yes	3.8
Facility 5196	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 5197	Wendell	NC	Solar	Intermediate	Yes	7.6
Facility 5198	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5199	Weavervillle	NC	Solar	Intermediate	Yes	10.0
Facility 5200	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 5201	Kure Beach	NC	Solar	Intermediate	Yes	9.4
Facility 5202	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5203	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5204	Knightdale	NC	Solar	Intermediate	Yes	4.3
Facility 5205	Goldsboro	NC	Solar	Intermediate	Yes	12.7
Facility 5206	Weaverville	NC	Solar	Intermediate	Yes	10.0
Facility 5207	Angier	NC	Solar	Intermediate	Yes	10.3
Facility 5208	Timberlake	NC	Solar	Intermediate	Yes	5.0
Facility 5209	Asheville	NC	Solar	Intermediate	Yes	8.9
Facility 5210	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 5211	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5212	Chapel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 5213	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5214	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5215	Asheville	NC	Solar	Intermediate	Yes	4.1
Facility 5216	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5217	Southern Pines	NC	Solar	Intermediate	Yes	7.6
Facility 5218	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5219	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5220	Blanch	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5221	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5222	Leland	NC	Solar	Intermediate	Yes	5.0
Facility 5223	Hubert	NC	Solar	Intermediate	Yes	7.6
Facility 5224	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 5225	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 5226	Fayetteville	NC	Solar	Intermediate	Yes	7.6
Facility 5227	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5228	Louisburg	NC	Solar	Intermediate	Yes	6.0
Facility 5229	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5230	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 5231	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5232	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5233	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5234	Chapel Hill	NC	Solar	Intermediate	Yes	13.0
Facility 5235	Willow Spring	NC	Solar	Intermediate	Yes	8.2
Facility 5236	Raleigh	NC	Solar	Intermediate	Yes	8.4
Facility 5237	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5238	Jacksonville	NC	Solar	Intermediate	Yes	11.4
Facility 5239	Garner	NC	Solar	Intermediate	Yes	3.7
Facility 5240	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 5241	Asheville	NC	Solar	Intermediate	Yes	6.1
Facility 5242	Weaverville	NC	Solar	Intermediate	Yes	5.9
Facility 5243	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5244	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 5245	Linden	NC	Solar	Intermediate	Yes	10.0
Facility 5246	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 5247	Wilmington	NC	Solar	Intermediate	Yes	6.7
Facility 5248	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 5249	Waynesville	NC	Solar	Intermediate	Yes	3.8
Facility 5250	Knightdale	NC	Solar	Intermediate	Yes	11.4
Facility 5251	asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5252	Candler	NC	Solar	Intermediate	Yes	10.0
Facility 5253	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5254	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 5255	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 5256	Chapel Hill	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5257	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 5258	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 5259	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5260	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5261	Sanford	NC	Solar	Intermediate	Yes	14.4
Facility 5262	Wendell	NC	Solar	Intermediate	Yes	10.0
Facility 5263	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5264	Oriental	NC	Solar	Intermediate	Yes	19.8
Facility 5265	Fayetteville	NC	Solar	Intermediate	Yes	10.0
Facility 5266	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5267	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5268	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5269	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5270	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5271	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 5272	Barnardsville	NC	Solar	Intermediate	Yes	7.7
Facility 5273	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5274	Raleigh	NC	Solar	Intermediate	Yes	19.0
Facility 5275	HAVELOCK	NC	Solar	Intermediate	Yes	11.4
Facility 5276	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5277	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 5278	Four Oaks	NC	Solar	Intermediate	Yes	7.6
Facility 5279	Asheville	NC	Solar	Intermediate	Yes	7.5
Facility 5280	Asheboro	NC	Solar	Intermediate	Yes	3.8
Facility 5281	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5282	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 5283	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5284	Holly Springs	NC	Solar	Intermediate	Yes	6.7
Facility 5285	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5286	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5287	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 5288	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5289	Asheville	NC	Solar	Intermediate	Yes	6.7
Facility 5290	Pittsboro	NC	Solar	Intermediate	Yes	10.0
Facility 5291	Trent Woods	NC	Solar	Intermediate	Yes	7.6
Facility 5292	Pinehurst	NC	Solar	Intermediate	Yes	3.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5293	Knightdale	NC	Solar	Intermediate	Yes	5.0
Facility 5294	Pittsboro	NC	Solar	Intermediate	Yes	10.0
Facility 5295	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5296	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 5297	Apex	NC	Solar	Intermediate	Yes	11.4
Facility 5298	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5299	Arden	NC	Solar	Intermediate	Yes	5.0
Facility 5300	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5301	Candler	NC	Solar	Intermediate	Yes	10.0
Facility 5302	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5303	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5304	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5305	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 5306	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5307	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5308	Asheville	NC	Solar	Intermediate	Yes	7.9
Facility 5309	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 5310	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5311	Coats	NC	Solar	Intermediate	Yes	10.0
Facility 5312	Angier	NC	Solar	Intermediate	Yes	11.4
Facility 5313	New Bern	NC	Solar	Intermediate	Yes	10.0
Facility 5314	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5315	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 5316	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5317	Chapel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 5318	Candler	NC	Solar	Intermediate	Yes	5.5
Facility 5319	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5320	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5321	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 5322	Pittsboro	NC	Solar	Intermediate	Yes	11.4
Facility 5323	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5324	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5325	Lillington	NC	Solar	Intermediate	Yes	7.6
Facility 5326	Weaverville	NC	Solar	Intermediate	Yes	12.0
Facility 5327	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5328	Asheville	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5329	Rolesville	NC	Solar	Intermediate	Yes	6.2
Facility 5330	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5331	Asheville	NC	Solar	Intermediate	Yes	5.3
Facility 5332	Cary	NC	Solar	Intermediate	Yes	8.0
Facility 5333	Hampstead	NC	Solar	Intermediate	Yes	5.0
Facility 5334	Knightdale	NC	Solar	Intermediate	Yes	3.8
Facility 5335	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 5336	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5337	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5338	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5339	Sanford	NC	Solar	Intermediate	Yes	7.6
Facility 5340	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5341	Arden	NC	Solar	Intermediate	Yes	6.0
Facility 5342	Cary	NC	Solar	Intermediate	Yes	15.2
Facility 5343	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5344	Candler	NC	Solar	Intermediate	Yes	11.4
Facility 5345	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5346	BLACK MOUNTAIN	NC	Solar	Intermediate	Yes	6.7
Facility 5347	Pittsboro	NC	Solar	Intermediate	Yes	10.0
Facility 5348	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5349	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5350	Rolesville	NC	Solar	Intermediate	Yes	11.4
Facility 5351	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 5352	Jacksonville	NC	Solar	Intermediate	Yes	7.6
Facility 5353	Leicester	NC	Solar	Intermediate	Yes	5.0
Facility 5354	Garner	NC	Solar	Intermediate	Yes	13.6
Facility 5355	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5356	Carolina Beach	NC	Solar	Intermediate	Yes	12.6
Facility 5357	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5358	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 5359	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5360	Swannanoa	NC	Solar	Intermediate	Yes	7.6
Facility 5361	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5362	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5363	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 5364	Raleigh	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5365	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5366	Hot Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5367	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5368	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5369	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 5370	Fairview	NC	Solar	Intermediate	Yes	7.6
Facility 5371	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 5372	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5373	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5374	Dudley	NC	Solar	Intermediate	Yes	3.8
Facility 5375	Middlesex	NC	Solar	Intermediate	Yes	7.6
Facility 5376	Raleigh	NC	Solar	Intermediate	Yes	9.8
Facility 5377	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5378	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5379	Spruce Pine	NC	Solar	Intermediate	Yes	5.1
Facility 5380	Weaverville	NC	Solar	Intermediate	Yes	7.8
Facility 5381	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5382	Weaverville	NC	Solar	Intermediate	Yes	5.0
Facility 5383	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5384	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5385	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 5386	Canton	NC	Solar	Intermediate	Yes	6.0
Facility 5387	Zebulon	NC	Solar	Intermediate	Yes	2.4
Facility 5388	Chapel Hill	NC	Solar	Intermediate	Yes	4.8
Facility 5389	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 5390	Asheville	NC	Solar	Intermediate	Yes	16.0
Facility 5391	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 5392	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 5393	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5394	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 5395	Canton	NC	Solar	Intermediate	Yes	5.0
Facility 5396	Pittsboro	NC	Solar	Intermediate	Yes	5.0
Facility 5397	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 5398	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5399	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 5400	Wendell	NC	Solar	Intermediate	Yes	3.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5401	Nashville	NC	Solar	Intermediate	Yes	13.2
Facility 5402	Garner	NC	Solar	Intermediate	Yes	9.9
Facility 5403	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5404	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 5405	Goldsboro	NC	Solar	Intermediate	Yes	5.3
Facility 5406	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5407	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5408	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5409	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 5410	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 5411	Atlantic Beach	NC	Solar	Intermediate	Yes	10.0
Facility 5412	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5413	Asheville	NC	Solar	Intermediate	Yes	20.0
Facility 5414	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 5415	Knightdale	NC	Solar	Intermediate	Yes	7.6
Facility 5416	Asheville	NC	Solar	Intermediate	Yes	10.8
Facility 5417	Grifton	NC	Solar	Intermediate	Yes	5.0
Facility 5418	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 5419	Waynesville	NC	Solar	Intermediate	Yes	6.0
Facility 5420	Southport	NC	Solar	Intermediate	Yes	3.8
Facility 5421	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5422	Morehead City	NC	Solar	Intermediate	Yes	5.0
Facility 5423	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5424	Asheville	NC	Solar	Intermediate	Yes	6.5
Facility 5425	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5426	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5427	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5428	CARY	NC	Solar	Intermediate	Yes	6.0
Facility 5429	Asheville	NC	Solar	Intermediate	Yes	2.4
Facility 5430	Asheville	NC	Solar	Intermediate	Yes	5.8
Facility 5431	Henderson	NC	Solar	Intermediate	Yes	6.6
Facility 5432	Black Mountain	NC	Solar	Intermediate	Yes	10.0
Facility 5433	Oxford	NC	Solar	Intermediate	Yes	6.0
Facility 5434	Clayton	NC	Solar	Intermediate	Yes	10.0
Facility 5435	Asheville	NC	Solar	Intermediate	Yes	5.9
Facility 5436	Apex	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5437	Apex	NC	Solar	Intermediate	Yes	20.0
Facility 5438	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5439	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5440	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5441	Waynesville	NC	Solar	Intermediate	Yes	4.1
Facility 5442	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5443	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5444	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5445	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5446	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5447	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5448	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 5449	Asheboro	NC	Solar	Intermediate	Yes	5.0
Facility 5450	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5451	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5452	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5453	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5454	Zebulon	NC	Solar	Intermediate	Yes	6.0
Facility 5455	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 5456	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5457	Siler City	NC	Solar	Intermediate	Yes	7.6
Facility 5458	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 5459	Bakersville	NC	Solar	Intermediate	Yes	7.6
Facility 5460	Wilmington	NC	Solar	Intermediate	Yes	7.4
Facility 5461	HOPEMILLS	NC	Solar	Intermediate	Yes	7.3
Facility 5462	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5463	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 5464	Garner	NC	Solar	Intermediate	Yes	9.3
Facility 5465	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 5466	Lake	NC	Solar	Intermediate	Yes	12.2
Facility 5467	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5468	Wilmington	NC	Solar	Intermediate	Yes	12.2
Facility 5469	Wilmington	NC	Solar	Intermediate	Yes	10.6
Facility 5470	BLACK MTN	NC	Solar	Intermediate	Yes	17.7
Facility 5471	BLACK MTN	NC	Solar	Intermediate	Yes	10.4
Facility 5472	Troy	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5473	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5474	Chapel Hill	NC	Solar	Intermediate	Yes	10.0
Facility 5475	New Bern	NC	Solar	Intermediate	Yes	10.6
Facility 5476	Sanford	NC	Solar	Intermediate	Yes	7.8
Facility 5477	Smithfield	NC	Solar	Intermediate	Yes	5.0
Facility 5478	Cary	NC	Solar	Intermediate	Yes	12.6
Facility 5479	WEAVERVILLE	NC	Solar	Intermediate	Yes	5.8
Facility 5480	Raleigh	NC	Solar	Intermediate	Yes	8.0
Facility 5481	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5482	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5483	Clyde	NC	Solar	Intermediate	Yes	6.0
Facility 5484	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5485	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 5486	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5487	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 5488	Garner	NC	Solar	Intermediate	Yes	11.4
Facility 5489	GARNER	NC	Solar	Intermediate	Yes	7.6
Facility 5490	Asheville	NC	Solar	Intermediate	Yes	6.4
Facility 5491	Weaverville	NC	Solar	Intermediate	Yes	17.6
Facility 5492	Garner	NC	Solar	Intermediate	Yes	6.0
Facility 5493	Swannanoa	NC	Solar	Intermediate	Yes	7.6
Facility 5494	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5495	Asheville	NC	Solar	Intermediate	Yes	11.4
Facility 5496	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5497	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5498	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5499	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5500	Canton	NC	Solar	Intermediate	Yes	7.6
Facility 5501	Arden	NC	Solar	Intermediate	Yes	6.0
Facility 5502	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5503	Raleigh	NC	Solar	Intermediate	Yes	15.2
Facility 5504	Fletcher	NC	Solar	Intermediate	Yes	11.4
Facility 5505	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 5506	Garner	NC	Solar	Intermediate	Yes	12.6
Facility 5507	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5508	Raleigh	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5509	Mt. Gilead	NC	Solar	Intermediate	Yes	1.0
Facility 5510	raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5511	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5512	Canton	NC	Solar	Intermediate	Yes	11.4
Facility 5513	Chapel Hill	NC	Solar	Intermediate	Yes	6.0
Facility 5514	Ayden	NC	Solar	Intermediate	Yes	20.0
Facility 5515	Fairview	NC	Solar	Intermediate	Yes	18.0
Facility 5516	Garner	NC	Solar	Intermediate	Yes	7.0
Facility 5517	Clayton	NC	Solar	Intermediate	Yes	9.3
Facility 5518	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5519	Garner	NC	Solar	Intermediate	Yes	3.0
Facility 5520	Wilmington	NC	Solar	Intermediate	Yes	7.7
Facility 5521	Nashville	NC	Solar	Intermediate	Yes	3.8
Facility 5522	Eastover	NC	Solar	Intermediate	Yes	5.0
Facility 5523	WACCAMAW	NC	Solar	Intermediate	Yes	6.8
Facility 5524	Clinton	NC	Solar	Intermediate	Yes	3.8
Facility 5525	RALEIGH	NC	Solar	Intermediate	Yes	6.0
Facility 5526	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5527	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 5528	Fuquay Varina	NC	Solar	Intermediate	Yes	2.4
Facility 5529	Benson	NC	Solar	Intermediate	Yes	3.8
Facility 5530	Garner	NC	Solar	Intermediate	Yes	7.7
Facility 5531	holly springs	NC	Solar	Intermediate	Yes	4.6
Facility 5532	Goldsboro	NC	Solar	Intermediate	Yes	8.6
Facility 5533	Dunn	NC	Solar	Intermediate	Yes	15.2
Facility 5534	Raleigh	NC	Solar	Intermediate	Yes	8.9
Facility 5535	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5536	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5537	Leland	NC	Solar	Intermediate	Yes	7.6
Facility 5538	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 5539	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5540	Goldsboro	NC	Solar	Intermediate	Yes	10.0
Facility 5541	Fayetteville	NC	Solar	Intermediate	Yes	3.8
Facility 5542	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5543	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 5544	Arden	NC	Solar	Intermediate	Yes	7.4

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5545	Holly Springs	NC	Solar	Intermediate	Yes	5.9
Facility 5546	Whispering Pines	NC	Solar	Intermediate	Yes	7.6
Facility 5547	Holly Springs	NC	Solar	Intermediate	Yes	7.2
Facility 5548	Fuquay-Varina	NC	Solar	Intermediate	Yes	3.8
Facility 5549	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 5550	Fuquay Varina	NC	Solar	Intermediate	Yes	15.2
Facility 5551	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 5552	Kure Beach	NC	Solar	Intermediate	Yes	7.6
Facility 5553	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 5554	Goldsboro	NC	Solar	Intermediate	Yes	7.4
Facility 5555	Wade	NC	Solar	Intermediate	Yes	5.0
Facility 5556	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 5557	Waynesville	NC	Solar	Intermediate	Yes	5.0
Facility 5558	Montreat	NC	Solar	Intermediate	Yes	10.0
Facility 5559	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5560	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5561	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5562	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 5563	Raleigh	NC	Solar	Intermediate	Yes	8.9
Facility 5564	Candler	NC	Solar	Intermediate	Yes	5.8
Facility 5565	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5566	Swannanoa	NC	Solar	Intermediate	Yes	7.6
Facility 5567	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 5568	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5569	raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5570	Siler City	NC	Solar	Intermediate	Yes	8.0
Facility 5571	Semora	NC	Solar	Intermediate	Yes	7.6
Facility 5572	Fuquay Varina	NC	Solar	Intermediate	Yes	11.4
Facility 5573	Knightdale	NC	Solar	Intermediate	Yes	6.2
Facility 5574	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 5575	Leland	NC	Solar	Intermediate	Yes	3.3
Facility 5576	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5577	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5578	Holly Springs	NC	Solar	Intermediate	Yes	6.7
Facility 5579	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 5580	Raleigh	NC	Solar	Intermediate	Yes	5.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5581	Holly Springs	NC	Solar	Intermediate	Yes	6.5
Facility 5582	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5583	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 5584	Raleigh	NC	Solar	Intermediate	Yes	11.4
Facility 5585	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5586	Cove City	NC	Solar	Intermediate	Yes	7.6
Facility 5587	Southern Pines	NC	Solar	Intermediate	Yes	3.8
Facility 5588	Hope Mills	NC	Solar	Intermediate	Yes	5.0
Facility 5589	Siler City	NC	Solar	Intermediate	Yes	3.8
Facility 5590	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 5591	Asheville	NC	Solar	Intermediate	Yes	4.6
Facility 5592	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5593	Louisburg	NC	Solar	Intermediate	Yes	11.4
Facility 5594	Randleman	NC	Solar	Intermediate	Yes	3.8
Facility 5595	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5596	Beulaville	NC	Solar	Intermediate	Yes	3.8
Facility 5597	Richlands	NC	Solar	Intermediate	Yes	5.0
Facility 5598	Carthage	NC	Solar	Intermediate	Yes	7.6
Facility 5599	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 5600	Fuquay Varina	NC	Solar	Intermediate	Yes	7.6
Facility 5601	Beulaville	NC	Solar	Intermediate	Yes	3.8
Facility 5602	Black Mountain	NC	Solar	Intermediate	Yes	7.6
Facility 5603	Holly Springs	NC	Solar	Intermediate	Yes	5.2
Facility 5604	Holly Springs	NC	Solar	Intermediate	Yes	8.2
Facility 5605	Fuquay Varina	NC	Solar	Intermediate	Yes	2.9
Facility 5606	Holly Springs	NC	Solar	Intermediate	Yes	5.8
Facility 5607	Holly Springs	NC	Solar	Intermediate	Yes	5.8
Facility 5608	Apex	NC	Solar	Intermediate	Yes	17.6
Facility 5609	Wilmington	NC	Solar	Intermediate	Yes	20.0
Facility 5610	Apex	NC	Solar	Intermediate	Yes	6.0
Facility 5611	Lillington	NC	Solar	Intermediate	Yes	3.1
Facility 5612	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5613	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 5614	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5615	Norlina	NC	Solar	Intermediate	Yes	5.5
Facility 5616	Wilmington	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5617	Apex	NC	Solar	Intermediate	Yes	4.1
Facility 5618	Raleigh	NC	Solar	Intermediate	Yes	3.4
Facility 5619	Cary	NC	Solar	Intermediate	Yes	4.8
Facility 5620	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 5621	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 5622	Wilmington	NC	Solar	Intermediate	Yes	13.6
Facility 5623	raleigh	NC	Solar	Intermediate	Yes	8.4
Facility 5624	Cary	NC	Solar	Intermediate	Yes	8.0
Facility 5625	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.6
Facility 5626	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 5627	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5628	Candler	NC	Solar	Intermediate	Yes	10.0
Facility 5629	Barnardsville	NC	Solar	Intermediate	Yes	3.8
Facility 5630	New Bern	NC	Solar	Intermediate	Yes	4.7
Facility 5631	Norlina	NC	Solar	Intermediate	Yes	7.6
Facility 5632	Hampstead	NC	Solar	Intermediate	Yes	3.8
Facility 5633	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 5634	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 5635	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5636	Morehead City	NC	Solar	Intermediate	Yes	7.3
Facility 5637	Raleigh	NC	Solar	Intermediate	Yes	3.6
Facility 5638	Raleigh	NC	Solar	Intermediate	Yes	7.2
Facility 5639	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 5640	Oxford	NC	Solar	Intermediate	Yes	7.1
Facility 5641	Carthage	NC	Solar	Intermediate	Yes	5.0
Facility 5642	MAGGIE VALLEY	NC	Solar	Intermediate	Yes	7.6
Facility 5643	Siler City	NC	Solar	Intermediate	Yes	6.0
Facility 5644	Asheboro	NC	Solar	Intermediate	Yes	6.6
Facility 5645	Holly Springs	NC	Solar	Intermediate	Yes	1.6
Facility 5646	Southern Pines,	NC	Solar	Intermediate	Yes	3.8
Facility 5647	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 5648	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 5649	Benson	NC	Solar	Intermediate	Yes	7.6
Facility 5650	Watha	NC	Solar	Intermediate	Yes	7.6
Facility 5651	Morehead City	NC	Solar	Intermediate	Yes	11.4
Facility 5652	Raleigh	NC	Solar	Intermediate	Yes	7.6

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 5653	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5654	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5655	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 5656	Asheville	NC	Solar	Intermediate	Yes	3.0
Facility 5657	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 5658	Angier	NC	Solar	Intermediate	Yes	10.0
Facility 5659	Pittsboro	NC	Solar	Intermediate	Yes	7.0
Facility 5660	Holly Springs	NC	Solar	Intermediate	Yes	2.4
Facility 5661	Holly Springs	NC	Solar	Intermediate	Yes	5.5
Facility 5662	Holly Springs	NC	Solar	Intermediate	Yes	3.8
Facility 5663	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 5664	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5665	Clayton	NC	Solar	Intermediate	Yes	8.6
Facility 5666	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 5667	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 5668	Canton	NC	Solar	Intermediate	Yes	3.8
Facility 5669	Carolina Beach	NC	Solar	Intermediate	Yes	5.0
Facility 5670	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5671	Apex	NC	Solar	Intermediate	Yes	8.2
Facility 5672	Asheville	NC	Solar	Intermediate	Yes	3.8
Facility 5673	Blanch	NC	Solar	Intermediate	Yes	3.8
Facility 5674	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 5675	Castalia	NC	Solar	Intermediate	Yes	15.2
Facility 5676	Jacksonville	NC	Solar	Intermediate	Yes	5.0
Facility 5677	Leland	NC	Solar	Intermediate	Yes	3.8
Facility 5678	wendell	NC	Solar	Intermediate	Yes	3.0
Facility 5679	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 5680	PINEHURST	NC	Solar	Intermediate	Yes	3.2
Facility 5681	Vass	NC	Solar	Intermediate	Yes	11.4
Facility 5682	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5683	Rolesville	NC	Solar	Intermediate	Yes	7.6
Facility 5684	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5685	Arden	NC	Solar	Intermediate	Yes	5.0
Facility 5686	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 5687	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5688	New Bern	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5689	Clinton	NC	Solar	Intermediate	Yes	3.8
Facility 5690	Wadesboro	NC	Solar	Intermediate	Yes	5.0
Facility 5691	Zebulon	NC	Solar	Intermediate	Yes	3.8
Facility 5692	Hope Mills	NC	Solar	Intermediate	Yes	5.0
Facility 5693	Clayton	NC	Solar	Intermediate	Yes	8.4
Facility 5694	Pinehurst	NC	Solar	Intermediate	Yes	10.0
Facility 5695	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5696	Bolton	NC	Solar	Intermediate	Yes	5.0
Facility 5697	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 5698	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 5699	Willow Spring	NC	Solar	Intermediate	Yes	8.2
Facility 5700	Holly Springs	NC	Solar	Intermediate	Yes	4.3
Facility 5701	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 5702	Cary	NC	Solar	Intermediate	Yes	10.0
Facility 5703	Fuquay Varina	NC	Solar	Intermediate	Yes	6.0
Facility 5704	Jacksonville	NC	Solar	Intermediate	Yes	7.6
Facility 5705	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 5706	Holly Springs	NC	Solar	Intermediate	Yes	8.4
Facility 5707	Cary	NC	Solar	Intermediate	Yes	4.9
Facility 5708	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5709	Asheboro	NC	Solar	Intermediate	Yes	7.6
Facility 5710	Currie	NC	Solar	Intermediate	Yes	5.0
Facility 5711	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 5712	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 5713	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5714	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5715	Cary	NC	Solar	Intermediate	Yes	7.7
Facility 5716	Zebulon	NC	Solar	Intermediate	Yes	7.6
Facility 5717	Durham	NC	Solar	Intermediate	Yes	15.2
Facility 5718	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5719	Raleigh	NC	Solar	Intermediate	Yes	5.7
Facility 5720	Raleigh	NC	Solar	Intermediate	Yes	3.0
Facility 5721	Wilmington	NC	Solar	Intermediate	Yes	2.9
Facility 5722	Holly Springs	NC	Solar	Intermediate	Yes	5.3
Facility 5723	Zebulon	NC	Solar	Intermediate	Yes	8.4
Facility 5724	Fuquay Varina	NC	Solar	Intermediate	Yes	7.9

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5725	Goldsboro	NC	Solar	Intermediate	Yes	5.0
Facility 5726	Raleigh	NC	Solar	Intermediate	Yes	8.7
Facility 5727	Jacksonville	NC	Solar	Intermediate	Yes	3.9
Facility 5728	Morehead City	NC	Solar	Intermediate	Yes	7.6
Facility 5729	Apex	NC	Solar	Intermediate	Yes	4.0
Facility 5730	Candler	NC	Solar	Intermediate	Yes	10.0
Facility 5731	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5732	Holly Springs	NC	Solar	Intermediate	Yes	10.0
Facility 5733	Raleigh	NC	Solar	Intermediate	Yes	15.2
Facility 5734	Chapel Hill	NC	Solar	Intermediate	Yes	9.3
Facility 5735	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5736	Jacksonville	NC	Solar	Intermediate	Yes	15.2
Facility 5737	Pikeville	NC	Solar	Intermediate	Yes	3.8
Facility 5738	Raleigh	NC	Solar	Intermediate	Yes	2.4
Facility 5739	Raleigh	NC	Solar	Intermediate	Yes	5.6
Facility 5740	Knightdale	NC	Solar	Intermediate	Yes	13.4
Facility 5741	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 5742	Raleigh	NC	Solar	Intermediate	Yes	4.1
Facility 5743	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 5744	Garner	NC	Solar	Intermediate	Yes	3.7
Facility 5745	Jacksonville	NC	Solar	Intermediate	Yes	7.6
Facility 5746	Spruce Pine	NC	Solar	Intermediate	Yes	7.6
Facility 5747	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 5748	Raleigh	NC	Solar	Intermediate	Yes	7.9
Facility 5749	Raleigh	NC	Solar	Intermediate	Yes	3.8
Facility 5750	Angier	NC	Solar	Intermediate	Yes	7.4
Facility 5751	Willow Spring	NC	Solar	Intermediate	Yes	4.6
Facility 5752	Wendell	NC	Solar	Intermediate	Yes	8.9
Facility 5753	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5754	Four Oaks	NC	Solar	Intermediate	Yes	10.0
Facility 5755	Cary	NC	Solar	Intermediate	Yes	9.9
Facility 5756	Cary	NC	Solar	Intermediate	Yes	11.4
Facility 5757	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5758	Salemburg	NC	Solar	Intermediate	Yes	10.0
Facility 5759	Chapel Hill	NC	Solar	Intermediate	Yes	5.0
Facility 5760	Black Mountain	NC	Solar	Intermediate	Yes	6.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5761	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5762	Asheboro	NC	Solar	Intermediate	Yes	3.7
Facility 5763	Chapel Hill	NC	Solar	Intermediate	Yes	11.4
Facility 5764	Angier	NC	Solar	Intermediate	Yes	7.6
Facility 5765	West end	NC	Solar	Intermediate	Yes	10.0
Facility 5766	Staley	NC	Solar	Intermediate	Yes	5.0
Facility 5767	Leicester	NC	Solar	Intermediate	Yes	5.1
Facility 5768	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 5769	Pittsboro	NC	Solar	Intermediate	Yes	5.1
Facility 5770	Canton	NC	Solar	Intermediate	Yes	5.1
Facility 5771	Staley	NC	Solar	Intermediate	Yes	16.4
Facility 5772	Swannanoa	NC	Solar	Intermediate	Yes	11.4
Facility 5773	Black Mtn	NC	Solar	Intermediate	Yes	3.7
Facility 5774	Bladenboro	NC	Solar	Intermediate	Yes	7.6
Facility 5775	Morrisville	NC	Solar	Intermediate	Yes	10.0
Facility 5776	Southport	NC	Solar	Intermediate	Yes	5.0
Facility 5777	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 5778	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 5779	Polkton	NC	Solar	Intermediate	Yes	5.0
Facility 5780	Linden	NC	Solar	Intermediate	Yes	7.6
Facility 5781	Clayton	NC	Solar	Intermediate	Yes	5.0
Facility 5782	Kenansville	NC	Solar	Intermediate	Yes	7.6
Facility 5783	Raleigh	NC	Solar	Intermediate	Yes	4.0
Facility 5784	Raleigh	NC	Solar	Intermediate	Yes	7.0
Facility 5785	Wendell	NC	Solar	Intermediate	Yes	6.5
Facility 5786	Beaufort	NC	Solar	Intermediate	Yes	3.8
Facility 5787	Wallace	NC	Solar	Intermediate	Yes	3.8
Facility 5788	Wilmington	NC	Solar	Intermediate	Yes	7.6
Facility 5789	FAYETTEVILLE	NC	Solar	Intermediate	Yes	10.0
Facility 5790	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5791	Cary	NC	Solar	Intermediate	Yes	3.7
Facility 5792	Carolina Beach	NC	Solar	Intermediate	Yes	5.0
Facility 5793	Chapel Hill	NC	Solar	Intermediate	Yes	2.4
Facility 5794	Willow Spring	NC	Solar	Intermediate	Yes	7.4
Facility 5795	Raleigh	NC	Solar	Intermediate	Yes	10.8
Facility 5796	Holly Springs	NC	Solar	Intermediate	Yes	4.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5797	Erwin	NC	Solar	Intermediate	Yes	11.4
Facility 5798	Wilmington	NC	Solar	Intermediate	Yes	9.0
Facility 5799	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 5800	Mount Olive	NC	Solar	Intermediate	Yes	4.5
Facility 5801	Liberty	NC	Solar	Intermediate	Yes	15.0
Facility 5802	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 5803	Dunn	NC	Solar	Intermediate	Yes	7.7
Facility 5804	Raleigh	NC	Solar	Intermediate	Yes	6.7
Facility 5805	Fuquay Varina	NC	Solar	Intermediate	Yes	3.0
Facility 5806	Raleigh	NC	Solar	Intermediate	Yes	5.4
Facility 5807	Holly Springs	NC	Solar	Intermediate	Yes	5.8
Facility 5808	Raleigh	NC	Solar	Intermediate	Yes	9.6
Facility 5809	Angier	NC	Solar	Intermediate	Yes	5.0
Facility 5810	Raleigh	NC	Solar	Intermediate	Yes	3.1
Facility 5811	Wendell	NC	Solar	Intermediate	Yes	3.8
Facility 5812	Chapel Hll	NC	Solar	Intermediate	Yes	5.2
Facility 5813	Pittsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5814	Randleman	NC	Solar	Intermediate	Yes	7.6
Facility 5815	Jacksonville	NC	Solar	Intermediate	Yes	3.8
Facility 5816	Castle Hayne	NC	Solar	Intermediate	Yes	7.6
Facility 5817	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5818	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5819	Kure Beach	NC	Solar	Intermediate	Yes	7.6
Facility 5820	Cary	NC	Solar	Intermediate	Yes	6.0
Facility 5821	Knightdale	NC	Solar	Intermediate	Yes	6.0
Facility 5822	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 5823	Waynesville	NC	Solar	Intermediate	Yes	10.0
Facility 5824	Lillington	NC	Solar	Intermediate	Yes	3.8
Facility 5825	Penland	NC	Solar	Intermediate	Yes	20.0
Facility 5826	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5827	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5828	Raleigh	NC	Solar	Intermediate	Yes	20.0
Facility 5829	Cary	NC	Solar	Intermediate	Yes	7.6
Facility 5830	Coats	NC	Solar	Intermediate	Yes	10.0
Facility 5831	Pittsboro	NC	Solar	Intermediate	Yes	20.0
Facility 5832	Arden	NC	Solar	Intermediate	Yes	5.1

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5833	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5834	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5835	Hubert	NC	Solar	Intermediate	Yes	3.8
Facility 5836	Raleigh	NC	Solar	Intermediate	Yes	12.7
Facility 5837	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 5838	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 5839	Rolesville	NC	Solar	Intermediate	Yes	3.8
Facility 5840	Raleigh	NC	Solar	Intermediate	Yes	5.8
Facility 5841	Asheville	NC	Solar	Intermediate	Yes	5.1
Facility 5842	Wilmington	NC	Solar	Intermediate	Yes	4.8
Facility 5843	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5844	Princeton	NC	Solar	Intermediate	Yes	4.1
Facility 5845	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 5846	Benson	NC	Solar	Intermediate	Yes	10.0
Facility 5847	Asheville	NC	Solar	Intermediate	Yes	3.7
Facility 5848	Morrisville	NC	Solar	Intermediate	Yes	11.4
Facility 5849	Willow Spring	NC	Solar	Intermediate	Yes	10.0
Facility 5850	Nashville	NC	Solar	Intermediate	Yes	10.0
Facility 5851	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5852	Garner	NC	Solar	Intermediate	Yes	5.0
Facility 5853	Zebulon	NC	Solar	Intermediate	Yes	4.8
Facility 5854	Raleigh	NC	Solar	Intermediate	Yes	10.1
Facility 5855	Raleigh	NC	Solar	Intermediate	Yes	4.8
Facility 5856	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5857	Apex	NC	Solar	Intermediate	Yes	6.2
Facility 5858	Asheville	NC	Solar	Intermediate	Yes	6.0
Facility 5859	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5860	Pittsboro	NC	Solar	Intermediate	Yes	11.4
Facility 5861	Garner	NC	Solar	Intermediate	Yes	10.0
Facility 5862	Hope Mills	NC	Solar	Intermediate	Yes	7.6
Facility 5863	Morehead City	NC	Solar	Intermediate	Yes	7.6
Facility 5864	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5865	Willow Spring	NC	Solar	Intermediate	Yes	10.8
Facility 5866	Carolina Beach	NC	Solar	Intermediate	Yes	7.6
Facility 5867	St. Pauls	NC	Solar	Intermediate	Yes	7.6
Facility 5868	Lake Waccamaw	NC	Solar	Intermediate	Yes	5.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5869	Southern Pines	NC	Solar	Intermediate	Yes	10.0
Facility 5870	Benson	NC	Solar	Intermediate	Yes	5.0
Facility 5871	Clinton	NC	Solar	Intermediate	Yes	5.0
Facility 5872	Asheboro	NC	Solar	Intermediate	Yes	10.0
Facility 5873	Wilmington	NC	Solar	Intermediate	Yes	6.0
Facility 5874	Aberdeen	NC	Solar	Intermediate	Yes	5.0
Facility 5875	Wendell	NC	Solar	Intermediate	Yes	5.8
Facility 5876	Vanceboro	NC	Solar	Intermediate	Yes	18.0
Facility 5877	Pikeville,	NC	Solar	Intermediate	Yes	7.6
Facility 5878	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5879	Apex	NC	Solar	Intermediate	Yes	7.6
Facility 5880	Raeford	NC	Solar	Intermediate	Yes	10.0
Facility 5881	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 5882	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 5883	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 5884	Weaverville	NC	Solar	Intermediate	Yes	11.4
Facility 5885	Fuquay Varina	NC	Solar	Intermediate	Yes	5.0
Facility 5886	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 5887	Whispering Pines	NC	Solar	Intermediate	Yes	7.6
Facility 5888	Goldsboro	NC	Solar	Intermediate	Yes	7.6
Facility 5889	Asheville	NC	Solar	Intermediate	Yes	7.6
Facility 5890	Asheville	NC	Solar	Intermediate	Yes	9.0
Facility 5891	Asheville	NC	Solar	Intermediate	Yes	5.0
Facility 5892	Leicester	NC	Solar	Intermediate	Yes	10.0
Facility 5893	Zebulon	NC	Solar	Intermediate	Yes	11.4
Facility 5894	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5895	Sanford	NC	Solar	Intermediate	Yes	5.0
Facility 5896	Blanch	NC	Solar	Intermediate	Yes	7.6
Facility 5897	Holly Springs	NC	Solar	Intermediate	Yes	6.0
Facility 5898	Wilmington	NC	Solar	Intermediate	Yes	3.8
Facility 5899	Asheville	NC	Solar	Intermediate	Yes	9.0
Facility 5900	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5901	Leland	NC	Solar	Intermediate	Yes	11.8
Facility 5902	ANGIER	NC	Solar	Intermediate	Yes	5.8
Facility 5903	Angier	NC	Solar	Intermediate	Yes	5.5
Facility 5904	Weaverville	NC	Solar	Intermediate	Yes	3.7

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5905	Fair Bluff	NC	Solar	Intermediate	Yes	5.0
Facility 5906	Raleigh	NC	Solar	Intermediate	Yes	5.0
Facility 5907	Waynesville	NC	Solar	Intermediate	Yes	7.0
Facility 5908	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 5909	Alexander	NC	Solar	Intermediate	Yes	6.0
Facility 5910	Wendell	NC	Solar	Intermediate	Yes	7.2
Facility 5911	Holly Springs	NC	Solar	Intermediate	Yes	5.6
Facility 5912	Garner	NC	Solar	Intermediate	Yes	8.2
Facility 5913	Kure Beach	NC	Solar	Intermediate	Yes	3.8
Facility 5914	Jacksonville	NC	Solar	Intermediate	Yes	5.0
Facility 5915	Leicester	NC	Solar	Intermediate	Yes	5.0
Facility 5916	Goldsboro	NC	Solar	Intermediate	Yes	5.8
Facility 5917	Hampstead	NC	Solar	Intermediate	Yes	6.0
Facility 5918	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5919	Four Oaks	NC	Solar	Intermediate	Yes	4.0
Facility 5920	Willow Spring	NC	Solar	Intermediate	Yes	7.6
Facility 5921	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5922	Warsaw	NC	Solar	Intermediate	Yes	3.8
Facility 5923	Wilmington	NC	Solar	Intermediate	Yes	3.9
Facility 5924	Cary	NC	Solar	Intermediate	Yes	3.8
Facility 5925	Candler	NC	Solar	Intermediate	Yes	7.6
Facility 5926	Pikeville	NC	Solar	Intermediate	Yes	8.4
Facility 5927	Holly Springs	NC	Solar	Intermediate	Yes	11.4
Facility 5928	Garner	NC	Solar	Intermediate	Yes	7.6
Facility 5929	Wilmington	NC	Solar	Intermediate	Yes	5.0
Facility 5930	Fairview	NC	Solar	Intermediate	Yes	10.0
Facility 5931	Leicester	NC	Solar	Intermediate	Yes	7.6
Facility 5932	Black Mtn	NC	Solar	Intermediate	Yes	7.6
Facility 5933	Fuquay-Varina	NC	Solar	Intermediate	Yes	7.6
Facility 5934	Beulaville	NC	Solar	Intermediate	Yes	7.6
Facility 5935	Raleigh	NC	Solar	Intermediate	Yes	10.0
Facility 5936	Carolina Beach	NC	Solar	Intermediate	Yes	5.0
Facility 5937	Canton	NC	Solar	Intermediate	Yes	9.9
Facility 5938	Cary	NC	Solar	Intermediate	Yes	5.0
Facility 5939	Canton	NC	Solar	Intermediate	Yes	3.8
Facility 5940	Trent Woods	NC	Solar	Intermediate	Yes	3.8

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 5941	Castle Hayne	NC	Solar	Intermediate	Yes	12.2
Facility 5942	Biscoe	NC	Solar	Intermediate	Yes	7.6
Facility 5943	Wendell	NC	Solar	Intermediate	Yes	6.0
Facility 5944	Clayton	NC	Solar	Intermediate	Yes	3.8
Facility 5945	Fuquay Varina	NC	Solar	Intermediate	Yes	10.0
Facility 5946	Wendell	NC	Solar	Intermediate	Yes	15.0
Facility 5947	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5948	Sanford	NC	Solar	Intermediate	Yes	11.4
Facility 5949	Raleigh	NC	Solar	Intermediate	Yes	7.6
Facility 5950	Bunn	NC	Solar	Intermediate	Yes	6.0
Facility 5951	Henderson	NC	Solar	Intermediate	Yes	7.6
Facility 5952	Black Mtn	NC	Solar	Intermediate	Yes	7.6
Facility 5953	Franklinville	NC	Solar	Intermediate	Yes	7.6
Facility 5954	Ramseur	NC	Solar	Intermediate	Yes	7.6
Facility 5955	Raleigh	NC	Solar	Intermediate	Yes	6.0
Facility 5956	Fairview	NC	Solar	Intermediate	Yes	5.1
Facility 5957	Candler	NC	Solar	Intermediate	Yes	6.0
Facility 5958	New Bern	NC	Solar	Intermediate	Yes	6.0
Facility 5959	Wendell	NC	Solar	Intermediate	Yes	11.4
Facility 5960	Clinton	NC	Solar	Intermediate	Yes	10.0
Facility 5961	Wilmington	NC	Solar	Intermediate	Yes	3.7
Facility 5962	Raleigh	NC	Solar	Intermediate	Yes	5.5
Facility 5963	Holly Springs	NC	Solar	Intermediate	Yes	3.6
Facility 5964	Asheboro	NC	Solar	Intermediate	Yes	3.8
Facility 5965	Pinehurst	NC	Solar	Intermediate	Yes	10.0
Facility 5966	Holly Springs	NC	Solar	Intermediate	Yes	7.6
Facility 5967	Fairview	NC	Solar	Intermediate	Yes	6.0
Facility 5968	Eastover	NC	Solar	Intermediate	Yes	10.0
Facility 5969	Asheville	NC	Solar	Intermediate	Yes	10.0
Facility 5970	Clarkton	NC	Solar	Intermediate	Yes	13.0
Facility 5971	Fairview	NC	Solar	Intermediate	Yes	5.0
Facility 5972	Pinehurst	NC	Solar	Intermediate	Yes	6.4
Facility 5973	Hallsboro	NC	Solar	Intermediate	Yes	8.0
Facility 5974	Leicester	NC	Solar	Intermediate	Yes	10.0
Facility 5975	Wilmington	NC	Solar	Intermediate	Yes	6.7
Facility 5976	Pinehurst	NC	Solar	Intermediate	Yes	10.0

Table 14-C ***DEP Non-Utility Generator Listing - North Carolina as of July 31, 2019***

NORTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 5977	Biscoe	NC	Solar	Intermediate	Yes	18.0
Facility 5978	Liberty	NC	Solar	Intermediate	Yes	13.6
Facility 5979	Fletcher	NC	Solar	Intermediate	Yes	7.6
Facility 5980	Weaverville	NC	Solar	Intermediate	Yes	6.0
Facility 5981	Apex	NC	Solar	Intermediate	Yes	10.0
Facility 5982	Weaverville	NC	Solar	Intermediate	Yes	11.4
Facility 5983	Barnardsville	NC	Solar	Intermediate	Yes	3.6
Facility 5984	WEAVERVILLE	NC	Solar	Intermediate	Yes	2.9
Facility 5985	Holly Springs	NC	Solar	Intermediate	Yes	5.0
Facility 5986	Clayton	NC	Solar	Intermediate	Yes	6.0
Facility 5987	Garner	NC	Solar	Intermediate	Yes	8.4
Facility 5988	Fletcher	NC	Solar	Intermediate	Yes	10.0
Facility 5989	Newton Grove	NC	Solar	Intermediate	Yes	11.4
Facility 5990	Chapel Hill	NC	Solar	Intermediate	Yes	7.6
Facility 5991	Four Oaks	NC	Solar	Intermediate	Yes	6.0
Facility 5992	Wilmington	NC	Solar	Intermediate	Yes	5.8
Facility 5993	Candler	NC	Solar	Intermediate	Yes	3.8
Facility 5994	Wilmington	NC	Solar	Intermediate	Yes	8.0
Facility 5995	Richlands	NC	Solar	Intermediate	Yes	6.0
Facility 5996	Arden	NC	Solar	Intermediate	Yes	10.0
Facility 5997	Fletcher	NC	Solar	Intermediate	Yes	5.0
Facility 5998	Smithfield	NC	Solar	Intermediate	Yes	7.6
Facility 5999	Wilmington	NC	Solar	Intermediate	Yes	10.0
Facility 6000	Hampstead	NC	Solar	Intermediate	Yes	10.8
Facility 6001	Kure Beach	NC	Solar	Intermediate	Yes	5.4
Facility 6002	Fuquay-Varina	NC	Solar	Intermediate	Yes	11.4
Facility 6003	Aberdeen	NC	Solar	Intermediate	Yes	10.0
Facility 6004	Alexander	NC	Solar	Intermediate	Yes	7.2
Facility 6005	Clayton	NC	Solar	Intermediate	Yes	11.4
Facility 6006	Willow Spring	NC	Solar	Intermediate	Yes	7.6
Facility 6007	Clayton	NC	Solar	Intermediate	Yes	7.6
Facility 6008	Holly Springs	NC	Solar	Intermediate	Yes	5.0

Table 14-D
DEP Non-Utility Generator Listing
South Carolina Facilities

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1	Rembert	SC	Solar	Intermediate	Yes	50.0
Facility 2	Elgin	SC	Diesel	Peak	Yes	400.0
Facility 3	Hartsville	SC	Solar	Intermediate	Yes	11.0
Facility 4	Latta	SC	Solar	Intermediate	Yes	5.6
Facility 5	Sumter	SC	Biomass	Intermediate	Yes	1546.0
Facility 6	Sumter	SC	Solar	Intermediate	Yes	1.9
Facility 7	Sumter	SC	Solar	Intermediate	Yes	2.5
Facility 8	Pageland	SC	Solar	Intermediate	Yes	140.0
Facility 9	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 10	Nichols	SC	Solar	Intermediate	Yes	5000.0
Facility 11	Bishopville	SC	Solar	Intermediate	Yes	2000.0
Facility 12	Society Hill	SC	Solar	Intermediate	Yes	2000.0
Facility 13	Pamplico	SC	Solar	Intermediate	Yes	2000.0
Facility 14	Bishopville	SC	Solar	Intermediate	Yes	10.0
Facility 15	Cheraw	SC	Solar	Intermediate	Yes	5.0
Facility 16	Latta	SC	Solar	Intermediate	Yes	5.6
Facility 17	Darlington	SC	Solar	Intermediate	Yes	140.0
Facility 18	Florence	SC	Solar	Intermediate	Yes	504.0
Facility 19	Summerton	SC	Solar	Intermediate	Yes	2000.0
Facility 20	Johnsonville	SC	Solar	Intermediate	Yes	5.6
Facility 21	Darlington	SC	Solar	Intermediate	Yes	10000.0
Facility 22	McBee	SC	Solar	Intermediate	Yes	640.0
Facility 23	Florence	SC	Solar	Intermediate	Yes	260.0
Facility 24	Effingham	SC	Solar	Intermediate	Yes	500.0
Facility 25	Effingham	SC	Solar	Intermediate	Yes	616.0
Facility 26	Pamplico	SC	Solar	Intermediate	Yes	2000.0
Facility 27	Lynchburg	SC	Solar	Intermediate	Yes	1980.0
Facility 28	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 29	Latta	SC	Solar	Intermediate	Yes	4.7
Facility 30	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 31	Darlington	SC	Solar	Intermediate	Yes	56.0
Facility 32	Florence	SC	Solar	Intermediate	Yes	12.8
Facility 33	Sumter	SC	Solar	Intermediate	Yes	24.0
Facility 34	Florence	SC	Solar	Intermediate	Yes	13.6
Facility 35	Florence	SC	Solar	Intermediate	Yes	3.7
Facility 36	Rembert	SC	Solar	Intermediate	Yes	18.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 37	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 38	Cheraw	SC	Solar	Intermediate	Yes	648.0
Facility 39	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 40	Sumter	SC	Solar	Intermediate	Yes	2.6
Facility 41	Darlington	SC	Solar	Intermediate	Yes	17.4
Facility 42	Mc Bee	SC	Solar	Intermediate	Yes	5.0
Facility 43	Rembert	SC	Solar	Intermediate	Yes	63.0
Facility 44	Effingham	SC	Solar	Intermediate	Yes	799.0
Facility 45	Elgin	SC	Solar	Intermediate	Yes	6.3
Facility 46	Florence	SC	Solar	Intermediate	Yes	68.0
Facility 47	Pamplico	SC	Solar	Intermediate	Yes	2000.0
Facility 48	Lamar	SC	Solar	Intermediate	Yes	8.0
Facility 49	Scranton	SC	Solar	Intermediate	Yes	2000.0
Facility 50	Florence	SC	Solar	Intermediate	Yes	2.5
Facility 51	Summerton	SC	Solar	Intermediate	Yes	2000.0
Facility 52	Florence	SC	Solar	Intermediate	Yes	4.0
Facility 53	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 54	Elgin	SC	Solar	Intermediate	Yes	2.5
Facility 55	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 56	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 57	Sumter	SC	Solar	Intermediate	Yes	25.0
Facility 58	Wallace	SC	Solar	Intermediate	Yes	448.0
Facility 59	Wallace	SC	Solar	Intermediate	Yes	476.0
Facility 60	Kingstree	SC	Solar	Intermediate	Yes	998.4
Facility 61	Florence	SC	Biomass	Intermediate	Yes	10000.0
Facility 62	Florence	SC	Solar	Intermediate	Yes	470.0
Facility 63	Florence	SC	Solar	Intermediate	Yes	35.0
Facility 64	Florence	SC	Solar	Intermediate	Yes	530.0
Facility 65	Lake City	SC	Solar	Intermediate	Yes	1980.0
Facility 66	Lynchburg	SC	Solar	Intermediate	Yes	1980.0
Facility 67	Darlington	SC	Solar	Intermediate	Yes	5.0
Facility 68	Nichols	SC	Solar	Intermediate	Yes	6.1
Facility 69	Nichols	SC	Solar	Intermediate	Yes	6.0
Facility 70	Cheraw	SC	Solar	Intermediate	Yes	2.7
Facility 71	Sumter	SC	Solar	Intermediate	Yes	2.6
Facility 72	Bethune	SC	Solar	Intermediate	Yes	3.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 73	Sumter	SC	Solar	Intermediate	Yes	3.0
Facility 74	Mullins	SC	Solar	Intermediate	Yes	1920.0
Facility 75	Manning	SC	Solar	Intermediate	Yes	2000.0
Facility 76	Darlington	SC	Solar	Intermediate	Yes	2000.0
Facility 77	Dillon	SC	Solar	Intermediate	Yes	4.7
Facility 78	Florence	SC	Solar	Intermediate	Yes	1.5
Facility 79	Manning	SC	Solar	Intermediate	Yes	60.0
Facility 80	Florence	SC	Solar	Intermediate	Yes	328.3
Facility 81	Darlington	SC	Solar	Intermediate	Yes	390.0
Facility 82	Marion	SC	Solar	Intermediate	Yes	5.8
Facility 83	Cheraw	SC	Solar	Intermediate	Yes	3.6
Facility 84	Sumter	SC	Solar	Intermediate	Yes	9.9
Facility 85	Lamar	SC	Solar	Intermediate	Yes	11.7
Facility 86	Lake City	SC	Solar	Intermediate	Yes	2.4
Facility 87	Sumter	SC	Solar	Intermediate	Yes	11.3
Facility 88	Sumter	SC	Solar	Intermediate	Yes	8.0
Facility 89	McColl	SC	Solar	Intermediate	Yes	3.6
Facility 90	Timmonsville	SC	Solar	Intermediate	Yes	7.6
Facility 91	Elgin	SC	Solar	Intermediate	Yes	3.8
Facility 92	Manning	SC	Solar	Intermediate	Yes	3.8
Facility 93	Florence	SC	Solar	Intermediate	Yes	20.0
Facility 94	Effingham	SC	Solar	Intermediate	Yes	16.4
Facility 95	Florence	SC	Solar	Intermediate	Yes	16.4
Facility 96	Darlington	SC	Solar	Intermediate	Yes	16.5
Facility 97	Lugoff	SC	Solar	Intermediate	Yes	3.4
Facility 98	Lamar	SC	Solar	Intermediate	Yes	18.0
Facility 99	Florence	SC	Solar	Intermediate	Yes	5.2
Facility 100	HARTSVILLE	SC	Solar	Intermediate	Yes	18.0
Facility 101	Elgin	SC	Solar	Intermediate	Yes	4.9
Facility 102	Florence	SC	Solar	Intermediate	Yes	4.0
Facility 103	Hartsville	SC	Solar	Intermediate	Yes	5.0
Facility 104	SUMTER	SC	Solar	Intermediate	Yes	13.5
Facility 105	Olanta	SC	Solar	Intermediate	Yes	3.8
Facility 106	Elgin	SC	Solar	Intermediate	Yes	14.2
Facility 107	McColl	SC	Solar	Intermediate	Yes	3.8
Facility 108	Hartsville	SC	Solar	Intermediate	Yes	8.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
Facility 109	Sumter	SC	Solar	Intermediate	Yes	2.8
Facility 110	Sumter	SC	Solar	Intermediate	Yes	16.4
Facility 111	Elgin	SC	Solar	Intermediate	Yes	6.0
Facility 112	Hemingway	SC	Solar	Intermediate	Yes	2.2
Facility 113	Elgin	SC	Solar	Intermediate	Yes	7.4
Facility 114	HARTSVILLE	SC	Solar	Intermediate	Yes	8.7
Facility 115	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 116	SUMTER	SC	Solar	Intermediate	Yes	15.2
Facility 117	Sumter	SC	Solar	Intermediate	Yes	12.0
Facility 118	Florence	SC	Solar	Intermediate	Yes	3.2
Facility 119	Elgin	SC	Solar	Intermediate	Yes	5.4
Facility 120	Pamplico	SC	Solar	Intermediate	Yes	3.2
Facility 121	Elgin	SC	Solar	Intermediate	Yes	6.6
Facility 122	Marion	SC	Solar	Intermediate	Yes	2.0
Facility 123	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 124	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 125	Green Sea	SC	Solar	Intermediate	Yes	3.6
Facility 126	Florence	SC	Solar	Intermediate	Yes	14.4
Facility 127	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 128	Hartsville	SC	Solar	Intermediate	Yes	4.6
Facility 129	Hartsville	SC	Solar	Intermediate	Yes	4.2
Facility 130	Florence	SC	Solar	Intermediate	Yes	2.8
Facility 131	Timmonsville	SC	Solar	Intermediate	Yes	4.4
Facility 132	Bennettsville	SC	Solar	Intermediate	Yes	7.2
Facility 133	Bishopville	SC	Solar	Intermediate	Yes	5.6
Facility 134	Bishopville	SC	Solar	Intermediate	Yes	4.0
Facility 135	Sumter	SC	Solar	Intermediate	Yes	2.8
Facility 136	Bishopville	SC	Solar	Intermediate	Yes	3.0
Facility 137	Lamar	SC	Solar	Intermediate	Yes	7.5
Facility 138	Manning	SC	Solar	Intermediate	Yes	9.9
Facility 139	Lugoff	SC	Solar	Intermediate	Yes	12.4
Facility 140	Lake View	SC	Solar	Intermediate	Yes	3.8
Facility 141	JOHNSONVILLE	SC	Solar	Intermediate	Yes	7.8
Facility 142	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 143	Hartsville	SC	Solar	Intermediate	Yes	5.0
Facility 144	Darlington	SC	Solar	Intermediate	Yes	5.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 145	Lugoff	SC	Solar	Intermediate	Yes	6.0
Facility 146	FLORENCE	SC	Solar	Intermediate	Yes	15.4
Facility 147	Cheraw	SC	Solar	Intermediate	Yes	14.4
Facility 148	florence	SC	Solar	Intermediate	Yes	5.5
Facility 149	Lugoff	SC	Solar	Intermediate	Yes	5.4
Facility 150	Sumter	SC	Solar	Intermediate	Yes	2.0
Facility 151	Florence	SC	Solar	Intermediate	Yes	4.0
Facility 152	Pamplico	SC	Solar	Intermediate	Yes	9.9
Facility 153	Cheraw	SC	Solar	Intermediate	Yes	5.6
Facility 154	Lugoff	SC	Solar	Intermediate	Yes	1.6
Facility 155	Lake View	SC	Solar	Intermediate	Yes	9.9
Facility 156	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 157	Florence	SC	Solar	Intermediate	Yes	9.9
Facility 158	Turbeville	SC	Solar	Intermediate	Yes	4.4
Facility 159	McColl	SC	Solar	Intermediate	Yes	6.0
Facility 160	Sumter	SC	Solar	Intermediate	Yes	15.2
Facility 161	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 162	Manning	SC	Solar	Intermediate	Yes	6.0
Facility 163	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 164	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 165	Sumter	SC	Solar	Intermediate	Yes	4.2
Facility 166	Turbeville	SC	Solar	Intermediate	Yes	6.0
Facility 167	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 168	Timmonsville	SC	Solar	Intermediate	Yes	5.0
Facility 169	Effingham	SC	Solar	Intermediate	Yes	5.8
Facility 170	Cheraw	SC	Solar	Intermediate	Yes	6.0
Facility 171	Lake City	SC	Solar	Intermediate	Yes	5.0
Facility 172	Elgin	SC	Solar	Intermediate	Yes	9.9
Facility 173	Manning	SC	Solar	Intermediate	Yes	9.9
Facility 174	Dalzell	SC	Solar	Intermediate	Yes	9.9
Facility 175	Bishopville	SC	Solar	Intermediate	Yes	13.0
Facility 176	Bishopville	SC	Solar	Intermediate	Yes	3.8
Facility 177	Sumter	SC	Solar	Intermediate	Yes	12.3
Facility 178	Elgin	SC	Solar	Intermediate	Yes	5.6
Facility 179	Elgin	SC	Solar	Intermediate	Yes	14.2
Facility 180	Florence	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 181	Sumter	SC	Solar	Intermediate	Yes	6.6
Facility 182	Florence	SC	Solar	Intermediate	Yes	20.0
Facility 183	Gable	SC	Solar	Intermediate	Yes	8.6
Facility 184	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 185	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 186	Dalzell	SC	Solar	Intermediate	Yes	15.3
Facility 187	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 188	Cheraw	SC	Solar	Intermediate	Yes	3.0
Facility 189	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 190	Wedgefield	SC	Solar	Intermediate	Yes	4.4
Facility 191	Sumter	SC	Solar	Intermediate	Yes	4.2
Facility 192	Florence	SC	Solar	Intermediate	Yes	12.5
Facility 193	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 194	Hartsville	SC	Solar	Intermediate	Yes	5.0
Facility 195	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 196	Hartsville	SC	Solar	Intermediate	Yes	11.4
Facility 197	Hartsville	SC	Solar	Intermediate	Yes	3.8
Facility 198	Hartsville	SC	Solar	Intermediate	Yes	20.0
Facility 199	Hartsville	SC	Solar	Intermediate	Yes	6.0
Facility 200	Florence	SC	Solar	Intermediate	Yes	3.0
Facility 201	Sumter	SC	Solar	Intermediate	Yes	12.9
Facility 202	Wedgefield	SC	Solar	Intermediate	Yes	4.8
Facility 203	Olanta	SC	Solar	Intermediate	Yes	4.4
Facility 204	Base	SC	Solar	Intermediate	Yes	3.8
Facility 205	Sumter	SC	Solar	Intermediate	Yes	9.9
Facility 206	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 207	Sumter	SC	Solar	Intermediate	Yes	2.4
Facility 208	Olanta	SC	Solar	Intermediate	Yes	5.0
Facility 209	Sumter	SC	Solar	Intermediate	Yes	2.2
Facility 210	Rembert	SC	Solar	Intermediate	Yes	3.6
Facility 211	Florence	SC	Solar	Intermediate	Yes	8.0
Facility 212	Florence	SC	Solar	Intermediate	Yes	7.8
Facility 213	Darlington	SC	Solar	Intermediate	Yes	11.3
Facility 214	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 215	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 216	Florence	SC	Solar	Intermediate	Yes	19.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 217	Bishopville	SC	Solar	Intermediate	Yes	6.0
Facility 218	Chesterfield	SC	Solar	Intermediate	Yes	6.0
Facility 219	Florence	SC	Solar	Intermediate	Yes	9.6
Facility 220	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 221	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 222	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 223	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 224	Shaw AFB	SC	Solar	Intermediate	Yes	6.0
Facility 225	Shaw AFB	SC	Solar	Intermediate	Yes	6.0
Facility 226	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 227	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 228	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 229	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 230	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 231	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 232	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 233	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 234	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 235	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 236	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 237	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 238	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 239	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 240	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 241	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 242	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 243	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 244	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 245	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 246	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 247	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 248	Sumter	SC	Solar	Intermediate	Yes	6.7
Facility 249	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 250	SHAW AFB	SC	Solar	Intermediate	Yes	7.6
Facility 251	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 252	SHAW AFB	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 253	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 254	Shaw AFB	SC	Solar	Intermediate	Yes	7.6
Facility 255	Shaw AFB	SC	Solar	Intermediate	Yes	6.0
Facility 256	SHAW AFB	SC	Solar	Intermediate	Yes	7.6
Facility 257	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 258	Shaw AFB	SC	Solar	Intermediate	Yes	6.0
Facility 259	Shaw AFB	SC	Solar	Intermediate	Yes	6.0
Facility 260	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 261	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 262	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 263	SHAW ABF	SC	Solar	Intermediate	Yes	5.0
Facility 264	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 265	SHAW AFB	SC	Solar	Intermediate	Yes	7.6
Facility 266	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 267	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 268	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 269	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 270	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 271	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 272	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 273	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 274	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 275	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 276	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 277	SHAW AFB	SC	Solar	Intermediate	Yes	7.6
Facility 278	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 279	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 280	SHAW AFB	SC	Solar	Intermediate	Yes	7.6
Facility 281	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 282	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 283	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 284	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 285	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 286	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 287	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 288	SHAW AFB	SC	Solar	Intermediate	Yes	6.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 289	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 290	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 291	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 292	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 293	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 294	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 295	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 296	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 297	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 298	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 299	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 300	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 301	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 302	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 303	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 304	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 305	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 306	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 307	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 308	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 309	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 310	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 311	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 312	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 313	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 314	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 315	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 316	Timmonsville	SC	Solar	Intermediate	Yes	1.6
Facility 317	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 318	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 319	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 320	SHAW AFB, SC	SC	Solar	Intermediate	Yes	3.8
Facility 321	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 322	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 323	SHAW AFB, SC	SC	Solar	Intermediate	Yes	3.8
Facility 324	SHAW AFB, SC	SC	Solar	Intermediate	Yes	6.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 325	SHAW AFB, SC	SC	Solar	Intermediate	Yes	6.0
Facility 326	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 327	Sumter	SC	Solar	Intermediate	Yes	12.6
Facility 328	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 329	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 330	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 331	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 332	SHAW AFB, SC	SC	Solar	Intermediate	Yes	5.0
Facility 333	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 334	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 335	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 336	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 337	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 338	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 339	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 340	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 341	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 342	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 343	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 344	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 345	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 346	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 347	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 348	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 349	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 350	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 351	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 352	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 353	SHAW AFB, SC	SC	Solar	Intermediate	Yes	3.8
Facility 354	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 355	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 356	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 357	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 358	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 359	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 360	Shaw AFB	SC	Solar	Intermediate	Yes	6.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 361	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 362	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 363	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 364	Shaw AFB	SC	Solar	Intermediate	Yes	3.0
Facility 365	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 366	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 367	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 368	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 369	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 370	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 371	Shaw AFB	SC	Solar	Intermediate	Yes	3.0
Facility 372	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 373	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 374	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 375	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 376	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 377	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 378	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 379	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 380	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 381	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 382	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 383	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 384	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 385	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 386	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 387	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 388	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 389	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 390	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 391	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 392	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 393	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 394	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 395	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 396	Shaw AFB	SC	Solar	Intermediate	Yes	3.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 397	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 398	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 399	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 400	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 401	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 402	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 403	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 404	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 405	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 406	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 407	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 408	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 409	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 410	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 411	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 412	Shaw AFB	SC	Solar	Intermediate	Yes	3.0
Facility 413	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 414	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 415	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 416	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 417	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 418	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 419	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 420	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 421	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 422	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 423	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 424	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 425	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 426	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 427	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 428	Bishopville	SC	Solar	Intermediate	Yes	3.6
Facility 429	Elgin	SC	Solar	Intermediate	Yes	5.8
Facility 430	Johnsonville	SC	Solar	Intermediate	Yes	5.0
Facility 431	Florence	SC	Solar	Intermediate	Yes	19.8
Facility 432	Sumter	SC	Solar	Intermediate	Yes	15.2

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 433	Sumter	SC	Solar	Intermediate	Yes	9.9
Facility 434	Sumter	SC	Solar	Intermediate	Yes	15.2
Facility 435	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 436	Dalzell	SC	Solar	Intermediate	Yes	7.5
Facility 437	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 438	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 439	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 440	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 441	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 442	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 443	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 444	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 445	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 446	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 447	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 448	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 449	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 450	SHAW AFB	SC	Solar	Intermediate	Yes	4.0
Facility 451	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 452	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 453	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 454	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 455	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 456	SHAW AFB	SC	Solar	Intermediate	Yes	5.0
Facility 457	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 458	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 459	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 460	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 461	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 462	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 463	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 464	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 465	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 466	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 467	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 468	SHAW AFB	SC	Solar	Intermediate	Yes	3.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 469	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 470	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 471	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 472	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 473	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 474	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 475	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 476	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 477	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 478	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 479	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 480	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 481	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 482	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 483	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 484	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 485	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 486	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 487	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 488	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 489	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 490	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 491	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 492	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 493	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 494	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 495	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 496	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 497	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 498	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 499	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 500	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 501	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 502	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 503	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 504	SHAW AFB	SC	Solar	Intermediate	Yes	3.8

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 505	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 506	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 507	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 508	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 509	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 510	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 511	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 512	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 513	SHAW AFB	SC	Solar	Intermediate	Yes	3.8
Facility 514	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 515	SHAW AFB	SC	Solar	Intermediate	Yes	3.0
Facility 516	Elgin	SC	Solar	Intermediate	Yes	10.0
Facility 517	Cheraw	SC	Solar	Intermediate	Yes	4.6
Facility 518	Sumter	SC	Solar	Intermediate	Yes	12.6
Facility 519	Cheraw	SC	Solar	Intermediate	Yes	7.2
Facility 520	SHAW AFB	SC	Solar	Intermediate	Yes	6.0
Facility 521	Sumter	SC	Solar	Intermediate	Yes	2.8
Facility 522	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 523	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 524	Lugoff	SC	Solar	Intermediate	Yes	5.0
Facility 525	Sumter	SC	Solar	Intermediate	Yes	5.5
Facility 526	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 527	Lugoff	SC	Solar	Intermediate	Yes	14.0
Facility 528	Elgin	SC	Solar	Intermediate	Yes	10.0
Facility 529	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 530	Hartsville	SC	Solar	Intermediate	Yes	3.8
Facility 531	Florence	SC	Solar	Intermediate	Yes	5.3
Facility 532	Manning SC	SC	Solar	Intermediate	Yes	3.0
Facility 533	Elgin	SC	Solar	Intermediate	Yes	10.0
Facility 534	Kingstree	SC	Solar	Intermediate	Yes	7.5
Facility 535	Sumter	SC	Solar	Intermediate	Yes	10.8
Facility 536	Andrews	SC	-	-	Yes	2.0
Facility 537	Cheraw	SC	Solar	Intermediate	Yes	4.8
Facility 538	Florence	SC	Solar	Intermediate	Yes	3.5
Facility 539	Mullins	SC	Solar	Intermediate	Yes	20.0
Facility 540	Sumter	SC	Solar	Intermediate	Yes	10.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 541	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 542	Florence	SC	Solar	Intermediate	Yes	3.0
Facility 543	New Zion	SC	Solar	Intermediate	Yes	7.6
Facility 544	Darlington	SC	Solar	Intermediate	Yes	20.0
Facility 545	Marion	SC	Solar	Intermediate	Yes	20.0
Facility 546	Hartsville	SC	Solar	Intermediate	Yes	7.8
Facility 547	Timmonsville	SC	Solar	Intermediate	Yes	7.7
Facility 548	Effingham	SC	Solar	Intermediate	Yes	9.9
Facility 549	Florence	SC	Solar	Intermediate	Yes	3.0
Facility 550	Kingstree	SC	Solar	Intermediate	Yes	20.0
Facility 551	Sumter	SC	Solar	Intermediate	Yes	20.0
Facility 552	Florence	SC	Solar	Intermediate	Yes	20.0
Facility 553	Sumter	SC	Solar	Intermediate	Yes	15.2
Facility 554	Chesterfield	SC	Solar	Intermediate	Yes	6.0
Facility 555	Rembert	SC	Solar	Intermediate	Yes	3.0
Facility 556	Cheraw	SC	Solar	Intermediate	Yes	3.8
Facility 557	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 558	Cheraw	SC	Solar	Intermediate	Yes	5.0
Facility 559	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 560	Mullins	SC	Solar	Intermediate	Yes	2.8
Facility 561	Sumter	SC	Solar	Intermediate	Yes	2.0
Facility 562	Florence	SC	Solar	Intermediate	Yes	10.8
Facility 563	Lugoff	SC	Solar	Intermediate	Yes	5.4
Facility 564	Florence	SC	Solar	Intermediate	Yes	6.3
Facility 565	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 566	Sumter	SC	Solar	Intermediate	Yes	3.7
Facility 567	Florence	SC	Solar	Intermediate	Yes	7.9
Facility 568	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 569	Chesterfield	SC	Solar	Intermediate	Yes	10.0
Facility 570	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 571	Florence	SC	Solar	Intermediate	Yes	14.7
Facility 572	Hartsville	SC	Solar	Intermediate	Yes	7.6
Facility 573	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 574	Bethune	SC	Solar	Intermediate	Yes	7.6
Facility 575	Sumter	SC	Solar	Intermediate	Yes	8.8
Facility 576	Hartsville	SC	Solar	Intermediate	Yes	3.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

Facility Name:	City/County:	State:	Primary Fuel Type:	Designation:	Inclusion in Utility's Resources:	Capacity (AC kW):
SOUTH CAROLINA GENERATORS:						
Facility 577	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 578	Sumter	SC	Solar	Intermediate	Yes	8.8
Facility 579	Green Sea	SC	Solar	Intermediate	Yes	6.0
Facility 580	Clio	SC	Solar	Intermediate	Yes	8.8
Facility 581	Florence	SC	Solar	Intermediate	Yes	4.0
Facility 582	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 583	Florence	SC	Solar	Intermediate	Yes	7.2
Facility 584	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 585	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 586	Sumter	SC	Solar	Intermediate	Yes	9.4
Facility 587	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 588	Sumter	SC	Solar	Intermediate	Yes	5.5
Facility 589	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 590	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 591	Hartsville	SC	Solar	Intermediate	Yes	8.2
Facility 592	Florence	SC	Solar	Intermediate	Yes	5.5
Facility 593	Elgin	SC	Solar	Intermediate	Yes	5.0
Facility 594	Chesterfield	SC	Solar	Intermediate	Yes	7.6
Facility 595	Florence	SC	Solar	Intermediate	Yes	7.7
Facility 596	Cheraw	SC	Solar	Intermediate	Yes	5.3
Facility 597	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 598	Shaw AFB	SC	Solar	Intermediate	Yes	5.0
Facility 599	Shaw AFB	SC	Solar	Intermediate	Yes	3.8
Facility 600	Florence	SC	Solar	Intermediate	Yes	7.7
Facility 601	Marion	SC	Solar	Intermediate	Yes	4.0
Facility 602	Dalzell	SC	Solar	Intermediate	Yes	4.8
Facility 603	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 604	Hemingway	SC	Solar	Intermediate	Yes	8.3
Facility 605	Sumter	SC	Solar	Intermediate	Yes	5.3
Facility 606	Florence	SC	Solar	Intermediate	Yes	4.8
Facility 607	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 608	Florence	SC	Solar	Intermediate	Yes	9.8
Facility 609	Sumter	SC	Solar	Intermediate	Yes	4.0
Facility 610	Florence	SC	Solar	Intermediate	Yes	9.3
Facility 611	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 612	Hartsville	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 613	Hemingway	SC	Solar	Intermediate	Yes	4.2
Facility 614	Sumter	SC	Solar	Intermediate	Yes	3.0
Facility 615	Sumter	SC	Solar	Intermediate	Yes	18.0
Facility 616	Lugoff	SC	Solar	Intermediate	Yes	8.6
Facility 617	Hartsville	SC	Solar	Intermediate	Yes	9.9
Facility 618	Clio	SC	Solar	Intermediate	Yes	11.4
Facility 619	Lugoff	SC	Solar	Intermediate	Yes	3.8
Facility 620	Hartsville Dr	SC	Solar	Intermediate	Yes	7.6
Facility 621	Florence	SC	Solar	Intermediate	Yes	19.8
Facility 622	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 623	Darlington	SC	Solar	Intermediate	Yes	6.0
Facility 624	Sumter	SC	Solar	Intermediate	Yes	3.0
Facility 625	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 626	Hartsville	SC	Solar	Intermediate	Yes	9.9
Facility 627	Sumter	SC	Solar	Intermediate	Yes	6.5
Facility 628	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 629	Sumpter	SC	Solar	Intermediate	Yes	5.0
Facility 630	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 631	Florence	SC	Solar	Intermediate	Yes	7.0
Facility 632	Turbeville	SC	Solar	Intermediate	Yes	7.6
Facility 633	Florence	SC	Solar	Intermediate	Yes	5.5
Facility 634	Hartsville	SC	Solar	Intermediate	Yes	3.8
Facility 635	Sumter	SC	Solar	Intermediate	Yes	2.5
Facility 636	Sumter	SC	Solar	Intermediate	Yes	2.6
Facility 637	Florence	SC	Solar	Intermediate	Yes	2.2
Facility 638	Hartsville	SC	Solar	Intermediate	Yes	11.4
Facility 639	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 640	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 641	Sumter	SC	Solar	Intermediate	Yes	3.0
Facility 642	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 643	Pamplico	SC	Solar	Intermediate	Yes	8.0
Facility 644	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 645	Florence	SC	Solar	Intermediate	Yes	5.0
Facility 646	Hemingway	SC	Solar	Intermediate	Yes	9.3
Facility 647	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 648	Cheraw	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 649	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 650	Lake City	SC	Solar	Intermediate	Yes	4.8
Facility 651	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 652	Bishopville	SC	Solar	Intermediate	Yes	5.3
Facility 653	Manning	SC	Solar	Intermediate	Yes	5.5
Facility 654	Turbeville	SC	Solar	Intermediate	Yes	7.6
Facility 655	Rembert	SC	Solar	Intermediate	Yes	7.6
Facility 656	Sumter	SC	Solar	Intermediate	Yes	4.0
Facility 657	Manning	SC	Solar	Intermediate	Yes	12.0
Facility 658	Nichols	SC	Solar	Intermediate	Yes	7.6
Facility 659	Sumter	SC	Solar	Intermediate	Yes	4.6
Facility 660	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 661	Sumter	SC	Solar	Intermediate	Yes	3.8
Facility 662	Hartsville	SC	Solar	Intermediate	Yes	20.0
Facility 663	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 664	Sumter	SC	Solar	Intermediate	Yes	8.0
Facility 665	Hartsville	SC	Solar	Intermediate	Yes	10.8
Facility 666	Bishopville	SC	Solar	Intermediate	Yes	15.2
Facility 667	Sumter	SC	Solar	Intermediate	Yes	3.0
Facility 668	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 669	Sumter	SC	Solar	Intermediate	Yes	5.2
Facility 670	Lake City	SC	Solar	Intermediate	Yes	4.8
Facility 671	Hartsville	SC	Solar	Intermediate	Yes	9.1
Facility 672	Marion	SC	Solar	Intermediate	Yes	4.1
Facility 673	Manning	SC	Solar	Intermediate	Yes	5.1
Facility 674	Florence	SC	Solar	Intermediate	Yes	6.2
Facility 675	Florence	SC	Solar	Intermediate	Yes	6.4
Facility 676	FLORENCE	SC	Solar	Intermediate	Yes	6.0
Facility 677	Florence	SC	Solar	Intermediate	Yes	7.3
Facility 678	Sumter	SC	Solar	Intermediate	Yes	6.3
Facility 679	Lugoff	SC	Solar	Intermediate	Yes	3.7
Facility 680	Lugoff	SC	Solar	Intermediate	Yes	10.0
Facility 681	Bishopville	SC	Solar	Intermediate	Yes	9.9
Facility 682	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 683	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 684	Sumter	SC	Solar	Intermediate	Yes	6.7

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 685	Hartsvile	SC	Solar	Intermediate	Yes	10.0
Facility 686	LANE	SC	Solar	Intermediate	Yes	5.0
Facility 687	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 688	Cheraw	SC	Solar	Intermediate	Yes	18.0
Facility 689	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 690	McColl	SC	Solar	Intermediate	Yes	3.0
Facility 691	Sumter	SC	Solar	Intermediate	Yes	13.6
Facility 692	Elgin	SC	Solar	Intermediate	Yes	7.6
Facility 693	Sumter	SC	Solar	Intermediate	Yes	5.5
Facility 694	Elgin	SC	Solar	Intermediate	Yes	10.0
Facility 695	Cheraw	SC	Solar	Intermediate	Yes	8.4
Facility 696	Sumter	SC	Solar	Intermediate	Yes	9.9
Facility 697	Hartsville	SC	Solar	Intermediate	Yes	8.0
Facility 698	Pageland	SC	Solar	Intermediate	Yes	7.2
Facility 699	Sumter	SC	Solar	Intermediate	Yes	10.2
Facility 700	Sumter	SC	Solar	Intermediate	Yes	5.1
Facility 701	Bishopville	SC	Solar	Intermediate	Yes	13.3
Facility 702	Florence	SC	Solar	Intermediate	Yes	5.6
Facility 703	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 704	Sumter	SC	Solar	Intermediate	Yes	14.6
Facility 705	Hartsville	SC	Solar	Intermediate	Yes	2.3
Facility 706	Clio	SC	Solar	Intermediate	Yes	5.8
Facility 707	Dalzell	SC	Solar	Intermediate	Yes	15.2
Facility 708	Andrews	SC	Solar	Intermediate	Yes	9.7
Facility 709	Sumter	SC	Solar	Intermediate	Yes	4.4
Facility 710	Sumter	SC	Solar	Intermediate	Yes	3.3
Facility 711	Sumter	SC	Solar	Intermediate	Yes	10.6
Facility 712	Sumter	SC	Solar	Intermediate	Yes	8.4
Facility 713	Nichols	SC	Solar	Intermediate	Yes	7.8
Facility 714	Johnsonville	SC	Solar	Intermediate	Yes	11.4
Facility 715	Effingham	SC	Solar	Intermediate	Yes	7.6
Facility 716	Sumter	SC	Solar	Intermediate	Yes	7.0
Facility 717	Sumter	SC	Solar	Intermediate	Yes	4.8
Facility 718	Sumter	SC	Solar	Intermediate	Yes	4.4
Facility 719	Lamar	SC	Solar	Intermediate	Yes	11.5
Facility 720	Florence	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 721	Sumter	SC	Solar	Intermediate	Yes	3.6
Facility 722	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 723	Andrews	SC	Solar	Intermediate	Yes	9.9
Facility 724	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 725	Andrews	SC	Solar	Intermediate	Yes	7.6
Facility 726	Bishopville	SC	Solar	Intermediate	Yes	5.3
Facility 727	Marion	SC	Solar	Intermediate	Yes	11.4
Facility 728	Andrews	SC	Solar	Intermediate	Yes	15.2
Facility 729	Pageland	SC	Solar	Intermediate	Yes	5.4
Facility 730	Andrews	SC	Solar	Intermediate	Yes	13.6
Facility 731	Andrews	SC	Solar	Intermediate	Yes	15.2
Facility 732	Florence	SC	Solar	Intermediate	Yes	12.4
Facility 733	Florence	SC	Solar	Intermediate	Yes	9.2
Facility 734	Darlington	SC	Solar	Intermediate	Yes	5.5
Facility 735	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 736	Florence	SC	Solar	Intermediate	Yes	10.6
Facility 737	Marion	SC	Solar	Intermediate	Yes	2.3
Facility 738	Sumter	SC	Solar	Intermediate	Yes	5.1
Facility 739	Hartsville	SC	Solar	Intermediate	Yes	8.1
Facility 740	Hartsville	SC	Solar	Intermediate	Yes	7.1
Facility 741	Hartsville	SC	Solar	Intermediate	Yes	11.2
Facility 742	Andrews	SC	Solar	Intermediate	Yes	7.6
Facility 743	Florence	SC	Solar	Intermediate	Yes	5.5
Facility 744	Andrews	SC	Solar	Intermediate	Yes	12.7
Facility 745	Sumter	SC	Solar	Intermediate	Yes	9.9
Facility 746	Sumter	SC	Solar	Intermediate	Yes	8.8
Facility 747	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 748	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 749	Hartsville	SC	Solar	Intermediate	Yes	12.6
Facility 750	Andrews	SC	Solar	Intermediate	Yes	11.4
Facility 751	Hartsville	SC	Solar	Intermediate	Yes	14.6
Facility 752	Florence	SC	Solar	Intermediate	Yes	13.6
Facility 753	Sumter	SC	Solar	Intermediate	Yes	4.6
Facility 754	Florence	SC	Solar	Intermediate	Yes	9.9
Facility 755	Florence	SC	Solar	Intermediate	Yes	12.7
Facility 756	Andrews	SC	Solar	Intermediate	Yes	8.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 757	Hartsville	SC	Solar	Intermediate	Yes	9.0
Facility 758	Lugoff	SC	Solar	Intermediate	Yes	7.6
Facility 759	Andrews	SC	Solar	Intermediate	Yes	14.6
Facility 760	Sumter	SC	Solar	Intermediate	Yes	7.3
Facility 761	FLORENCE	SC	Solar	Intermediate	Yes	3.7
Facility 762	Hartsville	SC	Solar	Intermediate	Yes	5.1
Facility 763	Hartsville	SC	Solar	Intermediate	Yes	9.9
Facility 764	Sumter	SC	Solar	Intermediate	Yes	3.7
Facility 765	Lugoff	SC	Solar	Intermediate	Yes	5.0
Facility 766	Hartsville	SC	Solar	Intermediate	Yes	9.0
Facility 767	Lugoff	SC	Solar	Intermediate	Yes	8.3
Facility 768	Mullins	SC	Solar	Intermediate	Yes	15.6
Facility 769	Sumter	SC	Solar	Intermediate	Yes	2.8
Facility 770	Florence	SC	Solar	Intermediate	Yes	8.6
Facility 771	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 772	Florence	SC	Solar	Intermediate	Yes	9.9
Facility 773	FLORENCE	SC	Solar	Intermediate	Yes	10.0
Facility 774	Sumter	SC	Solar	Intermediate	Yes	5.5
Facility 775	Dalzell	SC	Solar	Intermediate	Yes	6.4
Facility 776	Hartsville	SC	Solar	Intermediate	Yes	9.6
Facility 777	Florence	SC	Solar	Intermediate	Yes	19.0
Facility 778	Hartsville	SC	Solar	Intermediate	Yes	16.5
Facility 779	Andrews	SC	Solar	Intermediate	Yes	11.0
Facility 780	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 781	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 782	Hartsville	SC	Solar	Intermediate	Yes	16.0
Facility 783	Sumter	SC	Solar	Intermediate	Yes	9.0
Facility 784	Hartsville	SC	Solar	Intermediate	Yes	13.6
Facility 785	Andrews	SC	Solar	Intermediate	Yes	9.9
Facility 786	Andrews	SC	Solar	Intermediate	Yes	15.0
Facility 787	Lake City	SC	Solar	Intermediate	Yes	9.9
Facility 788	Lake City	SC	Solar	Intermediate	Yes	8.6
Facility 789	Andrews	SC	Solar	Intermediate	Yes	11.4
Facility 790	Kingstree	SC	Solar	Intermediate	Yes	11.4
Facility 791	Hartsville	SC	Solar	Intermediate	Yes	9.9
Facility 792	Andrews	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 793	Andrews	SC	Solar	Intermediate	Yes	4.6
Facility 794	Andrews	SC	Solar	Intermediate	Yes	7.0
Facility 795	Lake City	SC	Solar	Intermediate	Yes	5.1
Facility 796	Hartsville	SC	Solar	Intermediate	Yes	15.9
Facility 797	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 798	Lugoff	SC	Solar	Intermediate	Yes	12.0
Facility 799	Hartsville	SC	Solar	Intermediate	Yes	12.6
Facility 800	Hartsville	SC	Solar	Intermediate	Yes	13.6
Facility 801	Hartsville	SC	Solar	Intermediate	Yes	11.4
Facility 802	Sumter	SC	Solar	Intermediate	Yes	5.1
Facility 803	Lake City	SC	Solar	Intermediate	Yes	12.7
Facility 804	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 805	Andrews	SC	Solar	Intermediate	Yes	7.0
Facility 806	Kingstree	SC	Solar	Intermediate	Yes	13.5
Facility 807	Florence	SC	Solar	Intermediate	Yes	11.8
Facility 808	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 809	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 810	Timmonsville	SC	Solar	Intermediate	Yes	18.2
Facility 811	Kingstree	SC	Solar	Intermediate	Yes	6.0
Facility 812	Andrews	SC	Solar	Intermediate	Yes	6.0
Facility 813	Andrews	SC	Solar	Intermediate	Yes	12.0
Facility 814	Hartsville	SC	Solar	Intermediate	Yes	13.6
Facility 815	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 816	Anderws	SC	Solar	Intermediate	Yes	9.6
Facility 817	Florence	SC	Solar	Intermediate	Yes	12.0
Facility 818	Hartsville	SC	Solar	Intermediate	Yes	7.6
Facility 819	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 820	Florence	SC	Solar	Intermediate	Yes	7.1
Facility 821	Hartsville	SC	Solar	Intermediate	Yes	13.6
Facility 822	Hartsville	SC	Solar	Intermediate	Yes	15.2
Facility 823	Florence	SC	Solar	Intermediate	Yes	3.6
Facility 824	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 825	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 826	Lugoff	SC	Solar	Intermediate	Yes	9.9
Facility 827	Florence	SC	Solar	Intermediate	Yes	7.2
Facility 828	Mullins	SC	Solar	Intermediate	Yes	13.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 829	Florence	SC	Solar	Intermediate	Yes	3.7
Facility 830	wedgefield	SC	Solar	Intermediate	Yes	5.3
Facility 831	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 832	Hartsville	SC	Solar	Intermediate	Yes	5.0
Facility 833	Florence	SC	Solar	Intermediate	Yes	10.6
Facility 834	FLORENCE	SC	Solar	Intermediate	Yes	7.6
Facility 835	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 836	Society Hill	SC	Solar	Intermediate	Yes	5.1
Facility 837	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 838	Sumter	SC	Solar	Intermediate	Yes	3.5
Facility 839	Lake City	SC	Solar	Intermediate	Yes	13.0
Facility 840	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 841	Florence	SC	Solar	Intermediate	Yes	2.0
Facility 842	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 843	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 844	Florence	SC	Solar	Intermediate	Yes	16.4
Facility 845	Lake View	SC	Solar	Intermediate	Yes	11.4
Facility 846	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 847	Hartsville	SC	Solar	Intermediate	Yes	15.8
Facility 848	Hartsville	SC	Solar	Intermediate	Yes	12.6
Facility 849	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 850	Florence	SC	Solar	Intermediate	Yes	19.0
Facility 851	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 852	Hartsville	SC	Solar	Intermediate	Yes	11.0
Facility 853	Darlington	SC	Solar	Intermediate	Yes	10.0
Facility 854	Wedgefield	SC	Solar	Intermediate	Yes	5.0
Facility 855	Pageland	SC	Solar	Intermediate	Yes	19.1
Facility 856	Darlington	SC	Solar	Intermediate	Yes	16.5
Facility 857	Hartsville	SC	Solar	Intermediate	Yes	5.5
Facility 858	Sumter	SC	Solar	Intermediate	Yes	6.4
Facility 859	Elgin	SC	Solar	Intermediate	Yes	14.2
Facility 860	Florence	SC	Solar	Intermediate	Yes	8.0
Facility 861	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 862	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 863	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 864	Florence	SC	Solar	Intermediate	Yes	12.2

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 865	Andrews	SC	Solar	Intermediate	Yes	11.4
Facility 866	Darlington	SC	Solar	Intermediate	Yes	16.0
Facility 867	Sumter	SC	Solar	Intermediate	Yes	5.6
Facility 868	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 869	Pamplico	SC	Solar	Intermediate	Yes	7.5
Facility 870	Lugoff	SC	Solar	Intermediate	Yes	12.5
Facility 871	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 872	Florence	SC	Solar	Intermediate	Yes	12.2
Facility 873	Andrews	SC	Solar	Intermediate	Yes	5.0
Facility 874	Hartsville	SC	Solar	Intermediate	Yes	11.4
Facility 875	Sumter	SC	Solar	Intermediate	Yes	3.7
Facility 876	Dalzell	SC	Solar	Intermediate	Yes	7.6
Facility 877	Manning	SC	Solar	Intermediate	Yes	3.7
Facility 878	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 879	Cheraw	SC	Solar	Intermediate	Yes	7.0
Facility 880	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 881	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 882	Andrews	SC	Solar	Intermediate	Yes	7.6
Facility 883	Florence	SC	Solar	Intermediate	Yes	14.4
Facility 884	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 885	Hartsville	SC	Solar	Intermediate	Yes	16.4
Facility 886	Andrews	SC	Solar	Intermediate	Yes	10.0
Facility 887	Andrews	SC	Solar	Intermediate	Yes	16.0
Facility 888	Florence	SC	Solar	Intermediate	Yes	5.6
Facility 889	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 890	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 891	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 892	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 893	Bishopville	SC	Solar	Intermediate	Yes	5.0
Facility 894	Manning	SC	Solar	Intermediate	Yes	16.5
Facility 895	Kingstree	SC	Solar	Intermediate	Yes	7.6
Facility 896	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 897	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 898	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 899	Johnsonville	SC	Solar	Intermediate	Yes	16.0
Facility 900	Cheraw	SC	Solar	Intermediate	Yes	10.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 901	Florence	SC	Solar	Intermediate	Yes	5.0
Facility 902	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 903	Manning	SC	Solar	Intermediate	Yes	11.4
Facility 904	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 905	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 906	Bishopville	SC	Solar	Intermediate	Yes	3.8
Facility 907	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 908	Andrews	SC	Solar	Intermediate	Yes	5.1
Facility 909	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 910	Manning	SC	Solar	Intermediate	Yes	14.0
Facility 911	Marion	SC	Solar	Intermediate	Yes	7.9
Facility 912	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 913	Wedgefield	SC	Solar	Intermediate	Yes	11.4
Facility 914	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 915	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 916	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 917	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 918	Florence	SC	Solar	Intermediate	Yes	9.6
Facility 919	Lake City	SC	Solar	Intermediate	Yes	16.0
Facility 920	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 921	Florence	SC	Solar	Intermediate	Yes	14.4
Facility 922	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 923	Sumter	SC	Solar	Intermediate	Yes	3.7
Facility 924	Lake City	SC	Solar	Intermediate	Yes	11.6
Facility 925	Hemingway	SC	Solar	Intermediate	Yes	15.2
Facility 926	Manning	SC	Solar	Intermediate	Yes	11.4
Facility 927	Manning	SC	Solar	Intermediate	Yes	11.4
Facility 928	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 929	Kingstree	SC	Solar	Intermediate	Yes	11.4
Facility 930	Lake City	SC	Solar	Intermediate	Yes	12.6
Facility 931	Johnsonville	SC	Solar	Intermediate	Yes	15.0
Facility 932	Andrews	SC	Solar	Intermediate	Yes	10.0
Facility 933	Johnsonville	SC	Solar	Intermediate	Yes	12.6
Facility 934	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 935	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 936	Hartsville	SC	Solar	Intermediate	Yes	15.2

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 937	Olanta	SC	Solar	Intermediate	Yes	17.6
Facility 938	Sumter	SC	Solar	Intermediate	Yes	16.4
Facility 939	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 940	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 941	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 942	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 943	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 944	Lamar	SC	Solar	Intermediate	Yes	7.6
Facility 945	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 946	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 947	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 948	Sumter	SC	Solar	Intermediate	Yes	3.8
Facility 949	Sumter	SC	Solar	Intermediate	Yes	17.6
Facility 950	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 951	Bishopville	SC	Solar	Intermediate	Yes	5.0
Facility 952	Lake City	SC	Solar	Intermediate	Yes	13.0
Facility 953	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 954	Johnsonville	SC	Solar	Intermediate	Yes	11.4
Facility 955	Johnsonville	SC	Solar	Intermediate	Yes	7.6
Facility 956	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 957	Johnsonville	SC	Solar	Intermediate	Yes	14.6
Facility 958	Marion	SC	Solar	Intermediate	Yes	16.4
Facility 959	Andrews	SC	Solar	Intermediate	Yes	6.0
Facility 960	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 961	Sumter	SC	Solar	Intermediate	Yes	8.6
Facility 962	Hartsville	SC	Solar	Intermediate	Yes	8.8
Facility 963	Darlington	SC	Solar	Intermediate	Yes	10.0
Facility 964	Rembert	SC	Solar	Intermediate	Yes	11.4
Facility 965	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 966	Florence	SC	Solar	Intermediate	Yes	16.0
Facility 967	Sumter	SC	Solar	Intermediate	Yes	14.0
Facility 968	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 969	Lake City	SC	Solar	Intermediate	Yes	14.4
Facility 970	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 971	Sumter	SC	Solar	Intermediate	Yes	14.6
Facility 972	Lake City	SC	Solar	Intermediate	Yes	10.0

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 973	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 974	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 975	Cheraw	SC	Solar	Intermediate	Yes	5.5
Facility 976	Johnsonville	SC	Solar	Intermediate	Yes	13.6
Facility 977	Johnsonville	SC	Solar	Intermediate	Yes	6.0
Facility 978	Andrews	SC	Solar	Intermediate	Yes	7.6
Facility 979	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 980	Andrews	SC	Solar	Intermediate	Yes	11.4
Facility 981	Hartsville	SC	Solar	Intermediate	Yes	15.2
Facility 982	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 983	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 984	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 985	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 986	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 987	Lake View	SC	Solar	Intermediate	Yes	5.3
Facility 988	Lamar	SC	Solar	Intermediate	Yes	7.2
Facility 989	Manning	SC	Solar	Intermediate	Yes	10.0
Facility 990	Florence	SC	Solar	Intermediate	Yes	17.6
Facility 991	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 992	Florence	SC	Solar	Intermediate	Yes	8.2
Facility 993	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 994	Hartsville	SC	Solar	Intermediate	Yes	20.0
Facility 995	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 996	Florence	SC	Solar	Intermediate	Yes	10.6
Facility 997	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 998	Lake City	SC	Solar	Intermediate	Yes	16.4
Facility 999	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1000	Andrews	SC	Solar	Intermediate	Yes	14.4
Facility 1001	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1002	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 1003	Johnsonville	SC	Solar	Intermediate	Yes	10.0
Facility 1004	Andrews	SC	Solar	Intermediate	Yes	5.0
Facility 1005	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1006	Florence	SC	Solar	Intermediate	Yes	15.0
Facility 1007	Dillon	SC	Solar	Intermediate	Yes	14.6
Facility 1008	Hartsville	SC	Solar	Intermediate	Yes	14.4

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1009	Hartsville	SC	Solar	Intermediate	Yes	20.0
Facility 1010	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1011	Manning	SC	Solar	Intermediate	Yes	3.6
Facility 1012	Hartsville	SC	Solar	Intermediate	Yes	11.4
Facility 1013	Florence	SC	Solar	Intermediate	Yes	19.0
Facility 1014	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1015	Coward	SC	Solar	Intermediate	Yes	7.6
Facility 1016	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1017	Scranton	SC	Solar	Intermediate	Yes	20.0
Facility 1018	Manning	SC	Solar	Intermediate	Yes	15.1
Facility 1019	Hemingway	SC	Solar	Intermediate	Yes	18.0
Facility 1020	Lake City	SC	Solar	Intermediate	Yes	5.1
Facility 1021	Florence	SC	Solar	Intermediate	Yes	5.0
Facility 1022	Manning	SC	Solar	Intermediate	Yes	11.4
Facility 1023	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1024	Scranton	SC	Solar	Intermediate	Yes	3.8
Facility 1025	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1026	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1027	Florence	SC	Solar	Intermediate	Yes	15.0
Facility 1028	Scranton	SC	Solar	Intermediate	Yes	15.2
Facility 1029	Scranton	SC	Solar	Intermediate	Yes	11.4
Facility 1030	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1031	Johnsonville	SC	Solar	Intermediate	Yes	11.4
Facility 1032	Florence	SC	Solar	Intermediate	Yes	14.4
Facility 1033	FLORENCE	SC	Solar	Intermediate	Yes	3.8
Facility 1034	Lake City	SC	Solar	Intermediate	Yes	15.2
Facility 1035	BENNETTSVILLE	SC	Solar	Intermediate	Yes	9.6
Facility 1036	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 1037	Dalzell	SC	Solar	Intermediate	Yes	4.9
Facility 1038	Florence	SC	Solar	Intermediate	Yes	19.8
Facility 1039	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 1040	Dillon	SC	Solar	Intermediate	Yes	10.0
Facility 1041	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1042	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 1043	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 1044	Florence	SC	Solar	Intermediate	Yes	12.2

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1045	Hartsville	SC	Solar	Intermediate	Yes	17.6
Facility 1046	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1047	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1048	Hartsville	SC	Solar	Intermediate	Yes	14.4
Facility 1049	Dillon	SC	Solar	Intermediate	Yes	6.0
Facility 1050	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1051	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1052	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1053	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1054	Turbeville	SC	Solar	Intermediate	Yes	19.4
Facility 1055	Lake City	SC	Solar	Intermediate	Yes	19.8
Facility 1056	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 1057	Lake City	SC	Solar	Intermediate	Yes	5.0
Facility 1058	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1059	Sumter	SC	Solar	Intermediate	Yes	9.6
Facility 1060	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1061	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1062	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1063	Darlington	SC	Solar	Intermediate	Yes	3.0
Facility 1064	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 1065	Wedgefield	SC	Solar	Intermediate	Yes	13.6
Facility 1066	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1067	Bishopville	SC	Solar	Intermediate	Yes	7.6
Facility 1068	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1069	Lake City	SC	Solar	Intermediate	Yes	11.4
Facility 1070	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1071	Darlington	SC	Solar	Intermediate	Yes	7.6
Facility 1072	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 1073	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 1074	Lake City	SC	Solar	Intermediate	Yes	16.4
Facility 1075	Florence	SC	Solar	Intermediate	Yes	11.5
Facility 1076	Florence	SC	Solar	Intermediate	Yes	14.4
Facility 1077	Sumter	SC	Solar	Intermediate	Yes	13.9
Facility 1078	Scranton	SC	Solar	Intermediate	Yes	12.5
Facility 1079	Lake City	SC	Solar	Intermediate	Yes	4.5
Facility 1080	Florence	SC	Solar	Intermediate	Yes	7.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1081	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1082	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1083	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 1084	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1085	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 1086	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 1087	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1088	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 1089	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1090	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1091	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1092	Sumter	SC	Solar	Intermediate	Yes	12.4
Facility 1093	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1094	Sumter	SC	Solar	Intermediate	Yes	11.4
Facility 1095	Nesmith	SC	Solar	Intermediate	Yes	6.0
Facility 1096	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1097	Marion	SC	Solar	Intermediate	Yes	15.1
Facility 1098	LAKE CITY	SC	Solar	Intermediate	Yes	4.8
Facility 1099	Florence	SC	Solar	Intermediate	Yes	18.8
Facility 1100	Darlington	SC	Solar	Intermediate	Yes	7.6
Facility 1101	Elgin	SC	Solar	Intermediate	Yes	14.9
Facility 1102	Lake City	SC	Solar	Intermediate	Yes	5.0
Facility 1103	Sumter	SC	Solar	Intermediate	Yes	4.0
Facility 1104	Lake City	SC	Solar	Intermediate	Yes	15.8
Facility 1105	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1106	Sumter	SC	Solar	Intermediate	Yes	5.5
Facility 1107	FLORENCE	SC	Solar	Intermediate	Yes	6.7
Facility 1108	Florence	SC	Solar	Intermediate	Yes	17.6
Facility 1109	Cheraw	SC	Solar	Intermediate	Yes	5.0
Facility 1110	Florence	SC	Solar	Intermediate	Yes	11.4
Facility 1111	SUMPTER	SC	Solar	Intermediate	Yes	8.6
Facility 1112	Scranton	SC	Solar	Intermediate	Yes	4.3
Facility 1113	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1114	FLORENCE	SC	Solar	Intermediate	Yes	7.7
Facility 1115	Florence	SC	Solar	Intermediate	Yes	10.0
Facility 1116	Florence	SC	Solar	Intermediate	Yes	3.8

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1117	Lugoff	SC	Solar	Intermediate	Yes	6.0
Facility 1118	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1119	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1120	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1121	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1122	Darlington	SC	Solar	Intermediate	Yes	10.0
Facility 1123	Kingstree	SC	Solar	Intermediate	Yes	7.3
Facility 1124	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1125	Bishopville	SC	Solar	Intermediate	Yes	7.1
Facility 1126	Manning	SC	Solar	Intermediate	Yes	7.6
Facility 1127	Sumter	SC	Solar	Intermediate	Yes	8.3
Facility 1128	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1129	Lake City	SC	Solar	Intermediate	Yes	12.0
Facility 1130	Lake City	SC	Solar	Intermediate	Yes	6.0
Facility 1131	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1132	Lake City	SC	Solar	Intermediate	Yes	10.0
Facility 1133	Dalzell	SC	Solar	Intermediate	Yes	5.0
Facility 1134	Florence	SC	Solar	Intermediate	Yes	5.0
Facility 1135	TURBEVILLE	SC	Solar	Intermediate	Yes	12.0
Facility 1136	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1137	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 1138	Florence	SC	Solar	Intermediate	Yes	17.6
Facility 1139	Dillon	SC	Solar	Intermediate	Yes	10.6
Facility 1140	Timmonsville	SC	Solar	Intermediate	Yes	15.6
Facility 1141	Effingham	SC	Solar	Intermediate	Yes	12.0
Facility 1142	Florence	SC	Solar	Intermediate	Yes	5.0
Facility 1143	Darlington	SC	Solar	Intermediate	Yes	11.4
Facility 1144	Hartsville	SC	Solar	Intermediate	Yes	7.6
Facility 1145	FLORENCE	SC	Solar	Intermediate	Yes	5.5
Facility 1146	Hartsville	SC	Solar	Intermediate	Yes	10.0
Facility 1147	Florence	SC	Solar	Intermediate	Yes	7.2
Facility 1148	Lugoff	SC	Solar	Intermediate	Yes	7.6
Facility 1149	Effingham	SC	Solar	Intermediate	Yes	9.9
Facility 1150	Hartsville	SC	Solar	Intermediate	Yes	15.2
Facility 1151	Lake City	SC	Solar	Intermediate	Yes	7.6
Facility 1152	Pamplico	SC	Solar	Intermediate	Yes	10.6

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1153	Florence	SC	Solar	Intermediate	Yes	4.0
Facility 1154	sumter	SC	Solar	Intermediate	Yes	7.6
Facility 1155	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1156	Florence	SC	Solar	Intermediate	Yes	3.8
Facility 1157	Sumter	SC	Solar	Intermediate	Yes	4.6
Facility 1158	Lake City	SC	Solar	Intermediate	Yes	9.0
Facility 1159	Latta	SC	Solar	Intermediate	Yes	7.6
Facility 1160	Hartsville	SC	Solar	Intermediate	Yes	6.0
Facility 1161	FLORENCE	SC	Solar	Intermediate	Yes	9.1
Facility 1162	Hemingway	SC	Solar	Intermediate	Yes	6.5
Facility 1163	EFFINGHAM	SC	Solar	Intermediate	Yes	4.6
Facility 1164	Florence	SC	Solar	Intermediate	Yes	15.2
Facility 1165	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1166	Florence	SC	Solar	Intermediate	Yes	9.0
Facility 1167	Dillon	SC	Solar	Intermediate	Yes	13.0
Facility 1168	Lamar	SC	Solar	Intermediate	Yes	6.0
Facility 1169	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 1170	Pamplico	SC	Solar	Intermediate	Yes	7.6
Facility 1171	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1172	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1173	Johnsonville	SC	Solar	Intermediate	Yes	5.0
Facility 1174	Pamplico	SC	Solar	Intermediate	Yes	4.6
Facility 1175	Darlington	SC	Solar	Intermediate	Yes	12.0
Facility 1176	Hartsville	SC	Solar	Intermediate	Yes	6.2
Facility 1177	Turbeville	SC	Solar	Intermediate	Yes	18.6
Facility 1178	Sumter	SC	Solar	Intermediate	Yes	7.6
Facility 1179	Florence	SC	Solar	Intermediate	Yes	6.2
Facility 1180	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1181	Sumter	SC	Solar	Intermediate	Yes	10.0
Facility 1182	Hartsville	SC	Solar	Intermediate	Yes	3.8
Facility 1183	Florence	SC	Solar	Intermediate	Yes	7.6
Facility 1184	Sumter	SC	Solar	Intermediate	Yes	6.0
Facility 1185	Sumter	SC	Solar	Intermediate	Yes	5.0
Facility 1186	Florence	SC	Solar	Intermediate	Yes	4.8
Facility 1187	Florence	SC	Solar	Intermediate	Yes	6.0
Facility 1188	Sumter	SC	Solar	Intermediate	Yes	5.1

Table 14-D ***DEP Non-Utility Generator Listing - South Carolina as of July 31, 2019***

SOUTH CAROLINA GENERATORS:						
Facility Name:	**City/County:**	**State:**	**Primary Fuel Type:**	**Designation:**	**Inclusion in Utility's Resources:**	**Capacity (AC kW):**
Facility 1189	McBee	SC	Solar	Intermediate	Yes	7.8
Facility 1190	Sumter	SC	Solar	Intermediate	Yes	5.3

15. FUEL COMMODITY PRICES

The following table provides the fuel commodity prices used in the 2019 IRP for natural gas, coal and fuel oil.

DEP Annual Average Fuel Prices, $/MMBtu			
Year	Natural Gas Henry Hub	Coal DEP Average	Fuel Oil Average
2020	$2.50	$2.49	$14.48
2021	$2.57	$2.52	$14.15
2022	$2.61	$2.55	$13.97
2023	$2.68	$2.63	$14.13
2024	$2.78	$2.93	$14.55
2025	$2.90	$3.24	$14.99
2026	$3.01	$3.54	$15.44
2027	$3.12	$3.85	$15.90
2028	$3.25	$4.15	$16.38
2029	$3.39	$4.45	$16.87
2030	$3.68	$4.55	$17.53
2031	$4.07	$4.67	$18.20
2032	$4.50	$4.82	$18.86
2033	$5.04	$4.93	$19.52
2034	$5.30	$5.07	$20.18

TABLE 16-A CROSS-REFERENCE TABLE

This section contains a cross-reference table, Table 16-A, that provides the document location of information required by both NCUC and PSCSC in this 2019 IRP Update report.

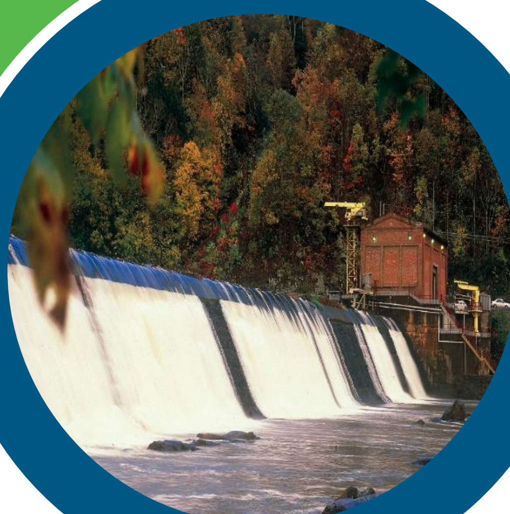
	REQUIREMENT:	CHAPTER LOCATION:
1.	Summary of significant amendments or revisions to most recently filed biennial report (including amendments to type and size of resources identified	Chapters 2, 4
2.	The electric utility's annual update must describe the impact of the updated base planning assumptions on the selected resource plan.	Chapter 9
3.	Short-Term Action Plan	Chapter 11
4.	REPS Compliance Plan	Attachment 1
5.	Renewable Energy Forecast	Chapter 6
6.	Most recent 10-year history and forecast of: • Customers by each customer class • Energy sales (mwh) by each customer class • Utilities summer and winter peak load	Chapter 5
7.	15-year table (w/ and w/o projected supply or demand side resources) of: • Peak loads for summer and winter seasons of each year • Annual energy forecasts • Reserve margins • Load duration curves • Effects of DR and EE programs on forecasted annual energy and peak loads	Chapters 5, 9
8.	Description of future supply-side resources including type of capacity / resource (MW rating, fuel source, base, intermediate, or peaking)	Chapter 9
9.	List of existing units in service with: • Type of fuel(s) used • Type of unit (base, int, peak) • Location of existing unit • List of units to be retired with location and date • List of units for which there are specific plans for life extension, refurbishment, or upgrading • Other changes to existing generating units that are expected to impact gen capability by 10% or 10 mw	Chapter 13
10.	Planned Generation Additions with: • Type of fuel used • Type of unit (MW rating, base, int, peak) • Location if determined • Summaries of analyses supporting any new gen additions included in its 15-year forecast	Chapters 9, 10, 11

	REQUIREMENT:	CHAPTER LOCATION:
11.	List of all NUG facilities • Facility name • Location • Primary fuel type • Capacity (base, int, peak) • Which are included in its total supply of resources	Chapter 14
12.	Commodity Fuel Prices	Chapter 15
13.	Cumulative resource additions necessary to meet load obligation & reserve margins	Chapters 9, 10, 11, 12

DUKE ENERGY
PROGRESS

ATTACHMENT I:

The Duke Energy Progress NC Renewable Energy & Energy Efficiency Portfolio Standard (NC REPS)



DUKE ENERGY PROGRESS NC REPS COMPLIANCE PLAN CONTENTS:

I. INTRODUCTION

Duke Energy Progress, LLC ("DEP" or "the Company") submits its annual Renewable Energy and Energy Efficiency Portfolio Standard ("NC REPS" or "REPS") Compliance Plan ("Compliance Plan") in accordance with NC Gen. Stat. § 62-133.8 and North Carolina Utilities Commission ("the Commission") Rule R8-67(b). This Compliance Plan, set forth in detail in Section II and Section III, provides the required information and outlines the Company's projected plans to comply with NC REPS for the period 2019 to 2021 ("the Planning Period"). Section IV addresses the cost implications of the Company's REPS Compliance Plan.

In 2007, the North Carolina General Assembly enacted Session Law 2007-397 (Senate Bill 3), codified in relevant part as NC Gen. Stat. § 62-133.8, in order to:

- Diversify the resources used to reliably meet the energy needs of consumers in the State;
- Provide greater energy security through the use of indigenous energy resources available within the State;
- Encourage private investment in renewable energy and energy efficiency; and
- Provide improved air quality and other benefits to energy consumers and citizens of the State.

As part of the broad policy initiatives listed above, Senate Bill 3 established the NC REPS, which requires the investor-owned utilities, electric membership corporations or co-operatives, and municipalities to procure or produce renewable energy, or achieve energy efficiency savings, in amounts equivalent to specified percentages of their respective retail megawatt-hour (MWh) sales from the prior calendar year.

Duke Energy Progress seeks to advance these State policies and comply with its REPS obligations through a diverse portfolio of cost-effective renewable energy and energy efficiency resources. Specifically, the key components of Duke Energy Progress' 2019 Compliance Plan include: (1) purchases of renewable energy certificates ("RECs"); (2) purchases of renewable biogas to generate RECs; (3) constructing and operating Company-owned renewable facilities; (4) energy efficiency programs that will generate savings that can be counted towards the Company's REPS obligation; and (5) research studies to enhance the Company's ability to comply with its future REPS obligations. The Company believes that these actions yield a diverse portfolio of qualifying resources and allow a flexible mechanism for compliance with the requirements of NC Gen. Stat. § 62-133.8.

In addition, the Company has undertaken, and will continue to undertake, specific regulatory and operational initiatives to support REPS compliance, including: (1) submission of regulatory applications to pursue reasonable and appropriate renewable energy and energy efficiency initiatives in support of the Company's REPS compliance needs; (2) solicitation, review, and analysis of proposals from renewable energy suppliers offering RECs and diligent pursuit of the most attractive opportunities, as appropriate; and (3) development and implementation of administrative processes to manage the Company's REPS compliance operations, such as procuring and managing renewable resource contracts, accounting for RECs, safely interconnecting renewable energy suppliers, reporting renewable generation to the North Carolina Renewable Energy Tracking System ("NC-RETS"), and forecasting renewable resource availability and cost in the future.

The Company believes these actions collectively constitute a thorough and prudent plan for compliance with NC REPS and demonstrate the Company's commitment to pursue its renewable energy and energy efficiency strategies for the benefit of its customers.

II. REPS COMPLIANCE OBLIGATION

Duke Energy Progress calculates its NC REPS Compliance Obligations[1] for 2019, 2020, and 2021 based on interpretation of the statute (NC Gen. Stat. § 62-133.8), the Commission's rules implementing Senate Bill 3 (Rule R8-67), and subsequent Commission orders, as applied to the Company's actual or forecasted retail sales in the Planning Period. The Company's contracts with wholesale customers for whom it supplied REPS compliance services terminated on December 31, 2017; therefore, this Compliance Plan only reflects REPS compliance services for DEP's retail customers. Table 1 below shows the Company's retail customers' REPS Compliance Obligation.

[1] For the purposes of this Compliance Plan, Compliance Obligation is more specifically defined as Duke Energy Progress' native load obligations for the Company's retail sales. The Company's contracts with the Town of Sharpsburg, the Town of Stantonsburg, the Town of Lucama, the Town of Black Creek and the Town of Winterville terminated on December 31, 2017.

Table 1: Duke Energy Progress' NC REPS Compliance Obligation

Compliance Year	Previous Year DEP Retail Sales (MWhs) (1)	Solar Set-Aside (RECs)	Swine Set-Aside (RECs)	Poultry Set-Aside (RECs)	REPS Requirement (%)	Total REPS Compliance Obligation (RECs)
2019	38,687,268	77,375	27,081	197,318	10%	3,868,727
2020	37,964,762	75,930	26,575	253,695	10%	3,796,476
2021	38,124,840	76,250	53,375	253,695	12.5%	4,765,605

(1) Annual compliance REC requirements are determined based on prior-year MWh sales. Retail sales figures shown for compliance years 2020 and 2021 are estimates of 2019 and 2020 retail sales, respectively.

As shown in Table 1, the Company's requirements in the Planning Period include the solar energy resource requirement ("Solar Set-Aside"), swine waste resource requirement ("Swine Waste Set-Aside"), and poultry waste resource requirement ("Poultry Waste Set-Aside"). In addition, the Company must also ensure that, in total, the RECs that it produces or procures, combined with energy efficiency savings, are an amount equivalent to 10% of its prior-year retail sales in compliance years 2019 and 2020, and 12.5% of its prior-year retail sales in compliance year 2021. The Company refers to this as its Total Obligation. For clarification, the Company refers to its Total Obligation, net of the Solar, Swine Waste, and Poultry Waste Set-Aside requirements, as its General Requirement.

III. REPS COMPLIANCE PLAN

In accordance with Commission Rule R8-67b(1)(i), the Company describes its planned actions to comply with the Solar, Swine Waste, and Poultry Waste Set-Asides, as well as the General Requirement below. The discussion first addresses the Company's efforts to meet the Set-Aside requirements and then outlines the Company's efforts to meet its General Requirement in the Planning Period.

A. SOLAR ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(d), the Company must produce or procure solar RECs equal to a minimum of 0.20% of the prior year's total electric energy in megawatt-hours (MWh) sold to retail customers in North Carolina in 2019, 2020 and 2021.

Based on the Company's actual retail sales in 2018, the Solar Set-Aside is 77,375 RECs in 2019. Based on forecasted retail sales, the Solar Set-Aside is projected to be approximately 75,930 RECs in 2020 and 76,250 RECs in 2021. The Company has fully satisfied and exceeded the minimum Solar Set-Aside requirements in the Planning Period through a combination of Power Purchase Agreements and Company-owned solar facilities, including those listed below.

- Camp Lejeune Solar Facility – 13MW, located in Onslow County, placed in service in November 2015;
- Warsaw Solar Facility – 65MW, located in Duplin County, placed in service in December 2015;
- Fayetteville Solar Facility – 23MW, located in Bladen County, placed in service in December 2015; and
- Elm City Solar Facility – 40MW, located in Wilson County, placed in service in March 2016.

Additional details with respect to the REC purchase agreements are set forth in Exhibit A.

B. SWINE WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(e), as amended by the North Carolina Utilities Commission ("NCUC") *Order Modifying the Swine and Poultry Waste Set-Aside Requirement and Providing Other Relief*, Docket No. E-100, Sub 113 (October 2018), for compliance years 2019 and 2020, at least 0.07%, and in 2021, at least 0.14%, of prior-year total retail electric energy sold in aggregate by utilities in North Carolina must be supplied by energy derived from swine waste. The Company's Swine Waste Set-Aside is estimated to be 27,081 RECs in 2019, 26,575 RECs in 2020, and 53,375 RECs in 2021.

Swine waste-to-energy compliance challenges have been numerous and varied. Three paths to the creation of swine waste-to-energy RECs have been identified, although each faces unique challenges.

1. On-farm generation

Projects consisting of digestion and generation on a single farm or tight cluster of farms often face gas production and feedstock agreement challenges, as well as interconnection difficulties. The Company understands that many farms in NC are contract growers and have only limited term agreements with the integrators. Accordingly, many contract growers are not in a position to provide a firm supply of waste sufficient to support project financing. On July 27, 2017 Governor Cooper signed into law the "Competitive Energy Solutions for North Carolina" bill or House Bill 589 ("HB 589") (SL 2017-92), which includes establishing an expedited interconnection review process for swine and poultry waste facilities that are two megawatts or less in size. This provision should help overcome some of the interconnection difficulties projects have experienced in the past.

2. Centralized digestion

This type of system would benefit farmers that cannot individually construct and operate an anaerobic digester manure handling system on their own due to the capital expense or just don't have the number of animals required to operate a digester successfully or cost effectively. Farms located close to each other could share the cost of the centrally located digester system. The centralized digester operated by an individual or private company would carry out the operation and maintenance of the digester and its mechanical systems. It would have the same advantages as on-farm digesters of odor reduction, pathogen and weed seed destruction, biogas production and a stable effluent ready to fertilize fields and crops. A downside with centralized digestion exists if the liquid swine waste has to be transported to the central site. One project has overcome this risk by co-locating the facility adjacent to a swine processing plant. The Company recognizes that NIMBY ("Not In My Back Yard") issues may scuttle some developers' plans for overcoming fuel supply and interconnection problems faced by more rural, on-farm projects.

3. Directed biogas

Directed biogas[2] reduces costs by piping isolated methane to a central area where it is cleaned up and injected into a natural gas pipeline and moved to large, efficient combined cycle plants in the place of smaller, less-efficient reciprocating engines typical of other projects. Technological advances in this field have helped drive pricing down to comparable levels of on-site generation for swine projects. The Company has worked diligently with Piedmont Natural Gas Company, Inc. ("Piedmont") and other market participants to help develop specifications for injection and contracts that developers can utilize. Continued challenges in this area include pipeline interconnection costs, gas clean-up requirements prior to injection and the general lack of physical proximity between clusters of farms and pipeline infrastructure.

The Company has entered into three contracts to purchase swine waste-derived directed biogas from projects in North Carolina. One of these projects, Optima KV, successfully interconnected

[3] "Directed Biogas" is defined as pipeline quality methane, injected into the pipeline system, and nominated to Duke Energy Progress generating facilities; this methane is biogenically derived from Swine Waste, Poultry Waste, and general Biomass sources.

with Piedmont in March 2018 and is sending biogas to DEP's Smith Energy Complex where swine RECs are being generated, and the other two projects are expected to come online in 2020. The Company continues to explore opportunities for additional directed biogas in North Carolina through discussions with developers as well as participation in a collaborative group working to deploy renewable natural gas in Eastern North Carolina.

On June 19, 2018, the NCUC issued an *Order Approving Appendix F and Establishing a Pilot Program* in Docket No. G-9, Sub 698. This Order introduces some uncertainty surrounding the future of swine and poultry waste-derived directed biogas projects, as it establishes a three-year pilot program where Piedmont will provide information to the NCUC regarding the impact of Alternative Gas[3] on its system operations and its customers. Piedmont and other Alternative Gas suppliers may apply to the Commission to participate in the pilot program; however, it must be demonstrated to the Commission that such additions will be useful in gathering the information and data sought by the Commission. At the end of the three-year period, the Commission will consider additional modifications to Appendix F, which sets forth the terms and conditions under which Piedmont will accept Alternative Gas into its system, based on the experience gained during the pilot period. Therefore, since NCUC approval is now required for any new swine or poultry-derived biogas project to be accepted into the pilot program, there's an additional level of uncertainty surrounding new swine and poultry-derived directed biogas projects coming online and the timing of these projects. These factors have presented challenges to timely project development of these resources as well as the relatively high cost that will likely be required to ultimately develop and deliver RECs from swine and poultry waste fuel.

In an effort to meet compliance with the Swine Waste Set Aside, the Company (1) continues direct negotiations for additional supplies of both in-state and out-of-state resources; (2) works diligently to understand the technological, permitting, and operational risks associated with various methods of producing qualifying swine RECs and to aid developers in overcoming those risks; when those risks cannot be overcome, the Company works with developers via contract amendments to adjust for outcomes that the developers believe are achievable based on new experience; (3) explores modifications to current biomass and set-asides contracts by working with developers to add swine waste to their fuel mix; (4) continues pursuit of swine-derived

[3] "Alternative Gas" is defined in Appendix F as gas capable of combustion in customer appliances or facilities which is similar in heat content and chemical characteristics to natural gas produced from traditional underground well sources and which is intended to act as a substitute or replacement for Natural Gas (as that term is defined in Piedmont's North Carolina Service Regulations). Alternative Gas shall include but not be limited to biogas, biomethane, and landfill gas, as well as any other type of natural gas equivalent produced or manufactured from sources other than traditional underground well sources.

directed biogas from North Carolina facilities to be directed to DEP's combined cycle plants for combustion and generation; (5) utilizes the broker market for out-of-state swine RECs available in the market; (6) engages the North Carolina Pork Council ("NCPC") in a project evaluation collaboration effort that will allow the Company and the NCPC to discuss project viability, as appropriate with respect to the Company's obligations to keep certain sensitive commercial information confidential; and (7) participates in the North Carolina Energy Policy Council Biogas Working Group.

In spite of Duke Energy Progress' active and diligent efforts to comply with its Swine Waste Set-Aside requirements, current projections indicate that DEP will not be able to comply with the swine waste set-aside in 2019, as existing contracts have not been able to reach contracted levels of production, and new contracts have not come online in the timeframe originally planned. Several swine projects are scheduled to come online over the next few years. The ability of these facilities to achieve projected delivery requirements and commercial operation milestones will determine the levels of compliance that DEP is able to meet in 2020 and 2021. The Company understands that swine waste-to-energy projects have encountered difficulties in achieving the full REC output of their contracts due to issues including local opposition to siting of the facilities, the inability to secure firm and reliable sources of swine waste feedstock from waste producers in North Carolina, difficulties securing project financing and technological challenges encountered when ramping up production. In addition, after terminating two contracts for swine waste RECs since 2017 due to failure to perform, the Company was notified by another project in January 2019 that the project will not be continuing due to failure to operate. Due to its expected non-compliance in 2019, the Company will submit a motion to the Commission for approval of a request to lower the 2019 compliance requirement and delay subsequent increases by one year.

The Company remains actively engaged in seeking additional resources and continues to make every reasonable effort to comply with the Swine Waste Set-Aside requirements. Additional details with respect to the Company's compliance efforts and REC purchase agreements are set forth in Exhibit A and the Company's semiannual progress reports, filed confidentially in Docket No. E-100, Sub 113A.

C. POULTRY WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(f), as amended by NCUC *Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief*, Docket No. E-100, Sub 113 (October 2018), for calendar year 2019, at least 700,000 MWhs, and for 2020 and 2021, at least 900,000 MWhs, or an equivalent amount of energy, shall be produced or procured each year from poultry waste, as defined per the Statute and additional clarifying Orders. As the Company's retail sales share of the State's total retail megawatt-hour sales is approximately 28%, the Company's Poultry Waste Set-Aside is estimated to be 197,318 RECs in 2019, 253,695 RECs in 2020, and 253,695 in 2021.

In an effort to meet compliance with the Poultry Waste Set-Aside, the Company (1) continues direct negotiations for additional supplies of both in-state and out-of-state resources with multiple counterparties; (2) works diligently to understand the technological, permitting, and operational risks associated with various methods of producing qualifying poultry RECs and to aid developers in overcoming those risks; when those risks cannot be overcome, the Company works with developers via contract amendments to adjust for more realistic outcomes; (3) explores leveraging current biomass contracts by working with developers to add poultry waste to their fuel mix; (4) explores adding thermal capabilities to current poultry sites to bolster REC production; (5) explores poultry-derived directed biogas at facilities located in North Carolina and directing such biogas to combined cycle plants for combustion and electric generation; (6) utilizes the broker market for out-of-state poultry RECs available in the market; and (7) participates in the North Carolina Energy Policy Council Biogas Working Group.

Duke Energy Progress is in a position to comply with its Poultry Waste Set-Aside requirement in 2019, but the Company's ability to procure sufficient volumes of RECs to meet its pro-rata share of the increased Poultry Waste Set-Aside requirements in 2020 and 2021 is dependent on the performance of poultry waste-to-energy developers under current contracts, particularly achievement of projected delivery requirements and commercial operation milestones. One new poultry facility came online in 2018, and another is expected to come online in the third quarter of 2019. However, a third is undergoing an outage to perform repairs, and three contracts for out-of-state poultry waste RECs were terminated due to failure to perform or force majeure issues. DEP's ability to comply in 2020 and 2021 is dependent on facilities producing at their contracted levels, and historical experience indicates that facilities usually experience some start-up issues and take time to reach full expected production levels. Ramping up to meet the increased compliance targets for 2020 - 2021 has been problematic because suppliers have either delayed projects or lowered the volume of RECs to be produced. The Company is, nevertheless, encouraged by the growing use of thermal poultry RECs and the proposals that it has recently received from developers.

In order for all electric suppliers to be able to meet the state-wide poultry waste set-aside requirement, the Company, along with the other North Carolina electric suppliers, will submit a motion to the Commission for approval of a request to reduce the 2019 Poultry Waste Set-Aside requirement and delay subsequent increases by one year.

The Company remains actively engaged in seeking additional resources and continues to make every reasonable effort to comply with the Poultry Waste Set-Aside requirements. Additional details with respect to the Company's compliance efforts and REC purchase agreements are set forth in Exhibit A and the Company's semiannual progress reports, filed confidentially in Docket No. E-100, Sub 113A.

D. GENERAL REQUIREMENT RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8, DEP is required to comply with its Total Obligation by submitting for retirement a total volume of RECs equivalent to 10% of prior-year retail sales in North Carolina in 2019 and, 2020, and 12.5% of prior-year retail sales in North Carolina in 2021. Based on the Company's actual retail sales in 2018, the Total Requirement is 3,868,727 RECs in 2019. Based on forecasted retail sales, the Total Requirement is projected to be approximately 3,796,476 RECs in 2020, and 4,765,605 RECs in 2021. This requirement net of the Solar, Swine Waste, and Poultry Waste Set-Aside requirements, referred to as the General Requirement, is estimated to be 3,566,953 RECs in 2019, 3,440,276 RECs in 2020, and 4,382,286 RECs in 2021. The various resource options available to the Company to meet the General Requirement are discussed below, as well as the Company's plan to meet the General Requirement with these resources. The Company has contracted for, or otherwise procured, sufficient resources to meet its General Requirement in the Planning Period. The Company submits that the actions and plans described herein represent a reasonable and prudent plan for meeting the General Requirement.

1. Use of Solar Resources for General Requirement

Duke Energy Progress plans to meet a significant portion of the General Requirement with RECs from solar facilities. Solar energy has emerged as a predominant renewable energy resource in the Southeast, and the Company views the downward trend in solar equipment and installation costs over the past several years as a positive development. As such, the Company is using solar resources to contribute to our compliance efforts beyond the Solar Set-Aside minimum threshold for NC REPS, and will continue to do so during the Planning Period.

i. Net Metering Facilities

Under the current Net Metering for Renewable Energy Facilities Rider offered by DEP (Rider NM-4B), a customer receiving electric service under a schedule other than a time-of-use schedule with demand rates shall provide any RECs to DEP at no cost. Per the NCUC's June 2018 *Order Approving Rider and Granting Waiver Request*, filed in Docket No. E-2, Sub 1106, since net metering generators are not individually metered, DEP is permitted to estimate the RECs generated by these facilities using the PVWatts Solar Calculator developed by the National Renewable Energy Laboratory. Thus, DEP will follow the calculations approved by the NCUC to estimate the number of RECs generated from net metering facilities and will use these RECs for REPS compliance.

ii. North Carolina Solar Rebate Program

North Carolina HB 589 introduced a solar rebate program, which offers incentives to residential and nonresidential customers for the installation of small customer owned or leased solar energy facilities participating in the Company's net metering tariff. The incentive is limited to 10 kilowatts alternating current ("kW AC") for residential solar installations and 100 kW AC for nonresidential solar installations. The program incentive shall be limited to 10,000 kW of installed capacity annually starting January 1, 2018 and continuing until December 31, 2022. Since all customers participating in the Solar Rebate Program must be participating in DEP's net metering tariff, DEP retains the rights to the RECs from these facilities, as described in the net metering section above. In addition, under HB 589, DEP shall be authorized to recover all reasonable and prudent costs of incentives provided to customers and program administrative costs through the REPS Rider.

2. Energy Efficiency

During the Planning Period, the Company plans to meet up to 25% of the Total Obligation with Energy Efficiency ("EE") savings in 2019 and 2020, and up to 40% of the Total Obligation with EE savings in 2021, which is the maximum allowable amount under NC Gen. Stat. § 62-133.7(b)(2)c. The Company continues to develop and offer its customers new and innovative EE programs that will deliver savings and count towards its future NC REPS requirements. The Company has attached a list of those EE measures that it plans to use toward REPS compliance, including projected impacts and a description of the measure, as Exhibit B.

3. Biomass Resources

Duke Energy Progress plans to meet a portion of the General Requirement through a variety of biomass resources, including landfill gas to energy, combined heat and power, and direct combustion of biomass fuels. The Company is purchasing RECs from multiple biomass facilities in the Carolinas, including landfill gas to energy facilities and biomass-fueled combined heat and power facilities, all of which qualify as renewable energy facilities. Please see Exhibit A for more information on each of these contracts.

Duke Energy Progress notes, however, that reliance on direct-combustion biomass remains limited in long-term planning horizons, in part due to continued uncertainties around the developable potential of such resources in the Carolinas and the projected availability of more cost-effective forms of renewable resources.

4. Hydroelectric Power

Duke Energy Progress plans to use hydroelectric power from hydroelectric generation suppliers whose facilities have received Qualifying Facility (QF or QF Hydro) status. RECs from QF Hydro facilities will be used towards the General Requirements of Duke Energy Progress' retail customers. Please see Exhibit A for more information on these contracts.

5. Wind

Duke Energy Progress considers wind a potential viable option to support increased diversity of the renewables portfolio and potentially long-term general compliance needs. While the Company may rely upon wind resources for future REPS compliance, the extent and timing will depend on deliverability, policy changes and market prices. Additional opportunities may exist to transmit wind energy from out of state regions where wind is more prevalent into the Carolinas.

6. Competitive Procurement of Renewable Energy ("CPRE")

North Carolina HB 589 introduced a competitive procurement process for adding 2,660 MW (subject to adjustment) of additional renewable energy and capacity in the Carolinas, with proposals issued over a 45-month period beginning on February 21, 2018, when the NCUC approved the CPRE Program. Renewable energy facilities eligible to participate in the CPRE solicitation(s) include those facilities that use renewable energy resources identified in G. S. § 62-133.8(a)(8), the REPS statute. DEP plans to use the RECs acquired through the CPRE RFP solicitations as needed for its future REPS compliance requirements and has therefore included the planned MW allocation and timeline in its REPS compliance planning process. Please see the CPRE Program Plan, which is included as Attachment II to this IRP, for additional information.

E. SUMMARY OF RENEWABLE RESOURCES

The Company has evaluated, procured, and/or developed a variety of types of renewable energy and energy efficiency resources to meet its NC REPS requirements within the compliance Planning Period. As noted above, several risks and uncertainties exist across the various types of resources and the associated parameters of the NC REPS requirements. The Company continues to carefully monitor opportunities and unexpected developments across all facets of its compliance requirements.

Duke Energy Progress submits that it has crafted a prudent, reasonable plan with a diversified balance of renewable resources that will allow the Company to comply with its NC REPS obligation over the Planning Period.

IV. COST IMPLICATIONS OF REPS COMPLIANCE PLAN

A. CURRENT AND PROJECTED AVOIDED COST RATES

The Current Avoided Energy and Capacity costs included in the table below represent key data elements used to determine the PP (NC) tariff rates filed for DEP in Docket No. E-100, Sub 158.

The "Energy" columns reflect the cost of fuel and variable O&M per kwh embedded in the filed tariff energy rates. The "Capacity" column is based on the installed cost and capacity rating of a combustion turbine unit as reflected in the filed capacity rates.

The Projected Avoided Energy Costs included below reflect updated estimates of the same data elements provided with the current costs. The capacity cost shown is a placeholder based on the current avoided cost filing.

The avoided costs contained herein are subject to change, including (but not limited to) fuel price projections, variable O&M estimates, turbine costs and equipment capability.

Table 2: Current and Projected Avoided Cost Rates Table

[BEGIN CONFIDENTIAL]

[redacted]

[END CONFIDENTIAL]

B. PROJECTED TOTAL NORTH CAROLINA RETAIL SALES AND YEAR-END NUMBER OF CUSTOMER ACCOUNTS BY CLASS

Table 3: Retail Sales

	2018 Actual	2019 Forecast	2020 Forecast	2021 Forecast
Retail MWh Sales	38,687,268	37,964,762	38,124,840	38,208,829

The MWh sales reported above are those applicable to REPS compliance years 2019-2022, and represent actual MWh sales for 2018, and projected MWh sales for 2019-2021.

Table 4: Retail Year-end Number of Customer Accounts

	2018 (Actual)	2019 (Projected)	2020 (Projected)	2021 (Projected)
Residential Accts	1,210,740	1,220,728	1,233,140	1,246,567
General Accts	195,967	198,344	199,900	199,936
Industrial Accts	1,810	1,800	1,790	1,777

The number of accounts reported above are those applicable to the cost caps for compliance years 2019-2022, and represent the actual number of REPS accounts for year-end 2018, and the projected number of REPS accounts for year-end 2019–2021.

C. PROJECTED ANNUAL COST CAP COMPARISON OF TOTAL AND INCREMENTAL COSTS, REPS RIDER AND FUEL COST IMPACT

Projected compliance costs for the Planning Period are presented in the cost tables below by calendar year. The cost cap data is based on the number of accounts as reported above.

Table 5: Projected Annual Cost Caps and Fuel Related Cost Impact

	2019	2020	2021
Total projected REPS compliance costs	$ 244,072,357	$ 252,126,388	$ 233,984,530
Recovered through the Fuel Rider	$ 201,068,979	$ 203,028,452	$ 183,187,701
Total incremental costs (REPS Rider)	$ 43,003,378	$ 49,097,936	$ 50,796,828
Total including Regulatory Fee	$ 43,063,667	$ 49,166,769	$ 50,868,043
Projected Annual Cost Caps (REPS Rider)	$ 63,895,030	$ 64,511,427	$ 65,069,892

EXHIBIT A

Duke Energy Progress, LLC's 2019 REPS Compliance Plan
Duke Energy Progress' Renewable Resource Procurement from 3rd Parties
(signed contracts as of June 30, 2019)

[BEGIN CONFIDENTIAL]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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[END CONFIDENTIAL]

EXHIBIT B

Duke Energy Progress, LLC's 2019 REPS Compliance Plan
Duke Energy Progress, LLC's EE Programs and Projected REPS Impacts

Forecast of Annual Energy Efficiency Impacts for the REPS Compliance Planning Period 2019-2021 (kWh)			
Residential Programs	**2019**	**2020**	**2021**
Energy Efficient Appliances and Devices	21,361,415	21,046,461	18,501,587
Energy Education Program for Schools	3,781,055	4,083,659	4,042,979
Multi-Family Energy Efficiency	13,509,474	13,888,978	13,194,824
My Home Energy Report	99,252,843	98,147,032	103,767,203
Neighborhood Energy Saver	1,922,046	1,197,596	1,197,596
Residential Energy Assessments	5,700,445	10,905,498	11,817,810
Residential New Construction	4,963,168	2,187,745	2,297,132
Residential Smart $aver® Energy Efficiency	5,355,774	4,913,142	4,922,903
Low Income Weatherization Pay for Performance Pilot	8,714	0	0
Sub Total	**155,854,935**	**156,370,110**	**159,742,034**
Non-Residential Programs	**2019**	**2020**	**2021**
Non-Residential Smart $aver® EE Products & Assessment	67,632,538	91,015,448	99,287,245
Non-Residential Smart $aver® Performance Incentive	325,540	3,120,818	4,340,451
Small Business Energy Saver	35,886,412	33,358,290	31,676,953
EnergyWise for Business	49,099	46,746	46,746
Sub Total	**103,893,589**	**127,541,302**	**135,351,395**
Combined Residential and Non-Residential Programs	**2019**	**2020**	**2021**
Energy Efficient Lighting	69,170,415	32,724,972	24,052,824
Sub Total	**69,170,415**	**32,724,972**	**24,052,824**
Total	**328,918,938**	**316,636,384**	**319,146,253**

DEP Energy Efficiency Programs

DEP uses the following energy efficiency (EE) programs in its IRP to efficiently and cost-effectively alter customer demands and reduce the long-run supply costs for energy and peak demand.

Residential EE Programs

- Energy Efficient Appliances and Devices
- Energy Efficiency Education
- Multi-Family Energy Efficiency
- My Home Energy Report
- Neighborhood Energy Saver
- Residential Energy Assessments
- Residential New Construction
- Residential Smart $aver® Energy Efficiency
- Low Income Weatherization Pay for Performance Pilot

Non-Residential EE Programs

- Non-Residential Smart $aver® Energy Efficiency Products and Assessment
- Non-Residential Smart $aver® Performance Incentive
- Small Business Energy Saver
- EnergyWise for Business

Combined Residential/Non-Residential EE Programs

- Energy Efficient Lighting

Residential EE Programs

Energy Efficient Appliances and Devices Program

The Energy Efficient Appliances and Devices Program is a new program that combines DEP's previous "Save Energy and Water Kit" with a variety of high efficiency products available through the Company's Online Savings Store, including but not limited to Air Purifiers, Dehumidifiers and LED Fixtures. The Save Energy and Water kit offers low flow water fixtures and insulating pipe tape to residential single-family homeowners with electric water heaters. Program participants are eligible for one kit shipped free of charge to their home. Kits are available in two sizes for homes with one or more full bathrooms and contain varying quantities of shower heads, bathroom aerators, kitchen aerator and insulating pipe tape.

Energy Efficiency Education Program

The Energy Efficiency Education Program is an energy efficiency program available to students in grades K-12 enrolled in public and private schools who reside in households served by Duke Energy Progress. The Program provides principals and teachers with an innovative curriculum that educates students about energy, resources, how energy and resources are related, ways energy is wasted and how to be more energy efficient. The centerpiece of the current curriculum is a live theatrical production focused on concepts such as energy, renewable fuels and energy efficiency performed by two professional actors.

Following the performance, students are encouraged to complete a home energy survey with their family to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption and is available at no cost to student households at participating schools. Teachers receive supportive educational material for classroom and student take home assignments. The workbooks, assignments and activities meet state curriculum requirements.

Multi-Family Energy Efficiency Program

The Multi-Family Energy Efficiency Program provides energy efficient lighting and water measures to reduce energy usage in eligible multi-family properties. The Program allows Duke Energy Progress to target multi-family apartment complexes with an alternative delivery channel. The measures are installed in permanent fixtures by the program administrator or the property management staff. The program offers LEDs including A-Line, Globes and Candelabra bulbs and energy efficient water measures such as bath and kitchen faucet aerators, water saving showerheads and pipe wrap.

My Home Energy Report Program

The My Home Energy Report (MyHER) Program provides residential customers with a comparative usage report that engages and motivates customers by comparing energy use to similar residences in the same geographical area based upon the age, size and heating source of the home. The report also empowers customers to become more efficient by providing them with specific energy saving recommendations to improve the efficiency of their homes. The actionable energy savings tips, as well as measure-specific coupons, rebates or other Company program offers that may be included in a customer’s report are based on that specific customer’s energy profile.

The program includes an interactive online portal that allows customers to further engage and learn more about their energy use and opportunities to reduce usage. Electronic versions of the My Home

Energy Report are sent to customers enrolled on the portal. In addition, all MyHER customers with an email address on file with the Company receive an electronic version of their report monthly.

Neighborhood Energy Saver (Low-Income) Program

DEP's Neighborhood Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within the households of income qualifying residential customers. The Program utilizes a Company-selected vendor to: (1) provide an on-site energy assessment of the residence to identify appropriate energy conservation measures, (2) install a comprehensive package of energy conservation measures at no cost to the customer, and (3) provide one-on-one energy education. Program measures address end-uses in lighting, refrigeration, air infiltration and HVAC applications.

Program participants receive a free energy assessment of their home followed by a recommendation of energy efficiency measures to be installed at no cost to the resident. A team of energy technicians will install applicable measures and provide one-on-one energy education about each measure emphasizing the benefit of each and recommending behavioral changes to reduce and control energy usage.

Residential Energy Assessments Program

The Residential Energy Assessments Program provides eligible customers with a free in-home energy assessment, performed by a Building Performance Institute ("BPI") certified energy specialist and designed to help customers reduce energy usage and save money. The BPI certified energy specialist completes a 60 to 90 minute walk-through assessment of a customer's home and analyzes energy usage to identify energy savings opportunities. The energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The customer also receives a customized report that identifies actions the customer can take to increase their home's efficiency.

In addition to a customized report, customers receive an energy efficiency starter kit with a variety of measures that can be directly installed by the energy specialist. The kit includes measures such as energy efficiency lighting, low flow shower head, low flow faucet aerators, outlet/switch gaskets, weather stripping and an energy saving tips booklet.

Residential New Construction Program

The Residential New Construction Program provides incentives for new single family and multi-family residential dwellings (projects of three stories and less) that fall within the 2012 North Carolina

Residential Building Code to meet or exceed the 2012 North Carolina Energy Conservation Code High Efficiency Residential Option ("HERO"). If a builder or developer constructing to the HERO standard elects to participate, the Program offers the homebuyer an incentive guaranteeing the heating and cooling consumption of the dwelling's total annual energy costs. Additionally, the Program incents the installation of high-efficiency heating, ventilating and air conditioning ("HVAC") and heat pump water heating ("HPWH") equipment in new single family, manufactured, and multi-family residential housing units.

New construction represents a unique opportunity for capturing cost effective EE savings by encouraging the investment in energy efficiency features that would otherwise be impractical or more costly to install at a later time.

Residential Smart $aver® Energy Efficiency Program

The Residential Smart $aver® EE Program offers DEP customers a variety of energy conservation measures designed to increase energy efficiency in existing residential dwellings. The Program utilizes a network of participating contractors to encourage the installation of: (1) high efficiency central air conditioning (AC) and heat pump systems with optional add on measures such as Quality Installation and Smart Thermostats, (2) attic insulation and sealing, (3) heat pump water heaters, and (4) high efficiency variable speed pool pumps.

The prescriptive menu of energy efficiency measures provided by the program allows customers the opportunity to participate based on the needs and characteristics of their individual homes. A referral channel provides free, trusted referrals to customers seeking reliable, qualified contractors for their energy saving home improvement needs.

Low Income Weatherization Pay for Performance Pilot

The Low Income Weatherization Pay for Performance Pilot was designed to provide payments, based on kilowatt-hour ("kWh") savings, to local non-profit organizations that provide weatherization and other energy saving upgrades to residential low-income households. These payments are intended to assist the organizations in expanding the number of customers they serve through their programs. The Pilot is also intended to leverage funding from other third-party sources. The Company is proposing that this Pilot remain in place for thirty-six months and begin in Buncombe County, North Carolina.

Non-Residential EE Programs

Non-Residential Smart $aver® Energy Efficient Products and Assessment Program

The Non-Residential Smart $aver® Energy Efficient Products and Assessment Program provides incentives to DEP commercial and industrial customers to install high efficiency equipment in applications involving new construction and retrofits and to replace failed equipment.

Commercial and industrial customers can have significant energy consumption but may lack knowledge and understanding of the benefits of high efficiency alternatives. The Program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the Program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products.

The program provides incentives through prescriptive measures, custom measures and technical assistance.

- ***Prescriptive Measures*****:** Customers receive incentive payments after the installation of certain high efficiency equipment found on the list of pre-defined prescriptive measures, including lighting; heating, ventilating and air conditioning equipment; and refrigeration measures and equipment.
- ***Custom Measures*****:** Custom measures are designed for customers with electrical energy saving projects involving more complicated or alternative technologies, whole-building projects, or those measures not included in the Prescriptive measure list. The intent of the Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company's technical or financial assistance. Unlike the Prescriptive portion of the program, all Custom measure incentives require pre-approval prior to the project implementation.
- ***Energy Assessments and Design Assistance*****:** Incentives are available to assist customers with energy studies such as energy audits, retro commissioning, and system-specific energy audits for existing buildings and with design assistance such as energy modeling for new construction. Customers may use a contracted Duke Energy vendor to perform the work or they may select their own vendor. Additionally, the Program assists customers who identify measures that may qualify for Smart $aver Incentives with their applications. Pre-approval is required.

Non-Residential Smart $aver® Performance Incentive Program

The Non-Residential Smart $aver® Energy Efficient Products and Assessment Program offers financial assistance to qualifying commercial, industrial and institutional customers to enhance their ability to adopt and install cost-effective electrical energy efficiency projects. The Program encourages the installation of new high efficiency equipment in new and existing nonresidential establishments as well as efficiency-related repair activities designed to maintain or enhance efficiency levels in currently installed equipment. Incentive payments are provided to offset a portion of the higher cost of energy efficient installations that are not eligible under either the Smart $aver® Prescriptive or Custom programs. The Program requires pre-approval prior to project initiation.

The types of projects covered by the Program include projects with some combination of unknown building conditions or system constraints, or uncertain operating, occupancy, or production schedules. The intent of the Program is to broaden participation in non-residential efficiency programs by being able to provide incentives for projects that previously were deemed too unpredictable to calculate an acceptably accurate savings amount, and therefore ineligible for incentives. This Program provides a platform to understand new technologies better. Only projects that demonstrate that they clearly reduce electrical consumption and/or demand are eligible for incentives.

The key difference between this program and the custom component of the Non-Residential Smart $aver® Energy Efficient Products and Assessment program is that Performance Incentive participants get paid based on actual measure performance, and involves the following two-step process.

- Incentive #1: For the portion of savings that are expected to be achieved with a high degree of confidence, an initial incentive is paid once the installation is complete.
- Incentive #2: After actual performance is measured and verified, the performance-based part of the incentive is paid. The amount of the payout is tied directly to the savings achieved by the measures.

Small Business Energy Saver Program

The Small Business Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within qualifying non-residential customer facilities. Program measures address major end-uses in lighting, refrigeration, and HVAC applications. The program is available to existing non-residential customers that are not opted-out of the Company's EE/DSM rider and have an average annual demand of 180 kW or less per active account.

Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from Duke Energy Progress. The customer makes the final determination of which measures will be installed after receiving the results of the energy assessment. The Company-authorized vendor schedules the installation of the energy efficiency measures at a convenient time for the customer, and electrical subcontractors perform the work.

EnergyWise for Business Program

EnergyWise for Business is both an energy efficiency and demand response ("DR") program for non-residential customers. Program participants can choose between a Wi-Fi thermostat or load control switch that will be professionally installed for free on each air conditioning or heat pump unit. The Wi-Fi thermostat option provides both EE and DR savings opportunities, while the load control switch option only offers DR savings capability. Only the EE component of the program is assumed to provide energy savings.

- ***EE Component***
  Participants choosing the thermostat will be given access to a portal that will allow them to set schedules, adjust the temperature set points, and receive energy conservation tips and communications from DEC. In addition to the portal access, participants will also receive conservation period notifications, so they can make adjustments to their schedules or notify their employees of the upcoming conservation periods.

- ***DR Component***
  The DR portion of the program allows DEC to reduce the operation of participants' air conditioning units to mitigate system capacity constraints and improve reliability of the power grid. In addition to equipment choice, participants can also select the cycling level they prefer (i.e., a 30%, 50% or 75% reduction of the normal on/off cycle of the unit). During a conservation period, DEC will send a signal to the thermostat or switch to reduce the on time of the unit by the cycling percentage selected by the participant. Participating customers will receive a $50 annual bill credit for each unit at the 30% cycling level, $85 for 50% cycling, or $135 for 75% cycling. Participants that have a heat pump unit with electric resistance emergency/back up heat and choose the thermostat can also participate in a winter option that allows control of the emergency/back up heat at 100% cycling for an additional $25 annual bill credit. Participants will also be allowed to override two conservation periods per year.

Combined Residential/Non-Residential Customer Programs

Energy Efficient Lighting Program

The Energy Efficient Lighting Program partners with lighting manufacturers and retailers across North and South Carolina to provide marked-down prices at the register to DEP customers purchasing energy efficient lighting products. Starting in 2017, the Program removed CFLs and only offers LEDs and energy-efficient fixtures.

As the program enters its eighth year, the DEP Energy Efficient Lighting Program will continue to encourage customers to adopt energy efficient lighting through incentives on a wide range of energy efficient lighting products. Customer education is imperative to ensure customers are purchasing the right bulb for the application in order to obtain high satisfaction with lighting products and subsequent purchases.

ATTACHMENT II:

The Duke Energy Progress Competitive Procurement of Renewable Energy (CPRE) Plan

Duke Energy Carolinas, LLC's & Duke Energy Progress, LLC's Competitive Procurement of Renewable Energy (CPRE) Program Plan Update September 1, 2019

Introduction

In accordance with North Carolina Utilities Commission ("NCUC" or the "Commission") Rule R8-71(g), Duke Energy Carolinas, LLC ("DEC"), and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or "the Companies") provide this update to the Program Plan for the Companies' Competitive Procurement of Renewable Energy ("CPRE") Program ("Program").

The CPRE Program is being implemented pursuant to N.C. Gen. Stat. § 62-110.8, as enacted by North Carolina Session Law 2017-192 ("HB 589"). This updated Program Plan presents the Companies' current plans for implementing the CPRE Program. The following provides a brief summary of significant events since the Program Plan was filed on September 1, 2018, in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, as part of the annual Integrated Resource Plan filing.

On January 9, 2018, the NCUC approved Accion, Inc. to act as the independent administrator ("IA") of the CPRE Program by its *Order Approving the Independent Administrator of the CPRE Program* in Docket No. E-100, Sub 151.

On February 21, 2018, the NCUC issued its *Order Modifying and Approving Joint CPRE Program*. The Order directed certain modifications to the initial Program Guidelines, which were incorporated into the CPRE Tranche 1 RFP documents that served as the Companies' Guidelines for purposes of the Tranche 1 RFP.[1]

On June 25, 2018, the NCUC issued its *Order Denying Joint Motion, Approving Pro Forma PPA, and Providing Other Relief*, specifically approving Duke Energy's final Tranche 1 PPA. The Companies then issued the final RFP to the IA on July 5, 2018, as required by section (f)(1)(vi).

On July 10, 2018, the IA issued the final Tranche 1 RFP documents opening the RFP to bids. The Tranche 1 submission period closed on October 9, 2018 and winning bids were announced on April 9, 2019

On July 2, 2019, the NCUC issued its *Order Modifying and Accepting CPRE Program Plan* establishing a timeline for Tranche 2 without significant departure from the Tranche 1 framework

[1] As explained in the Companies' letter filed on May 11, 2018, the Tranche 1 RFP summary document constituted the updated CPRE Program Guidelines as required under Rule R8-71(f)(1)(ii) and conformed with the requirement of the Commission's Program Order to modify the initial CPRE Program Guidelines.

On July 8, 2019 the contracting period for Tranche 1 closed.

The acceptance of proposals for Tranche 2 shall open on October 15, 2019 and close on December 15, 2019 subject to adjustment depending on the timing of the issuance of a final order in the Sub 158 Proceeding.

1. CPRE Compliance Plan

1.1. Implementation of Aggregate CPRE Program requirements

Under N.C. Gen. Stat. § 62-110.8(a), the Companies are responsible for procuring renewable energy and capacity through a competitive procurement program in a manner that allows the Companies to continue to reliably and cost-effectively serve customers' future energy needs. The Companies are required to procure energy and capacity from renewable energy facilities in the aggregate amount of 2,660 MW ("Initial Targeted Amount") through requests for proposals ("RFPs"). The CPRE RFPs must be reasonably allocated over a term of 45 months beginning with the Commission approval of the CPRE Program on February 21, 2018.

Renewable energy facilities eligible to participate in the CPRE RFPs include those facilities that use renewable energy resources identified in N.C. Gen. Stat. § 62-133.8(a)(8) but are limited to a nameplate capacity rating of 80 MW or less that are placed in service after the date of the electric public utility's initial competitive procurement. The renewable energy facilities to be developed or acquired by the Companies or procured from a third party through a power purchase agreement under the CPRE Program must also deliver to the Companies all of the environmental and renewable attributes associated with the power.

The Companies can satisfy the CPRE Program requirements through any of the following:

(i) Renewable energy facilities to be acquired from third parties and subsequently owned and operated by the Companies;

(ii) Self-developed renewable energy facilities to be constructed, owned, and operated by the Companies up to a 30% cap identified in N.C. Gen. Stat. § 62-110.8(b)(4)[2]; or

(iii) The purchase of renewable energy, capacity, and environmental and renewable attributes from renewable energy facilities owned and operated by third parties that commit to allow the Companies rights to dispatch, operate, and control the solicited renewable energy facilities in the same manner as the Companies' own generating resources.

[2] The Companies voluntarily agree to recognize both Self-developed Proposals, as well as third-party PPA Proposals offered by any Duke Energy affiliate bid into the CPRE RFP Solicitation(s), as being subject to the 30% cap.

Per N.C. Gen. Stat. § 62-110.8(b), electric public utilities may jointly or individually implement these aggregate competitive procurement requirements. The Companies plan to continue to jointly implement the CPRE Program.

1.2. Projected Uncontrolled Renewable Energy Generating Capacity

N.C. Gen. Stat. § 62-110.8(b)(1) provides that if prior to the end of the initial 45-month competitive procurement period, the Companies have executed PPAs and interconnection agreements for renewable energy and capacity within their Balancing Authorities ("BAs") that are not subject to economic dispatch or curtailment and were not procured pursuant to N.C. Gen. Stat. § 62-159.2 ("Transition MW Projects") having an aggregate capacity in excess of 3,500 MW, the Commission shall reduce the competitive procurement aggregate amount by the amount of such exceedance. If the aggregate capacity of such Transition MW Projects is less than 3,500 MW at the end of the initial 45-month competitive procurement period, the Commission shall require the Companies to conduct an additional competitive procurement in the amount of such deficit.

As of the end of July 2019, approximately 3,665MW of Transition MW Projects are installed or under construction, creating an excess of approximately 165 MW. Note, at time the initial Program Plan was filed in November, 2017, approximately 2,900 MW of Transition MW Projects was installed or under construction.

Error! Reference source not found. specifies additional projects that may contribute to the Transition MWs but do not have both a signed IA and a signed PPA. The range was derived based on applying a materialization factor to the projects that have an established LEO to sell to the Companies. This includes many MW from certain settlement agreements that enabled certain projects to retain the rights to previously established LEO's from older avoided cost dockets. This increase in the number of MW that have reached settlement agreements is the primary cause of the significant increase in the projected total number of Transition MWs. As previously noted, a project must have executed a PPA and an Interconnection Agreement prior to the end of the CPRE Procurement Period in order to qualify as a Transition MW. Given the uncertainty about the number of projects that will satisfy the statutory criteria, the Companies are currently projecting a range for total Transition MW of 4,300 to 4,900. Note that some percentage of these potential Transition MW may not be counted as Transition MW due to delays in the Interconnection process, but may still be constructed after the CPRE Program has concluded.

Figure 1. Potential Transition MW's

Consolidated Transition Summary	DEC	DEP	Total
Solar Connected	676	2,407	**3,083**
Non-Solar Connected	83	96	**179**
Additional Solar with a PPA/IA	91	312	**403**
Sub-Total	**850**	**2,815**	**3,665**
Potential Additional MW's*	350 to 480	265 to 780	**615 to 1260**
Total	**~1,200 to 1,300**	**~3,100 to 3,600**	**~4,300 to 4,900**

*Includes projects with a signed PPA, but no IA as well as projects with a LEO but no PPA. The upper end of the range is based on Duke's estimates of materialization rates for these projects. Lower end of range is a more conservative view of materialization rates and intended to bound potential outcomes.

The updated estimate for the Transition MWs shows that the Companies procurement through CPRE will be less than the initial 2,660 MW target. Note that the Companies' projections have assumed that there will be no re-allocation of capacity to the CPRE program for unsubscribed MW under G.S. 62-159.2 (Renewable Energy Procurement for Major Military Installations, Public Universities and Other Large Customers).

1.3. Tranche 1 Results

On April 9, 2019 the Independent Administrator completed the selection process and delivered final status notifications to each Market Participant in Tranche 1 of the CPRE RFP. The contracting period for Tranche 1 concluded on July 8, 2019. Below is a summary of results for DEC and DEP:

<u>600 MW DEC Request</u>

- 58 proposals ranging from 7 to 80 MW-AC totaling 2,733 MW
    - Median proposal was 50 MW
- All proposals were solar, 3 included storage
- 1,416 MW proposed in NC, 1,317 MW in SC
- 11 projects were contracted totaling 465 MW
    - 9 in NC totaling 415 MW; 2 in SC totaling 50 MW
    - 2 projects included battery energy storage

  - 2 DEC utility-owned projects selected (94 MW) and 3 Duke affiliate (Duke Energy Renewables "DER") projects selected (95 MW)
  - Average all in delivered price ~$37.75; estimated savings versus avoided cost of $247.8 million over 20 year term

<u>80 MW DEP Request</u>

- 20 proposals ranging from 7 to 80 MW-AC totaling 1,231 MW
  - Median proposal was 75 MW
- All proposals were solar, 1 included storage
- 617 MW proposed in NC, 614 MW in SC
- 2 projects were contracted totaling 87 MW
  - 1 in NC totaling 80 MW; 1 in SC totaling 7 MW
  - Average all in delivered price ~$38.31; estimated savings versus avoided cost of $33.17 million over 20-year term

1.4. Planned RFP Solicitations

1.5. Allocations of Resources

As prescribed by N.C. Gen. Stat. § 62-110.8(c), the Companies have the authority to determine the location and allocated amount of each CPRE RFP, as well as the CPRE Total Obligation to be procured within their respective service territories taking into consideration:

> (i) the State's desire to foster diversification of siting of renewable energy resources throughout the State;
> (ii) the efficiency and reliability impacts of siting of additional renewable energy facilities in each public utility's service territory; and
> (iii) the potential for increased delivered cost to a public utility's customers as a result of siting additional renewable energy facilities in a public utility's service territory, including additional costs of ancillary services that may be imposed due to the operational or locational characteristics of a specific renewable energy resource technology, such as non-dispatchability, unreliability of availability, and creation or exacerbation of system congestion that may increase redispatch costs.

The Companies are currently planning to allocate and procure the CPRE Program Total Obligation through the Tranche 1-3 CPRE RFP Solicitations, discussed above, by soliciting the amounts of Renewable Energy Resource capacity shown in **Error! Reference source not found.**. The total solicitation is impacted by the amount of Transition MWs. The calculation of potential additional Transition MWs is dynamic and uncertain so Figure 2 shows a range of potential solicitations for Tranche 3.

Figure 2. Planned CPRE Solicitation Targets by Tranche

	DEC (Approximate MW)	**DEP (Approximate MW)**
Tranche 1 - Contracted	**465**	**86**
Tranche 2 - Issued	600	80
Tranche 3	0 to 570*	0 to 80*
Total	1,065 to 1635	166 to 246

*If all potential additional Transition MWs materialize then Tranche 3 may not be necessary. The upper end of the range represents a low materialization estimate for potential additional transition MWs

This allocation reflects the same consideration that informed the Companies' initial allocation of MW as described in the Companies' initial Program Plan. The Companies' system operational experience integrating additional renewable energy resource capacity into the DEC and DEP BAs and distribution and transmission system operations, will inform the manner in which future CPRE Program Plans propose to allocate the remaining CPRE Program Procurement between the DEC and DEP service territories. As a result, the planned CPRE solicitation targets for DEC and DEP shown in Figure 2 are subject to change.

The Companies took into consideration the following factors prescribed by N.C. Gen. Stat. § 62-110.8(c) when establishing the allocation of MWs to DEC an DEP:

<u>(i) Fostering Diversification of Siting of Additional Renewable Energy Resources</u>[3]
The Companies' primary objective is to procure cost-effective renewable energy resource facilities that allow DEC and DEP to reliably dispatch, operate, and control the facilities in the same manner as utility-owned generating resources, while diversifying the siting of renewable energy facilities across the Companies' BAs. The CPRE Program recognizes the State's desire to foster diversification of additional renewable energy facilities and to more effectively integrate additional

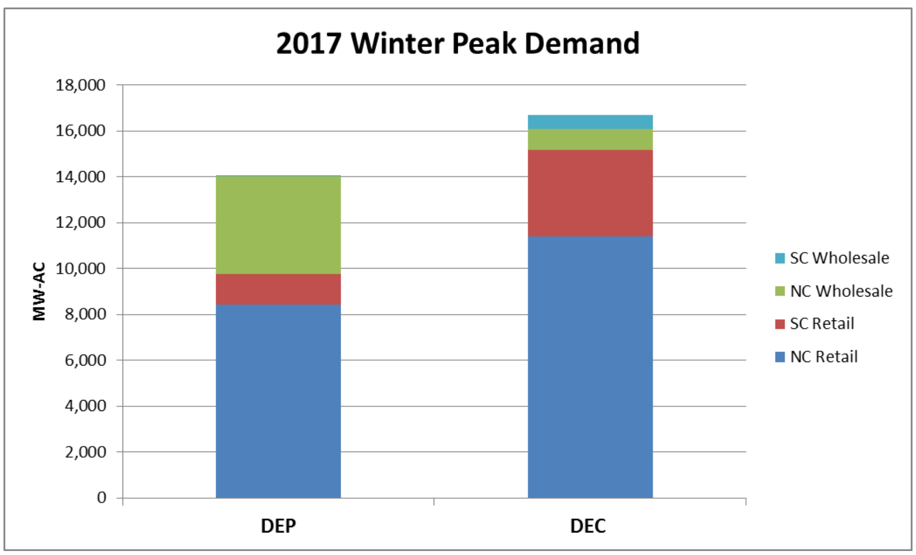
[3] All Proposals bid into the Tranche 1 CPRE RFP Solicitation were utility-scale solar generating facilities. The Companies have primarily analyzed the need for additional diversification of siting for utility-scale solar resources. The Companies may consider the need to analyze diversification of siting of other renewable energy resource technologies in future CPRE Program Plans, depending on interest from other technologies in the Tranche 2 CPRE RFP Solicitation.

utility-scale solar and other resources into the Companies' system operations. The Companies have developed the CPRE Program Plan allocations to meet the goals of diversifying the locations and avoiding inefficient or unreliable over-concentration of additional renewable energy facilities, and improving planning for the siting of additional facilities across the Companies' BAs and within their respective service territories throughout North Carolina and South Carolina.

Adding CPRE Utility-Scale Solar in DEC will Foster Improved Diversification as Existing Utility-Scale Solar is Concentrated in DEP

DEP is a smaller BA than DEC. In 2017, the DEC winter peak load was approximately 16,700 MW in comparison to the DEP winter peak load of approximately 14,200 MW, as seen in Figure 3.

Figure 3. 2017 Peak Load by BA[4]



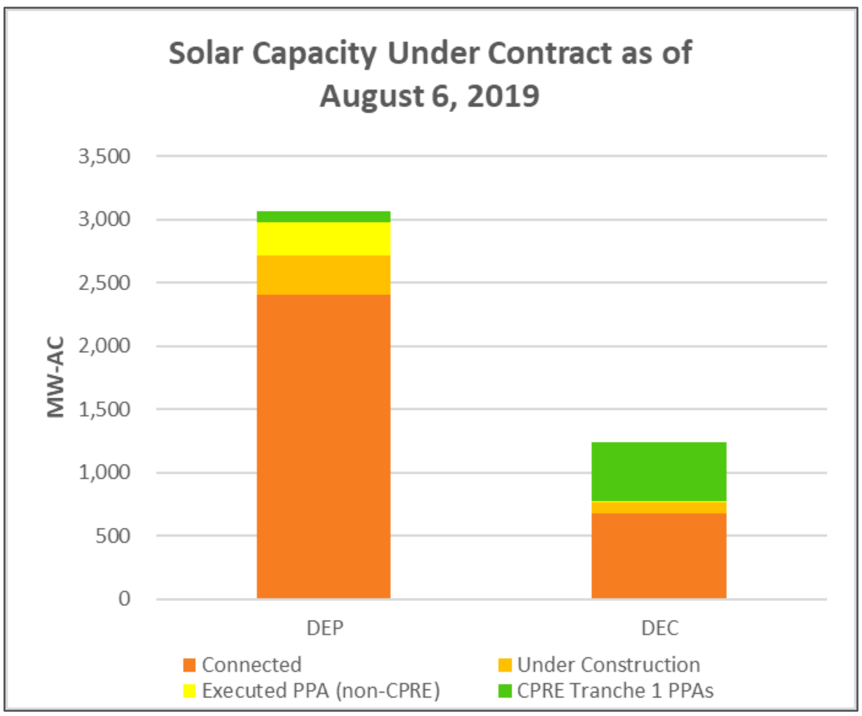
While DEP is a smaller BA, the Companies have experienced a significantly greater concentration of utility-scale solar development in DEP compared to DEC. As of August 6, 2019, the Companies are contractually obligated to purchase from third-party owners approximately 3,748 MW of solar under REPS and legacy PURPA contracts, in addition to 225 MW of utility-owned solar, and excluding CPRE Tranche 1 contracts. As shown in **Error! Reference source not found.**, this utility-scale solar growth has been especially significant in DEP, where approximately 80% of the total non-CPRE MWs under contract are located.

[4] Peak demand values shown in **Error! Reference source not found.** are for 2017 winter peak production demand allocators from the 2018 Cost of Service study.

If the total solar energy capacity in DEC and DEP were to be spread across the service territories based on their respective utilities' peak load, the DEC service territory should have approximately 60% of the solar energy capacity rather than its current ~20%.

To achieve the goals of diversifying the siting of renewable energy facilities throughout the Companies' service territories in a manner that promotes efficiency, reliability, and mitigates cost impact on the Companies' customers, the Companies' Tranche 1 RFP, as well as the planned total CPRE Program procurement allocation (provided in **Error! Reference source not found.**), seeks proposals primarily in the DEC service territory in North Carolina and South Carolina. If the Transition MW proceed as expected and the CPRE targets are met with primarily or all solar capacity, the resulting composition is a more balanced split of solar capacity between DEC and DEP.

Figure 4. Solar Capacity under Contract as of August 6, 2019



<u>(ii) System Operations and Reliability Impacts</u>

In developing the proposed allocation of CPRE Program resources between the DEP and DEC service territories, the Companies also considered the operational efficiency and reliability impacts of siting additional renewable energy facilities within the DEC and DEP BAs. The highly concentrated levels of uncontrolled legacy PURPA contract solar that are currently installed, under construction, and under contract to be installed in the DEP BA has caused the Companies to primarily allocate the planned CPRE Program procurement towards the larger DEC BA, where significantly less utility-scale solar is installed today. The Companies' planned CPRE Program allocation between the DEC and DEP BAs is also supported by the growing levels of operationally excess energy and increasingly steep ramping requirements in the DEP BA.

Independent BA System Operations Basics

DEP and DEC are each independent BAs responsible for maintaining compliance with North American Electric Reliability Corporation ("NERC") reliability standards to ensure reliable operations on their systems, as well as managing power flows between their systems and other utility systems. DEP and DEC must independently control their respective network resources to meet system loads and maintain compliance with reliability regulations within their separate BAs. Each BA must independently comply with NERC's mandatory Reliability Standards on a unified basis across the entire BA that encompasses territory in both North Carolina and South Carolina.

DEP's and DEC's system operators independently plan and operate each BA's generating resources to reliably meet increasing and decreasing intra-day and day-ahead system loads within reliability and generating unit availability and operating limits. These reliability requirements place the burden on the DEP and DEC BAs to balance generation resources (including new dispatchable CPRE renewable energy facilities), unscheduled energy injections (existing QF and renewable energy contracts), and load demand in real-time, all of which is essential to providing reliable firm native load service. To meet this objective, DEP and DEC must independently plan for and maintain a "Security Constrained Unit Commitment" of baseload and load-following assets, regulation resources, operating reserves, and spinning reserves, working together to ensure real-time frequency support and balancing.

The Companies' baseload[5] and must-run regulation units[6] represent the foundational resources necessary to meet load requirements, provide reliability, and meet mandatory NERC Reliability Standards. In the aggregate, the operationally constrained minimum reliable output of these generators represents the Lowest Reliability Operating Level ("LROL") of the BA's Security Constrained Unit Commitment. These essential generating resources cannot be de-committed in real time nor on an intra-day basis, because they must run within specified engineering levels and provide essential frequency and regulation support to the BA, and because they are needed to meet upcoming peak demands, such as the evening peak demands and next day peak demands. The

[5] The Companies' baseload units are firm native load generating resources such as nuclear, coal, and large natural gas combined cycle units that form the foundation of reliable service to meet the core system demand.
[6] Must-run regulation and regulation reserves resources are generating resources that must run to provide load balancing regulation and frequency regulation support to maintain reliability by supporting system frequency to the required target of 60 Hz in compliance with mandatory NERC Reliability Standards.

LROL represents the level on the BA at which continued energy injections into the BA above the BA's load causes the BA to have operationally excess energy.[7]

As has been discussed in recent avoided cost and IRP filings and in the initial CPRE plan filed in November, 2017, integration of additional solar is increasingly causing operationally excess energy and extreme ramping events in DEP. Further increases of solar generation in the DEP BA will continue to increase the risk of future potential NERC noncompliance and associated reliability risks, unless DEP has adequate dispatch control rights to proactively plan and dispatch generation resources on its system. Continued addition of solar generation in the DEP BA will exacerbate existing reliability challenges and increase the potential future risks of NERC noncompliance. The DEP BA's growing experience managing operationally excess energy and increasingly steep ramping requirements as additional unscheduled and uncontrolled solar generation comes online will also increase the likelihood of emergency curtailment in DEP. DEC currently is better positioned to accommodate additional solar resources without creating routine instances of operationally excess energy. However, DEC will also eventually face similar issues with operationally excess energy and ramping as additional solar generation is added to the system. This further strengthens the importance of the additional contractual curtailment rights available to DEC and DEP for the CPRE facilities.

(iii) Potential for Increased Delivered Cost; Ancillary Services

The Companies have evolved and will continue to evolve the modeling necessary to quantify the increased delivered costs and additional ancillary services needed to maintain NERC Balancing Authority compliance due to siting additional renewable energy facilities in DEC or DEP. Based on the prior two factors discussed, the vast majority of the MW's to be procured through CPRE have been allocated to DEC, however this third factor may influence future decisions to further adjust this allocation.

Allocation of Resources

In summary, the growing concentration of legacy PURPA solar facilities installed in the DEP BA, associated operational challenges and reliability risks on the DEP system and growing risks of uncompensated system emergency curtailments in DEP, and projections of DEP's and DEC's respective ability to reliably accommodate additional solar energy have informed the Companies' decision to allocate CPRE development primarily in the DEC service territory. The Companies anticipate that the designated allocation of CPRE Program capacity may evolve over the CPRE

[7] The Companies testified to the importance of managing system operations to maintain the LROL of the BA's Security Constrained Unit Commitment in the 2016 avoided cost proceeding. *See In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities – 2016*, Pre-filed Direct Testimony of John S. Holeman, III, at 7-8, 12-13 Docket No E-100, Sub 148 (filed February 21, 2017).

Procurement Period, and the Companies intend to meet the CPRE Program requirements in a manner that ensures continued reliable electric service to customers while procuring cost-effective renewable energy resource capacity located within the DEC and DEP service territories. The Companies will update the planned allocation, if it is determined that changes are appropriate, through subsequent CPRE Program Plan filings.

1.6. Locational Designation

For purposes of the Tranche 1 CPRE RFP Solicitation, the Companies published Grid Locational Guidance information to the Independent Administrator's website on May 10, 2018 and also held a webinar open to all registrants to review and discuss these materials and answer questions from potential market participants and other interested parties. The Grid Locational Guidance was updated at conclusion of Tranche 1 and published to the Independent Administrator's website August 6, 2019 in advance of a webinar discussion on August 7, 2019. This guidance was intended to provide market participants with information on areas that have known transmission and distribution limitations as a result of the amount of existing or approved renewable energy facilities in the area. The goal of providing this grid locational guidance is to minimize the need for costly network upgrades to integrate CPRE renewable energy facilities and to provide information to market participants for use when planning development activities for the proposals to be submitted into the Tranche 2 CPRE RFP. The grid locational guidance information consists of a map and a table of circuits and substations that have known or increasing constraints.

The Companies continue to evaluate how to provide further updates to this guidance to provide potential participants in CPRE as much information as possible to enable the most cost effective proposals to be bid into the RFP.

2. CPRE Tranche 1 RFP Document and Pro forma PPA

The Tranche 1 RFP constitute the Companies' Program Guidelines for the completed solicitation.

<u>Comments on stakeholder engagement regarding the Pro forma PPA</u>

Consistent with the directive in the NCUC's order approving the CPRE Program in February 2018 in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, the Companies have substantially revised the PPA based on feedback received through two formal comment periods and continued to engage with stakeholders to determine if consensus can be reached on additional revisions to the PPA. More specifically, based on comments filed by stakeholders in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, the Companies made significant revisions to the November 2017 version of the Pro forma PPA before publishing this on May 11 as a pre-solicitation document for Tranche 1 of the RFP. Market Participants and other interested parties then had a second opportunity to review the

Pro Forma PPA (along with other draft solicitation documents). These comments were provided via the IA website. The Companies and the IA evaluated all of the comments received on the draft documents, including the Pro forma PPA and proceeded to make further, significant revisions to the Pro forma PPA before publishing the final PPA to be used in the Tranche 1 solicitation on June 8, 2018. The IA detailed the results of the comment period in their report which was completed on June 20, 2018 and posted to the website on June 21, 2018. In this report, the IA finds that the Companies gave full consideration to each observation and the IA agreed with the changes that the Companies elected to make to the PPA. On June 25, 2018 the Commission approved the final Pro forma PPA for use in Tranche 1 of the CPRE program.

The Companies held an additional stakeholder meeting regarding the PPA on August 7, 2018 via webinar. Approximately 50 participants called in to the webinar. The Companies presented a summary of the process that led to the Commission approval of the Tranche 1 PPA and summarized key changes made during the course of this process in response to comments and suggestions made by stakeholders. The Companies then opened the floor to questions from the webinar participants. Several of these questions were unrelated to the PPA and these individuals were directed to use the message board and Q&A process on the IA website. The comments on the PPA itself were very limited. The Companies provided responses to these comments on the call and reiterated the commitment to take these comments into consideration during the drafting of the Tranche 2 PPA document.

2. CPRE Tranche 2 RFP Document and Pro forma PPA

The Tranche 2 RFP document and pro-forma PPA are in review and subject to revisions during the Tranche 2 60-day pre-solicitation period which opened August 15, 2019. These documents will be posted to the Independent Administrators website when finalized: https://decprerfp2019.accionpower.com .

Comments on stakeholder engagement regarding the Pro forma PPA

Pursuant to the NCUC Order Modifying and Accepting CPRE Program Plan on July 2, 2019, the pre-solicitation process for Tranche 2 will allow for comment opportunity with stakeholders that will be supervised by the Independent Administrator. The Commission order requires monthly stakeholder meetings to address any issues not specifically addressed in the order and to reach consensus on Tranche 2 documents. The schedule for these meetings is provided as Figure 5.

Figure 5. Tranche 2 Stakeholder Meeting Schedule

Date	Topic(s)
August 7, 2019	Review of IA's final Tranche 1 Report Grid Locational Guidance Discussion concerning PPA Storage Protocols
September 12, 2019	PPA Terms and Conditions Grouping Study Base Case
October 10, 2019	General RFP Structure Asset Acquisition Discussion
November 13, 2019	Bidding Questions
December 12, 2019	To be determined

4. Other Program Plan Updates

Energy Storage

Recognizing the improving cost effectiveness of energy storage technologies and planned future adoption by the Companies and consideration by other utilities in recent competitive generation procurements, the Companies' made the determination that Renewable plus Storage Proposals—if thoughtfully integrated into the Companies' system operations—should be accepted for consideration in the CPRE RFP. For this reason, the Companies' Tranche 1 RFP and pro forma Tranche 1 PPA enabled market participants the option to offer Renewable plus Storage Proposals. Storage was included in 4 bids in Tranche 1 and 2 of these bids were ultimately awarded contracts.

To facilitate equitable consideration in the RFP, as well as to ensure effective integration of energy storage with the Companies' system operations under the CPRE Program framework, the Companies incorporated into the Pro Forma PPA a limited number of modifications, including a two-page "Energy Storage Protocol".

On May 23, 2019 the Companies participated in an NCUC CPRE Stakeholder Technical Conference to discuss modifications to the Energy Storage Protocol. The Companies provided an updated Energy Storage Protocol for Tranche 2 on August 7, 2019 for discussion in the initial Tranche 2 Stakeholder Meeting. The pre-solicitation feedback window is currently open.

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DEP NC and SC
<u>Front Cover Photos (Top to Bottom):</u>

Combined Cycle: HF Lee
Hydro: Tillery
Nuclear: Robinson
Hydro: Marshall
Energy Efficiency

<u>Back Cover Photos (Top to Bottom):</u>

Downtown Raleigh, NC
Duke Energy Transmission Line
Helping Our Customers
Duke Energy Lineman
Solar: McAlpine Creek Substation
Raleigh Convention Center Rooftop

DUKE ENERGY PROGRESS

NORTH CAROLINA
INTEGRATED RESOURCE PLAN

2018

PUBLIC

DEP NC 2018 IRP CONTENTS:

ABBREVIATIONS:

10 CFR	**Title 10 of the Code of Federal Regulations**
AC	**Alternating Current**
AEO	**Annual Energy Outlook**
BCFD	**Billion Cubic Feet Per Day**
CAIR	**Clean Air Interstate Rule**
CAMA	**North Carolina Coal Ash Management Act of 2014**
CAMR	**Clean Air Mercury Rule**
CAPP	**Central Appalachian Coal**
CC	**Combined Cycle**
CCR	**Coal Combustion Residuals**
CCS	**Carbon Capture and Sequestration**
CECPCN	**Certificate of Environmental Compatibility and Public Convenience and Necessity (SC)**
CFL	**Compact Fluorescent Light bulbs**
CO_2	**Carbon Dioxide**
COD	**Commercial Operation Date**
COL	**Combined Construction and Operating License**
COWICS	**Carolinas Offshore Wind Integration Case Study**
CPCN	**Certificate of Public Convenience and Necessity (NC)**
CPRE	**Competitive Procurement of Renewable Energy**
CSAPR	**Cross State Air Pollution Rule**
CT	**Combustion Turbine**
DC	**Direct Current**
DCA	**Design Certification Application**
DEC	**Duke Energy Carolinas**
DEF	**Duke Energy Florida**
DEI	**Duke Energy Indiana**
DEK	**Duke Energy Kentucky**
DEP	**Duke Energy Progress**
DER	**Distributed Energy Resource**
DIY	**Do It Yourself**
DOE	**Department of Energy**
DOJ	**Department of Justice**
DSM	**Demand-Side Management**
EE	**Energy Efficiency Programs**
EIA	**Energy Information Administration**
EPA	**Environmental Protection Agency**
EPC	**Engineering, Procurement, and Construction Contractors**
EPRI	**Electric Power Research Institute**
FERC	**Federal Energy Regulatory Commission**
FGD	**Flue Gas Desulfurization**

ABBREVIATIONS:

FLG	**Federal Loan Guarantee**
FPS	**Feet Per Second**
GALL-SLR	**Generic Aging Lessons Learned for Subsequent License Renewal**
GEH	**GE Hitachi**
GHG	**Greenhouse Gas**
GWh	**Gigawatt-hour**
HB 589	**North Carolina House Bill 589**
HVAC	**Heating, Ventilation and Air Conditioning**
HRSG	**Heat Recovery Steam Generator**
IA	**Interconnection Agreement**
IGCC	**Integrated Gasification Combined Cycle**
ILB	**Illinois Basin**
ILR	**Inverter Load Ratios**
IRP	**Integrated Resource Plan**
IS	**Interruptible Service**
ISOP	**Integrated Systems and Operations Planning**
IT	**Information Technologies**
ITC	**Investment Tax Credit**
IVVC	**Integrated Volt-Var Control**
JDA	**Joint Dispatch Agreement**
kW	**Kilowatt**
kWh	**Kilowatt-hour**
LCR TABLE	**Load, Capacity, and Reserves Table**
LEED	**Leadership in Energy and Environmental Design**
LED	**Light Emitting Diodes**
LEO	**Legally Enforceable Obligation**
LFE	**Load Forecast Error**
LNG	**Liquified Natural Gas**
LOLE	**Loss of Load Expectation**
MACT	**Maximum Achievable Control Technology**
MATS	**Mercury Air Toxics Standard**
MGD	**Million Gallons Per Day**
MW	**Megawatt**
MWh	**Megawatt-hour**
NAPP	**Northern Appalachian Coal**
NAAQS	**National Ambient Air Quality Standards**
NAP	**Northern Appalachian Coal**
NEMS	**National Energy Modeling Systems**
M&V	**Measurement and Verification**
NC	**North Carolina**
NCCSA	**North Carolina Clean Smokestacks Act**

ABBREVIATIONS:

NCDAQ	North Carolina Division of Air Quality
NCEMC	North Carolina Electric Membership Corporation
NCMPA1	North Carolina Municipal Power Agency #1
NCTPC	NC Transmission Planning Collaborative
NCUC	North Carolina Utilities Commission
NERC	North American Electric Reliability Corp
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxide
NES	Neighborhood Energy Saver
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NSPS	New Source Performance Standard
NYMEX	New York Mercantile Exchange
NUREG	Nuclear Regulatory Commission Regulation
OATT	Open Access Transmission Tariff
O&M	Operating and Maintenance
PD	Power Delivery
PEV	Plug-In Electric Vehicles
PJM	PMJ Interconnection, LLC
PMPA	Piedmont Municipal Power Agency
PPA	Purchase Power Agreement
PPB	Parts Per Billion
PROSYM	Production Cost Model
PSCSC	Public Service Commission of South Carolina
PSD	Prevention of Significant Deterioration
PURPA	Public Utility Regulatory Policies Act
PV	Photovoltaic
PVDG	Solar Photovoltaic Distributed Generation Program
PVRR	Present Value Revenue Requirements
QF	Qualifying Facility
RCRA	Resource Conservation Recovery Act
REC	Renewable Energy Certificates
REPS	Renewable Energy and Energy Efficiency Portfolio Standard
RFP	Request for Proposal
RICE	Reciprocating Internal Combustion Engines
RIM	Rate Impact Measure
RPS	Renewable Portfolio Standard
RRP	Refrigerator Replacement Program
SAE	Statistical Adjusted End-Use Model
SAT	Single-Axis Tracking
SC	South Carolina

ABBREVIATIONS:

SCE&G	**South Carolina Electric & Gas**
SC DER or SC ACT 236	**South Carolina Distributed Energy Resource Program**
SCR	**Selective Catalytic Reduction**
SEPA	**Southeastern Power Administration**
SERC	**SERC Reliability Corporation**
SERVM	**Strategic Energy Risk Valuation Model**
SG	**Standby Generation**
SIP	**State Implementation Plan**
SLR	**Subsequent License Renewal**
SMR	**Small Modular Reactor**
SO	**System Optimizer**
SO_2	**Sulfur Dioxide**
SRP – SLR	**Standard Review Plan for the Review of Subsequent License Renewal**
T&D	**Transmission & Distribution**
TAG	**Technology Assessment Guide**
TRC	**Total Resource Cost**
TVA	**Tennessee Valley Authority**
THE COMPANY	**Duke Energy Progress**
THE PLAN	**Duke Energy Progress Annual Plan**
UEE	**Utility Energy Efficiency**
UG/M^3	**Micrograms Per Cubic Meter**
UCT	**Utility Cost Test**
VACAR	**Virginia/Carolinas**
VAR	**Volt Ampere Reactive**
WERP	**Weatherization and Equipment Replacement Program**
ZELFRS	**Zero – Emitting Load Following Resources**

1. EXECUTIVE SUMMARY

For more than a century, Duke Energy Progress (DEP or the Company) has provided affordable and reliable electricity to customers in North Carolina (NC) and South Carolina (SC) now totaling approximately 1.6 million in number. The Company continues to serve its growing number of customers by planning for future resource needs in the most reliable and economic way possible while using increasingly clean forms of energy to meet those needs.

Historically, each year, as required by the North Carolina Utilities Commission (NCUC) and the Public Service Commission of South Carolina (PSCSC), DEP submits a long-range planning document called the Integrated Resource Plan (IRP). The IRP details potential infrastructure needed to match the forecasted electricity requirements and a reasonable reserve margin to maintain system reliability for our customers over the next 15 years.

The Company files separate IRPs for North Carolina and South Carolina. However, the IRP analyzes the system as one DEP utility across both states including customer demand, energy efficiency (EE), demand-side management (DSM), renewable resources and traditional supply-side resources. As such, the quantitative analysis contained in both the North Carolina and South Carolina filings is identical, while certain sections dealing with state-specific issues such as state renewable standards or environmental standards may be specific to that state's IRP.

This report is intended to provide stakeholders insight into the Company's planning process for meeting forecasted customer peak demand and cumulative energy needs over the 15-year planning horizon. Such stakeholders include: legislative policymakers, public utility commissioners and their staffs, other regulatory entities, retail customers, wholesale customers, environmental advocates, renewable resource industry groups and the general public.

2018 IRP SUMMARY

Objectives:

The 2018 IRP is the best projection of how the Company's resource portfolio is expected to evolve based on current data and assumptions. This projection may change over time as variables such as the projected load forecasts, fuel price forecasts, federal and state regulations, technology performance and cost characteristics and other outside factors change.

Consistent with the Company's commitment to a smarter energy future, the resource plan presented within this IRP meet the following objectives:

- Improve the environmental footprint of the resource portfolio reducing carbon dioxide (CO_2) emissions by at least 40% from 2005 levels by 2030 with approximately 60% of electricity coming from carbon free clean energy sources.
- Ensure adequate resource reserves are available over the planning horizon to provide reliable electric service 365 days a year, 24 hours a day, especially during periods of high demand such as cold winter mornings.
- Develop resource plans that result in the lowest reasonable cost to customers in order to provide affordable power for the residents, businesses and communities that depend on DEP.
- Produce robust plans that recognize current trends and future uncertainty in the way power is both produced and consumed given technology advancements in power supply and consumer usage.

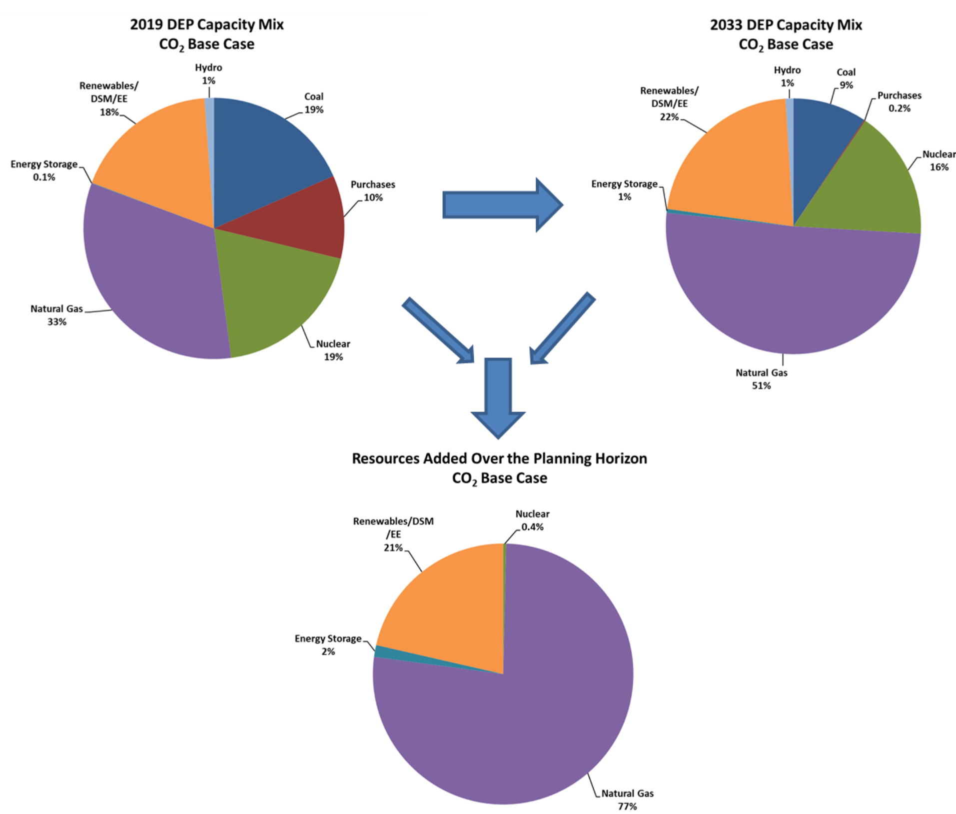
Resource Need:

To maintain long-term reliability, new resource additions are required to meet growing customer demand and to allow for the retirement of aging resources. While extensive Company-sponsored energy efficiency programs help to reduce energy consumption, industry, businesses and residents continue to grow and expand in DEP's service territory. The Company projects the addition of 201,000 new customers contributing to approximately 1,560 MW of additional winter peak demand on the system with annual energy consumption growing by approximately 5,100 GWh between 2019 and 2033. This represents an annual demand growth rate of 0.7 % and an energy growth rate of 0.5%. In addition to growing demand, DEP is planning for the potential retirement of some of its older, less efficient generation, creating an additional need of 2,183 MW. The Company also has approximately 1,850 MW of purchased power contracts that expire during the planning period. Finally, beyond just meeting expected consumer demand and replacing retired resources, the plan must also be capable of covering uncertainty caused by variables such as extreme cold weather events or unexpected resource outages. Planning for this uncertainty requires the incorporation of a 17% winter planning reserve margin ensuring that adequate resources are available to reliably serve customers despite these uncertainties. In total, customer growth, retirements, contract expirations and additional reserves will result in the need for approximately 6,300 MW of new resources over the planning horizon.

Planned Additions:

As discussed in more detail in this report, the Company examined several different resource portfolio options to see how each would perform under varying future state assumptions. The development of the base resource plans (one base plan assuming a carbon constrained future and one base plan assuming no future carbon legislation) that best meet the previously stated objectives resulted in the addition of a diverse mix of energy efficiency (EE), Demand-Side Management (DSM), renewable energy resources, and natural gas resources. The plans also contemplate the addition of grid-connected battery storage projects, given their potential to provide solutions for the transmission and distribution systems with the possibility of simultaneously providing benefits to the generation resource portfolio. Technical advancements and declining cost trends in distributed energy resources such as battery storage, distributed solar generation and demand-side management initiatives give rise to a future resource portfolio that is comprised of both centralized resources, as well as, a growing penetration of distributed resources. This document discusses the Company's efforts to evolve its planning models to better evaluate these distributed resources as they are integrated into the generation, transmission and distribution systems along with centralized generation such as natural gas and nuclear generation facilities. The figure below shows the Company's 2019 starting resource portfolio capacity mix in the upper left pie figure, while the upper right figure shows the 2033 projected portfolio at the end of the planning horizon. The figure on the bottom illustrates the incremental resources made over the planning horizon.

Figure Exec-1: 2019 and 2033 Capacity Mix and Sources of Incremental Capacity Additions



As shown in Figure Exec-1, DEP continues to reduce its dependence on coal fired generation with installed coal capacity dropping from 19% of the total portfolio in 2019 to a projection of only 9% by 2033. Renewable resources, energy efficiency and demand-side management also growing from 18% of the capacity mix in 2019 to 22% in 2033, while natural gas resources increase by 18% growing to 51% of the mix by 2033.

As the bottom figure indicates, the plan calls for the significant additions of predominantly dispatchable natural gas generation, as well as, renewable generation, battery storage, EE and DSM resources. Together, this combination provides customers with a balanced portfolio with natural gas resources providing dispatchable power at night or when solar output is interrupted due to cloud cover, snow cover or other factors. The additional storage will further help to integrate distributed solar resources into the resource portfolio.

A small amount of nuclear capacity is expected to be added to existing nuclear resources over the 15-year study period due to planned uprates within the existing nuclear fleet. However, nuclear capacity will make-up a slightly smaller percentage of total capacity as the total system grows throughout the planning period. No new nuclear generation units are added to the system, nor do the base plans contemplate nuclear retirements over the planning period.

Nuclear Generation:

Low natural gas prices, the absence of national carbon regulation and other industry factors have collectively moved the need for new nuclear generation outside the current planning window. However, shown in the figure above, clean, carbon-free nuclear generation from existing units provides approximately 20% of the installed capacity in DEP's resource portfolio. DEP nuclear resources collectively account for nearly one-half of the total energy produced.

Unlike almost all other resource options, nuclear units provide clean power around the clock every day of the year, except for small periods of outages for refueling and maintenance. As such, nuclear generation is an essential component of the Company's commitment to the provision of affordable, reliable and increasingly clean power.

DEP currently has operating licenses from the Nuclear Regulatory Commission (NRC) that allow the Company to operate its units for sixty years. To ensure these valuable resources are available for the next generation, the Company is working within the framework established by the NRC to evaluate the potential for subsequent license renewals (SLR) of its nuclear units.

SLR would give the Company the option to operate its nuclear facilities an additional twenty years. Chapter 10 describes the Company's ongoing efforts toward the evaluation of SLR.

Renewable Energy and Energy Efficiency:

DEP continues to aggressively pursue additional cost-effective renewable resources as a growing part of its energy portfolio. The Company's commitment, coupled with supporting federal tax credits and state legislation such as North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (NC REPS), NC House Bill 589 (HB 589) and South Carolina's Distributed Energy Resource Program Act (SC DER or SC Act 236), have led to significant growth in renewable resource development in the Carolinas. The 2018 IRP calls for installed solar capacity to grow from approximately 2,758 MW in 2019 to 4,199 MW in 2033. Chapter 5 of the plan discusses the importance of the Competitive Procurement of Renewable Energy (CPRE) process as a mechanism to acquire new solar resources at the lowest possible cost for customers.[1] Additionally, Chapter 5 discusses future physical and economic factors that will ultimately influence the amount of solar generation that can reliably and affordably be incorporated into DEP's resource portfolio.

In addition to growing renewable generation in the plan, DEP is actively investing in EE and DSM programs that promote, educate and incentivize the efficient utilization of power. DEP offers a wide range of EE programs to its residential, commercial and industrial customers to help them reduce their power consumption. These efforts are expected to help decrease the projected growth in annual energy consumption by approximately 22% over the planning horizon.

Dispatchable Natural Gas:

An important component of DEP's resource portfolio is the addition of dispatchable natural gas resources that are required for long-term system reliability, as well as for the provision of day-to-day, hour-to-hour and even minute-to-minute load following capabilities. Improvements in natural gas turbine technology provide additional flexibility to the resource portfolio relative to older assets that are being retired, while efficiency improvements reduce the amount of fuel required to produce the same amount of electricity. These technology developments make these natural gas technologies attractive, resulting in a resource portfolio with a smaller environmental

[1] The DEP CPRE Plan is included as Attachment II of this IRP document.

footprint, while also providing additional real-time ramping capabilities to better follow changes in system load requirements and varying levels of solar output. At times, these resources may be needed for short durations to provide power during high load periods caused by extreme temperatures. In other instances, these dispatchable resources are needed to run for days, or even weeks at a time, to provide power when other units are offline for maintenance or during periods of extended cloud cover that reduce the output of solar generation. DEP's resource plans call for the addition of approximately 2,760 MW of simple cycle combustion turbine (CT) technology and 3,236 MW of combined cycle (CC) generation technology to help meet load growth, replace unit retirements and expiring purchase power contracts, and optimally meet the needs of the system.

Conclusion:

In summary, the 2018 IRP Base Cases, discussed later in this document, show planned resource additions necessitated by load growth, retirement of aging generation resources and expiration of purchased power contracts. The plans are consistent with DEP's commitment to a smarter energy future, providing customers with reliable, affordable and increasingly clean sources of energy. Additionally, they maintain the Company's sustainability goals to reduce DEP's carbon emissions by more than 40% from 2005 levels by 2030. The plans accomplish this goal, despite serving significantly more customer demand over the planning period and without federal or state carbon mandates. Achieving robust base plans that balance the previously stated objectives requires a diverse mix of additional EE, DSM, renewable resources, energy storage and new efficient dispatchable natural gas resources. Plans that concentrate too much on a single resource result in additional customer costs, higher carbon emissions or both.

The following chapters of this document provide an overview of the assumptions, inputs, analysis and results included in the 2018 IRP. In addition to two Base Case plans, five different resource portfolios were analyzed under multiple sensitivities. The appendices to the document give even greater detail and specific information regarding the input development and the analytic process utilized in the 2018 IRP. A more detailed presentation of the Base Cases described above is included in this document in Chapter 12 and Appendix A.

Finally, DEP will continue to closely monitor changes in key variables such as technology cost trends, the system load forecast, fuel price forecasts, emerging technology performance characteristics, the pace of adoption of distributed resources, advancements in storage technologies, new federal or state energy policies and other key variables. To the extent these variables change over time, DEP will incorporate such changes in subsequent annual IRP reports.

2. SYSTEM OVERVIEW

DEP's service area covers approximately 32,485 square miles, including a substantial portion of the coastal plain of North Carolina extending from the Piedmont to the Atlantic coast between the Pamlico River and the South Carolina border, the lower Piedmont section of North Carolina, an area in western North Carolina in and around the city of Asheville and an area in the northeastern portion of South Carolina. In addition to retail sales to approximately 1.56 million residential, commercial and industrial customers, the Company also sells wholesale electricity to incorporated municipalities and to public and private utilities.

DEP currently meets energy demand, in part, by purchases from the open market, through longer-term purchased power contracts and from the following electric generation assets. All capacities represent winter ratings, unless otherwise noted:

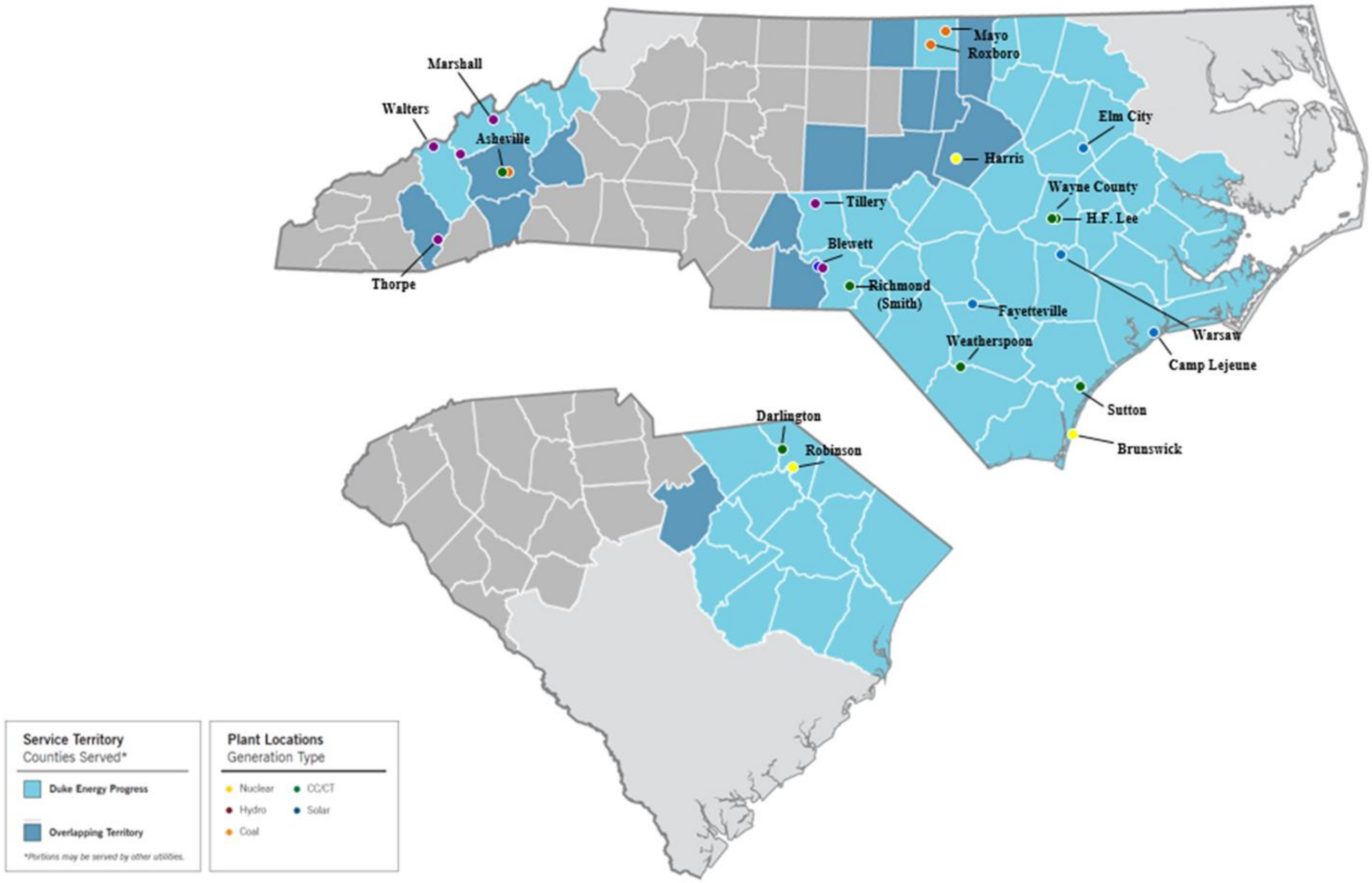
- Three nuclear generating stations with a combined net capacity of 3,705 MW
- Three coal-fired stations with a combined capacity of 3,592 MW
- Four hydroelectric stations with a combined capacity of 227 MW
- Ten combustion turbine stations including four combined cycle units with a combined capacity of 6,388 MW
- Four utility-owned solar facilities with a combined capacity of 141 MW (nameplate) [2]

DEP's power delivery system consists of approximately 75,836 miles of distribution lines and 6,241 miles of transmission lines. The transmission system is directly connected to all of the Transmission Operators that surround the DEP service area. There are 42 tie-line circuits connecting with six different Transmission Operators: Duke Energy Carolinas (DEC), PJM, Tennessee Valley Authority (TVA), Cube Hydro, South Carolina Electric & Gas (SCE&G), and Santee Cooper. These interconnections allow utilities to work together to provide an additional level of reliability. The strength of the system is also reinforced through coordination with other electric service providers in the Virginia-Carolinas (VACAR) sub-region, SERC Reliability Corporation (formerly Southeastern Electric Reliability Council), and North American Electric Reliability Corporation (NERC).

The map on the following page provides a high-level view of the DEP service area.

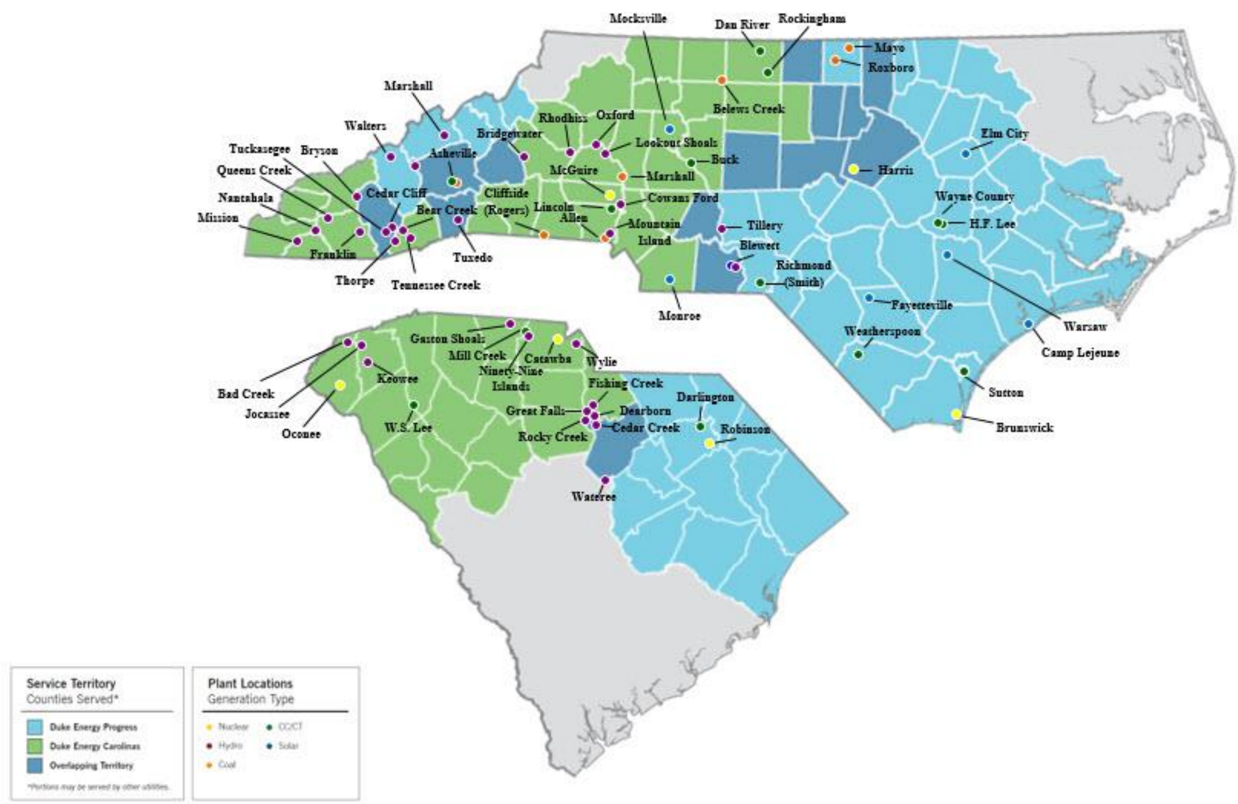
[2] The capacity represented in this listing only includes utility-owned solar capacity. Capacity from purchased power contracts are not included.

Figure 2-A: Duke Energy Progress Service Area



With the closing of the Duke Energy Corporation and Progress Energy Corporation merger, the service territories for both DEP and DEC lend to future opportunities for collaboration and potential sharing of capacity to create additional savings for North Carolina and South Carolina customers of both utilities. An illustration of the service territories of the Companies is shown in the map below.

Figure 2-B: DEP and DEC Service Area



3. ELECTRIC LOAD FORECAST

The Duke Energy Progress Spring 2018 forecast provides projections of the energy and peak demand needs for its service area. The forecast covers the time period of 2019 – 2033 and represents the needs of the retail and wholesale customers.

Energy projections are developed with econometric models using key economic factors such as income, electricity prices, industrial production indices, along with weather, appliance efficiency trends, rooftop solar trends, and electric vehicle trends. Population is also used in the Residential customer model. Regression analysis is utilized and has yielded consistently reasonable results over the years.

The economic projections used in the Spring 2018 Forecast are obtained from Moody's Analytics, a nationally recognized economic forecasting firm, and include economic forecasts for the states of North and South Carolina.

Moody's Analytics supplies the Company with economic and demographic projections, which are used in the energy and demand models. Preliminary analysis of Moody's historical projections versus actuals resulted in smaller variances and minimum bias during normal economic periods. However, the likelihood of greater forecast variance and forecast bias increases during unique disruptive economic periods like the Great Recession. Load Forecasting will continue to monitor Moody's forecast error going forward.

The Retail forecast consists of the three major classes: Residential, Commercial and Industrial.

The Residential class sales forecast is comprised of two projections. The first is the number of residential customers, which is driven by population. The second is energy usage per customer, which is driven by weather, regional economic and demographic trends, electricity prices and appliance efficiencies.

The usage per customer forecast was derived using a Statistical Adjusted End-Use Model (SAE). This is a regression-based framework that uses projected appliance saturation and efficiency trends developed by Itron using Energy Information Administration (EIA) data. It incorporates naturally occurring efficiency trends and government mandates more explicitly than other models. The outlook for usage per customer is essentially flat through much of the forecast horizon, so most of the growth is primarily due to increases in the number of customers being added to the system. The average annual energy growth rate of Residential in the Spring 2018 forecast, including the impacts of Utility EE (UEE) programs, rooftop solar and electric vehicles from 2019 to 2033 is 1.1%.

The Commercial forecast also uses an SAE model in an effort to reflect naturally occurring, as well as, government-mandated efficiency changes. The three largest sectors in the Commercial class are Offices, Education and Retail. Commercial energy sales are expected to grow 0.6% per year over the forecast horizon.

The Industrial class is forecasted by a standard econometric model with drivers such as total manufacturing output, textile output, and the price of electricity. Overall, Industrial energy sales are expected to grow 0.2% per year over the forecast horizon, after all adjustments.

Peak Demand and Energy Forecast:

The load forecast projection for energy and capacity, including the impacts of UEE, rooftop solar, and electric vehicles, that was utilized in the 2018 IRP is shown in Table 3-A.

Table 3-A: Load Forecast with Energy Efficiency Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2019	13,317	14,011	64,038
2020	13,322	14,016	63,669
2021	13,324	14,001	63,613
2022	13,416	14,089	63,393
2023	13,510	14,139	63,809
2024	13,658	14,308	64,622
2025	13,796	14,415	65,178
2026	14,014	14,568	65,145
2027	14,118	14,713	65,726
2028	14,336	14,903	66,593
2029	14,473	15,032	67,080
2030	14,605	15,155	67,548
2031	14,762	15,303	68,108
2032	14,941	15,475	68,787
2033	15,054	15,575	69,125
Avg. Annual Growth Rate	0.8%	0.7%	0.5%

A detailed discussion of the electric load forecast is provided in Appendix C.

4. ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT

DEP is committed to making sure electricity remains available, reliable and affordable and that it is produced in an environmentally sound manner and, therefore, DEP advocates a balanced solution to meeting future energy needs in the Carolinas. That balance includes a strong commitment to energy efficiency (EE) and demand-side management (DSM).

Since 2009, DEP has been actively developing and implementing new EE and DSM programs throughout its North Carolina and South Carolina service areas to help customers reduce their electricity demands. DEP's EE and DSM plan is designed to be flexible, with programs being evaluated on an ongoing basis so that program refinements and budget adjustments can be made in a timely fashion to maximize benefits and cost-effectiveness. Initiatives are aimed at helping all customer classes and market segments use energy more wisely. The potential for new technologies and new delivery options is also reviewed on an ongoing basis in order to provide customers with access to a comprehensive and current portfolio of programs.

DEP's EE programs encourage customers to save electricity by installing high efficiency measures and/or changing the way they use their existing electrical equipment. DEP evaluates the cost-effectiveness of EE/DSM programs from the perspective of program participants, non-participants, all customers and total utility spending using the four California Standard Practice tests (i.e., Participant Test, Rate Impact Measure (RIM) Test, Total Resource Cost (TRC) Test and Utility Cost Test (UCT), respectively) to ensure the programs can be provided at a lower cost than building supply-side alternatives. The use of multiple tests can ensure the development of a reasonable set of programs and indicate the likelihood that customers will participate. DEP will continue to seek approval from State utility commissions to implement EE and DSM programs that are cost-effective and consistent with DEP's forecasted resource needs over the planning horizon. DEP currently has approval from the North Carolina Utilities Commission (NCUC) and the Public Service Commission of South Carolina (PSCSC) to offer a large variety of EE and DSM programs and measures to help reduce electricity consumption across all types of customers and end-uses.

For IRP purposes, these EE-based demand and energy savings are treated as a reduction to the load forecast, which also serves to reduce the associated need to build new supply-side generation, transmission and distribution facilities. DEP also offers a variety of DSM (or demand response) programs that signal customers to reduce electricity use during select peak hours as specified by the Company. The IRP treats these "dispatchable" types of programs as resource options that can be dispatched to meet system capacity needs during periods of peak demand.

In 2016, DEP commissioned an EE market potential study to obtain estimates of the technical, economic and achievable potential for EE savings within the DEP service area. The final report was prepared by Nexant, Inc. and was completed in December 2016. The results of the market potential study are suitable for integrated resource planning purposes and use in long-range system planning models. However, the study did not attempt to closely forecast short-term EE achievements from year to year. Therefore, the Base Case EE/DSM savings contained in this IRP were projected by blending DEP's five-year program planning forecast into the long-term achievable potential projections from the market potential study.

DEP prepared a Base Portfolio savings projection that was based on DEP's five-year program plan for 2018-22. For periods beyond 2027, the Base Portfolio assumed that the Company could achieve the annual savings projected in the Achievable Portfolio presented in Nexant's Market Potential Study. For the period of 2023 through 2027, the Company employed an interpolation methodology to blend together the projection from DEP's program plan and the Market Potential Study Achievable Potential.

DEP also prepared a High EE Portfolio savings projection based on the Enhanced Scenario contained in Nexant's Market Potential Study, which assumed the implementation of potential new technologies and programs not currently offered by DEP can encourage additional customer participation and savings.

Additionally, for both the Base and High Portfolios described above, DEP included an assumption that, when the EE measures included in the forecast reach the end of their useful lives, the impacts associated with these measures are removed from the future projected EE impacts. This concept of "rolling off" the impacts from EE programs is explained further in Appendix C.

See Appendix D for further detail on DEP's EE, DSM and consumer education programs, which also includes a discussion of the methodology for determining the cost effectiveness of EE and DSM programs.

5. RENEWABLE ENERGY STRATEGY / FORECAST

The growth of renewable generation in the United States continues to outpace that of non-renewable generation. According to EIA, in 2017, including small-scale solar, 14.5 GW of wind and solar capacity were installed nationwide compared to 9.3 GW of natural gas. About 4 GW of natural gas was retired in 2017 and over 6 GW of coal was retired with no new coal-fired generation installed.[3]

North Carolina ranked second in the country in solar capacity added in 2017, and remains second behind only California in total solar capacity online. According to GTM Research, South Carolina also cracked the top 10 in 2018, adding nearly 400 MW in 2017. Duke Energy's compliance with the North Carolina Renewable Energy and Energy Efficiency Portfolio Standards (NC REPS), the South Carolina Distributed Energy Resource Program (SC DER), the Public Utility Regulatory Policies Act (PURPA), as well as the availability of the Federal Investment Tax Credit (ITC) were key factors behind the high penetration of solar.

The interconnection queue has continued to grow, with the DEP and DEC combined solar queue representing approximately 12 GW. Key drivers to queue growth have been the upcoming procurement for HB 589 (described below), North Carolina's historically favorable avoided cost rate and 15-year contract terms for qualifying facilities (QFs) under PURPA, and the implementation of SC DER.

The implementation of North Carolina House Bill 589 (HB 589), which calls for the addition of 2,660 MW of competitively procured renewable resources over a 45-month period, is significant to the amount of solar projected to be operational during the planning horizon. Growing customer demand, the federal ITC, and declining installed solar costs make solar capacity the Company's primary renewable energy resource in the 2018 IRP. The following key assumptions regarding renewable energy were included in the 2018 IRP:

- Installed solar capacity increases in DEP from 2,758 MW in 2019 to 4,199 MW in 2033;
- Compliance with NC REPS continues to be met through a combination of solar, other renewables, EE, and Renewable Energy Certificate (REC) purchases;
- Achievement of the SC Act 236 goal of 39 MW of solar capacity located in DEP; and
- Implementation of HB 589 and continuing solar cost declines drive solar capacity growth above and beyond NC REPS requirements and SC Act 236 requirements.

[3] All renewable energy GW/MW represent GW/MW-AC (alternating current) unless otherwise noted.

HB 589 Competitive Procurement of Renewable Energy (CPRE):

HB 589 establishes a competitive solicitation process, known as the Competitive Procurement of Renewable Energy (CPRE), which calls for the addition of 2,660 MW of competitively procured renewable resources across the Duke Energy Balancing Authority Areas over a 45-month period. On July 10, 2018, Duke issued a request for bids for the first tranche of CPRE, requesting 600 MW in DEC and 80 MW in DEP. North Carolina and South Carolina projects may submit proposals into CPRE. See the annual CPRE Program Plan included as Attachment II for additional details.

The Companies expect to issue three "tranches" of requests for bids. Future tranches of CPRE may be affected by capacity referred to in this document as the "Transition MW." "Transition MW" represents the total capacity of renewable generation projects in the combined Duke Balancing Authority area that are (1) already connected; or (2) have entered into purchase power agreements (PPAs) and interconnection agreements (IAs) as of the end of the 45-month competitive procurement period, provided that they are not subject to curtailment or economic dispatch. The total CPRE target of 2,660 MW will vary based on the amount of Transition MW at the end of the 45-month period, which HB 589 expected to total 3,500 MW. If the aggregate capacity in the Transition MW exceeds 3,500 MW, the competitive procurement volume of 2,660 MW will be reduced by the excess amount; conversely, if the Transition falls short of 3,500 MW the Companies will conduct additional competitive procurement. The Company believes the Transition MW will easily total 3,500 MW and possibly exceed it by as much as 1,200 MW.

In preparation for the HB 589 competitive procurement process, the Company continues to build its relationships with suppliers, Engineering, Procurement, and Construction Contractors (EPCs), and other entities to create greater efficiencies in the supply chain, reduce construction costs, reduce operating and maintenance costs (O&M), and enhance system design. In anticipation of future solar growth, DEP is positioning itself to properly integrate renewable resources to the grid regardless of ownership.

In addition to ensuring DEP has operational control over future solar associated with HB 589, the intermittency of solar output will require the Company to evaluate and invest in technologies to provide solutions for voltage, volt-ampere reactive (VAR), and/or higher ancillary reserve requirements.

Interconnection Queue:

Through the end of 2017, DEP had more than 2,000 MW of utility scale solar on its system, with over 600 MW interconnecting in 2017. When renewable resources were evaluated for the 2018 IRP, DEP reported another approximately 1,000 MW of third party solar under construction and more than 6,000 MW in the interconnection queue. Table I-1 contains interconnection queue information which provides details on the number of pending projects and pending capacity by state.

Projecting future solar connections from the interconnection queue presents a significant challenge due to the large number of project cancellations, ownership transfers, interconnection studies required, and the unknown outcome of which projects will be selected through the CPRE program.

DEP's contribution to the Transition depends on a number of variables including connecting projects under construction, the expected number of projects in the queue with a PPA and IA, and SC DER Program Tier I. As of May 31, 2018, DEP had approximately 2,500 MW of solar capacity with a PPA and IA, and roughly 100 MW of non-solar renewable capacity with PPAs that extend through the 45-month CPRE period. A number of additional projects in the queue with a legally enforceable obligation (LEO) are expected to acquire both a PPA and IA prior to the expiration of the 45-month period defined in HB 589, potentially resulting in approximately an additional 1,000 MW contributing to the Transition. In total, DEP may contribute roughly three-quarters of the Transition MW with DEC accounting for the remaining quarter.

NC REPS Compliance:

DEP remains committed to meeting the requirements of NC REPS, including the poultry waste, swine waste, and solar set-asides, and the general requirement, which will be met with additional renewable and energy efficiency resources. DEP's long-term general compliance needs are expected to be met through a combination of renewable resources, including RECs obtained through the HB 589 competitive procurement process. For details of DEP's NC REPS compliance plan, please reference the NC REPS Compliance Plan, included as Attachment I to this IRP.

HB-589 Competitive Procurement and Utility-Owned Solar:

DEP continues to evaluate utility-owned solar additions to grow its renewables portfolio. DEP owns and operates four utility-scale solar projects as part of its efforts to encourage emission free generation resources and help meet its compliance targets, totaling 141 MW-AC:

- Camp Lejeune Solar Facility – 13MW, located in Onslow County, NC placed in service in November 2015;
- Warsaw Solar Facility – 65MW, located in Duplin County, NC placed in service in December 2015;
- Fayetteville Solar Facility – 23MW, located in Bladen County, NC placed in service in December 2015; and
- Elm City Solar Facility – 40MW, located in Wilson County, NC placed in service in March 2016.

No more than 30% of the CPRE Program requirement may be satisfied through projects in which Duke Energy or its affiliates have an ownership interest at the time of bidding. DEP intends to bid into the first and future tranches of the CPRE and will also evaluate the potential for acquiring facilities where appropriate. HB 589 does not stipulate a limit for DEP's option to acquire projects from third parties that are specifically proposed in the CPRE RFP as acquisition projects, though any such project will not be procured unless determined to be among the most cost-effective projects submitted.

Additional Factors Impacting Future Solar Growth:

A number of factors impact the Company's forecasting of future solar growth. First, potential changes in the Company's avoided cost may impact the development of projects under PURPA and HB 589. Avoided cost forecasts are subject to variability due to changes in factors such as natural gas and coal commodity prices, system energy and demand requirements, the level and cost of generation ancillary service requirements and interconnection costs. PURPA requires utilities to purchase power from QFs at or below the utility's avoided cost rate. HB 589 requires that competitive bids are priced below utility's avoided cost rates, as approved by the NCUC, in order to be selected. Therefore, the cost of solar is a critical input for forecasting how much solar will materialize in the future.

Solar costs are also influenced by other variables. Panel prices have decreased at a significant rate and are expected to continue to decline. However, in January 2018, President Trump announced a tariff on solar modules and cells with a rate of 30% in year 1, declining 5% until the fourth and final year in which the tariff rate is 15%. Additional factors that could put upward pressure on solar costs include direct interconnection costs, as well as costs incurred to maintain the appropriate operational control of the facilities. Finally, as panel prices have decreased, there has been more interest in installing single-axis tracking (SAT) systems and/or systems with higher inverter load ratios (ILR) which change the hourly profile of solar output and increase expected capacity factors. DEP now models fixed tilt and SAT system hourly profiles with a range of ILR's as high as 1.6 (DC/AC ratio).

In summary, there is a great deal of uncertainty in both the future avoided cost applicable to solar and the expected price of solar installations in the years to come. As a result, the Company will continue to closely monitor and report on these changing factors in future IRP and competitive procurement filings.

HB 589 Customer Programs:

In addition to the CPRE program, HB 589 offers direct renewable energy procurement for major military installations, public universities, and other large customers, as well as a community solar program. These programs will complement the existing SC Act 236 Programs.

As part of HB 589, the renewable energy procurement program for large customers such as military installations and universities enables large customers to procure renewable energy attributes from new renewable energy resources. The program allows for up to 600 MW of total capacity, with set asides for military installations (100 MW of the 600 MW) and the University of North Carolina (UNC) system (250 MW of the 600 MW). The 2018 IRP base case assumes all 600 MW of this program materialize, with the DEP/DEC split expected to be roughly equal. If all 600 MW are not utilized, the remainder will roll back to the competitive procurement, increasing its volume.

The community solar portion of HB 589 calls for up to 20 MW of shared solar in DEP. This program is similar to the SC Act 236 shared solar program, and allows customers who cannot or do not want to put solar on their property to take advantage of the economic and environmental benefits of solar by subscribing to the output of a centralized facility. The 2018 IRP Base Cases assume that all 20 MW of the HB 589 shared solar program materializes.

HB 589 also calls for a rebate program for rooftop solar. The rebate program opened in July and the program has already proven to spur greater interest in solar installations and therefore, more net metered customers in NC. Thru May 2018, DEP has installed nearly the same capacity of rooftop solar as was installed in all of 2017. Enough customers were processed in the first two weeks of the rebate program to fill the 2018 allotment for Residential and Commercial customers.

SC Act 236:

Steady progress continues to be made with the first two tiers of the SC DER Program summarized below, completion of which would unlock the third tier:

- Tier I: 13 MW of solar capacity from facilities each >1 MW and < 10 MW in size.
- Tier II: 13 MW of behind-the-meter solar facilities for residential, commercial and industrial customers, each ≤1 MW, 25% of which must be ≤ 20 kilowatts (kW). Since Tier II is behind the meter, the expected solar generation is embedded in the load forecast as a reduction to expected load.
- Tier III: Investment by the utility in 13 MW of solar capacity from facilities each >1 MW and <10 MW in size. Upon completion of Tiers I and II (to occur no later than 2021), the Company may directly invest in additional solar generation to complete Tier III.

DEP has executed two PPAs to complete Tier I which will result in 15 MW, 5 MW of which are currently operational. Tier II incentives have resulted in growth in private solar in DEP, although it hasn't been as significant as DEC to this point.

The Company launched its first Shared Solar program as part of Tier I. Duke Energy designed its initial SC Shared Solar program to have appeal to residential and commercial customers who rent or lease their premises, residential customers who reside in multifamily housing units or shaded housing or for whom the relatively high up-front costs of solar PV make net metering unattainable, and non-profits who cannot monetize the ITC.

Wind:

DEP considers wind a potential energy resource in the long term to support increased renewables portfolio diversity and long-term general compliance need. However, investing in wind inside of DEP's footprint may be challenging in the short term, primarily due to a lack of suitable sites, permitting challenges, and more modest capital cost declines relative to other renewable technologies like solar. Opportunities may exist to transmit wind energy into the Carolinas from out of state regions where wind is more cost-effective.

Summary of Expected Renewable Resource Capacity Additions:

The 2018 IRP incorporates the Base Case renewable capacity forecast below. This case includes renewable capacity components of the Transition MW of HB 589, such as capacity required for compliance with NC REPS, PURPA purchases, the SC DER Program, and the additional three components of HB 589 (competitive procurement, renewable energy procurement for large customers, and community solar). This year's Base Case also includes additional projected solar growth beyond HB 589. While certain regions of DEP may become saturated with solar, it is the Company's belief that continued declines in the installation cost of solar and storage, will enable solar and coupled "solar plus storage" systems to contribute to growing energy needs. The Company also believes supportive policies for solar and solar plus storage will continue to exist in NC and SC even beyond the HB 589 procurement horizon.

The Company anticipates a diverse portfolio including solar, biomass, hydro, wind, and other resources. Actual results could vary substantially for the reasons discussed previously, as well as other potential changes to legislative requirements, tax policies, technology costs, and other market forces. The details of the forecasted capacity additions, including both nameplate and contribution to winter and summer peaks are summarized in Table 5-A below.

While solar is not at its maximum output at the time of DEP's expected peak load in the summer, solar's contribution to summer peak load is large enough that it may push the time of summer peak to a later hour if solar penetration levels continue to increase. However, solar is unlikely to have a similar impact on the morning winter peak due to little solar output in the morning hours. Solar capacity contribution to summer and winter peak demands is discussed more fully in Chapter 9.

Table 5-A: DEP Base Case Total Renewables

DEP Base Renewables - Compliance + Non-Compliance										
	MW Nameplate			MW Contribution to Summer Peak				MW Contribution to Winter Peak		
	Solar	Biomass/ Hydro	Total	Solar	Biomass/ Hydro	Total		Solar	Biomass/ Hydro	Total
2019	2758	266	3024	965	266	1231	2019	28	266	293
2020	3061	266	3327	1071	266	1337	2020	31	266	296
2021	3341	120	3461	1157	120	1278	2021	33	120	154
2022	3588	115	3703	1231	115	1346	2022	36	115	151
2023	3760	103	3862	1271	103	1374	2023	38	103	140
2024	3938	102	4041	1289	102	1391	2024	39	102	142
2025	4019	73	4092	1297	73	1370	2025	40	73	113
2026	4053	73	4125	1300	73	1373	2026	41	73	113
2027	4086	67	4153	1304	67	1371	2027	41	67	108
2028	4120	14	4134	1307	14	1321	2028	41	14	55
2029	4153	3	4156	1310	3	1313	2029	42	3	44
2030	4187	2	4188	1314	2	1315	2030	42	2	43
2031	4191	2	4192	1314	2	1316	2031	42	2	44
2032	4195	0	4195	1314	0	1314	2032	42	0	42
2033	4199	0	4199	1315	0	1315	2033	42	0	42

* Solar includes 0.5% per year degradation

** Capacity listed excludes REC-Only contracts

Given the significant volume and uncertainty around solar penetration, high and low solar portfolios were compared to the Base Case described above. The portfolios do not envision a specific market condition, but rather the potential combined effect of a number of factors. For example, the high sensitivity could occur given events such as high carbon prices, lower solar capital costs, economical solar plus storage, continuation of renewable subsidies, and/or stronger renewable energy mandates. On the other hand, the low sensitivity may occur given events such as lower fuel prices for more traditional generation technologies, higher solar installation and interconnection costs, and/or high ancillary costs which may drive down the economic viability of future incremental solar additions. These events may cause solar projections to fall short of the Base Case if the CPRE, renewable energy procurement for large customers, and/or the community solar programs of HB 589 do not materialize or are delayed. Tables 5-B and 5-C below provide the high and low solar nameplate capacity summaries, as well as, their corresponding expected contributions to summer and winter peaks.

Table 5-B: DEP High Case Total Renewables

DEP High Renewables - Compliance + Non-Compliance												
	MW Nameplate				MW Contribution to Summer Peak					MW Contribution to Winter Peak		
	Solar	Biomass/ Hydro	Total		Solar	Biomass/ Hydro	Total			Solar	Biomass/ Hydro	Total
2019	2774	266	3040		971	266	1237		2019	28	266	294
2020	3114	266	3380		1089	266	1355		2020	31	266	297
2021	3489	120	3610		1202	120	1322		2021	35	120	155
2022	3728	115	3843		1268	115	1383		2022	37	115	152
2023	3900	103	4003		1285	103	1388		2023	39	103	142
2024	4076	102	4178		1303	102	1405		2024	41	102	143
2025	4205	73	4278		1316	73	1389		2025	42	73	115
2026	4259	73	4332		1321	73	1394		2026	43	73	115
2027	4313	67	4380		1326	67	1393		2027	43	67	110
2028	4366	14	4380		1332	14	1345		2028	44	14	57
2029	4419	3	4422		1337	3	1340		2029	44	3	47
2030	4472	2	4474		1342	2	1344		2030	45	2	46
2031	4485	2	4487		1344	2	1345		2031	45	2	46
2032	4498	0	4498		1345	0	1345		2032	45	0	45
2033	4510	0	4510		1346	0	1346		2033	45	0	45

* Solar includes 0.5% per year degradation
** Capacity listed excludes REC-Only contracts

Table 5-C: DEP Low Case Total Renewables

DEP Low Renewables - Compliance + Non-Compliance												
	MW Nameplate				MW Contribution to Summer Peak					MW Contribution to Winter Peak		
	Solar	Biomass/ Hydro	Total		Solar	Biomass/ Hydro	Total			Solar	Biomass/ Hydro	Total
2019	2647	266	2913		926	266	1192		2019	26	266	292
2020	2976	266	3242		1042	266	1307		2020	30	266	296
2021	3255	120	3375		1131	120	1252		2021	33	120	153
2022	3397	115	3512		1174	115	1289		2022	34	115	149
2023	3463	103	3566		1194	103	1297		2023	35	103	137
2024	3516	102	3618		1210	102	1312		2024	35	102	138
2025	3536	73	3609		1216	73	1289		2025	35	73	109
2026	3572	73	3645		1227	73	1299		2026	36	73	108
2027	3608	67	3675		1238	67	1304		2027	36	67	103
2028	3644	14	3658		1248	14	1262		2028	36	14	50
2029	3680	3	3683		1259	3	1262		2029	37	3	39
2030	3716	2	3717		1267	2	1268		2030	37	2	39
2031	3712	2	3714		1266	2	1268		2031	37	2	39
2032	3709	0	3709		1266	0	1266		2032	37	0	37
2033	3705	0	3705		1266	0	1266		2033	37	0	37

* Solar includes 0.5% per year degradation
** Capacity listed excludes REC-Only contracts

6. INTEGRATED SYSTEMS AND OPERATIONS PLANNING (ISOP) AND BATTERY STORAGE

The Industry is Rapidly Changing:

In recent years, the electric utility industry has undergone extraordinary transformation that has directly resulted in an increasingly dynamic environment for which the Company must plan and operate. This transformation is driven by several key trends including rapidly changing technologies, evolving customer expectations and the progression towards a smarter grid. New technologies are being developed at an exponential rate, creating a multitude of new possibilities of assets to serve customers. Many Duke Energy customers have come to realize the benefits that technology can provide and are no longer inactive recipients of a simple commodity at the least possible cost. These customers are now expecting more choices and services to control their energy use and desire active interaction with their energy choices. Duke Energy Progress is committed to serving its customers in new and improved ways that recognize the increasing differences between its customers. To do so will make planning more complex. For example, the Company will need much better data on how our customers want to be served, and that data will not be easy to obtain. Providing safe, reliable, cleaner and affordable power, however, will always be at the heart of Duke Energy's foundation. Furthermore, the commitment to provide transparency to both customers and other stakeholders is of utmost importance, due to the belief that taking advantage of the collective knowledge of the parties will ultimately benefit all customers.

Implications for the IRP:

The Company, as well as others in the electric utility industry, are recognizing that the traditional methods of utility resource planning must be enhanced to keep pace with changes occurring in the industry. As a result, beginning this year, Duke Energy Progress will begin to adapt its IRP to adjust to this changed world, recognizing that this process will continue to evolve. The planning tools that have been used in the past are limited in their ability to value some aspects of the newer technologies. Historically, the Company has not been able to identify the locational value of distributed generation sources and are now developing models to do so, as well as more tightly link our distribution plans to the bulk power (generation and transmission) plans. DEP also recognizes the sub-hourly operational impacts of intermittency of some supply resources and is developing modeling capabilities needed to quantify these operational impacts. As the single entity responsible for the reliable operations of the system, DEP is required to address what it will take to operate its system under a wider variety of futures, which will directly result in the consideration of more scenarios. Also, with the accelerated pace of change, the Company must place a higher value on the flexibility of the resource plan to adapt to changing circumstances.

Changes reflected in this year's IRP:

Based on recent developments, the amount of renewables on the DEP system has increased to reflect HB 589 requirements and the expected renewable adoption is now forecasted to exceed the legislatively mandated limits. As a result, the need for real-time system regulation and balancing increases over time as more intermittent renewables are integrated into the system. While the models are not yet perfected, DEP can now make reasonable estimates for these real-time system impacts and those estimates have been included in the long-term planning models for the first time. DEP has also assumed the deployment of more grid-connected battery storage within the next few years which if deployed appropriately have the potential to provide benefits to the transmission and distribution system as well as the bulk power system.

Changes to be Included in Future IRPs:

Duke Energy is further addressing these shifting trends through our Integrated System and Operations Planning (ISOP) effort. ISOP envisions the creation of a broader process by which all energy resources are evaluated fully and fairly valued on functional capability, irrespective of the resource location on the grid. ISOP strives to identify the appropriate tools and examine the performance of different asset portfolios across a variety of potential futures. ISOP has completed evaluations of the current planning practices and has identified future enhancements to be addressed in a systematic, disciplined manner to realize this future vision.

One key goal of ISOP is for the planning models to reasonably mimic the future operational realities to allow DEP to serve its customers with newer technologies. The introduction of balancing and regulating reserve requirements with respect to growing renewable generation in this IRP is an indication of this effort. Additionally, ISOP has a number of other workstreams addressing the identified future enhancements to the modeling tools, the need for granularity in location and time, as well as, the approach for stacking functional benefits across the system. These future enhancements in planning are expected to be addressed over the next several years, as soon as the modeling tools, processes and data development will allow.

Duke Energy recognizes the substantial effort it will take to continue down this integrated planning path for years to come, and is committed to the development and delivery of these new methods. There are considerable risks and learning curves with a number of these new workstreams as many of the modeling tools and functionalities are currently in developmental stages throughout the industry. Given that some of the most promising emerging resource solutions, such as battery storage and leading-edge intelligent grid controls, are still in the early stages, Duke Energy is committed to understanding and capturing these capabilities. There will also be a heightened need to address data challenges such as the increased levels of granularity associated with automated systems and data storage requirements. Duke Energy is committed to addressing these and other potential risks. The Company recognizes that it is proceeding with the first few steps of an evolutionary journey. DEP looks forward to public feedback as the IRP process evolves, and is committed to openly considering all viewpoints and new data that will improve the ability to plan for and meet the needs of its customers

Battery Storage:

As introduced in the ISOP discussion, the Company is assessing the integration of battery storage technology into its portfolio of assets. Battery storage costs are expected to continue to decline which may make this resource a viable option for grid support services, including frequency regulation, solar smoothing during periods with high incidences of intermittency, as well as, the potential to provide overall energy and capacity value. Energy Storage can also provide value to the transmission and distribution (T&D) system by deferring or eliminating traditional upgrades and can be used to improve reliability and power quality to locations on the Company's distribution system. This approach results in stacked benefits which couples value streams from the Transmission, Distribution, and Generation systems. This unique evaluation process falls outside of the Company's traditional IRP process which focuses primarily on meeting future generation needs reliably and at the lowest possible cost. This new approach to evaluating technologies that have generation, transmission and distribution value is being addressed through the ISOP enhancements, discussed above.

The Company will begin investing in multiple grid-connected storage systems dispersed throughout its North and South Carolina service territories that will be located on property owned by the Company or leased from its customers. These deployments will allow for a more complete evaluation of potential benefits to the distribution, transmission and generation system while also providing actual operations and maintenance cost impacts of batteries deployed at a significant scale. This will allow the Company to explore the nature of new offerings desired by customers and fill knowledge gaps, such as how the Company can best integrate battery storage into its daily operations. The Company will work with Generation, Transmission and Distribution departments in this evaluation process, utilizing the ISOP framework. The goal is to optimize the location to couple localized T&D system benefits with bulk system benefits, and to minimize cost and maximize benefits for its customers. The Company believes such investments are consistent with the direction of state policy in both NC and SC under the NC HB 589 and SC DER Program, respectively. Additionally, the Company continues to participate in an energy storage study to assess the economic potential for NC customers, mandated by HB 589. Results of the study are expected in December 2018.

As stated in DEP's most recent Western Carolinas Modernization Project (WCMP) Annual Progress Report (Docket No. E-2, Sub 1089), DEP has identified multiple opportunities to deploy energy storage in the form of batteries throughout the region, specifically to meet the Commission's order to deploy at least 5 MW of energy storage in the DEP-West region and support the avoidance or deferral of the contingent natural gas-fired Combustion Turbine. For example, DEP is pursuing a grid-connected microgrid (solar and battery) to serve the Town of Hot Springs, should their radial feed experience an outage.

7. SCREENING OF GENERATION ALTERNATIVES

As previously discussed, the Company develops the load forecast and adjusts for the impacts of EE programs that have been pre-screened for cost-effectiveness. The growth in this adjusted load forecast and associated reserve requirements, along with existing unit retirements or purchased power contract expirations, creates a need for future generation. This need is partially met with DSM resources and the renewable resources required for compliance with NC REPS, HB 589 and SC Act 236. The remainder of the future generation needs can be met with a variety of potential supply side technologies.

For purposes of the 2018 IRP, the Company considered a diverse range of technology choices utilizing a variety of different fuels, including ultra-supercritical pulverized coal (USCPC) units with carbon capture and sequestration (CCS), integrated gasification combined cycle (IGCC) with CCS, CTs, CCs with duct firing, Combined Heat and Power (CHP), reciprocating engines, and nuclear units. In addition, Duke Energy Progress considered renewable technologies such as Wind, Solar PV, Landfill Gas and storage options such as Pumped Storage Hydro (PSH) and Lithium Ion Batteries in the screening analysis. Hybrids of the above technologies were also considered (i.e. solar steam augmentation and solar PV plus battery).

For the 2018 IRP screening analysis, the Company screened technology types within their own respective general categories of baseload, peaking/intermediate, renewable, and storage, with the goal of screening to pass the best alternatives from each of these four categories to the integration process. As in past years, the reason for the initial screening analysis is to determine the most viable and cost-effective resources for further evaluation on the DEP system. This initial screening evaluation is necessary to narrow down options to be further evaluated in the quantitative analysis process as discussed in Appendix A.

The results of these screening processes determine a smaller, more manageable subset of technologies for detailed analysis in the expansion planning model. The following list details the technologies that were evaluated in the screening analysis phase of the IRP process. The technical and economic screening is discussed in detail in Appendix F.

Dispatchable (Winter Ratings)

- Base load – 782 MW Ultra-Supercritical Pulverized Coal with CCS
- Base load – 557 MW 2x1 IGCC with CCS
- Base load – 2 x 1,117 MW Nuclear Units (AP1000)
- Base load – 667 MW – 1x1x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 1,339 MW – 2x2x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 22 MW – Combined Heat & Power (Combustion Turbine)
- Base load – 9 MW – Combined Heat & Power (Reciprocating Engine)
- Base load – 600 MW – Small Modular Reactor (SMR)
- Peaking/Intermediate – 196 MW 4 x LM6000 Combustion Turbines (CTs)
- Peaking/Intermediate – 202 MW, 12 x Reciprocating Engine Plant
- Peaking/Intermediate – 574 MW 2 x G/H-Class Combustion Turbines (CTs)
- Peaking/Intermediate – 754 MW 2 x J-Class Combustion Turbines (CTs)
- Peaking/Intermediate – 919 MW 4 x 7FA.05 Combustion Turbines (CTs)
- Storage – 5 MW / 5 MWh Li-ion Battery
- Storage – 20 MW / 80 MWh Li-ion Battery
- Storage – 1,400 MW Pumped Storage Hydro (PSH)
- Renewable – 75 MW Wood Bubbling Fluidized Bed (BFB, biomass)
- Renewable – 5 MW Landfill Gas

Non-Dispatchable (Nameplate)

- Renewable – 150 MW Wind - On-Shore
- Renewable – 50 MW Solar PV, Fixed-tilt (FT)
- Renewable – 50 MW Solar PV, Single Axis Tracking (SAT)

8. RESOURCE ADEQUACY

Background:

Resource adequacy refers to the ability of the electric system to supply the aggregate electrical demand and energy requirements of the end-use customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements. Utilities require a margin of reserve generating capacity in order to provide reliable service. Periodic scheduled outages are required to perform maintenance, inspections of generating plant equipment, and to refuel nuclear plants. Unanticipated mechanical failures may occur at any given time, which may require shutdown of equipment to repair failed components. Adequate reserve capacity must be available to accommodate these unplanned outages and to compensate for higher than projected peak demand due to forecast uncertainty and weather extremes. The Company utilizes a reserve margin target in its IRP process to ensure resource adequacy. Reserve margin is defined as total resources minus peak demand, divided by peak demand. The reserve margin target is established based on probabilistic assessments as described below.

2016 Resource Adequacy Study:

The Company retained Astrapé Consulting in 2016 to conduct an updated resource adequacy study.[4] The updated study was warranted to account for the extreme weather experienced in the service territory in recent winter periods, and the significant amount of solar capacity that has been added to the system and in the interconnection queue. Solar resources provide meaningful capacity benefits in the summer since peak demand typically occurs in afternoon hours when the sun is shining and solar resources are available. However, solar resources contribute very little capacity value to help meet winter peak demands that typically occur in early morning hours.

Methodology:

The 2016 resource adequacy study incorporated the uncertainty of weather, economic load growth, unit availability, and the availability of transmission and generation capacity for emergency assistance. Astrapé analyzed the optimal planning reserve margin based on providing an acceptable

[4] Astrapé Consulting is an energy consulting firm with expertise in resource adequacy and integrated resource planning. Astrapé also conducted resource adequacy studies for DEC and DEP in 2012.

level of physical reliability and minimizing economic costs to customers. The most common physical reliability metric used in the industry is to target a system reserve margin that satisfies the one day in 10 years Loss of Load Expectation (LOLE) standard. This standard is interpreted as one firm load shed event every 10 years due to a shortage of generating capacity. From an economic perspective, as planning reserve margin increases, the total cost of reserves increases while the costs related to reliability events decline. Similarly, as planning reserve margin decreases, the cost of reserves decreases while the costs related to reliability events increase, including the costs to customers for loss of power. Thus, there is an economic optimum point where the cost of additional reserves plus the cost of reliability events to customers is minimized.

Winter Capacity Planning:

In the past, loss of load risk was typically concentrated during the summer months and a summer reserve margin target provided adequate reserves in both the summer and winter periods. However, the incorporation of recent winter load data and the significant amount of solar penetration included in the 2016 study, shows that the majority of loss of load risk is now heavily concentrated during the winter period. The shift in seasonal LOLE is the result of greater winter load volatility, as well as the high penetration of solar resources and the associated capacity contribution to summer reserves compared to winter reserves. The seasonal shift of LOLE to the winter period also increases as greater amounts of solar capacity are added to the system. Thus, increasing solar penetrations shift the planning process to a winter focus. Winter load and resources now drive the timing need for new capacity additions and a winter planning reserve margin target is now needed to ensure that adequate resources are available throughout the year to meet customer demand.

Results:

Based on results of the 2016 resource adequacy assessment, the Company adopted a 17% minimum winter reserve margin target for scheduling new resource additions and incorporated this planning criterion beginning with the 2016 IRP.

Adequacy of Projected Reserves:

DEP's resource plan reflects winter reserve margins ranging from approximately 17% to 25%. Reserves projected in DEP's IRP meet the minimum planning reserve margin target and thus satisfy the one day in 10 years LOLE criterion. Projected reserve margins often exceed the minimum 17% winter target by 3% or more in years immediately following new resource additions. Reserve margins are projected to exceed the minimum 17% winter target by 3% or more in 2025 and 2027 due to the combined cycle capacity additions in those years. The projected reserve margin also exceeds the minimum target by about 3% in 2029 due to the addition of a block of CT capacity.

The IRP provides general guidance in the type and timing of resource additions. As previously noted, projected reserve margins will often be somewhat higher than the minimum target in years immediately following new generation additions since capacity is generally added in large blocks to take advantage of economies of scale. Large resource additions are deemed economic only if they have a lower Present Value Revenue Requirement (PVRR) over the life of the asset as compared to smaller resources that better fit the short-term reserve margin need. Reserves projected in the Company's IRP are appropriate for providing an economic and reliable power supply.

NC Regulatory Procedural History:

The NCUC's June 27, 2017 Order Accepting Integrated Resource Plans and Accepting REPS Compliance Plans in Docket No. E-100, Sub 147 concluded that the reserve margins included in the DEP and DEC IRPs are reasonable for planning purposes. However, the Commission also directed DEP and DEC to work with the Public Staff to address outstanding concerns raised by the Public Staff and SACE consultant Wilson. The Commission further directed the Companies and the Public Staff to file a Joint Report summarizing their review and conclusions within 150 days of the filing of Duke's 2017 IRP updates.

Per the Commission's Sub 147 order, the Companies worked with the Public Staff in efforts to resolve outstanding concerns related to the 2016 Resource Adequacy studies and filed the Joint Report on April 2, 2018. As noted in the report, the discussions between the Public Staff and the Companies were helpful; however, the parties did not reach consensus on all of the issues. In particular, the parties did not reach agreement regarding the methodology used to incorporate economic load forecast uncertainty. Ultimately, the Public Staff recommended that DEP and DEC utilize a 16% reserve margin in their 2018 IRPs and until such time that a new resource adequacy study is conducted. Duke recommended a minimum 17% winter reserve margin for planning purposes until such time that a new resource adequacy study is conducted. The Public Staff and Duke jointly recommended that a new resource adequacy study be conducted no later than the 2020 biennial IRP filings to reflect updated inputs and planning assumptions.

The NCUC's April 16, 2018 Order Accepting Filing of 2017 Update Reports and Accepting 2017 REPS Compliance Plans in Docket No. E-100, Sub 147, accepted the parties' Joint Report and concluded that DEP and DEC may continue to utilize the minimum 17% winter reserve margin for planning purposes in their 2018 IRPs. In addition, the Commission ordered DEP and DEC to further address the economic load forecast uncertainty issue in their 2018 IRPs. The Commission also required the Companies to present a sensitivity analysis in their 2018 IRPs that illustrates the impact of a 16% winter reserve margin, including the specific risk impact (LOLE) of using a 16% minimum reserve margin versus a 17% minimum reserve margin. Further discussion of the economic load forecast uncertainty and results of the 16% reserve margin sensitivity are presented below.

Economic Load Forecast Uncertainty:

As described in the Joint Report, the Public Staff and Duke do not dispute the appropriateness of modeling to include the economic load forecast uncertainty. However, the parties disagree on the methodology and assumptions used to incorporate the uncertainty. As directed by the NCUC, Duke and Astrapé further reviewed the economic load forecast uncertainty issue and the assumptions previously provided by the Public Staff.

Table 8-A below shows the reserve margins that achieve 0.1 days/year LOLE using the Company's load forecast error (LFE) assumptions and the Public Staff's LFE assumptions. The Company has added a third column which completely removed the impact of the load forecast uncertainty. As shown in the table, assuming the Company has perfect knowledge of its 50/50 weather normal forecast, completely removing the LFE results in a 15.8% reserve margin. The Public Staff's recommended 16.08% reserve margin, which includes the Public Staff's assumptions for load uncertainty, is only 0.28% greater than the reserve margin needed with perfect forecasting knowledge. Thus, the Public Staff's LFE assumptions produce a reserve margin that only allows a 0.28% increase in the reserve margin to account for load uncertainty. The Company believes there is meaningful load growth uncertainty over a two to four-year period and that reserves of greater than 0.28% of load are required to manage that risk.

Table 8-A: Reserve Margin Needed to Satisfy 0.1 Days/Year LOLE

	Original	NC Public Staff Scenario	Assumes No LFE
	Base Case	2-year LFE + Remove cold weather outages	
DEC	16.7%	15.85% (PS-S2)	15.5
DEP	17.5%	16.30% (PS-S2)	16.1
Average	17.1%	16.08% (PS-S2)	15.8

Further, to reiterate concerns noted in the Joint Report, the Company is not comfortable with the over forecast bias that is assumed in the Public Staff's LFE assumptions. As shown in Table 8-B below, the Public Staff shows that load will only be under forecast 17.3% of the time compared to an over forecast probability of 48.4%. The Company's projected annual growth rates for peak demand and energy have averaged about 1.6% based on historical forecasts. However, these forecasts have been trending downward and the Company's 2018 IRP projects an average annual growth rate of less than 1.0% for summer and winter peak demands, and 0.5% for energy. With lower projected load growth, the likelihood of under-forecasting load growth is greater. The Company has taken this historical load growth into account in its projections to align with its objectives of producing a 50/50 load forecast. That is, 50% of the time load growth is expected to be higher than projected and 50% of the time it is expected to be lower than projected.

Table 8-B: Public Staff Load Forecast Error Assumptions

	Load Forecast Error Levels				
	-6%	-3%	0%	3%	6%
	Load Forecast Error Probabilities				
2 years	15.4%	33.0%	34.2%	14.6%	2.7%

Finally, as stated in the 150 Day Joint Report, the Company believes there are other assumptions in the study that could be aggressive (meaning reserve margins are too low) that will need to be revisited in the future. These include unit outage rate modeling and market assistance assumptions among others that would be revisited in the next study. The Company believes it is prudent to maintain a minimum 17% winter reserve margin to provide adequate reliability and satisfy the target of less than 1 firm load shed event every 10 years.

16% Winter Reserve Margin Sensitivity:

Compliant with the NCUC's April 16, 2018 Sub 147 order, Table 8-C below shows a comparison of DEP's base case resource additions using a 17% winter reserve margin compared to a scenario using a 16% winter reserve margin. As illustrated in the table, use of a 16% reserve margin would result in lesser short-term purchase quantities, as well as deferral of some of the undesignated future resources. For example, a portion of the CT block in 2029 for the 17% reserve margin base case could be deferred two years to 2031. Also, the 460 MW CT block in 2032 of the base case could be deferred two years to 2034 (one year beyond the planning period). The reserve margins resulting from these changes are depicted in the table.

The 2016 resource adequacy study recommendation used a consensus of the DEP and DEC study results to establish a minimum 17% winter reserve margin target for the two companies. This minimum reserve margin target is needed to maintain an LOLE of one day in ten years (0.1 days/year). Based on results from the 2016 study, allowing the DEP reserve margin to decline to 16% for a given year would increase the loss of load expectation to approximately 0.13 days/year for DEP, which equates to one expected firm load shed event approximately every 7.7 years.

Table 8-C: 16% Reserve Margin Sensitivity

Winter Projections of Load, Capacity, and Reserves for Duke Energy Progress 2018 Annual Plan

(17% Reserve Margin Base Case)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Undesignated Future Resources															
Combined Cycle							1,338		1,338						
Combustion Turbine											1,840			460	460
Short-Term Market Purchases		30	590	590	430	430	(30)	(590)	(590)	(430)	(430)				
Generating Reserves	2,491	2,410	2,405	2,426	2,428	2,460	3,571	2,848	3,450	2,784	3,006	2,886	2,743	3,034	2,969
% Reserve Margin	**17.6%**	**17.0%**	**17.0%**	**17.0%**	**17.0%**	**17.0%**	**24.8%**	**19.5%**	**23.4%**	**18.7%**	**20.0%**	**19.0%**	**17.9%**	**19.6%**	**19.1%**

(16% Reserve Margin Scenario)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Undesignated Future Resources															
Combined Cycle							1,338		1,338						
Combustion Turbine											1,380		460		460
Short-Term Market Purchases			479	583	435	426		(479)	(583)	(435)	(426)				
Generating Reserves	2,491	2,380	2,264	2,278	2,286	2,314	3,455	2,843	3,451	2,781	2,546	2,426	2,743	2,574	2,509
% Reserve Margin	**17.6%**	**16.8%**	**16.0%**	**16.0%**	**16.0%**	**16.0%**	**24.0%**	**19.5%**	**23.5%**	**18.7%**	**16.9%**	**16.0%**	**17.9%**	**16.6%**	**16.1%**

9. CAPACITY VALUE OF SOLAR / EFFECTIVE LOAD CARRYING CAPABILITY

Solar Capacity Value Study Summary:

As DEP and DEC continue to add solar to their systems, understanding the reliability contribution of solar resources is critical for generation planning and projecting capacity needs as part of the Integration Resource Plan. Conventional thermal resources are typically counted as 100% of net capability in reserve margin calculations for future generation planning since these resources are fully dispatchable resources when not on forced outage or planned maintenance. Due to the diurnal pattern and intermittent nature of solar resources, it is not reasonable to assume that these resources provide the same capacity value as a fully dispatchable resource. Peak loads for DEP and DEC in the winter occur in the early morning and late evening when the solar output is low, while peak loads in the summer occur across the afternoon and early evening which is more coincident with solar output. Solar output shapes and the timing of peak demand periods must be considered to determine the capacity value or reliability contribution of a solar resource compared to a fully dispatchable resource such as a combustion turbine.

Astrapé performed this solar capacity value study for the Companies using the Strategic Energy Risk Valuation Model (SERVM) which was the same model utilized for the 2016 Resource Adequacy Studies. Extensive work went into the development of fixed-tilt and single-axis-tracking solar profiles across a 13-location grid in North Carolina and South Carolina.

Astrapé calculated the incremental capacity value of solar across five solar penetration levels for each company. The table below shows the different penetration levels of renewable solar generation for both DEP and DEC. These levels are consistent with the Companies' estimates of penetration at the time of this analysis. Consistent with NC House Bill 589, solar additions were divided up into the categories of Existing Plus Transition and then an additional four tranches of solar that are expected over the next few years. However, note that the tranches discussed in this study reflect the Companies' total expected solar procurement which includes all utility scale requirements under NC HB 589 (CPRE, large customer programs and community solar). While the exact timing and amounts of transition and incremental solar additions may change over time, it is reasonable to assume the levels provided in the table below given the current procurement targets of the Companies.

Table 9-A: Simulated Solar Penetration Levels

	DEC Incremental MW	DEC Cumulative MW	DEP Incremental MW	DEP Cumulative MW
0 MW Level	–	–	–	–
Existing Plus Transition MW	840	840	2,950	2,950
Tranche 1	680	1,520	160	3,110
Tranche 2	780	2,300	180	3,290
Tranche 3	780	3,080	160	3,450
Tranche 4	420	3,500	135	3,585

Table 9-B below shows the seasonal LOLE weightings for the different increments of solar for DEP. As solar is added to the system, a higher percentage of the LOLE will occur in the winter because the output of solar in the summer during peak load hours, which occur in the afternoon and early evening, is naturally higher than the output during the winter peak load hours which occur early in the morning or late in the evening. In other words, when 1 MW of nameplate solar is added to the system, the 1 MW of solar reduces summer LOLE more than it reduces winter LOLE, thereby further shifting the seasonal weighting of LOLE more to the winter. This is apparent by examining the LOLE results in the table. The DEP no solar scenario has a seasonal LOLE weighting of approximately 85% winter and 15% summer. DEP has a significant level of Existing Plus Transition solar which pushes the seasonal winter LOLE weighting to greater than 99%. Thus, solar levels greater than Existing Plus Transition for DEP will have solar capacity values based solely on their capacity contribution in the winter.

Table 9-B: DEP Seasonal LOLE Percentage

	DEP Incremental Solar MW	DEP Cumulative Solar MW	DEP LOLE Summer %	DEP LOLE Winter %
0 MW Level	-	-	14.7%	85.3%
Existing Plus Transition MW	2,950	2,950	0.6%	99.4%
Tranche 1	160	3,110	0.5%	99.5%
Tranche 2	180	3,290	0.4%	99.6%
Tranche 3	160	3,450	0.3%	99.7%
Tranche 4	135	3,585	0.3%	99.7%

Table 9-C shows the solar capacity value results for DEP. The table illustrates the declining capacity value of solar as greater amounts of solar resources are added to the system. The first MW of solar in DEP provides only a 7% annual capacity value because of the high winter season LOLE weighting.[5] The Existing Plus Transition solar has an annual capacity value of less than 1%. The table also shows slightly greater capacity values for tracking versus fixed solar arrays.

[5] Capacity values represent the incremental capacity value of the next MW given the referenced solar penetration. The average capacity contribution for an entire block of solar resources can be estimated by averaging the incremental value for the first MW of the block and the incremental value for the first MW of the next block.

Table 9-C: DEP Capacity Value Results by Solar Penetration

Solar Capacity at Each Penetration Level (Incremental MW)	Solar Capacity at Each Penetration Level (Cumulative MW)	Penetration Level	Winter	Summer	Annual
0	0	DEP - 0 Solar	1.2%	35.4%	7.2%
2,950	2,950	DEP - 2950 Existing + Transition	0.6%	12.4%	0.6%
160	3,110	DEP - Tranche 1 – Fixed	0.3%	12.2%	0.3%
180	3,290	DEP - Tranche 2 – Fixed	0.3%	11.6%	0.3%
160	3,450	DEP - Tranche 3 – Fixed	0.2%	8.8%	0.3%
135	3,585	DEP - Tranche 4 – Fixed	0.2%	8.2%	0.3%
160	3,110	DEP - Tranche 1–Tracking	3.2%	22.3%	3.2%
180	3,290	DEP - Tranche 2–Tracking	3.1%	20.6%	3.1%
160	3,450	DEP - Tranche 3–Tracking	2.8%	16.2%	2.9%
135	3,585	DEP – Tranche 4–Tracking	2.7%	15.3%	2.8%

In summary, the winter LOLE to summer LOLE ratio drives the annual solar equivalent capacity values. Because the company has higher winter LOLE values in hours when solar is not available, the resulting equivalent annual solar capacity values are significantly reduced. As solar penetration increases, the capacity values decrease further since the firm load shed events are shifted even further into hours when there is less solar output. However, single-axis-tracking resources do bring some additional capacity value compared to fixed-tilt resources due to more output in morning and evening hours.

10. NUCLEAR AND SUBSEQUENT LICENSE RENEWAL (SLR)

Nuclear Assumptions in the 2018 IRP:

With respect to nuclear generation overall, the Company will continue to monitor and analyze key developments on factors impacting the potential need for, and viability of, future new baseload nuclear generation. Such factors include further developments on the Vogtle project and other new reactor projects worldwide, progress on existing unit relicensing efforts, nuclear technology developments, and changes in fuel prices and carbon policy.

Subsequent License Renewal (SLR) for Nuclear Power Plants:

DEP and DEC, collectively, provide approximately one half of all energy served in their NC and SC service territories from clean carbon-free nuclear generation. This highly reliable source of generation provides power around the clock every day of the year. While nuclear unit outages are needed for maintenance and refueling, outages are generally relatively short in duration and are spread across the nuclear fleet in months of lower power demand. In total, the fleet has a capacity factor, or utilization rate, of well over 90% with some units achieving 100% annual availability depending on refueling schedules. Nuclear generation is foundational to Duke's commitment to providing affordable, reliable electricity while also reducing the carbon footprint of its resource mix. Currently, all units within the fleet have operating licenses from the Nuclear Regulatory Commission (NRC) that allow the units to run 60 years from their original license date.

License Renewal is governed by Title 10 of the Code of Federal Regulations (10 CFR) Part 54, *Requirements for Renewal of Operating Licenses for Nuclear Power Plants.* Currently NRC has approved applications to extend licenses to up to 60 years for 89 nuclear units across the country, with applications for four nuclear units currently under review.

SLR would cover a second license renewal period, for a total of as much as 80 years. The NRC has issued regulatory guidance documents, NUREG-2191 [Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report] and NUREG-2192 [Standard Review Plan for the Review of Subsequent License Renewal (SRP-SLR) Applications for Nuclear Power Plants], establishing formal regulatory guidance for SLR.

NextEra submitted the industry's first SLR application to the NRC on January 31, 2018 for its Turkey Point station. The SLR application was accepted by NRC as sufficient for review allowing the NRC to begin their comprehensive review of the application. The NRC review is expected to take 18 months not including the time needed to perform the sufficiency review.

On July 10, 2018, Exelon Corporation submitted an SLR application for its Peach Bottom plant. The NRC is currently performing the sufficiency review of the Peach Bottom SLR application with a decision expected 3Q2018. Dominion Energy announced it would pursue SLR for its Surry and North Anna plants targeting an SLR application submittal to the NRC in early-2019 for Surry and 2020 for North Anna.

Based on recent industry progress in SLR including published NRC guidance, the NextEra and Exelon Corporation application submittals, and announcements from Dominion Energy, the Company's Base Cases assume SLR for existing nuclear generation to 80 years for planning purposes in this year's IRP. The Company will continue to monitor industry and NRC developments related to SLR.

The Company views all its existing nuclear fleet as excellent candidates for SLR based on current conditions and expected operating expenditures, regardless of future carbon constraints. Duke Energy intends to pursue SLR for all its nuclear plants that show benefit for the customer. Work continues on development of the Oconee Nuclear Station SLR.

11. COMBINED HEAT AND POWER

Combined Heat and Power (CHP) systems, also known as cogeneration, generate electricity and useful thermal energy in a single, integrated system. CHP is not a new technology, but an approach to applying existing technologies. Heat that is normally wasted in conventional power generation is recovered as useful energy, which avoids the losses that would otherwise be incurred from separate generation of heat and power. CHP incorporating a gas-fired combustion turbine (CT) and heat recovery steam generator (HRSG) is more efficient than the conventional method of producing power and usable heat separately with a CT/generator and a stand-alone steam boiler.

Duke Energy is exploring and working with potential customers with continuous large thermal loads on a regulated CHP offer. The CHP asset is included as part of Duke Energy's IRP as a placeholder for future projects as described below. The steam sales revenue would be credited back to the revenue requirement of the projects to reduce the total cost of this resource. Along with the potential to be a cost-competitive generation resource, CHP would result in CO_2 emission reductions, and is an economic development opportunity for the state. In DEP, discussions with a potential steam host are currently underway.

Projections for CHP have been included in the following quantities in this IRP:

2021: 22 MW (winter)

As CHP development continues, future IRPs will incorporate additional CHP, as appropriate. Additional technologies evaluated as part of this IRP are discussed in Chapter 7 and Appendix F.

12. WESTERN CAROLINAS MODERNIZATION PLAN (WCMP)

Through community collaboration in DEP-West, specifically Buncombe County, the contingent CT has been pushed out beyond the horizon of this 15-year planning analysis.

2018 has been a pivotal year for the work of the Energy Innovation Task Force. Since the beginning of the year, the group's 18-months of planning and analysis is being put into action.

The Energy Innovation Task Force is a diverse group of community leaders who have launched a movement to: transition DEP-West to a smarter, cleaner and affordable energy future *AND* avoid or delay the construction of the planned contingent CT.

The co-conveners (City of Asheville, Buncombe County and Duke Energy Progress) engaged Rocky Mountain Institute as a key partner early in the process to provide analytical support. Because of their participation and expertise, the Company now knows more about how customers in DEP-West use electricity than ever before. Their work also narrowed the focus on areas for the group to focus – primarily heating system efficiency.

The research of Rocky Mountain Institute identified the current lack of automated-metering infrastructure (AMI) in the region as a barrier to the effort's overall success. AMI deployment is now underway in DEP-West.

A critical milestone for the Energy Innovation Task Force was the launch of the Blue Horizons Project. This brand was created through community conversations facilitated by the Knoxville-based Sustainability marketing firm – The Shelton Group.

The Blue Horizons Project is the brand associated with the community movement around energy efficiency, demand-side management, renewables and low-income weatherization locally. The primary gateway for customers to interact with Blue Horizons Project is a user-friendly website that directs customers to Duke Energy programs, local governmental initiatives and/or non-profit energy efficiency and weatherization opportunities. [6]

Through tabling at local events to neighborhood-level outreach and education, the Blue Horizons Project is engaging customers and driving more energy-efficient behaviors. The movement is being managed by the Greenbuilt Alliance, a local non-profit organization that specializes in the Greenbuilt environment, funded and supported by Duke Energy Progress, City of Asheville and

[6] https://www.bluehorizonsproject.com

Buncombe County. This full-time position was created to implement and advance the goals and efforts initiated by the Rocky Mountain Institute.

Although the movement was only launched in March 2018, they have had a presence at more than 25 public events and are seeing strong engagement from communities in the Asheville area. This work, along with canvassing by Duke Energy, is supporting continued success in the DSM program, EnergyWise^{SM}. In 2016, when the Energy Innovation Task Force was formed, 7,183 DEP-West customers were enrolled in the program. As of August 13, 2018, 11,329 customers are enrolled in winter EnergyWise^{SM} programs. Customer participation in this goal specifically addresses reductions in peak demand.

On the public engagement front, the Blue Horizons Project is soaring high and even stronger success is expected as outreach and marketing efforts continue.

Additionally, work to make deliberate investments in advanced and evolving technologies continues to be a strong focus of the group. The Technology Working Group, a subcommittee of the Energy Innovation Task Force, has been meeting monthly for nearly two years to look for cost-effective options for deployment of solar, battery storage, AMI, cold-climate heat pumps and other technologies. Their work has resulted in efforts to:

- Create DEP-West's first ever microgrid (solar and battery) on Mt. Sterling in the Great Smoky Mountains National Park.
- Commit to a grid connected microgrid (solar and battery) to serve the Town of Hot Springs, should their radial feed go out.
- Commit to at least 19 MW of battery storage in the region.
    - Duke Energy has determined that the potential for approximately 50 MW of energy storage in the region is feasible. The Technology Working Group has challenged Duke Energy Progress to push for 100 MW of energy storage.
- Develop a pilot for cold-climate heat pump. This technology would operate more efficiently in the DEP-West region than other heat pump technologies.
- Advance the work to site, design and build a large solar farm at the retired Buncombe County Landfill.

Although the focus of the Blue Horizons Project is to increase participation in existing and approved residential and commercial EE/DSM programs, there is also a focus on using this organized partnership to pilot new products and services. Specifically, a low-income energy efficiency pay-for-performance weatherization program.

Both the City of Asheville and Buncombe County have made sizable investments to advance the work of the Blue Horizons Project for building audits, staff support and other direct investments in low-income weatherization.

This community-centered approach to increasing participation in EE/DSM and making deliberate and strategic investments in technology is helping create a collaborative environment for infrastructure investments too. Working together with the local community has helped DEP-West make infrastructure investments to its local transmission system to increase capacity by rebuilding existing facilities and/or siting new substations to serve customers.

Although collaboration with the DEP-West community has yielded strong results, efforts to transition the region to a smarter, cleaner and affordable energy future for customers continues.

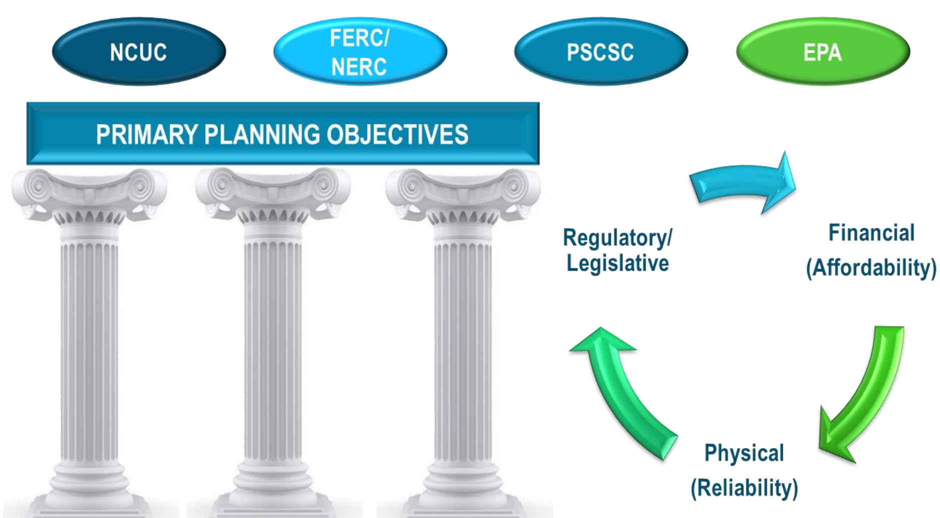
13. EVALUATION AND DEVELOPMENT OF THE RESOURCE PLAN

As described in Chapter 8, DEP continues to plan to winter planning reserve margin criteria in the IRP process. To meet the future needs of DEP's customers, it is necessary for the Company to adequately understand the load and resource balance. For each year of the planning horizon, DEP develops a load forecast of cumulative energy sales and hourly peak demand. To determine total resources needed, the Company considers the peak demand load obligation plus a 17% minimum planning winter reserve margin. The projected capability of existing resources, including generating units, EE and DSM, renewable resources and purchased power contracts is measured against the total resource need. Any deficit in future years will be met by a mix of additional resources that reliably and cost-effectively meet the load obligation and planning reserve margin while complying with all environmental and regulatory requirements. It should be noted that DEP considers the non-firm energy purchases and sales associated with the Joint Dispatch Agreement (JDA) with DEC in the development of its independent Base Cases and five alternative portfolios as discussed later in this chapter and in Appendix A.

Three Pillars of the IRP:

The IRP process has evolved as the energy industry has changed. While the intent of the IRP remains to develop a 15-year plan that is reliable and economical to meet future customer demand, other factors also must be considered when selecting a plan.

Figure 13-A: Three Pillars of the IRP



There are three pillars which determine the primary planning objectives in the IRP. These pillars are as follows:

- Regulatory/Legislative
- Financial (Affordability)
- Physical (Reliability)

The Regulatory and Legislative pillar of the IRP process takes into consideration various policies set by state and federal entities. Such entities include NCUC, PSCSC, FERC, NERC, SERC, NRC, and EPA, along with various other state and federal regulatory entities. Each of these entities develop policies that have a direct bearing on the inputs, analysis and results of the IRP process. Examples of such policies include NC HB 589 and SC DER program that set targets for the addition of renewable resources. Environmental legislation at the state and federal level can impact the cost and operations of existing resources as well as future assets. In addition, reliability and operational requirements imposed on the system also influence the IRP process.

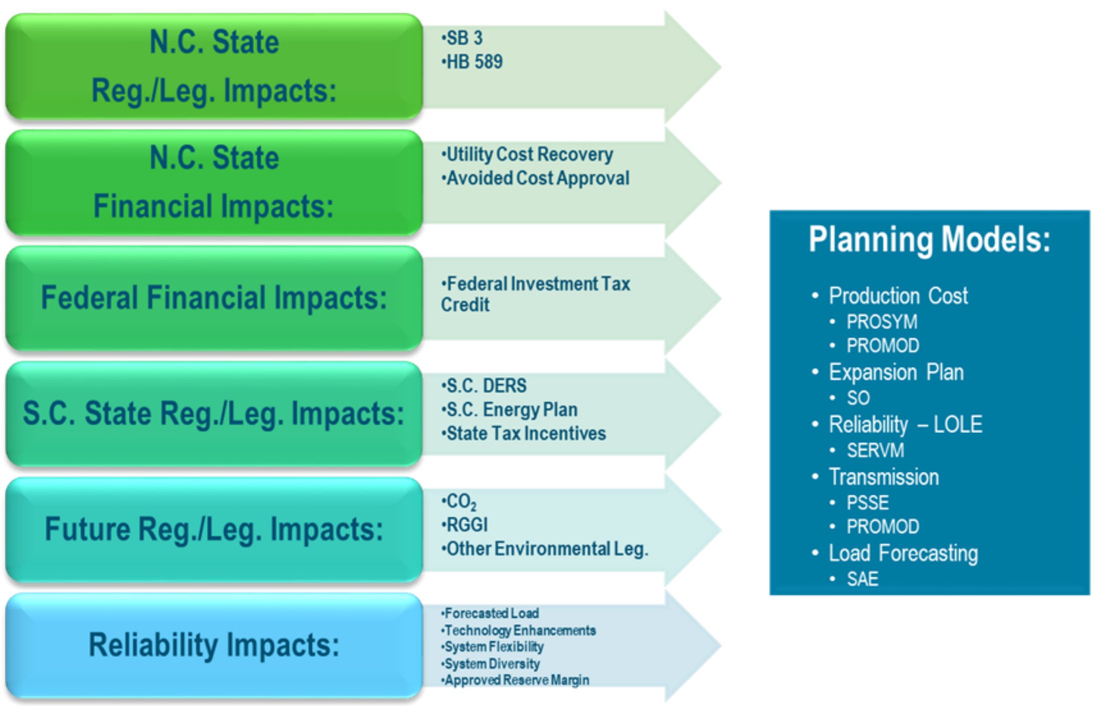
The Financial, or Affordability, pillar is another basic criterion for the IRP. The plan that is selected must be cost-effective for the customers of the Company. DEP's service territory, located in the southern United States, has climate conditions that require more combined electric heating and cooling per customer than any other region in the country. As such, DEP's customers require more electricity than customers from other regions, highlighting the need for affordable power. Changing customer preferences and usage patterns will continue to influence the load forecast incorporated in the Company's IRPs. Furthermore, as new technologies are developed and continue to evolve, the costs of these technologies are projected to decline. These downward impacts are contemplated in the planning process and changes to those projections will be closely monitored and captured in future IRPs.

Finally, Physical Reliability is the third pillar of the IRP process. Reliability of the system is vitally important to meeting the needs of today's customers as well as the future needs that comes with substantial customer growth projected in the region. DEP's customers expect energy to be provided to them when they need it both today and into the future. As discussed previously, the addition of new types of generation has impacted the operation of the system. As such, different ways of managing the system operations to ensure the Company reliably meets customer demand have been incorporated. The Company continues to plan to a reasonable 17% reserve margin, which helps to ensure that the reliability of the system is maintained.

Each of these pillars must be evaluated and balanced in the IRP in order to meet the intent of the process. The Company has adhered to the principles of these pillars in the development of this IRP and the portfolios evaluated as part of the IRP process.

Figure 13-B below graphically represents examples of how issues from each of the pillars may impact the IRP modeling process and subsequent portfolio development.

Figure 13-B: Impacts of Three Pillars on the IRP Modeling Process



IRP Analysis Process:

The following section summarizes the Data Input, Generation Alternative Screening, Portfolio Development and Detailed Analysis steps in the IRP process. A more detailed discussion of the IRP Process and development of the Base Cases and additional portfolios is provided in Appendix A.

Data Inputs:

Refreshing input data is the initial step in the IRP development process. For the 2018 IRP, data inputs such as load forecast, EE and DSM projections, fuel prices, projected CO_2 prices, individual plant operating and cost information, and future resource information were updated with the most current data. These data inputs were developed and provided by Company subject matter experts and/or based upon vendor studies, where available. Furthermore, DEP and DEC continue to benefit from the combined experience of both utilities' subject matter experts utilizing best practices from each utility in the development of their respective IRP inputs. Where appropriate, common data inputs were utilized.

As expected, certain data elements and issues have a larger impact on the IRP than others. Any changes in these elements may result in a noticeable impact to the plan, and as such, these elements are closely monitored. Some of the most consequential data elements are listed below. A detailed discussion of each of these data elements has been presented throughout this document and are examined in more detail in the appendices.

- Load Forecast for Customer Demand
- EE/DSM Forecast
- Renewable Resources and Cost Projections
- Fuel Costs Forecasts
- Technology Costs and Operating Characteristics
- Environmental Legislation and Regulation

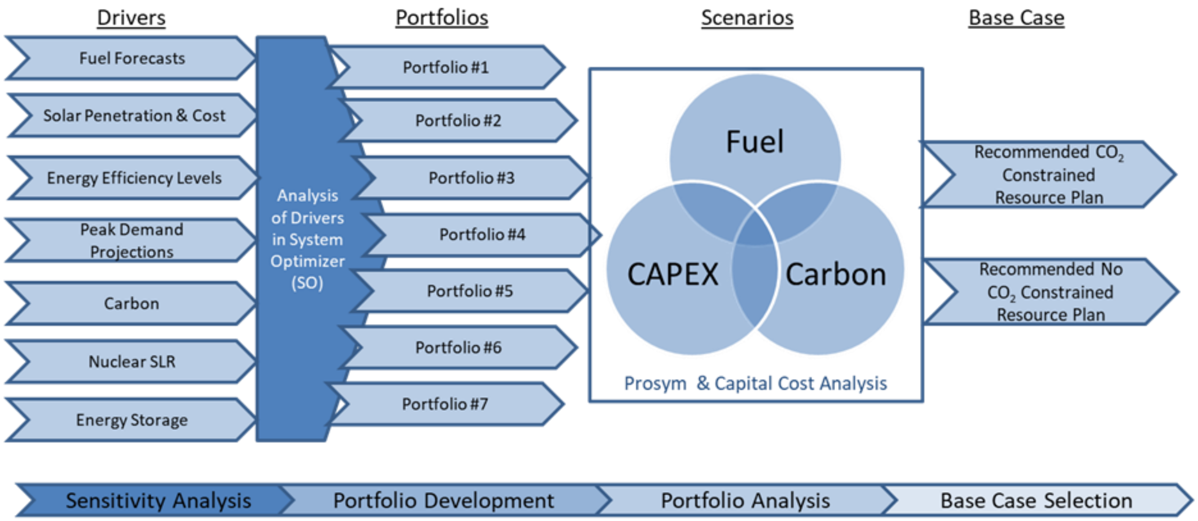
Generation Alternative Screening:

DEP reviews generation resource alternatives on a technical and economic basis. Resources must also be demonstrated to be commercially available for utility scale operations. The resources that are found to be both technically and economically viable are then passed to the detailed analysis process for further analysis.

Portfolio Development and Detailed Analysis:

The following figure provides an overview of the process for the portfolio development and detailed analysis phase of the IRP.

Figure 13-C: Overview of Portfolio Development and Detailed Analysis Phase



The Sensitivity Analysis and Portfolio Development phases rely upon the updated data inputs and results of the generation alternative screening process to derive resource portfolios or resource plans. The Sensitivity Analysis and Portfolio Development phases utilize an expansion planning model, System Optimizer (SO), to determine the best mix of capacity additions for the Company's short- and long-term resource needs with an objective of selecting a robust plan that meets reliability targets and minimizes the PVRR to customers and is environmentally sound by complying with or exceeding, all State and Federal regulations.

Sensitivity analysis of input variables such as load forecast, fuel costs, renewable energy, EE, and capital costs are considered as part of the quantitative analysis within the resource planning process. Utilizing the results of these sensitivities, possible expansion plan options for the DEP system are developed. These expansion plans are reviewed to determine if any overarching trends are present across the plans, and based on this analysis, specific portfolios are developed to represent these trends. Finally, the portfolios are analyzed using a capital cost model and an hourly production cost model (PROSYM) under various fuel price, capital cost and carbon scenarios to evaluate the robustness and economic value of each portfolio under varying input assumptions. After this comprehensive analysis is completed, the Base Case portfolios are selected.

In addition to evaluating these portfolios solely within the DEP system, the potential benefits of sharing capacity within DEP and DEC are examined in a common Joint Planning Case. A detailed discussion of these portfolios is provided in Appendix A.

Selected Portfolios:

For the 2018 IRP, seven representative portfolios were identified through the Sensitivity Analysis and Portfolio Development steps. As described below, the portfolios range from diverse portfolios with varying fuel sources such as nuclear, solar, natural gas, and coal, to more technology concentrated resources such as CT Centric and CC Centric resources. Additionally, some portfolios increase the amount and adoption rate of renewables, EE, and energy storage.

Portfolio 1 (Base CO_2 Future)

This portfolio represents a balanced generation portfolio with CCs and CTs making up the generation mix with incremental solar additions just beyond the 15-year window. While CCs are the preferred initial generating options in both DEP and DEC, CTs make up the vast majority of additional resources at the end of the 15-year planning horizon. This portfolio also includes base EE and renewable assumptions, along with 1,000 MW of economically selected solar just beyond the planning horizon. Additionally, 140 MW of nameplate battery storage placeholders are included. These placeholders represent a limited amount of grid connected battery storage projects that have the potential to provide solutions for the transmission and distribution systems with the possibility of simultaneously providing benefits to the generation resource portfolio.

Portfolio 2 (Base No CO_2 Future)

Within the 15-year planning horizon, this portfolio is the same as Portfolio 1. Beyond the planning window, CT technology generally takes precedent over CC technology. No additional solar was selected in this portfolio. The Base No CO_2 portfolio also includes base EE and renewable assumptions, along with 140 MW of nameplate battery storage placeholders.

Portfolio 3 (CT Centric)

This portfolio is similar to Portfolio 2. However, the 2027 CC need is replaced with CT technology to increase the concentration of CTs in this portfolio. Like Portfolio 2, this portfolio includes base EE and renewable assumptions, and no additionally selected solar. The portfolio includes 140 MW of nameplate storage placeholders.

Portfolio 4 (CC Centric – No Nuclear Future)

This portfolio represents a future where all existing nuclear assets are retired at the end of their current extended license period, and those nuclear assets are primarily replaced with CCs rather than new nuclear generation. The CC Centric Portfolio converts the entire 2029

CT block to CC technology. This portfolio also includes base EE and renewable assumptions, along with 1,000 MW of economically selected solar just beyond the planning horizon. Additionally, 140 MW of nameplate battery storage placeholders are included.

Portfolio 5 (High EE / High Renewables)

This portfolio includes the High EE and High Renewable assumptions in DEP. Solar nameplate capacity increases at a more rapid pace, and the total MW of solar is 310 MW greater in the High Renewable case by 2033. This portfolio includes an additional 124 MW of EE by the end of the planning horizon. Finally, this case also includes 140 MW of nameplate battery storage placeholders.

Portfolio 6 (CT Centric / High Renewables)

Like Portfolio 3, Portfolio 6 includes a high concentration of CT generation in the 15-year planning horizon. However, this portfolio includes the High Renewable assumption which accelerates solar additions in DEP while increasing the total amount of solar by approximately 300 MW. Portfolio 6 includes Base EE assumptions along with a placeholder of 140 MW of nameplate battery storage. This portfolio is especially illustrative when evaluating additional energy storage added in Portfolio 7.

Portfolio 7 (CT Centric with Battery Storage and High Renewables)

This portfolio converts the first 460 MW block of CTs in Portfolio 6 to 575 MW (nameplate) of 4-hour Lithium-ion battery storage in 2029. The additional 575 MW of battery storage is assumed to only provide generation and energy transfer capability that is 100% controlled by the Company. As such, the battery storage installation is assumed to provide 460 MW of winter peak capacity. The total amount of nameplate battery storage in DEP in this case is 715 MW by 2029.

Portfolio Analysis & Base Case Selection:

The seven portfolios identified in the screening analysis were evaluated in more detail with an hourly production cost model under a matrix of nine carbon and fuel cost scenarios. Additionally, each of the portfolios were further studied under high and low capital cost scenarios to determine how changing capital costs impacted their relative value under the varying fuel and carbon scenarios. Table 13-A shows the matrix that each of the scenarios were tested under.

Table 13-A Scenarios for Portfolio Analysis

	No CO_2	Base CO_2	High CO_2
Low Fuel			
Base Fuel			
High Fuel			

Table 13-B details the results of the PVRR analysis under the varying carbon and fuel scenarios while Tables 13-C and 13-D provide the same results but under low capital cost and high capital cost futures respectively.

Table 13-B: Lowest PVRR (thru 2068) Portfolios Under Each Scenario (2018 dollars in Millions)

PVRR thru 2068 (2018 $M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-$132 M vs Port 3)	Portfolio 1 (-$84 M vs Port 2)	Portfolio 1 (-$409 M vs Port 2)
Base Fuel	Portfolio 2 (-$17 M vs Port 1)	Portfolio 1 (-$231 M vs Port 2)	Portfolio 1 (-$536 M vs Port 5)
High Fuel	Portfolio 1 (-$257 M vs Port 2)	Portfolio 1 (-$493 M vs Port 2)	Portfolio 1 (-$533 M vs Port 5)

Table 13-C: Lowest PVRR (thru 2068) Portfolios Under Each Scenario – Low Capital Cost Sensitivity (2018 dollars in Millions)

PVRR thru 2068 (2018 $M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-$6 M vs Port 1)	Portfolio 1 (-$260 M vs Port 2)	Portfolio 1 (-$586 M vs Port 5)
Base Fuel	Portfolio 1 (-$60 M vs Port 2)	Portfolio 1 (-$408 M vs Port 2)	Portfolio 1 (-$579 M vs Port 5)
High Fuel	Portfolio 1 (-$351 M vs Port 7)	Portfolio 1 (-$551 M vs Port 5)	Portfolio 1 (-$552 M vs Port 5)

Table 13-D: Lowest PVRR (thru 2068) Portfolios Under Each Scenario – High Capital Cost Sensitivity (2018 dollars in Millions)

PVRR thru 2068 (2018 \$M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-\$137 M vs Port 3)	Portfolio 2 (-\$44 M vs Port 2)	Portfolio 1 (-\$282 M vs Port 2)
Base Fuel	Portfolio 2 (-\$144 M vs Port 1)	Portfolio 1 (-\$104 M vs Port 2)	Portfolio 1 (-\$409 M vs Port 2)
High Fuel	Portfolio 1 (-\$129 M vs Port 2)	Portfolio 1 (-\$366 M vs Port 2)	Portfolio 1 (-\$448 M vs Port 5)

Carbon Constrained Base Case:

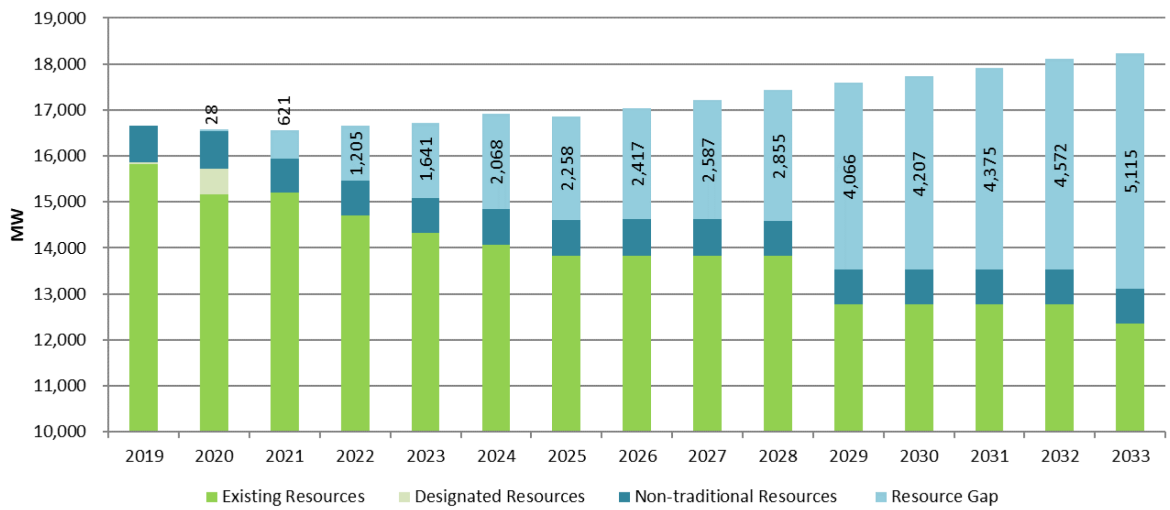
For planning purposes, Duke Energy considers a carbon constrained future and a no carbon future in the development of the Base Case portfolios. If a carbon constrained future is either delayed or is more restrictive than the base plan, or other variables such as fuel price and capital costs change significantly from the base assumptions, the selected carbon constrained portfolio should be adequately robust to still provide value in those futures. Another factor that is considered when selecting the base portfolio is the likelihood that the selected portfolio can be executed as shown. Under those considerations, the Company selected Portfolio 1 (Base CO_2 Future) as the base portfolio for planning assumptions.

Portfolio 1 includes a diverse compilation of resources including CCs, CTs, battery storage, and increasing amounts of EE/DSM and solar resources in conjunction with existing nuclear, natural gas, renewables and other assets already on the DEP system. This portfolio also enables the Company to lower carbon emissions under a range of future scenarios at a lower cost than most other scenarios.

Finally, the Carbon Constrained Base Case was developed utilizing consistent assumptions and analytic methods between DEP and DEC, where appropriate. This case does not consider the sharing of capacity between DEP and DEC. However, the Base Case incorporates the JDA between DEP and DEC, which represents a non-firm energy only commitment between the Companies. A Joint Planning Case that explores the potential for DEP and DEC to share firm capacity was also developed and is discussed later in this chapter and in Appendix A.

The Load and Resource Balance shown in Figure 13-D illustrates the resource needs that are required for DEP to meet its load obligation inclusive of a required reserve margin. The existing generating resources, designated resource additions and EE resources do not meet the required load and reserve margin beginning in 2020. As a result, the resource plan analyses described above have determined the most robust plan to meet this resource gap.

Figure 13-D: DEP Carbon Constrained Base Case Load Resource Balance (Winter)



Cumulative Resource Additions to Meet Winter Load Obligation and Reserve Margin (MW)

Year	2019	2020	2021	2022	2023	2024	2025	2026
Resource Need	0	28	621	1,205	1,641	2,068	2,258	2,417
Year	2027	2028	2029	2030	2031	2032	2033	
Resource Need	2,587	2,855	4,066	4,207	4,375	4,572	5,115	

Tables 13-E and 13-F present the Load, Capacity and Reserves (LCR) tables for the Carbon Constrained Base Case analysis that was completed for DEP's 2018 IRP.

Table 13-E: Carbon Constrained Load, Capacity and Reserves Table -Winter

Winter Projections of Load, Capacity, and Reserves
for Duke Energy Progress 2018 Annual Plan

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	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load Forecast															
1 DEP System Winter Peak	14,036	14,060	14,062	14,168	14,243	14,429	14,553	14,724	14,886	15,090	15,232	15,367	15,524	15,704	15,811
2 Firm Sale	150	150	150	150	150	150	0	0	0	0	0	0	0	0	0
3 Cumulative New EE Programs	(26)	(44)	(62)	(79)	(104)	(120)	(138)	(155)	(173)	(187)	(200)	(211)	(221)	(229)	(236)
4 Adjusted Duke System Peak	**14,161**	**14,166**	**14,151**	**14,239**	**14,289**	**14,458**	**14,415**	**14,568**	**14,713**	**14,903**	**15,032**	**15,155**	**15,303**	**15,475**	**15,575**
Existing and Designated Resources															
5 Generating Capacity	13,912	13,942	14,124	13,614	13,620	13,620	13,626	13,394	13,394	13,394	13,398	12,345	12,345	12,345	12,345
6 Designated Additions / Uprates	30	566	4	6	0	6	0	0	0	4	0	0	0	0	0
7 Retirements / Derates	0	(384)	(514)	0	0	0	(232)	0	0	0	(1,053)	0	0	0	0
8 Cumulative Generating Capacity	**13,942**	**14,124**	**13,614**	**13,620**	**13,620**	**13,626**	**13,394**	**13,394**	**13,394**	**13,398**	**12,345**	**12,345**	**12,345**	**12,345**	**12,345**
Purchase Contracts															
9 Cumulative Purchase Contracts	**2,013**	**1,703**	**1,646**	**1,140**	**738**	**480**	**480**	**479**	**476**	**470**	**466**	**465**	**465**	**463**	**35**
Non-Compliance Renewable Purchases	99	102	48	49	38	40	39	39	36	33	29	28	27	26	26
Non-Renewables Purchases	1,914	1,601	1,599	1,091	700	440	440	440	440	437	437	437	437	437	9
Undesignated Future Resources															
10 Nuclear															
11 Combined Cycle							1,338		1,338						
12 Combustion Turbine											1,840			460	460
13 Short-Term Market Purchases		30	590	590	430	430	(30)	(590)	(590)	(430)	(430)				
14 Solar															
Renewables															
15 Cumulative Renewables Capacity	194	194	106	102	102	102	74	74	72	22	15	16	16	16	16
16 Combined Heat & Power	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0
17 Energy Storage	12	12	12	14	14	16	16	16	0	0	0	0	0	0	0
18 Cumulative Production Capacity	**16,161**	**16,075**	**16,045**	**16,144**	**16,187**	**16,381**	**17,445**	**16,870**	**17,613**	**17,131**	**17,477**	**17,477**	**17,477**	**17,935**	**17,967**
Demand Side Management (DSM)															
19 Cumulative DSM Capacity	**490**	**501**	**511**	**521**	**530**	**537**	**541**	**546**	**550**	**557**	**560**	**564**	**569**	**574**	**578**
20 Cumulative Capacity w/ DSM	**16,651**	**16,576**	**16,555**	**16,665**	**16,718**	**16,918**	**17,985**	**17,416**	**18,163**	**17,687**	**18,038**	**18,041**	**18,046**	**18,509**	**18,544**
Reserves w/ DSM															
21 Generating Reserves	2,491	2,410	2,405	2,426	2,428	2,460	3,571	2,848	3,450	2,784	3,006	2,886	2,743	3,034	2,969
22 % Reserve Margin	**17.6%**	**17.0%**	**17.0%**	**17.0%**	**17.0%**	**17.0%**	**24.8%**	**19.5%**	**23.4%**	**18.7%**	**20.0%**	**19.0%**	**17.9%**	**19.6%**	**19.1%**

Table 13-F: Carbon Constrained Load, Capacity and Reserves Table -Summer

**Summer Projections of Load, Capacity, and Reserves
for Duke Energy Progress 2018 Annual Plan**

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Load Forecast															
1 DEP System Summer Peak	13,374	13,409	13,439	13,557	13,676	13,850	14,018	14,264	14,398	14,642	14,804	14,959	15,137	15,333	15,463
2 Firm Sale	150	150	150	150	150	150	0	0	0	0	0	0	0	0	0
3 Cumulative New EE Programs	(58)	(87)	(115)	(141)	(166)	(193)	(222)	(250)	(280)	(306)	(332)	(354)	(375)	(392)	(409)
4 Adjusted Duke System Peak	**13,467**	**13,472**	**13,474**	**13,566**	**13,660**	**13,808**	**13,796**	**14,014**	**14,118**	**14,336**	**14,473**	**14,605**	**14,762**	**14,941**	**15,054**
Existing and Designated Resources															
5 Generating Capacity	12,728	12,732	12,852	12,477	12,477	12,481	12,481	12,305	12,305	12,307	12,307	11,260	11,260	11,260	11,260
6 Designated Additions / Uprates	4	498	4	0	4	0	0	0	2	0	0	0	0	0	0
7 Retirements / Derates	0	(378)	(379)	0	0	0	(176)	0	0	0	(1,047)	0	0	0	0
8 Cumulative Generating Capacity	**12,732**	**12,852**	**12,477**	**12,477**	**12,481**	**12,481**	**12,305**	**12,305**	**12,307**	**12,307**	**11,260**	**11,260**	**11,260**	**11,260**	**11,260**
Purchase Contracts															
9 Cumulative Purchase Contracts	**2,207**	**2,170**	**1,705**	**1,445**	**1,461**	**1,262**	**1,278**	**1,268**	**1,256**	**1,242**	**1,229**	**1,219**	**1,215**	**1,208**	**809**
Non-Compliance Renewable Purchases	611	719	741	818	835	856	871	862	850	838	825	816	811	805	800
Non-Renewables Purchases	1,596	1,451	964	626	626	406	406	406	406	403	403	403	403	403	9
Undesignated Future Resources															
10 Nuclear															
11 Combined Cycle							1,198		1,198						
12 Combustion Turbine											1,704			426	426
13 Short Term Market Purchases		30	590	590	430	430	(30)	(590)	(590)	(430)	(430)				
14 Solar															
Renewables															
15 Cumulative Renewables Capacity	620	618	537	528	539	535	499	511	521	482	488	499	504	509	514
16 Combined Heat & Power	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0
17 Energy Storage	12	12	12	14	14	16	16	16	0	0	0	0	0	0	0
18 Cumulative Production Capacity	**15,571**	**15,694**	**15,391**	**15,726**	**16,202**	**16,445**	**17,432**	**16,861**	**17,469**	**16,986**	**17,205**	**17,207**	**17,208**	**17,633**	**17,665**
Demand Side Management (DSM)															
19 Cumulative DSM Capacity	**923**	**958**	**984**	**1,007**	**1,019**	**1,024**	**1,027**	**1,032**	**1,035**	**1,041**	**1,044**	**1,047**	**1,051**	**1,055**	**1,058**
20 Cumulative Capacity w/ DSM	**16,494**	**16,652**	**16,375**	**16,733**	**17,221**	**17,469**	**18,459**	**17,893**	**18,504**	**18,026**	**18,249**	**18,254**	**18,259**	**18,688**	**18,723**
Reserves w/ DSM															
21 Generating Reserves	3,027	3,180	2,901	3,167	3,561	3,662	4,663	3,879	4,385	3,690	3,776	3,650	3,496	3,747	3,669
22 % Reserve Margin	**22.5%**	**23.6%**	**21.5%**	**23.3%**	**26.1%**	**26.5%**	**33.8%**	**27.7%**	**31.1%**	**25.7%**	**26.1%**	**25.0%**	**23.7%**	**25.1%**	**24.4%**

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DEP - Assumptions of Load, Capacity, and Reserves Table

The following notes are numbered to match the line numbers on the Winter Projections of Load, Capacity, and Reserves table. All values are MW (winter ratings) except where shown as a percent.

1. Planning is done for the peak demand for the Duke Energy Progress System.

2. Firm sale of 150 MW through 2024.

3. Cumulative new energy efficiency and conservation programs (does not include demand response programs).

4. Peak load adjusted for firm sales and cumulative energy efficiency.

5. Existing generating capacity reflecting designated additions, planned uprates, retirements and derates as of July 1, 2018.

6. Designated Capacity Additions include:

   Planned nuclear uprates totaling 56 MW in the 2019 - 2028 timeframe.

   560 MW Asheville combined cycle addition in November 2019.

7. Planned Retirements include:

   384 MW Asheville Coal Units 1-2 in November 2019.

   514 MW Darlington CT Units 1-4, 6-8, 10 by December 2020.

   232 MW Blewett CT Units 1-4 and Weatherspoon CT units 1-4 in December 2024.

   1,053 MW Roxboro Units 1-2 in December 2028.

   Planning assumptions for nuclear stations assume subsequent license renewal at the end of the current license. 797 MW Robinson 2 is assumed to be relicensed to 2050 (current license expires in 2030).

   All retirement dates are subject to review on an ongoing basis. Dates used in the 2018 IRP are for planning purposes only, unless already planned for retirement.

DEP - Assumptions of Load, Capacity, and Reserves Table (cont.)

8. Sum of lines 5 through 7.

9. Cumulative Purchase Contracts have several components:

   Purchased capacity from PURPA Qualifying Facilities, Anson and Hamlet CT tolling, Butler Warner purchase, Southern CC purchase, and Broad River CT purchase.

   Additional line items are shown under the total line item to show the amounts of renewable and traditional QF purchases.

10. New nuclear resources selected to meet load and minimum planning reserve margin

    Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the following year.

    No new nuclear resources were selected in the Base Case in the 15-year study period.

11. New combined cycle resources economically selected to meet load and minimum planning reserve margin.

    Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the next year.

    Addition of 1,338 MW of combined cycle capacity online December 2024

    Addition of 1,338 MW of combined cycle capacity online December 2026.

12. New combustion turbine resources economically selected to meet load and minimum planning reserve margin.

    Capacity must be on-line by June 1 to be included in available capacity for the summer peak of that year and by December 1 to be included in available capacity for the winter peak of the next year.

    Addition of 1,840 MW of combustion turbine capacity online December 2028.

    Addition of 460 MW of combustion turbine capacity online December 2031.

DEP - Assumptions of Load, Capacity, and Reserves Table (cont.)

Addition of 460 MW of combustion turbine capacity online December 2032.

13. Short-term market purchases needed to meet load and minimum planning reserve margin.

14. New solar resources economically selected to meet load and minimum planning reserve margin above the forecast in Section 5.

    No solar resources were economically selected in the Base Case.

15. Resources to comply with NC REPS, HB 589 and SC DERS. These resources include solar, landfill gas, poultry and swine resources. Solar resources reflect percentage of nameplate capacity contribution at the time of the winter and summer peak demands.

16. New 22 MW combined heat and power capacity included in 2021.

17. Addition of 113 MW of energy storage placeholders over the years 2019 through 2026 based on 80% contribution to peak assumption.

18. Sum of lines 8 through 17.

19. Cumulative Demand-Side Management programs including load control and DSDR.

20. Sum of lines 18 and 19.

21. The difference between lines 20 and 4.

19. Reserve Margin = (Cumulative Capacity-System Peak Demand)/System Peak Demand

    Line 21 divided by Line 4.

    Minimum target planning reserve margin is 17%.

A tabular presentation of the Carbon Constrained Base Case resource plan represented in the above LCR table is shown below:

Table 13-G: DEP Carbon Constrained Base Case

Duke Energy Progress Resource Plan [(1)]
Base Case - Winter

Year	Resource				MW			
2019	Nuclear Uprates	Solar	Energy Storage		30	190	12	
2020	Nuclear Uprates	Asheville CC	Solar	Energy Storage	6	560	303	12
2021	Nuclear Uprates	CHP	Solar	Energy Storage	4	22	280	12
2022	Nuclear Uprates	Solar	Energy Storage		6	247	14	
2023	Solar	Energy Storage			172	14		
2024	Nuclear Uprates	Energy Storage	Solar		6	16	179	
2025	New CC	Energy Storage	Solar		1,338	16	80	
2026	Energy Storage	Solar			16	34		
2027	New CC	Solar			1,338	34		
2028	Nuclear Uprates	Solar			4	34		
2029	New CT	Solar			1,840	33		
2030	Solar				33			
2031	Solar				4			
2032	New CT	Solar			460	4		
2033	New CT	Solar			460	4		

Notes: (1) Table includes both designated and undesignated capacity additions
(2) Incremental solar additions represent nameplate ratings
(3) Future additions of other renewables, EE and DSM not included
(4) Table does not include short term PPA purchases in 2020 through 2024

Additionally, a summary of the above table is represented below in Table 13-H.

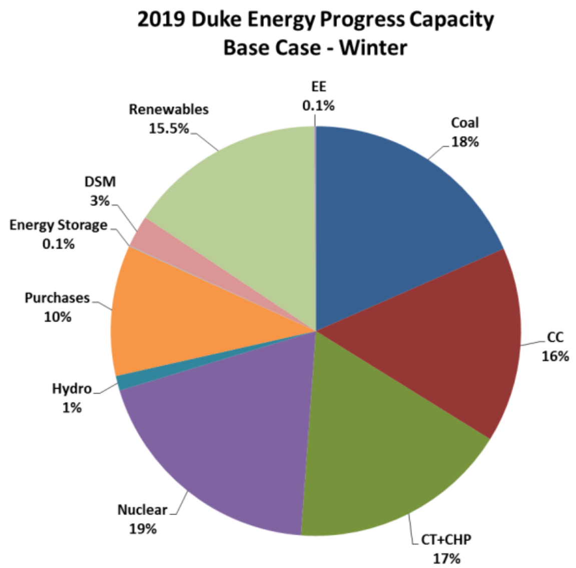
Table 13-H: Summary of DEP Carbon Constrained Base Case Winter Resources

DEP Base Case Resources
Cumulative Winter Totals - 2019 - 2033

Nuclear	56
Solar	1,631
CC	3,236
CT	2,760
CHP	22
Energy Storage	113
Total	7,817

The following figures illustrate both the current and forecasted capacity for the DEP system, as projected by the Carbon Constrained Base Case. As demonstrated in Figure 13-E, the capacity mix for the DEP system changes with the passage of time. In 2033, the Carbon Constrained Base Case projects that DEP will have a smaller reliance on coal, nuclear and external purchases and a higher reliance on gas-fired resources, renewable resources and EE as compared to the current state. It should be noted that the Company's Carbon Constrained Base Case resources depicted in Figure 13-E below reflect a significant amount of solar capacity with nameplate solar growing from 2,758 MW in 2019 to 4,199 MW by 2033. However, given that solar resources only contribute 1% or less of nameplate capacity at the time of the Company's winter peak, solar capacity contribution to winter peak only grows from 28 MW in 2019 to 42 MW by 2033.

Figure 13-E: Duke Energy Progress Capacity Over 15 Year Study Period – Carbon Constrained Base Case [7]



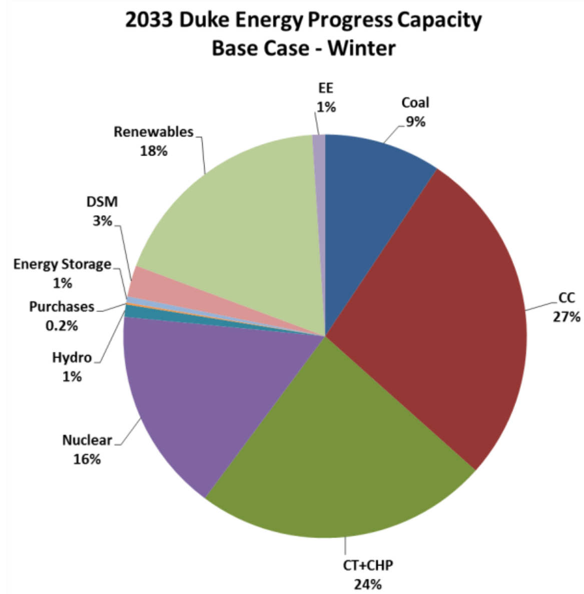
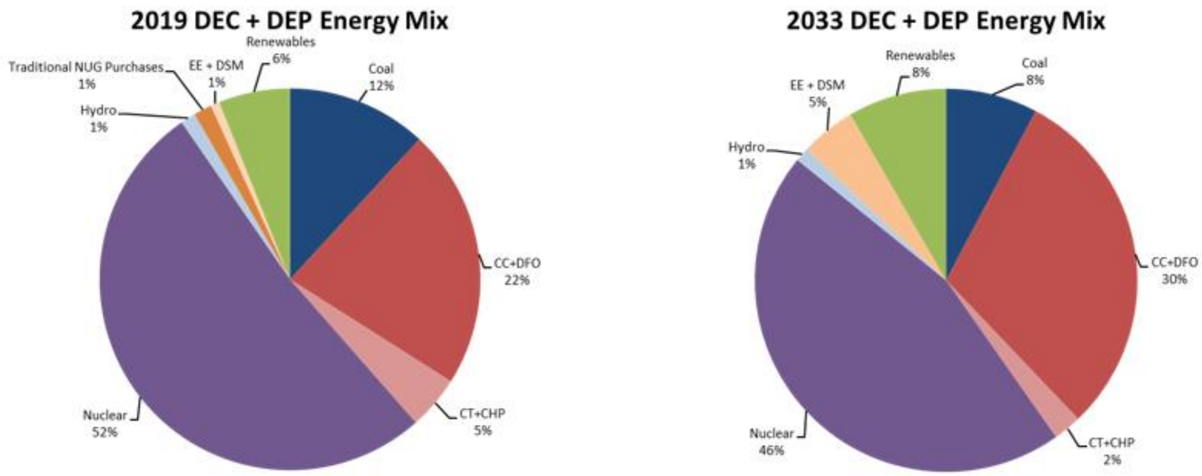


Figure 13-F represents the energy of both the DEP and DEC Carbon Constrained Base Cases over time. Due to the joint dispatch agreement (JDA), it is prudent to combine the energy of both utilities to develop a meaningful Carbon Constrained Base Case energy figure. From 2019 to 2033, the figure shows that nuclear resources will continue to serve almost half of DEC and DEP energy needs, a reduction in the energy served by coal, and an increase in energy served by natural gas, renewables and EE.

[7] Capacity based on winter ratings (renewables based on nameplate).

Figure 13-F: DEP and DEC Energy Over 15 Year Study Period – Carbon Constrained Base Case



A detailed discussion of the assumptions, inputs and analytics used in the development of the Base Cases are contained in Appendix A. As previously noted, the further out in time planned additions or retirements are within the 2018 IRP the greater the opportunity for input assumptions to change. Thus, resource allocation decisions at the end of the planning horizon have a greater possibility for change as compared to those earlier in the planning horizon.

No Carbon Base Case:

While Duke Energy presents a base resource plan that was developed under a carbon constrained future, the Company also provides a No Carbon (or No CO_2) Base Case expansion plan that reflects a future without CO_2 constraints. In DEP, this expansion plan is represented by Portfolio 2 (Base No CO_2 Future). As shown in Tables 13-I and 13-J below, there is no difference between the Carbon Constrained Base Case and the No Carbon Base Case over the 15-year planning horizon. However, beyond the 15-year window, CT technology generally takes precedent over CC technology. Because of the trend towards CT technology and the absence of incremental solar in the years just after the planning window, Portfolio 2 has a lower capital cost and a slightly lower PVRR than Portfolio 1 in the Base Fuel / No CO_2 scenario.

The tables below depict a tabular form of the resources required in the No Carbon Base Case.

Table 13-I: DEP No Carbon Base Case

Duke Energy Progress Resource Plan [1] No CO_2 Case - Winter								
Year	**Resource**				**MW**			
2019	Nuclear Uprates	Solar	Energy Storage		30	190	12	
2020	Nuclear Uprates	Asheville CC	Solar	Energy Storage	6	560	303	12
2021	Nuclear Uprates	CHP	Solar	Energy Storage	4	22	280	12
2022	Nuclear Uprates	Solar	Energy Storage		6	247	14	
2023	Solar	Energy Storage			172	14		
2024	Nuclear Uprates	Energy Storage	Solar		6	16	179	
2025	New CC	Energy Storage	Solar		1,338	16	80	
2026	Energy Storage	Solar			16	34		
2027	New CC	Solar			1,338	34		
2028	Nuclear Uprates	Solar			4	34		
2029	New CT	Solar			1,840	33		
2030	Solar				33			
2031	Solar				4			
2032	New CT	Solar			460	4		
2033	New CT	Solar			460	4		

Notes: (1) Table includes both designated and undesignated capacity additions
(2) Incremental solar additions represent nameplate ratings
(3) Future additions of other renewables, EE and DSM not included
(4) Table does not include short term PPA purchases in 2020 through 2024

Additionally, a summary of the above table is represented below in Table 13-J.

Table 13-J: Summary of DEP No Carbon Base Case Winter Resources

DEP No CO_2 Case Resources
Cumulative Winter Totals – 2019 - 2033

Nuclear	56
Solar	1,631
CC	3,236
CT	2,760
CHP	22
Energy Storage	113
Total	7,817

Joint Planning Case:

A Joint Planning Case that explores the potential for DEP and DEC to share firm capacity between the Companies was also developed. The focus of this case is to illustrate the potential for the Utilities to collectively defer generation investment by utilizing each other's capacity when available and by jointly owning or purchasing new capacity additions. This case does not address the specific implementation methods or issues required to implement shared capacity. Rather, this case illustrates the benefits of joint planning between DEP and DEC with the understanding that the actual execution of capacity sharing would require separate regulatory proceedings and approvals.

Table 13-K below represents the annual non-renewable incremental additions reflected in the combined DEP and DEC winter Base Cases as compared to the Joint Planning Case. The plan contains the undesignated additions for DEP and DEC over the planning horizon. As presented in Table 13-K, the Joint Planning Case allows for the delay of a CC resource and several blocks of CT resources through the 15-year study period. Though not shown below, the ability to share capacity between DEP and DEC would also limit the amount of undesignated short-term market purchases identified in the 2020 to 2024 timeframe in the DEP IRP.

Table 13-K: DEP and DEC Joint Planning Case

DEC and DEP Combined Resource Plan [1] Base Case - Winter		
Year	Resource	MW
2019		
2020		
2021		
2022		
2023		
2024		
2025	New CC	1,338
2026		
2027	New CC	1,338
2028	New CC	1,338
2029	New CT	1,840
2030		
2031	New CC	1,338
2032	New CT	460
2033	New CT	920

Notes: (1) Table only includes undesignated conventional capacity additions.

Delay
Delay 460 MW
Delay 460 MW
Delay 460 MW Beyond Study Period

DEC and DEP Joint Planning Resource Plan [1] Base Case - Winter				
Year	Resource		MW	
2019				
2020				
2021				
2022				
2023				
2024				
2025	New CC		1,338	
2026				
2027	New CC		1,338	
2028				
2029	New CC	New CT	1,338	1,380
2030				
2031	New CC		1,338	
2032				
2033	New CT		1,380	

A comparison of both the DEP and DEC Combined Base Case and Joint Planning Base Case by resource type is represented below in Table 13-L.

Table 13-L: DEP and DEP Base Case and Joint Planning Case Comparison by Resource Type

DEC and DEP Combined Base Case Resources

Cumulative Winter Totals - 2019 - 2033

Nuclear	0
CC	5,352
CT	3,220
Total	8,572

DEC and DEP Joint Base Case Resources

Cumulative Winter Totals - 2019 - 2033

Nuclear	0
CC	5,352
CT	2,760
Total	8,112

14. SHORT-TERM ACTION PLAN

The Company's Short-Term Action Plan, which identifies accomplishments in the past year and actions to be taken over the next five years, is summarized below:

Continued Reliance on EE and DSM Resources:

The Company is committed to continuing to grow the amount of EE and DSM resources utilized to meet customer growth. The following are the ways in which DEP will increase these resources:

- Continue to execute the Company's EE and DSM plan, which includes a diverse portfolio of EE and DSM programs spanning the residential, commercial, and industrial classes.

- Continue on-going collaborative work to develop and implement additional cost-effective EE and DSM products and services, such as: (1) adding new or expanding existing programs to include additional measures, (2) program modifications to account for changing market conditions and new measurement and verification (M&V) results and (3) other EE research & development pilots.

- Continue to seek additional DSM programs that will specifically benefit during winter peak situations.

Continued Focus on Renewable Energy Resources:

DEP is committed to the addition of significant renewable generation into its resource portfolio. Over the next five years, DEP is projecting to grow its renewable portfolio from 3,024 MW to 4,199 MW. Supporting policy such as NC REPS, NC HB 589 and SC DER have all contributed to DEP's aggressive plans to grow its renewable resources. DEP is committed to complying with NC REPS, meeting its targets for the SC DER Program, and under HB 589, DEP and DEC are responsible for procuring renewable energy and capacity through a competitive procurement program. These activities will be done in a manner that allows the Companies to continue to reliably and cost-effectively serve customers' future energy needs. The Companies, under the competitive procurement program, are required to procure energy and capacity from renewable energy facilities in the aggregate amount of 2,660 MW through request for proposals. DEP and DEC plan to jointly implement the CPRE Program across the NC and SC service territories.

For further details, refer to Chapter 5, as well as, Attachments I and II.

Integration of Battery Storage:

The Company will begin investing in multiple grid connected storage systems dispersed throughout its North and South Carolina service territories that will be located on property owned by the Company or leased from its customers. These deployments will allow for a more complete evaluation of potential benefits to the distribution, transmission and generation system, while also providing actual operation and maintenance cost impacts of batteries deployed at a significant scale. Additionally, the Company continues to participate in an energy storage study to assess the economic potential for NC customers, mandated by HB 589. Results of the study are expected in December 2018.

Continue to Find Opportunities to Enhance Existing Clean Resources:

DEP is committed to continually looking for opportunities to improve and enhance its existing resources. DEP is expecting capacity uprates to its existing nuclear units, Brunswick and Harris, due to upcoming projects at those sites. The uprates total 56 MW from 2019 to 2028.

Addition of Clean Natural Gas Resources: [8]

- The Company continues to consider advanced technology combined cycle units as excellent options to meet future demand. The improving efficiency and reliability of CCs coupled with the continued trend of lower natural gas prices make this resource very attractive. As older units on the DEP system are retired, CC units continue to play an important role in the Company's future diverse portfolio.

    - A combined cycle unit (560 MW) is being constructed at the Asheville site and has an expected commercial operation date (COD) of November 2019.

    - Two Sutton LM6000 CT units (98 MW) were brought online in July of 2017.

    - One 22 MW block of Combined Heat and Power is considered in the 2018 IRP and included as a resource for meeting future generation needs. While no contracts have yet been signed for DEP, discussions with a potential steam host are currently underway. Future IRP processes will incorporate additional CHP as appropriate.

    - Take actions to ensure the CC need in the winter of 2025 (expected COD in December 2024) is met. The 2016, 2017 and 2018 IRPs have indicated that this first need is best met with a combined cycle.

A summarization of the capacity resource changes for the Base Plans in the 2018 IRP is shown in Table 14-A below. Capacity retirements and resource additions are presented in the table as incremental values in the year in which the change impacts the winter peak. The values shown for renewable resources, EE and DSM represent cumulative totals.

[8] Capacities represent winter ratings.

Table 14-A DEP Short-Term Action Plan

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Duke Energy Progress Short-Term Action Plan (1) (2)						
			Compliance Renewable Resources (Cumulative Nameplate MW)			
Year	**Retirements**	**Additions (5)**	**Solar (3)**	**Biomass/Hydro**	**EE**	**DSM (4)**
2019		30 MW Nuc Uprate 12 MW Energy Storage	2758	266	26	490
2020	384 MW Asheville 1-2	560 MW Asheville CC 6 MW Nuc Uprate 12 MW Energy Storage 30 MW Short-Term PPA	3061	266	44	501
2021	514 MW Darlington CT	4 MW Nuc Uprate 22 MW CHP 12 MW Energy Storage 590 MW Short-Term PPA	3341	120	62	511
2022		6 MW Nuc Uprate 14 MW Energy Storage 590 MW Short-Term PPA	3588	115	79	521
2023		14 MW Energy Storage 430 MW Short-Term PPA	3760	103	104	530

Notes:

(1) Capacities shown in winter ratings unless otherwise noted.

(2) Dates represent when the project impacts the winter peak.

(3) Capacity is shown in nameplate ratings.

(4) Includes impacts of grid modernization.

(5) Energy Storage capacity represents 80% of nameplate.

Continue with Plan for Subsequent License Renewal of Existing Nuclear Units:

As discussed in Chapter 10, Duke Energy will continue to evaluate SLR for all its nuclear plants and is actively working on DEC's Oconee Nuclear Station SLR application to extend the licenses to 80 years. The remaining nuclear sites will do likewise where the cost/benefit balance proves acceptable.

Continued Development and Implementation of Capacity Value of Solar:

Conventional thermal resources are typically counted as 100% of net capability in reserve margin calculations for future generation planning since these resources are fully dispatchable resources when not on forced outage or planned maintenance. Due to the diurnal pattern and intermittent nature of solar energy resources, it is not reasonable to assume that these resources provide the same capacity credit as a fully dispatchable resource. An outside consultant calculated the capacity value of incremental solar additions for DEC and DEP for use in the resource planning process.

Continued Transition Toward Integrated Systems and Operations Planning:

As explained in Chapter 6, the traditional methods of utility resource planning are continuing to evolve. DEP is committed to moving toward an integrated planning process to meet the changing needs of planning in the future. The traditional methods of utility resource planning must be enhanced to address shifting trends through an Integrated System and Operations Planning (ISOP) effort.

In the 2018 IRP, DEP has begun to adapt its IRP to adjust to this changed world, recognizing that this process will continue to evolve. One key goal of ISOP is for the planning models to reasonably mimic the future operational realities to allow DEP to serve its customers with newer technologies. These enhancements in planning are expected to be addressed over the next several years, as soon as the modeling tools, processes and data development will allow.

Continued Focus on Environmental Compliance:

- Retire older coal generation.
    - As of December 2013, all of DEP's older, un-scrubbed coal units have been retired.
    - DEP has retired approximately 1,700 MW of older coal units in total since 2011.
    - Asheville Units 1 and 2 (384 MW) are expected to retire in November of 2019.

- Retire older CT generation.
  - As of May 2018, DEP has retired approximately 520 MW of older CT generation. The most recent retirements include:
    1. Sutton Units 1, 2A and 2B (76 MW) were retired in March and July of 2017.
    2. Darlington Unit 9 (65 MW) was retired in June of 2017 and Darlington Unit 5 (66 MW) was retired in May of 2018.
  - The Company continues to evaluate the condition and economic viability of the older CTs, resulting in expected future retirements.
    1. Darlington Units 1-4, 6-8 and 10 (514 MW) are expected to retire by December 2020.

- Continue to investigate the future environmental control requirements and resulting operational impacts associated with existing and potential environmental regulations such as EPA's Clean Power Plan (Section 111d of Clean Air Act regulating CO_2 from existing power plants), Mercury Air Toxics Standard (MATS), the Coal Combustion Residuals (CCR) rule, the Cross-State Air Pollution Rule (CSAPR).

Wholesale:

- Continue to pursue existing and potential opportunities for wholesale power sales agreements within the Duke Energy balancing authority area.
- Over the next five years, DEP has approximately 1,200 MW of purchased power contracts that expire under the current contract terms. The Company plans to engage the marketplace to determine the feasibility of extending existing contracts or replacing them with other purchased power arrangements to economically meet customer demand.

Regulatory:

- Continue to monitor energy-related statutory and regulatory activities.
- Continue to examine the benefits of joint capacity planning and pursue appropriate regulatory actions.

DEP Request for Proposal (RFP) Activity:

Duke Energy Progress Capacity and Energy Market Solicitation

DEP has identified a near term need for approximately 2,000 MW of firm dispatchable peaking/intermediate capacity and energy resources resulting from existing traditional purchase power contract expirations. To meet this need, DEP is seeking proposal extensions from existing purchase power contract suppliers and new capacity proposals from similar operationally capable existing generation facilities or systems with firm transmission deliverability into DEP. Successfully selected proposals are expected to be multi-year peaking/intermediate negotiated contracts with terms up to five years in duration beginning in year 2020 that meet industry standards for commercial availability and dispatchability requirements. The capacity and energy market solicitation was released on August 27, 2018.

Duke Energy Carolinas/Progress Swine Waste Fueled RFP – North Carolina

DEP and DEC released a Request for Proposals soliciting proposals for swine waste fueled biogas, the supply of electric power fueled by swine waste, or swine RECs (renewable energy certificates). Swine biogas projects must be sited in the state of North Carolina, Renewable Energy Facility proposals must be from swine projects sited within the NC/SC Duke Energy retail/wholesale service territory, and North Carolina qualifying in-state and out-of-state REC-Only proposals (electric swine RECs). This RFP solicited up to 750,000 MMBtu (million British thermal units), or the equivalent in MWh (megawatt hours) which is approximately 110,000 MWh from project developers. RECs secured under this RFP will be used for compliance with the swine waste set aside under REPS. Proposal structure allowed for this RFP was for Renewable Natural Gas Contracts or Purchase Power Agreements with terms of up to 20 years. RFP released December 15, 2017 and closed on January 29, 2018. Seven responses were received to the RFP, proposals have been evaluated, and have executed contracts with two of the projects. In addition, DEP/DEC is working with three other bids from the RFP while the respondents further develop their projects before moving forward.

Competitive Procurement of Renewable Energy (CPRE)

Pursuant to N.C. Gen. Stat. § 62-110.8, DEP has initiated the first RFP solicitation under the Competitive Procurement of Renewable Energy Program. This initial RFP solicitation was released on July 10, 2018 and is currently open. Details concerning the CPRE program can be found in the annual CPRE Plan filing, which is Attachment II to this document.

DUKE ENERGY PROGRESS

APPENDICES

APPENDICES:

APPENDIX A: QUANTITATIVE ANALYSIS

This appendix provides an overview of the Company's quantitative analysis of the resource options available to meet customers' future energy needs. Sensitivities on major inputs resulted in multiple portfolios that were then evaluated under several scenarios that varied fuel prices, capital costs, and CO_2 constraints. These portfolios were analyzed using a least cost analysis to determine the Base Cases for the 2018 IRP. The selection of these plans considers takes into account the cost to customers, resource diversity, reliability and the long-term carbon intensity of the system.

The future resource needs were optimized for DEP and DEC independently. However, an additional case representative of jointly planning future capacity on a DEP/DEC combined system basis using the Base Case assumptions was also analyzed to demonstrate potential customer savings, if this option was available in the future.

A. Overview of Analytical Process

The analytical process consists of four steps:

1. Assess resource needs
2. Identify and screen resource options for further consideration
3. Develop portfolio configurations
4. Perform portfolio analysis over various scenarios

1. Assess Resource Needs

The required load and generation resource balance needed to meet future customer demands was assessed as outlined below:

- Customer peak demand and energy load forecast – identified future customer aggregate demands to determine system peak demands and developed the corresponding energy load shape.
- Existing supply-side resources – summarized each existing generation resource's operating characteristics including unit capability, potential operational constraints and life expectancy.
- Operating parameters – determined operational requirements including target planning reserve margins and other regulatory considerations.

Customer load growth, the expiration of purchased power contracts and additional asset retirements result in resource needs to meet energy and peak demands in the future. The following assumptions impacted the 2018 resource plan:

- Peak Demand and Energy Growth - The growth in winter customer peak demand after the impact of energy efficiency averaged 0.6% from 2019 through 2033.[9] The forecasted compound annual growth rate for energy is 0.5% after the impacts of energy efficiency programs are included.
- Generation / Purchase Power
    - Undesignated short-term purchased power agreements (PPAs) totaling 2,070 MW from December 2019 through December 2023 aid in meeting reserve requirements over that time period. These PPAs were assumed to have 5-year contract lives, and therefore, the initial PPAs begin rolling off in December 2024.
    - Completion of the 560 MW Asheville CC in November 2019
    - Nuclear uprates totaling 52 MW between 2019 and 2024 at Brunswick and Harris Nuclear plants
- Retirements
    - Retirement of 384 MW of coal generation at Asheville Steam Station in November 2019
    - Retirement of 514 MW of CT generation (Units 1-4, 6-8, 10) at the Darlington Plant in December 2020
    - Retirement of 232 MW of CT generation at the Weatherspoon and Blewett Plants in December 2024
    - Retirement of 1,053 MW of coal generation at the Roxboro Steam Plant (Units 1&2) in December 2028
- Purchase Power Contract Expirations
    - Nearly 1,500 MW of purchase power contracts expire between January 2019 and January 2024
- Reserve Margin - A 17% minimum winter planning reserve margin for the planning horizon

[9] This growth rate does not match the growth provided in the load forecasting sections. This number includes a 150 MW firm sale through 2024.

2. Identify and Screen Resource Options for Further Consideration

The IRP process evaluated EE, DSM and traditional and non-traditional supply-side options to meet customer energy and capacity needs. The Company developed EE and DSM projections based on existing EE/DSM program experience, the most recent market potential study, input from its EE/DSM collaborative and cost-effectiveness screening for use in the IRP. Supply-side options reflect a diverse mix of technologies and fuel sources (gas, nuclear, renewable, and energy storage). Supply-side options were initially screened based on the following attributes:

- Technical feasibility and commercial availability in the marketplace
- Compliance with all Federal and State requirements
- Long-run reliability
- Reasonableness of cost parameters

The Company compared the capacity size options and operational capabilities of each technology, with the most cost-effective options of each being selected for inclusion in the portfolio analysis phase. An overview of resources screened on technical basis and a levelized economic basis is discussed in Appendix F.

Resource Options:

Supply-Side:

Based on the results of the screening analysis, the following technologies were included in the quantitative analysis as potential supply-side resource options to meet future capacity needs:

- Base load – 600 MW – Small Modular Reactor (SMR)
- Base load – 1,339 MW – 2x2x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 22 MW – Combined Heat & Power (Combustion Turbine)
- Peaking/Intermediate – 460 MW – 2 x 7FA.05 CTs
    - (Based upon the cost to construct 4 units, available for brownfield sites only)
- Peaking/Intermediate – 919 MW 4 x 7FA.05 Combustion Turbines (CTs)
- Renewable – 50 MW Solar PV, Fixed-tilt (FT)
- Renewable – 50 MW Solar PV, Single Axis Tracking (SAT)
- Storage – Grid Tied 20 MW / 80 MWh Li-ion Battery

Energy Efficiency and Demand-Side Management:

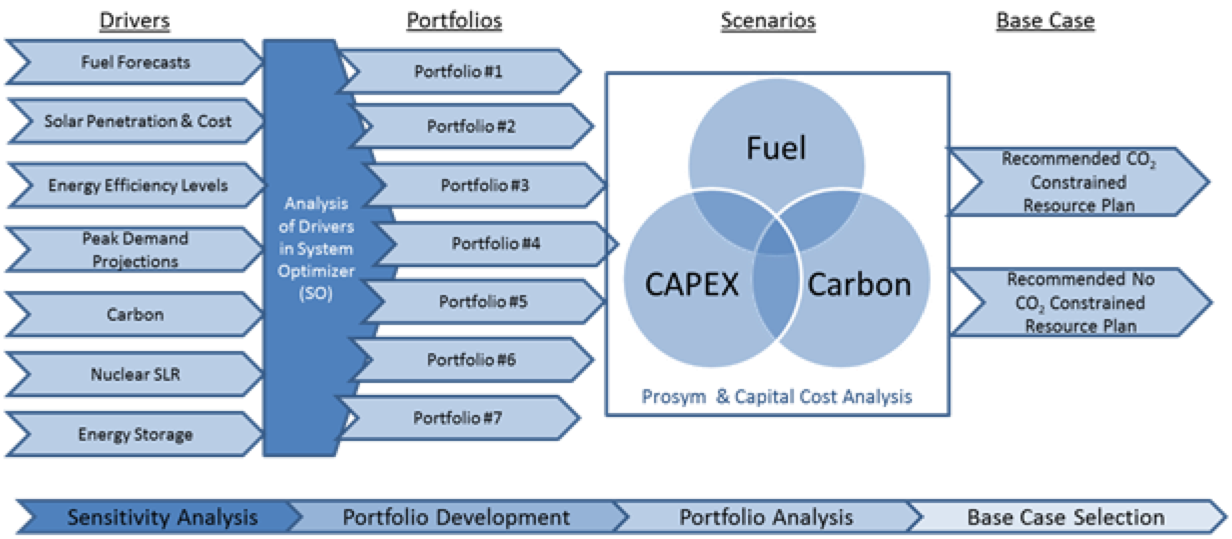
EE and DSM programs continue to be an important part of Duke Energy Progress' system mix. The Company considered both EE and DSM programs in the IRP analysis. As described in Appendix D, EE and DSM measures are compared to generation alternatives to identify cost-effective EE and DSM programs.

In the Base Case, the Company modeled the program costs associated with EE and DSM based on a combination of both internal company expectations and projections based on information from the 2016 market potential study. In the DEP and DEC Merger Settlement Agreement, the Company agreed to aspire to a more aggressive implementation of EE throughout the planning horizon. The impacts of this goal were incorporated in one of the portfolios evaluated. The program costs used for this analysis leveraged the Company's internal projections for the first five years and in the longer term, utilized the updated market potential study data incorporating the impacts of customer participation rates over the range of potential programs.

3. Develop Portfolio Configurations

Once the load and generation balance was assessed, and resource options were screened, the portfolios and scenarios were developed, and the preferred base case was selected, based on the following simplified diagram.

Figure A-1: Simplified Process Flow Diagram for Development and Selection of Base Case



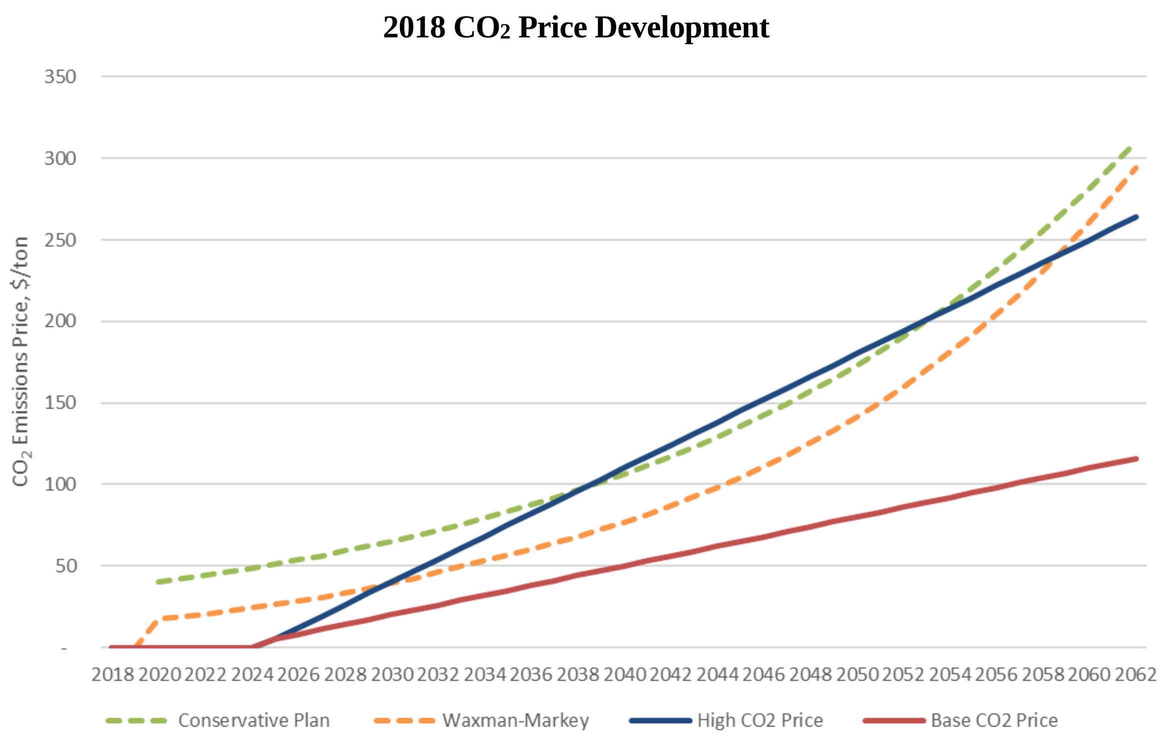
The Company conducted a sensitivity analysis of various drivers using the simulation modeling software, *System Optimizer* (SO). The expansion plans produced by SO were compared and seven portfolios that encompass the impact of the range of input sensitivities were identified. The seven portfolios were then analyzed in multiple scenarios in the hourly production cost model, PROSYM, to determine the optimum base case. An overview of the base planning assumptions and sensitivities considered in both SO and PROSYM are outlined below:

- Impact of potential carbon constraints
    - In the current legislative / regulatory environment, predicting future carbon constraints is becoming increasingly difficult. In October 2017, the EPA began the formal process to change EPA rules and repeal the previous administration's Clean Power Plan (CPP). With the CPP likely repealed in the next year to two years, the Company developed an internal CO_2 allowance price, or "Base CO_2 Price," which would lead to a 40% CO_2 reduction from a 2005 baseline by 2030, a 50% reduction by 2040, and a 60% reduction by 2050 for the Company's regulated utilities (Duke Energy Indiana (DEI), Duke Energy Kentucky (DEK), Duke Energy Florida (DEF), DEP, and DEC). The "Base CO_2 Price" falls between the expected CPP price on the low end, and the previously proposed Waxman/Markey legislation on the high end. Additionally, the Company

developed a "High CO_2 Price" that was based on the Waxman-Markey legislation and the recently proposed "Conservative Plan". The "High CO_2 Price" [10] would support a CO_2 reduction of 80% by 2050. Figure A-2 presents a view of the carbon prices used in the analysis, along with the Conservative Plan and Waxman-Markey legislation prices.

- Base CO_2 Price – Incorporated an intrastate CO_2 tax starting at $5/ton in 2025 and escalating at $3/ton annually that was applied to all carbon emissions.
- High CO_2 Price – Incorporated an intrastate CO_2 tax starting at $5/ton in 2025 and escalating at $7/ton annually that was applied to all carbon emissions.

Figure A-2: Comparison of CO_2 Prices and Other CO_2 Reference Prices



[10] https://www.clcouncil.org/media/TheConservativeCaseforCarbonDividends.pdf

- ***Retirements:***

  - Coal assets – For this IRP, the depreciation book life was used as a placeholder for future retirement dates for coal assets. Based on this assumption, 1,053 MW of coal generation were retired at the Roxboro Steam Plant (Units 1&2) in December 2028. Additionally, per the Mountain Energy Act (NC Senate Bill 716) 384 MW of coal generation at Asheville Steam Station are required to retire by January 31, 2020. However, for planning purposes, the Asheville Steam Station is assumed retired when the Asheville CC enters service in November 2019.

  - CT assets - For this IRP, the depreciation book life was used as a placeholder for future retirement dates for CT assets. Based on this assumption, 514 MW of CT generation (Units 1-4, 6-8, 10) at the Darlington Plant were retired in December 2020. Additionally, 164 MW of CT generation at the Weatherspoon Plant and 68 MW of CT generation at the Blewett Plant were assumed retired in December 2024.

- ***Nuclear assets:***

  - Robinson Nuclear Plant is the oldest DEP nuclear power reactor. Its current operating license has been extended to 60 years and expires in 2030. NextEra's Turkey Point Station and Exelon Corporation's Peach Bottom plant have each submitted a Subsequent License Renewal (SLR) application to the Nuclear Regulatory Commission (NRC). Additionally, Dominion Energy has announced its intention to pursue SLRs for its Surry and North Anna plants. The Company views all of its existing nuclear fleet as excellent candidates for license extensions based on current condition and expected operation expenditures regardless of future carbon constraints. Based on recent NRC guidance for SLR, the NextEra and Exelon Corporation application submittals, and the announcement from Dominion Energy, the Company's base case assumes SLR for all existing nuclear generation, including Robinson Nuclear Station, from 60 to 80 years for planning purposes in this year's IRP.

    - A sensitivity was performed assuming SLRs were not pursued for any of the Company's nuclear assets.

  - SMR technology was "screened out" in the Technology Screening phase of the analysis as discussed in Appendix F. However, given the severity of the "High

CO_2 Price" sensitivity, and the need for zero-emitting, load following resources (ZELFRs), additional nuclear generation in the form of SMRs was allowed to be selected.

- ***Coal and natural gas fuel prices:***

  - Short-term pricing:
    - Natural Gas based on market prices from 2018 through 2028 transitioning to 100% fundamental by 2033.

    - Coal based on market observations through 2022 transitioning to 100% fundamental by 2028.

  - Long-term pricing: Based on the Company's fundamental fuel price projections.

    - High Fuel Price Sensitivity – A high fuel price sensitivity was developed where the short-term, or market, natural gas price was increased based on statistical analysis that produced a +1 Standard Deviation (Std) from the base market price. The average cumulative probability of the +1 Std was 90% (i.e. in 90% of the cases, the average price will be lower than this scenario). The long-term pricing component was increased based on the U.S. Energy Information Administration's (EIA) Annual Energy Outlook (AEO) 2018 report which provided a "Low Resource and Technology" curve.

    - Low Fuel Price Sensitivity - A low fuel price sensitivity was developed where the short-term, or market, natural gas price was decreased based on statistical analysis that produced a -1 Std from the base market price. The average cumulative probability of the -1 Std was 6.7% (i.e. in 6.7% of the cases, the average price will be lower than this scenario). The long-term pricing component was increased based on the U.S. Energy Information Administration's (EIA) Annual Energy Outlook (AEO) 2018 report which provided a "High Resource and Technology" curve.

- ***Capital Cost Sensitivities:***

  - As discussed in Appendix F, most technologies include specific Technology Forecast Factors which were sourced from the Energy Information Administration (EIA) Annual Energy Outlook (AEO) 2017 which provides costs projections for various technologies through the planning period as an input to the National Energy Modeling System (NEMS) utilized by the EIA for the AEO. More nascent technologies, such as battery storage and, to a lesser extent, PV solar, have relatively steep projected cost declines over time compared to more established technologies such as CCs and CTs. The capital cost sensitivities conducted were as follows:

    - Low Capital Cost – Technology forecast factors were doubled thereby increasing the cost declines of all technologies over time.

    - High Capital Cost – Technology forecast factors were reduced by half, thereby decreasing the rate of cost decline of all technologies over time.

  - Solar – The base case includes renewable capacity components of the Transition MW of HB 589 such as capacity required for compliance with NC REPS, PURPA renewable purchases, the SC DER Program, legacy Green Source Rider program, and the additional three components of HB 589 (competitive procurement, renewable energy procurement for large customers, and community solar). The base case also includes additional projected solar growth beyond HB 589. Below is an overview of the solar base planning assumptions and the sensitivities performed:

    - Base – Solar facility costs continue to decrease over the next decade with a 30% Federal Investment Tax Credit (ITC) through 2019, 26% ITC in 2020, 22% ITC in 2021 and 10% ITC thereafter. Additional solar beyond compliance was allowed to be selected if economical.

    - Low Cost - To determine if a lower cost would impact the economic selection of additional solar resources, a capital cost sensitivity was performed where solar prices were reduced by 10%.

    - Higher Solar Penetration – Given the significant volume uncertainty around solar penetration, a high solar penetration scenario was performed to account for a number of potential factors that could increase solar additions over the planning horizon. These factors include events such as high carbon prices, lower solar capital costs, economical solar plus storage, continuation of renewable subsidies, and/or stronger renewable energy mandates.

- EE and Renewables – Two different options were evaluated with regards to the amount of EE and Renewables.

  - Base EE and Base Renewables

    - Base EE corresponds to the Company's current projections for achievable cost-effective EE program acceptance.

    - Base renewables correspond to the resources needed to meet components of the Transition MW of HB 589 such as capacity required for compliance with NC REPS, PURPA renewable purchases, the SC DER Program, legacy Green Source Rider program, and the additional three components of HB 589 (competitive procurement, renewable energy procurement for large customers, and community solar). Base renewables also includes additional projected solar growth beyond HB 589.

  - High EE and High Renewables

    - Evaluated to assess the impact of additional EE and renewables on the expansion plan.

    - High EE – Established as part of the Progress Energy-Duke Energy Carolinas Merger Settlement Agreement. The cumulative EE achievements since 2009 are counted toward the cumulative settlement agreement impacts. By 2033, the high EE case accounts for an additional 124 MW of winter peak demand reduction versus the base EE case.

    - High Renewables –Added 1,103 MW of additional solar to the base NC and SC renewable planning assumptions by 2033 versus the base renewable case.

  - While not explicitly evaluated, the impacts of a Low EE future on the expansion, are similar to the impacts of the "high load" sensitivity that was evaluated in SO and that is discussed later in this section.

- ***Energy Storage:***

  - 140 MW of 4-hour Lithium ion batteries are included in the base case as placeholders for future assets to provide operational experience on the DEP system. These placeholders represent a limited amount of grid connected battery storage projects that have the potential to provide solutions for the transmission and distribution systems with the possibility of simultaneously providing benefits to the generation portfolio. As discussed in various sections throughout this document, the extent to which 4-hour battery storage can provide generation deferral benefits is still being evaluated, particularly when a single battery storage installment is expected provide multiple services in addition to generation and energy benefits. Additionally, the benefits of battery storage are most realized when the asset is grid-tied and the Company has real-time control of when the battery storage is dispatched to, or charged from, the system.

  The deployment of utility scale battery storage over the next decade will provide valuable real-world experience for optimizing and assessing the benefits of battery storage. Given the uncertainties in future battery deployments and the ability to fully contribute to generation deferral, the Base Case assumes that the 140 MW of placeholder battery storage provides 112 MW (or 80% of nameplate capacity)[11] towards meeting winter peak demand. These assumptions are likely to change as the Company gains experience operating utility-scale battery storage technologies. An additional battery storage sensitivity was also considered:

    - A battery storage sensitivity was also included in which a 575 MW 4-hour Lithium ion battery replaced a 460 MW CT block in a high renewable future.

- High and Low Load – The annual average load growth rate before impacts of EE from 2020 through 2033 was increased from 0.8% to 1.5% in the high load sensitivity and the annual average growth rate was reduced from 0.8% to 0.2% in the low load sensitivity.

[11] EPRI's "Technical Update: Evaluating the Capacity Value of Energy Storage (E. Lannoye & E. Ela, December 2017)" provides several methodologies for calculating capacity value of Energy Storage. The results range from ~40% to 100% of nameplate capacity as potential capacity value. For the purposes of the 2018 IRP, 80% was selected for planning purposes.

- A sensitivity was performed assuming joint planning with DEP and DEC to demonstrate the benefits of shared resources and how new generation could be delayed.

Sensitivity Analysis Results:

A review of the results from the sensitivity analysis conducted in SO yielded some common themes.

Initial Resource Needs – The first resource need after executing on the 2,070 MW of undesignated short-term power purchases, occurs in December of 2024 in all cases. The high EE and low load sensitivities would have the impact of reducing the undesignated short-term power purchase requirements, but the first need for new generation would still occur in December 2024. The type of resource selected is consistently a CC regardless of fuel and carbon assumptions.

- Joint Planning Case - The first three resource needs are CCs, two in DEP, in 2024/2025 and 2026/2027, and one in DEC in 2027/2028. When joint capacity planning, the DEP CCs are not delayed, but the DEC CC is delayed one year to 2028/2029.

Renewable Generation – The timing of incremental solar beyond the capacity included in the base case was dependent on the CO_2 and fuel price assumptions as shown in Table A-1 below. It must be noted that incremental solar additions in DEP are only credited with a maximum of 1% contribution to winter peak capacity, and therefore, these incremental solar additions are only providing energy value and essentially no capacity value.

Table A-1: First Year of Incremental Solar Additions in DEP

	No CO_2	Base CO_2	High CO_2
Low Fuel	Not Selected	2052	2035
Base Fuel	Not Selected	2038	2031
High Fuel	2034	2030	2028

Additionally, in the case where solar prices were reduced by 10%, the first year of incremental solar additions accelerated from 2038 to 2035 in the Base CO_2 / Base Fuel case.

New Nuclear Selection – New nuclear additions, in the form of SMRs, were selected in the SO analysis in all High CO_2 cases, as well as, in the Base CO_2 / High Fuel case. As shown in Table A-2 below, the timing of new nuclear selection in the High CO_2 cases is dependent on the fuel price assumptions.

Table A-2: First Year of New Nuclear Additions

	No CO_2	Base CO_2	High CO_2
Low Fuel	Not Selected	Not Selected	2051
Base Fuel	Not Selected	Not Selected	2040
High Fuel	Not Selected	2040	2033

In the No SLR scenario for existing nuclear units, the timing for new nuclear generation accelerated from 2040 to 2036 in the High CO_2 / Base Fuel case. As continues to be the case, in order to meet potentially stringent CO_2 emission regulations, new nuclear generation will likely be needed. The timing of new nuclear generation is highly dependent on fuel price projections, as well as, subsequent license renewal of the existing nuclear generation fleet.

High EE and High Renewables – Within the 15-year planning horizon, the impact from High EE, in combination with High Renewables, was to delay the need for CT generation in 2029 and 2032 by one year each due to the reduction in winter peak demand net of EE impacts.

Gas Firing Technology Options – The number of CCs selected over the planning horizon varied with the fuel and CO_2 assumptions as shown in Table A-3 below, but in all cases, other than the CT Centric portfolio, the first two generation needs in 2025 and 2027 are met by CC technology.

Table A-3: Number of CCs Selected in 15-Year Planning Horizon

	No CO_2	Base CO_2	High CO_2
Low Fuel	2	2	2
Base Fuel	2	2	3
High Fuel	2	3	3

Portfolio Development:

Using insights gleaned from the sensitivity analysis, seven portfolios were developed. These portfolios were developed to assess the relative value of various generating technologies including CCs, CTs, Renewables, and Nuclear, as well as, energy storage under multiple scenarios. A description of the seven portfolios follows:

<u>Portfolio 1 (Base CO_2 Future)</u>

This portfolio represents a balanced generation portfolio with CCs and CTs making up the generation mix with incremental solar additions just beyond the 15-year window. While CCs are the preferred initial generating options in both DEP and DEC, CTs make up the vast majority of additional resources at the end of the 15-year planning horizon. This portfolio also includes base EE and renewable assumptions, along with 1,000 MW of economically selected solar just beyond the planning horizon. Additionally, 140 MW of nameplate battery storage placeholders are included. These placeholders represent a limited amount of grid connected battery storage projects that have the potential to provide solutions for the transmission and distribution systems with the possibility of simultaneously providing benefits to the generation resource portfolio.

<u>Portfolio 2 (Base No CO_2 Future)</u>

Within the 15-year planning horizon, this portfolio is the same as Portfolio 1. Beyond the planning window, CT technology generally takes precedent over CC technology. No additional solar was selected in this portfolio. The Base No CO_2 portfolio also includes base EE and renewable assumptions, along with 140 MW of nameplate battery storage placeholders.

<u>Portfolio 3 (CT Centric)</u>

This portfolio is similar to Portfolio 2. However, the 2027 CC need is replaced with CT technology to increase the concentration of CTs in this portfolio. Like Portfolio 2, this portfolio includes base EE and renewable assumptions, and no additionally selected solar. The portfolio includes 140 MW of nameplate storage placeholders.

<u>Portfolio 4 (CC Centric – No Nuclear Future)</u>

This portfolio represents a future where all existing nuclear assets are retired at the end of their current extended license period, and those nuclear assets are primarily replaced with CCs rather than new nuclear generation. The CC Centric Portfolio converts the entire 2029 CT block to CC technology. This portfolio also includes base EE and renewable assumptions, along with 1,000 MW of economically selected solar just beyond the planning horizon. Additionally, 140 MW of nameplate battery storage placeholders are included.

<u>Portfolio 5 (High EE / High Renewables)</u>

This portfolio includes the High EE and High Renewable assumptions in DEP. Solar nameplate capacity increases at a more rapid pace, and the total MW of solar is 310 MW greater in the High Renewable case by 2033. This portfolio includes an additional 124 MW of EE by the end of the planning horizon. Finally, this case also includes 140 MW of nameplate battery storage placeholders.

<u>Portfolio 6 (CT Centric / High Renewables)</u>

Like Portfolio 3, Portfolio 6 includes a high concentration of CT generation in the 15-year planning horizon. However, this portfolio includes the High Renewable assumption which accelerates solar additions in DEP while increasing the total amount of solar by approximately 300 MW. Portfolio 6 includes Base EE assumptions along with 140 MW of nameplate battery storage. This portfolio is especially illustrative when evaluating additional energy storage added in Portfolio 7.

<u>Portfolio 7 (CT Centric with Battery Storage and High Renewables)</u>

This portfolio converts the first 460 MW block of CTs in Portfolio 6 to 575 MW (nameplate) of 4-hour Lithium-ion battery storage in 2029. The additional 575 MW of battery storage is assumed to only provide generation and energy transfer capability that is 100% controlled by the Company. As such, the battery storage installation is assumed to provide 460 MW of winter peak capacity. The total amount of nameplate battery storage in DEP in this case is 715 MW by 2029.

An overview of the resource needs of each portfolio are shown in Table A-4 below.

Table A-4: Portfolio Summary for Duke Energy Progress[1,2]

	Portfolio 1 (Base CO_2 Future)	Portfolio 2 (No CO_2 Future)	Portfolio 3 (CT Centric)	Portfolio 4 (CC Centric)	Portfolio 5 (High EE / High Renewables)	Portfolio 6 (CT Centric / High Renewables)	Portfolio 7 (CT Centric / High Renewables w/ Battery Storage)
2024	Total Solar = 4061 Total Storage = 101 EE = 120	Total Solar = 4061 Total Storage = 101 EE = 120	Total Solar = 4061 Total Storage = 101 EE = 120	Total Solar = 4061 Total Storage = 101 EE = 120	Total Solar = 4187 Total Storage = 101 EE = 191	Total Solar = 4187 Total Storage = 101 EE = 120	Total Solar = 4187 Total Storage = 101 EE = 120
2025	CC = 1338 Total Solar = 4161 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 4161 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 4161 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 4161 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 4337 Total Storage = 121 EE = 220	CC = 1338 Total Solar = 4337 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 4337 Total Storage = 121 EE = 138
2026	Total Solar = 4215 Total Storage = 141 EE = 155	Total Solar = 4215 Total Storage = 141 EE = 155	Total Solar = 4215 Total Storage = 141 EE = 155	Total Solar = 4215 Total Storage = 141 EE = 155	Total Solar = 4412 Total Storage = 141 EE = 246	Total Solar = 4412 Total Storage = 141 EE = 155	Total Solar = 4412 Total Storage = 141 EE = 155
2027	CC = 1338 Total Solar = 4269 Total Storage = 141 EE = 173	CC = 1338 Total Solar = 4269 Total Storage = 141 EE = 173	CT = 1380 Total Solar = 4269 Total Storage = 141 EE = 173	CC = 1338 Total Solar = 4269 Total Storage = 141 EE = 173	CC = 1338 Total Solar = 4487 Total Storage = 141 EE = 269	CT = 1380 Total Solar = 4487 Total Storage = 141 EE = 173	CT = 1380 Total Solar = 4487 Total Storage = 141 EE = 173
2028	Total Solar = 4323 Total Storage = 141 EE = 187	Total Solar = 4323 Total Storage = 141 EE = 187	Total Solar = 4323 Total Storage = 141 EE = 187	Total Solar = 4323 Total Storage = 141 EE = 187	Total Solar = 4562 Total Storage = 141 EE = 288	Total Solar = 4562 Total Storage = 141 EE = 187	Total Solar = 4562 Total Storage = 141 EE = 187
2029	CT = 1840 Total Solar = 4377 Total Storage = 141 EE = 200	CT = 1840 Total Solar = 4377 Total Storage = 141 EE = 200	CT = 1840 Total Solar = 4377 Total Storage = 141 EE = 200	CC = 1338 CT = 460 Total Solar = 4377 Total Storage = 141 EE = 200	CT = 1380 Total Solar = 4637 Total Storage = 141 EE = 307	CT = 1840 Total Solar = 4637 Total Storage = 141 EE = 200	CT = 1380 Total Solar = 4637 Total Storage = 716 EE = 200
2030	Total Solar = 4431 Total Storage = 141 EE = 211	Total Solar = 4431 Total Storage = 141 EE = 211	Total Solar = 4431 Total Storage = 141 EE = 211	Total Solar = 4431 Total Storage = 141 EE = 211	CT = 460 Total Solar = 4712 Total Storage = 141 EE = 323	Total Solar = 4712 Total Storage = 141 EE = 211	Total Solar = 4712 Total Storage = 716 EE = 211
2031	Total Solar = 4456 Total Storage = 141 EE = 221	Total Solar = 4456 Total Storage = 141 EE = 221	Total Solar = 4456 Total Storage = 141 EE = 221	CT = 920 Total Solar = 4456 Total Storage = 141 EE = 221	Total Solar = 4747 Total Storage = 141 EE = 336	Total Solar = 4747 Total Storage = 141 EE = 221	Total Solar = 4747 Total Storage = 716 EE = 221
2032	CT = 460 Total Solar = 4481 Total Storage = 141 EE = 229	CT = 460 Total Solar = 4481 Total Storage = 141 EE = 229	CT = 460 Total Solar = 4481 Total Storage = 141 EE = 229	CT = 460 Total Solar = 4481 Total Storage = 141 EE = 229	Total Solar = 4782 Total Storage = 141 EE = 349	CT = 460 Total Solar = 4782 Total Storage = 141 EE = 229	CT = 460 Total Solar = 4782 Total Storage = 716 EE = 229
2033	CT = 460 Total Solar = 4506 Total Storage = 141 EE = 236	CT = 460 Total Solar = 4506 Total Storage = 141 EE = 236	CT = 460 Total Solar = 4506 Total Storage = 141 EE = 236	CT = 460 Total Solar = 4506 Total Storage = 141 EE = 236	CT = 920 Total Solar = 4817 Total Storage = 141 EE = 360	CT = 460 Total Solar = 4817 Total Storage = 141 EE = 236	CT = 460 Total Solar = 4817 Total Storage = 716 EE = 236
Total	CC = 2676 CT = 2760 Total Solar = 4506 Total Storage = 141 EE = 236	CC = 2676 CT = 2760 Total Solar = 4506 Total Storage = 141 EE = 236	CC = 1338 CT = 4140 Total Solar = 4506 Total Storage = 141 EE = 236	CC = 4014 CT = 2300 Total Solar = 4506 Total Storage = 141 EE = 236	CC = 2676 CT = 2760 Total Solar = 4817 Total Storage = 141 EE = 360	CC = 1338 CT = 4140 Total Solar = 4817 Total Storage = 141 EE = 236	CC = 1338 CT = 3680 Total Solar = 4817 Total Storage = 716 EE = 236

[1] EE represents the cumulative new energy efficiency additions each year.
[2] Solar does not include 0.5% annual degradation.

4. Perform Portfolio Analysis

Each of the seven portfolios identified in the screening analysis were evaluated in more detail with an hourly production cost model (PROSYM) under future fuel price and CO_2 scenarios to determine the robustness of each portfolio under varying fuel and carbon futures. The run matrix for the nine scenarios is summarized in Table A-5 below.

Table A-5: PROSYM Run Matrix for Portfolio Analysis

	No CO_2	Base CO_2	High CO_2
Low Fuel			
Base Fuel			
High Fuel			

The PROSYM model provided the system production costs for each portfolio under the scenarios shown above. The model included DEP's non-firm energy purchases and sales associated with the Joint Dispatch Agreement (JDA) with DEC, and as such, the model optimized both DEP and DEC and provided total system (DEP + DEC) production costs. The PROSYM results were separated to reflect system production costs that were solely attributed to DEP to account for the impacts of the JDA. The DEP specific system production costs were then added to the DEP specific capital costs for each portfolio to develop the total Present Value of Revenue Requirements (PVRR) for each portfolio under the given fuel price and CO_2 conditions.

The seven portfolios were ranked in each of the nine fuel and carbon scenarios, and the portfolio with the lowest PVRR in each of the nine scenarios was identified.

Additionally, high and low capital cost sensitivities were conducted to determine if varying future price projections for each technology would impact the results of the scenario analysis.

PVRR Results:

Table A-6 below reflects the portfolio that performed best (i.e. lowest PVRR) under each scenario, as well as, the delta PVRR to the next lowest portfolio ("Port").

Table A-6: Lowest PVRR (thru 2068) Portfolios Under Each Scenario (2018 dollars in Millions)

PVRR thru 2068 (2018 $M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-$132 M vs Port 3)	Portfolio 1 (-$84 M vs Port 2)	Portfolio 1 (-$409 M vs Port 2)
Base Fuel	Portfolio 2 (-$17 M vs Port 1)	Portfolio 1 (-$231 M vs Port 2)	Portfolio 1 (-$536 M vs Port 2)
High Fuel	Portfolio 1 (-$257 M vs Port 2)	Portfolio 1 (-$493 M vs Port 2)	Portfolio 1 (-$533 M vs Port 5)

The following table summarizes the total PVRR for each portfolio in the scenarios above versus Portfolio 1.

Table A-7: Total PVRR (thru 2068) Comparison of All Portfolios vs Portfolio 1 (2018 dollars in Millions)

	Portfolio 2 (Base No CO_2 Future)	Portfolio 3 (CT Centric)	Portfolio 4 (CC Centric)	Portfolio 5 (High EE / High Renew)	Portfolio 6 (CT Centric / High Renew)	Portfolio 7 (CT Centric / High Renew w/ Batt Storage)
Base Fuel / Base CO_2	$231	$798	$8,116	$565	$1,119	$702
Base Fuel / High CO_2	$536	$1,486	$10,839	$560	$1,682	$1,060
Base Fuel / No CO_2	($17)	$264	$5,784	$583	$667	$483
High Fuel / BaseCO_2	$493	$1,226	$10,871	$532	$1,427	$847
High Fuel / High CO_2	$759	$1,885	$13,602	$533	$1,977	$1,143
High Fuel / No CO_2	$257	$667	$8,586	$553	$979	$606
Low Fuel / Base CO_2	$84	$503	$6,515	$598	$876	$656
Low Fuel / High CO_2	$409	$1,177	$9,301	$574	$1,430	$984
Low Fuel / No CO_2	($183)	($51)	$4,182	$595	$447	$384

In addition to the sensitivities conducted above, capital cost sensitivities were also conducted. In the low capital cost sensitivity, technology specific forecast factors were decreased (i.e. greater cost declines in technology costs over time). In the high capital cost sensitivity, technology specific forecast factors were increased (i.e. lower cost declines in technology costs over time). One example of the impact of these cost sensitivities, is the impact on project costs of 4-hour Lithium ion battery storage. In the base case, battery storage costs are projected to drop by nearly 40% by 2025 in real terms. In the low and high capital cost sensitivities, battery storage costs are projected to drop by slightly over 60% and slightly over 20% respectively, by 2025. The results on the lowest PVRR portfolios due to these capital costs sensitivities are shown in Tables A-8 and A-9.

Table A-8: Lowest PVRR (thru 2068) Portfolios Under Each Scenario – Low Capital Cost Sensitivity (2018 dollars in Millions)

PVRR thru 2068 (2018 $M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-$6 M vs Port 1)	Portfolio 1 (-$260 M vs Port 2)	Portfolio 1 (-$586 M vs Port 5)
Base Fuel	Portfolio 1 (-$60 M vs Port 2)	Portfolio 1 (-$408 M vs Port 2)	Portfolio 1 (-$579 M vs Port 5)
High Fuel	Portfolio 1 (-$351 M vs Port 7)	Portfolio 1 (-$551 M vs Port 5)	Portfolio 1 (-$552 M vs Port 5)

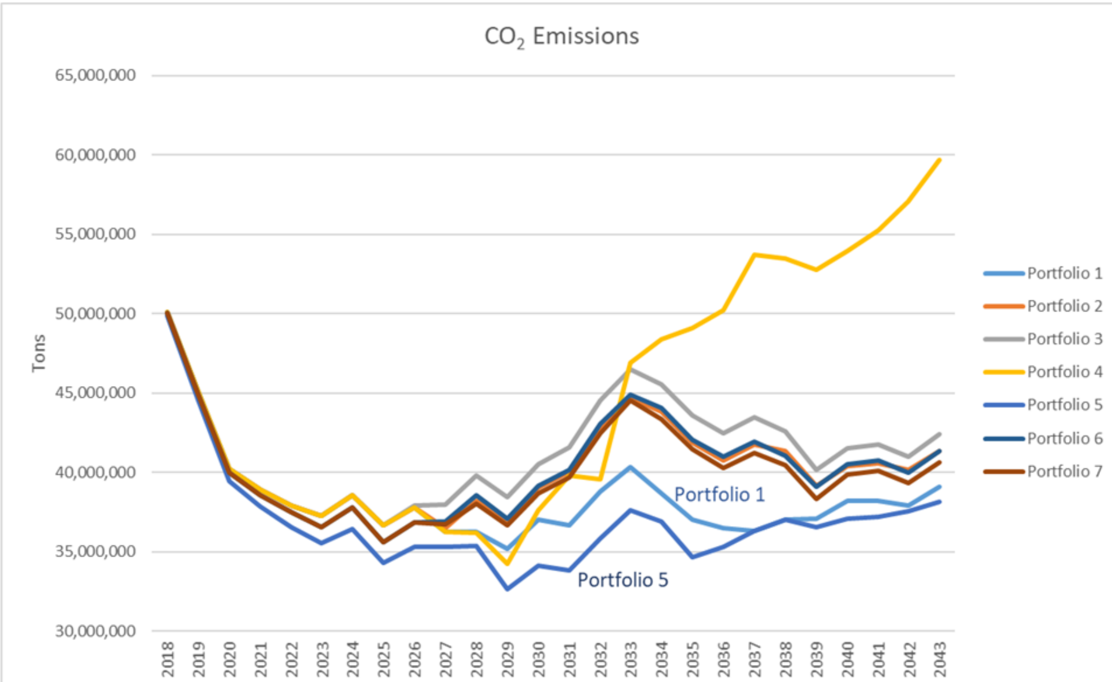
Table A-9: Lowest PVRR (thru 2068) Portfolios Under Each Scenario – High Capital Cost Sensitivity (2018 dollars in Millions)

PVRR thru 2068 (2018 $M)	No CO_2	Base CO_2	High CO_2
Low Fuel	Portfolio 2 (-$137 M vs Port 3)	Portfolio 2 (-$44 M vs Port 2)	Portfolio 1 (-$282 M vs Port 2)
Base Fuel	Portfolio 2 (-$144 M vs Port 1)	Portfolio 1 (-$104 M vs Port 2)	Portfolio 1 (-$409 M vs Port 2)
High Fuel	Portfolio 1 (-$129 M vs Port 2)	Portfolio 1 (-$366 M vs Port 2)	Portfolio 1 (-$448 M vs Port 5)

CO_2 Emissions:

Over the next 15 years, and beyond, Portfolio 1 provides significant CO_2 emission reductions as shown in Figure A-3 below. Only Portfolio 5 (High EE / High Renewables) provides similar or increased carbon reductions over the life of the plan. Additionally, if existing nuclear generation was not extended in DEP, or was not replaced with new nuclear generation, CO_2 emissions would rise significantly as each nuclear plant was retired as shown in Portfolio 4 (Yellow).

Figure A-3: DEP + DEC Carbon Emissions Summary – All Portfolios



Conclusions:

Base CO_2 Portfolio Selection:

For planning purposes, Duke Energy considers both a carbon constrained future and a non-carbon constrained future in the development of the base case portfolios. As the base planning assumption. If a carbon constrained future is either delayed or is more restrictive than the base plan, or other variables such as fuel price and capital costs change significantly from the base assumptions, the selected carbon constrained portfolio should be adequately robust to still provide value in those futures. Another factor that is considered when selecting the base portfolio is the likelihood that the selected portfolio can be executed as shown. Under those considerations, the Company selected Portfolio 1 (Base CO_2 Future) as the base portfolio for planning assumptions.

Portfolio 1 includes a diverse compilation of resources including CCs, CTs, battery storage, and increasing amounts of EE/DSM and solar resources in conjunction with existing nuclear, natural gas, renewables and other assets already on the DEP system. This portfolio also enables the

Company to lower carbon emissions under a range of future scenarios at a lower cost than most other scenarios.

Finally, the Carbon Constrained Base Case was developed utilizing consistent assumptions and analytic methods between DEP and DEC, where appropriate. This case does not consider the sharing of capacity between DEP and DEC. However, the Base Case incorporates the JDA between DEP and DEC, which represents a non-firm energy only commitment between the Companies. A Joint Planning Case that explores the potential for DEP and DEC to share firm capacity was also developed and is discussed later in this chapter and in Appendix A.

No CO_2 Portfolio Selection:

While Duke Energy presents a base resource plan that was developed under a carbon constrained future, the Company also provides a No Carbon Base Case expansion plan that reflects a future without CO_2 constraints. In DEP, this expansion plan is represented by Portfolio 2 (Base No CO_2 Future). There is no difference between the Carbon Constrained Base Case and the No Carbon Base Case over the 15-year planning horizon. However, beyond the 15-year window, CT technology generally takes precedent over CC technology. Because of the trend towards CT technology and the absence of incremental solar in the years just after the planning window, Portfolio 2 has a lower capital cost and a slightly lower PVRR than Portfolio 1 in the Base Fuel / No CO_2 scenario.

Other Findings:

Based on the analysis discussed above, other observations regarding the future of nuclear, solar and battery storage assets on the system can be made.

- **Existing nuclear assets**
    - Portfolio 4 (CC Centric) represents a future where licenses for existing nuclear assets are allowed to expire and those nuclear assets are mainly replaced with CC technology. This portfolio increases capital costs versus the base portfolio as nuclear assets are retired and replaced with CCs, and, the system production cost penalty of replacing nuclear assets that provide nearly 50% of the Company's energy at almost zero fuel cost and zero CO_2 emissions, with CC technology is severe. While retiring existing nuclear assets may provide more value if new nuclear technology such as

SMRs become more established at lower costs, current projections show that maintaining the option to continue operating the Company's existing nuclear fleet provides value for the Company and its customers.

- **Renewables**
  - The level of solar generation in DEP is significant and increasing. Increasing solar generation on the DEP system is likely to cause additional operational issues and costs as more conventional generating assets are required to provide additional ancillary services to manage the intermittency of solar generation. The addition of incremental solar and EE in Portfolio 5 caused a PVRR increase of at least $500M in all cases. Even in a CT Centric future, where there is a greater concentration of energy limited resources, the addition of solar led to an increase in PVRR in all scenarios.

- **Battery Storage**
  - Portfolio 7 (CT Centric / High Renewables / Battery Storage) was developed off Portfolio 6 (CT Centric / High Renewables). In Portfolio 7, a 460 MW block of CT generation in the winter of 2028/2029 was converted to 575 MW of battery storage. While the total cost of Portfolio 7 was significantly higher than Portfolio 1, the addition of battery storage improved the PVRR versus Portfolio 6 by as much as $800M in a high fuel / high CO_2 scenario. While this case shows potential cost savings associated with battery storage, it is important to consider several factors including:
    - Based on the provided cost curves, battery storage costs are projected to decline 50% by 2028.
    - The value shown in this scenario is for incremental battery storage added to a portfolio that already includes 140 MW of 4-hour battery storage in DEP. As with all assets, whether CCs, CTs, solar, or nuclear, there is a point of diminishing returns as more storage is added to the system. It is unclear from this analysis, where battery storage falls on that value curve. As a point of reference, a similar analysis was conducted

in the DEC IRP, and in that case, adding battery storage to the system created a cost increase. At least wo potential reasons for this difference are 1) DEC already includes 2,400 MW of storage in the form of pumped hydro storage, and 2) DEC has overall less MW of solar which could be limiting the benefits of additional storage in DEC.

- The battery storage in this case is a grid tied asset that can be charged with system energy. It is likely that the battery's value would diminish if it were only allowed to charge with solar energy. In that case, the battery would lose the value of being charged with off-peak energy that is generated when solar is not available.
- The model assumes the Company has real-time control of the battery to maximize the battery's value. Without real-time control, the value of the battery on the DEP system is limited.
- While these results suggest that battery storage may have value as a generation deferral and energy arbitrage asset, it is possible that the value of battery storage may be even greater under other applications such as distribution or transmission asset deferral. Additionally, and as discussed elsewhere in this document, the value of battery storage for generation deferral, energy arbitrage, and/or ancillary services may be diminished if the battery is also providing support for voltage control, distribution asset deferral, or emergency back-up power as part of other use cases.

To better understand the true value of battery storage in DEP, it is important for the Company to operate utility storage on its system to properly evaluate the abilities and value of battery storage.

Value of Joint Planning:

To demonstrate the value of sharing capacity with DEC, a Joint Planning Case was developed to examine the impact of joint capacity planning on the resource plans. The impacts were determined by comparing how the combined Base Cases of DEP and DEC would change if a 17% minimum winter planning reserve margin was applied at the combined system level, rather than the individual company level.

An evaluation was performed comparing the optimally selected Portfolio 1 for DEP and DEC to a combined Joint Planning Case in which existing and future capacity resources could be shared between DEP and DEC to meet the 17% minimum winter planning reserve margin. Table A-10 shows the base expansion plans (Portfolio 1 for both DEP and DEC) through 2033, if separately planned, compared to the Joint Planning Case. The total of the two combined resource requirements is then compared to the amount of resources needed if DEP and DEC could jointly plan for capacity. Years where the Joint Planning Case differs from the individual Utility cases are highlighted.

Table A-10: Comparison of Carbon Constrained Base Case Portfolio to Joint Planning Case

	DEC Portfolio 1 (Base CO_2)	**DEP Portfolio 1 (Base CO_2)**	**1 BA (Base CO_2)**
2024	Total Solar = 2834 Total Storage = 100 EE = 248	Total Solar = 4061 Total Storage = 101 EE = 120	Total Solar = 6895 Total Storage = 201 EE = 368
2025	Total Solar = 2939 Total Storage = 125 EE = 284	CC = 1338 Total Solar = 4161 Total Storage = 121 EE = 138	CC = 1338 Total Solar = 7100 Total Storage = 246 EE = 422
2026	Total Solar = 3065 Total Storage = 150 EE = 318	Total Solar = 4215 Total Storage = 141 EE = 155	Total Solar = 7280 Total Storage = 291 EE = 473
2027	Total Solar = 3191 Total Storage = 150 EE = 350	CC = 1338 Total Solar = 4269 Total Storage = 141 EE = 173	CC = 1338 Total Solar = 7460 Total Storage = 291 EE = 522
2028	**CC = 1338** Total Solar = 3317 Total Storage = 150 EE = 370	Total Solar = 4323 Total Storage = 141 EE = 187	Total Solar = 7640 Total Storage = 291 EE = 557
2029	Total Solar = 3443 Total Storage = 150 EE = 383	**CT = 1840** Total Solar = 4377 Total Storage = 141 EE = 200	CC = 1338 CT = 1380 Total Solar = 7820 Total Storage = 291 EE = 583
2030	Total Solar = 3569 Total Storage = 150 EE = 390	Total Solar = 4431 Total Storage = 141 EE = 211	Total Solar = 8000 Total Storage = 291 EE = 601
2031	CC = 1338 Total Solar = 3594 Total Storage = 150 EE = 392	Total Solar = 4456 Total Storage = 141 EE = 221	CC = 1338 Total Solar = 8050 Total Storage = 291 EE = 613
2032	Total Solar = 3619 Total Storage = 150 EE = 394	**CT = 460** Total Solar = 4481 Total Storage = 141 EE = 229	Total Solar = 8100 Total Storage = 291 EE = 623
2033	CT = 460 Total Solar = 3644 Total Storage = 150 EE = 398	CT = 460 Total Solar = 4506 Total Storage = 141 EE = 236	CT = 1380 Total Solar = 8150 Total Storage = 291 EE = 634
Total	CC = 2676 CT = 460 Total Solar = 3644 Total Storage = 150 EE = 398	CC = 2676 CT = 2760 Total Solar = 4506 Total Storage = 141 EE = 236	CC = 5352 CT = 2760 Total Solar = 8150 Total Storage = 291 EE = 634

A comparison of the DEP and DEC Combined Base Case resource requirements to the Joint Planning Scenario requirements illustrates the ability to defer a CC and CT resource in the late 2020s. Consequently, the Joint Planning Case also results in a lower overall reserve margin. This is confirmed by a review of the reserve margins for the Combined Base Case as compared to the Joint Planning Case, which averaged 20.3% and 19.5%, respectively, from the first resource need in 2020 through 2033. The lower reserve margin in the Joint Planning Case indicates that DEC and DEP more efficiently and economically meet capacity needs when planning for capacity jointly. This is reflected in a capital PVRR savings of $250 million for the Joint Planning Case as compared to the Combined Base Case. Though not included in the Joint Planning Case analysis, the ability to share capacity between DEP and DEC would also limit the amount of undesignated short-term market purchases identified in the 2020 to 2024 timeframe in DEP.

B. Quantitative Analysis Summary

The quantitative analysis resulted in several key takeaways that are important for near-term decision-making, as well as in planning for the longer term.

1. Following procurement of the undesignated short-term market purchases in 2020 through the winter of 2023/2024, the first undesignated resource need is in December of 2024 to meet the minimum reserve margin requirement in the winter of 2024/2025. The results of this analysis show that this need is best met with CC generation.

2. The ability to jointly plan capacity with DEC provides customer savings by allowing for the deferral of new generation resources over the 15-year planning horizon.

3. Nuclear generation, whether relicensing or new build, is essential for continuing to lower CO_2 emissions on the system.

Battery storage may provide value in DEP as intermittent energy resources increase on the system. However, since the value is highly dependent on continued steep cost declines of the technology, and the specific use case of the battery, it is prudent to continue monitoring battery storage costs while testing their capabilities on the DEP system.

APPENDIX B: DUKE ENERGY PROGRESS OWNED GENERATION

Duke Energy Progress' generation portfolio includes a balanced mix of resources with different operating and fuel characteristics. This mix is designed to provide energy at the lowest reasonable cost to meet the Company's obligation to serve its customers. Duke Energy Progress-owned generation, as well as purchased power, is evaluated on a real-time basis in order to select and dispatch the lowest-cost resources to meet system load requirements.

The tables below list the Duke Energy Progress' plants in service in North Carolina (NC) and South Carolina (SC) with plant statistics, and the system's total generating capability.

Existing Generating Units and Ratings [1, 3]
All Generating Unit Ratings are as of July 1, 2018 unless otherwise noted.

Coal						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Asheville	1	192	189	Arden, NC	Coal	Intermediate
Asheville	2	192	189	Arden, NC	Coal	Intermediate
Mayo [2]	1	746	727	Roxboro, NC	Coal	Intermediate
Roxboro	1	380	379	Semora, NC	Coal	Intermediate
Roxboro	2	673	668	Semora, NC	Coal	Intermediate
Roxboro	3	698	694	Semora, NC	Coal	Intermediate
Roxboro [2]	4	711	698	Semora, NC	Coal	Intermediate
Total Coal		3,592	3,544			

Combustion Turbines						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Asheville	3	185	160	Arden, NC	Natural Gas/Oil	Peaking
Asheville	4	185	160	Arden, NC	Natural Gas/Oil	Peaking
Blewett	1	17	13	Lilesville, NC	Oil	Peaking
Blewett	2	17	13	Lilesville, NC	Oil	Peaking
Blewett	3	17	13	Lilesville, NC	Oil	Peaking
Blewett	4	17	13	Lilesville, NC	Oil	Peaking
Darlington	1	63	50	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	2	64	48	Hartsville, SC	Oil	Peaking
Darlington	3	63	50	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	4	66	48	Hartsville, SC	Oil	Peaking
Darlington	6	62	43	Hartsville, SC	Oil	Peaking
Darlington	7	65	47	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	8	66	44	Hartsville, SC	Oil	Peaking
Darlington	10	65	49	Hartsville, SC	Oil	Peaking
Darlington	12	133	118	Hartsville, SC	Natural Gas/Oil	Peaking
Darlington	13	133	116	Hartsville, SC	Natural Gas/Oil	Peaking
Smith [4]	1	189	157	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	2	187	156	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	3	185	155	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	4	186	159	Hamlet, NC	Natural Gas/Oil	Peaking
Smith [4]	6	187	145	Hamlet, NC	Natural Gas/Oil	Peaking
Sutton	4	49	39	Wilmington, NC	Natural Gas/Oil	Peaking
Sutton	5	49	39	Wilmington, NC	Natural Gas/Oil	Peaking
Wayne	1/10	192	177	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	2/11	192	174	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	3/12	193	173	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	4/13	191	170	Goldsboro, NC	Oil/Natural Gas	Peaking
Wayne	5/14	195	163	Goldsboro, NC	Oil/Natural Gas	Peaking
Weatherspoon	1	41	31	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	2	41	31	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	3	41	32	Lumberton, NC	Natural Gas/Oil	Peaking
Weatherspoon	4	41	30	Lumberton, NC	Natural Gas/Oil	Peaking
Total NC		2,597	2,203			
Total SC		780	613			
Total CT		3,377	2,816			

Combined Cycle						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Lee	CT1A	225	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	CT1B	227	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	CT1C	228	170	Goldsboro, NC	Natural Gas/Oil	Base
Lee	ST1	379	378	Goldsboro, NC	Natural Gas/Oil	Base
Smith [4]	CT7	189	154	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT8	189	153	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	ST4	175	169	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT9	216	174	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	CT10	216	175	Hamlet, NC	Natural Gas/Oil	Base
Smith [4]	ST5	248	248	Hamlet, NC	Natural Gas/Oil	Base
Sutton	CT1A	224	170	Wilmington, NC	Natural Gas/Oil	Base
Sutton	CT1B	224	171	Wilmington, NC	Natural Gas/Oil	Base
Sutton	ST1	271	266	Wilmington, NC	Natural Gas/Oil	Base
Total CC		3,011	2,568			

Hydro						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Blewett	1	4	4	Lilesville, NC	Water	Intermediate
Blewett	2	4	4	Lilesville, NC	Water	Intermediate
Blewett	3	4	4	Lilesville, NC	Water	Intermediate
Blewett	4	5	5	Lilesville, NC	Water	Intermediate
Blewett	5	5	5	Lilesville, NC	Water	Intermediate
Blewett	6	5	5	Lilesville, NC	Water	Intermediate
Marshall	1	2	2	Marshall, NC	Water	Intermediate
Marshall	2	2	2	Marshall, NC	Water	Intermediate
Tillery	1	21	21	Mt. Gilead, NC	Water	Intermediate
Tillery	2	18	18	Mt. Gilead, NC	Water	Intermediate
Tillery	3	21	21	Mt. Gilead, NC	Water	Intermediate
Tillery	4	24	24	Mt. Gilead, NC	Water	Intermediate
Walters	1	36	36	Waterville, NC	Water	Intermediate
Walters	2	40	40	Waterville, NC	Water	Intermediate
Walters	3	36	36	Waterville, NC	Water	Intermediate
Total Hydro		227	227			

Nuclear						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
Brunswick [2]	1	975	938	Southport, NC	Uranium	Base
Brunswick[2]	2	953	932	Southport, NC	Uranium	Base
Harris [2]	1	980	932	New Hill, NC	Uranium	Base
Robinson	2	797	741	Hartsville, SC	Uranium	Base
Total NC		2,908	2,802			
Total SC		797	741			
Total Nuclear		3,705	3,543			

Solar						
	Unit	**Winter (MW)**	**Summer (MW)**	**Location**	**Fuel Type**	**Resource Type**
NC Solar		7.1	62.0	NC	Solar	Intermittent

Total Generation Capability		
	Winter Capacity (MW)	**Summer Capacity (MW)**
TOTAL DEP SYSTEM - N.C.	12,342	11,406
TOTAL DEP SYSTEM - S.C.	1,577	1,354
TOTAL DEP SYSTEM	13,919	12,760

Note 1: Ratings reflect compliance with NERC reliability standards.

Note 2: Duke Energy Progress completed the purchase from NCEMC of jointly owned Roxboro 4, Mayo 1, Brunswick 1 & 2 and Harris 1units effective 7/31/2015.

Note 3: Resource type based on NERC capacity factor classifications which may alternate over the forecast period.

Note 4: Richmond County Plant renamed to Sherwood H. Smith Jr. Energy Complex.

Note 5: Solar capacity ratings reflect contribution to winter and summer peak values.

Planned Uprates			
Unit	**Completion Date**	**Winter MW**	**Summer MW**
Brunswick 1 [1]	Spring 2020	4	2
Brunswick 2 [1]	Spring 2019	6	4
Brunswick 2 [1]	Spring 2023	6	4
Brunswick 2 [1]	Spring 2027	4	2
Brunswick 2 [1]	Spring 2021	6	4
Harris 1[1]	Spring 2018	30	30

Note 1: Capacity not reflected in Existing Generating Units and Ratings section.

Retirements					
Unit & Plant Name	**Location**	**Capacity (MW) Winter / Summer**		**Fuel Type**	**Retirement Date**
Cape Fear 5	Moncure, NC	148	144	Coal	10/1/12
Cape Fear 6	Moncure, NC	175	172	Coal	10/1/12
Cape Fear 1A	Moncure, NC	14	11	Combustion Turbine	3/31/13
Cape Fear 1B	Moncure, NC	14	12	Combustion Turbine	3/31/13
Cape Fear 2A	Moncure, NC	15	12	Combustion Turbine	3/31/13
Cape Fear 2B	Moncure, NC	14	11	Combustion Turbine	10/1/12
Cape Fear 1	Moncure, NC	12	11	Steam Turbine	3/31/11
Cape Fear 2	Moncure, NC	12	7	Steam Turbine	3/31/11
Darlington 5	Hartsville, SC	66	51	Combustion Turbine	5/31/2018
Darlington 9	Hartsville, SC	65	50	Combustion Turbine	6/30/17
Darlington 11	Hartsville, SC	67	52	Combustion Turbine	11/8/15
Lee 1	Goldsboro, NC	80	74	Coal	9/15/12
Lee 2	Goldsboro, NC	80	68	Coal	9/15/12
Lee 3	Goldsboro, NC	252	240	Coal	9/15/12
Lee 1	Goldsboro, NC	15	12	Combustion Turbine	10/1/12
Lee 2	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Lee 3	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Lee 4	Goldsboro, NC	27	21	Combustion Turbine	10/1/12
Morehead 1	Morehead City, NC	15	12	Combustion Turbine	10/1/12
Robinson 1	Hartsville, SC	179	177	Coal	10/1/12
Robinson 1	Hartsville, SC	15	11	Combustion Turbine	3/31/13
Weatherspoon 1	Lumberton, NC	49	48	Coal	9/30/11
Weatherspoon 2	Lumberton, NC	49	48	Coal	9/30/11
Weatherspoon 3	Lumberton, NC	79	74	Coal	9/30/11
Sutton 1	Wilmington, NC	98	97	Coal	11/27/13
Sutton 2	Wilmington, NC	95	90	Coal	11/27/13
Sutton 3	Wilmington, NC	389	366	Coal	11/4/13
Sutton GT1	Wilmington, NC	12	11	Combustion Turbine	3/1/2017
Darlington 9	Hartsville, SC	65	50	Combustion Turbine	6/30/2017
Sutton GTA	Wilmington, NC	31	23	Combustion Turbine	7/8/2017
Sutton GTB	Wilmington, NC	33	25	Combustion Turbine	7/8/2017
Total		2,219 MW	2,022 MW		

Planning Assumptions – Unit Retirements [a, b]					
Unit & Plant Name	**Location**	**Winter Capacity (MW)**	**Summer Capacity (MW)**	**Fuel Type**	**Expected Retirement**
Asheville 1	Arden, N.C.	192	189	Coal	11/2019
Asheville 2	Arden, N.C.	192	189	Coal	11/2019
Mayo 1	Roxboro, N.C.	746	727	Coal	12/2035
Roxboro 1	Semora, N.C.	380	379	Coal	12/2028
Roxboro 2	Semora, N.C.	673	665	Coal	12/2028
Roxboro 3	Semora, N.C.	698	691	Coal	12/2033
Roxboro 4	Semora, N.C.	711	698	Coal	12/2033
Darlington 1	Hartsville, S.C.	63	52	Natural Gas/Oil	12/2020
Darlington 2	Hartsville, S.C.	64	48	Oil	12/2020
Darlington 3	Hartsville, S.C.	63	52	Natural Gas/Oil	12/2020
Darlington 4	Hartsville, S.C.	66	50	Oil	12/2020
Darlington 6	Hartsville, S.C.	62	45	Oil	12/2020
Darlington 7	Hartsville, S.C.	65	51	Natural Gas/Oil	12/2020
Darlington 8	Hartsville, S.C.	66	48	Oil	12/2020
Darlington 10	Hartsville, S.C.	65	51	Oil	12/2020
Blewett 1	Lilesville, N.C.	17	13	Oil	12/2024
Blewett 2	Lilesville, N.C.	17	13	Oil	12/2024
Blewett 3	Lilesville, N.C.	65	13	Oil	12/2024
Blewett 4	Lilesville, N.C.	66	13	Oil	12/2024
Weatherspoon 1	Lumberton, N.C.	41	32	Natural Gas/Oil	12/2024
Weatherspoon 2	Lumberton, N.C.	41	32	Natural Gas/Oil	12/2024
Weatherspoon 3	Lumberton, N.C.	41	33	Natural Gas/Oil	12/2024
Weatherspoon 4	Lumberton, N.C.	41	31	Natural Gas/Oil	12/2024
Total		4,435	4,115		

Note a: Retirement assumptions are for planning purposes only; retirement dates are based on the depreciation study approved as part of the most recent DEP rate case.

Note b: For planning purposes, the 2018 IRP Base Case assumes subsequent license renewal for existing nuclear facilities beginning at end of current operating licenses.

Planning Assumptions – Unit Additions					
Unit & Plant Name	**Location**	**Winter Capacity (MW)**	**Summer Capacity (MW)**	**Fuel Type**	**Expected Commercial Date**
Asheville CC	Arden, N.C.	560	495	Natural Gas	11/2019

Operating License Renewal

Planned Operating License Renewal				
Unit & Plant Name	**Location**	**Original Operating License Expiration**	**Date of Approval**	**Extended Operating License Expiration**
Blewett #1-6 [1]	Lilesville, NC	04/30/08	April 2015	2055
Tillery #1-4 [1]	Mr. Gilead, NC	04/30/08	April 2015	2055
Robinson #2	Hartsville, SC	07/31/10	04/19/2004	07/31/2030
Brunswick #2	Southport, NC	12/27/14	06/26/2006	12/27/2034
Brunswick #1	Southport, NC	09/08/16	06/26/2006	09/08/2036
Harris #1	New Hill, NC	10/24/26	12/12/2008	10/24/2046

Note 1: The license renewal for the Blewett and Tillery Plants was received in April 2015. The license extension was granted for 40 years.

APPENDIX C: ELECTRIC LOAD FORECAST

Methodology:

The Duke Energy Progress spring 2018 forecast provides projections of the energy and peak demand needs for its service area. The forecast covers the time period of 2019 – 2033 and represents the needs of the following customer classes:

- Residential
- Commercial
- Industrial
- Other Retail
- Wholesale

Energy projections are developed with econometric models using key economic factors such as income, electricity prices, industrial production indices, along with weather, appliance efficiency trends, rooftop solar trends, and electric vehicle trends. Population is also used in the residential customer model.

The economic projections used in the Spring 2018 Forecast are obtained from Moody's Analytics, a nationally recognized economic forecasting firm, and include economic forecasts for the states of North and South Carolina.

Moody's Analytics supplies the Company with economic and demographic projections, which are used in the energy and demand models. Preliminary analysis of Moody's historical projections versus actuals resulted in smaller variances and minimum bias during normal economic periods. However, the likelihood of greater forecast variance and forecast bias increases during unique disruptive economic periods like the Great Recession. The Load Forecasting team will continue to monitor Moody's forecast error going forward.

The retail forecast consists of the three major classes: Residential, Commercial and Industrial.

The Residential class sales forecast is comprised of two projections. The first is the number of residential customers, which is driven by population. The second is energy usage per customer, which is driven by weather, regional economic and demographic trends, electricity prices and appliance efficiencies.

The usage per customer forecast was derived using a Statistical Adjusted End-Use Model. This is a regression based framework that uses projected appliance saturation and efficiency trends developed by Itron using EIA data. It incorporates naturally occurring efficiency trends and government mandates more explicitly than other models. The outlook for usage per customer is essentially flat through much of the forecast horizon, so most of the growth is primarily due to customer increases. The average annual growth rate of residential in the Spring 2018 forecast, including the impacts of Utility Energy Efficiency programs (UEE), rooftop solar and electric vehicles from 2019-2033 is 1.1%.

The Commercial forecast also uses an SAE model in an effort to reflect naturally occurring as well as government mandated efficiency changes. The three largest sectors in the commercial class are offices, education and retail. Commercial energy sales are expected to grow 0.6% per year over the forecast horizon.

The Industrial class is forecasted by a standard econometric model, with drivers such as total manufacturing output, textile output, and the price of electricity. Overall, Industrial sales are expected to grow 0.2% per year over the forecast horizon.

Weather impacts are incorporated into the models by using Heating Degree Days with a base temperature of 59 and Cooling Degree Days with a base temperature of 65. The forecast of degree days is based on a 30-year average, which is updated every year.

The appliance saturation and efficiency trends are developed by Itron using data from the EIA. Itron is a recognized firm providing forecasting services to the electric utility industry. These appliance trends are used in the residential and commercial sales models.

Peak demands were projected using the SAE approach. The peak forecast was developed using a monthly SAE model, similar to the sales SAE models, which includes monthly appliance saturations and efficiencies, interacted with weather and the fraction of each appliance type that is in use at the time of monthly peak.

Forecast Enhancements:

In 2013, The Company began using the statistically adjusted end use (SAE) projections to forecast sales and peaks. The end use models provide a better platform to recognize trends in equipment /appliance saturation and changes to efficiencies, and how those trends interact with heating, cooling, and "other" or non-weather-related sales. The appliance saturation and efficiency trends are developed by ITRON using data from EIA. ITRON is a recognized firm providing forecasting services to the electric utility industry. These appliance trends are used in the residential and commercial sales models. In conjunction with peer utilities and ITRON, the company continually looks for refinements to its modeling procedures to make better use of the forecasting tools, and develop more reliable forecasts.

Each time the forecast is updated, the most currently available historical and projected data is used. The current 2018 forecast utilizes:

- Moody's Analytics January 2018 base and consensus economic projections.
- End use equipment and appliance indexes reflect the 2017 update of ITRON's end-use data, which is consistent with the Energy Information Administration's 2017 Annual Energy Outlook
- A calculation of normal weather using the period 1987-2016

As instructed by the North Carolina Utilities Commission after review of the 2016 IRP, the company continues to research the weather sensitivity of summer and winter peaks, hourly shaping of sales and load research data. As a result of the study, several improvements were identified and incorporated into the current forecast, as follows:

- **Retail Peak Weather Normalization**
  - The peak weather Rank/Sort process was updated using the ITRON forecasting software rank/sort functionality. For purposes of projecting peaks, a seasonal rank/sort approach was used to capture historical weather patterns that may have occurred outside of the normal peak month.
  - The peak model was updated to capture the actual historical average daily temperature on the day of peak. Previous models selected the coldest average daily temperature during the month of peak.
- **Load History –** Conducted a detailed review of historical loads, and the definitions of the loads in order to better align historical results with future projections.
- **Wholesale Assumptions -** The wholesale forecast process was better integrated with the retail forecast process. Additional reporting detail was provided for wholesale history and wholesale customer classes, resulting in an improved load shape.

After completing the study, it was determined that historical winter peaks were coming in well above forecasted peaks. Several process improvements above addressed that issue, raising the winter peaks in the 2018 Spring Forecast compared to the 2017 Spring Forecast.

Assumptions:

Below are the projected average annual growth rates of several key drivers from DEP's Spring 2018 Forecast.

	2019-2033
Real Income	2.3%
Manufacturing Industrial Production Index (IPI)	1.1%
Population	1.3%

In addition to economic, demographic, and efficiency trends, the forecast also incorporates the expected impacts of UEE, as well as projected effects of electric vehicles and behind the meter solar technology.

Utility Energy Efficiency:

Utility Energy Efficiency Programs (UEE) continue to have a large impact in the acceleration of the adoption of energy efficiency. When including the impacts of UEE on energy and peaks, careful attention must be paid to avoid the double counting of UEE efficiencies with the naturally occurring efficiencies included in the SAE modeling approach. To ensure there is not a double counting of these efficiencies, the forecast "rolls off" the UEE savings at the conclusion of its measure life. For example, if the accelerated benefit of a residential UEE program is expected to have occurred seven years before the energy reduction program would have been otherwise adopted, then the UEE effects after year seven are subtracted ("rolled off") from the total cumulative UEE. With the SAE model's framework, the naturally occurring appliance efficiency trends replace the rolled off UEE benefits serving to continue to reduce the forecasted load resulting from energy efficiency adoption.

The table below illustrates this process on sales:

Table C-1: UEE Program Life Process (MWh)

	A	B	C	D	E	F	G
Year	Forecast Before UEE	Historical UEE Roll Off	Forecast With Historical Roll Off	Forecasted UEE Incremental Roll on	Forecasted UEE Incremental Roll Off	UEE to Subtract From Forecast	Forecast After UEE
2019	64,378	8	64,386	(348)	-	(348)	64,038
2020	64,173	38	64,212	(543)	0	(543)	63,669
2021	64,243	97	64,340	(728)	0	(728)	63,613
2022	64,104	193	64,297	(905)	2	(903)	63,393
2023	64,558	325	64,884	(1,080)	5	(1,075)	63,809
2024	65,390	478	65,868	(1,256)	10	(1,246)	64,622
2025	65,963	631	66,594	(1,431)	16	(1,416)	65,178
2026	65,956	769	66,725	(1,607)	26	(1,581)	65,145
2027	66,593	875	67,468	(1,782)	41	(1,742)	65,726
2028	67,530	944	68,473	(1,958)	78	(1,880)	66,593
2029	68,096	985	69,081	(2,134)	133	(2,001)	67,080
2030	68,654	1,003	69,657	(2,311)	202	(2,109)	67,548
2031	69,300	1,009	70,309	(2,488)	288	(2,201)	68,108
2032	70,060	1,009	71,069	(2,668)	386	(2,282)	68,787
2033	70,461	1,009	71,470	(2,848)	503	(2,345)	69,125

Wholesale:

For a description of the Wholesale forecast, please see Appendix H.

Customer Growth:

Tables C-2 and C-3 show the history and projections for DEP customers.

Table C-2: Retail customers (annual average in thousands)

Year	Residential Customers	Commercial Customers	Industrial Customers	Other Customers	Retail Customers
2008	1,195	216	4	2	1,417
2009	1,207	215	5	2	1,429
2010	1,216	216	5	2	1,439
2011	1,221	217	4	2	1,445
2012	1,231	219	4	2	1,457
2013	1,242	222	4	2	1,470
2014	1,257	223	4	2	1,486
2015	1,275	226	4	2	1,507
2016	1,292	229	4	2	1,527
2017	1,310	232	4	1	1,547
Avg. Annual Growth Rate	1.0%	0.8%	-0.3%	-4.4%	1.0%

Table C-3: Retail customers (annual average in thousands)

Year	Residential Customers	Commercial Customers	Industrial Customers	Other Customers	Retail Customers
2019	1,345	237	4	1	1,588
2020	1,361	240	4	1	1,607
2021	1,376	243	4	1	1,625
2022	1,392	246	4	1	1,643
2023	1,406	248	4	1	1,660
2024	1,420	251	4	1	1,676
2025	1,433	253	4	1	1,692
2026	1,445	256	4	1	1,706
2027	1,457	258	4	1	1,720
2028	1,469	261	4	1	1,735
2029	1,480	263	4	1	1,748
2030	1,492	265	4	1	1,762
2031	1,503	268	4	1	1,776
2032	1,514	270	4	1	1,789
2033	1,526	272	4	1	1,789
Avg. Annual Growth Rate	0.8%	0.9%	-1.0%	-0.2%	0.8%

Electricity Sales:

Table C-4 shows the actual historical GWh sales. As a note, the values in Table C-2 are not weather adjusted Sales.

Table C-4: Electricity sales (GWh)

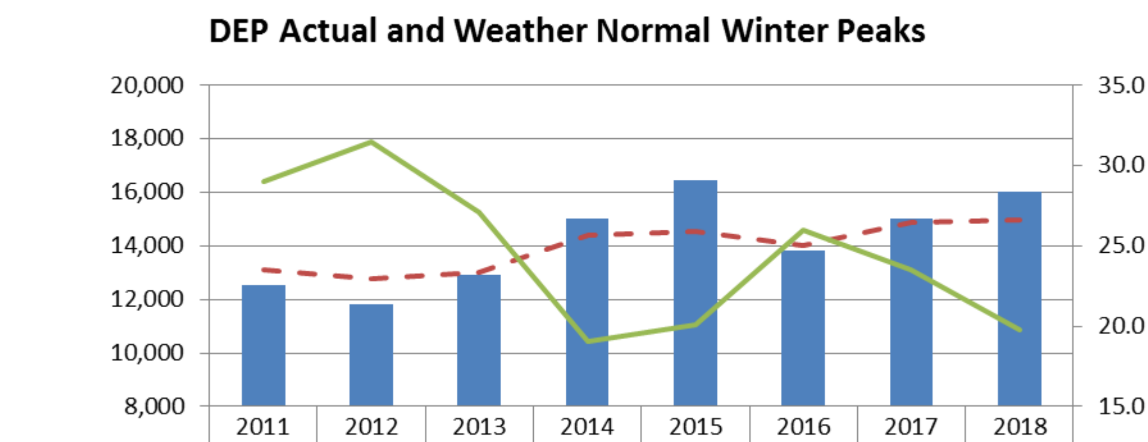
Year	Residential GWh	Commercial GWh	Industrial GWh	Military & Other GWh	Retail GWh	Wholesale GWh	Total System GWh
2008	17,200	14,033	11,883	1,438	44,553	12,656	57,209
2009	17,000	13,940	11,216	1,467	43,622	12,868	56,489
2010	17,117	13,639	10,375	1,497	42,628	12,772	55,400
2011	19,108	14,184	10,677	1,574	45,544	12,772	58,316
2012	17,764	13,709	10,573	1,591	43,637	12,267	55,903
2013	16,663	13,581	10,508	1,602	42,355	12,676	55,031
2014	18,201	13,887	10,321	1,614	44,023	13,578	57,601
2015	17,954	14,039	10,288	1,597	43,876	15,782	59,658
2016	17,686	14,082	10,274	1,563	43,606	18,676	62,282
2017	17,228	13,903	10,391	1,531	43,053	18,242	61,295
Avg. Annual Growth Rate	0.0%	-0.1%	-1.5%	0.7%	-0.4%	4.1%	0.8%

Note: The wholesale values in Table C-4 exclude NCEMPA sales for all years before 2015, and is only partially included in 2015.

System Peaks:

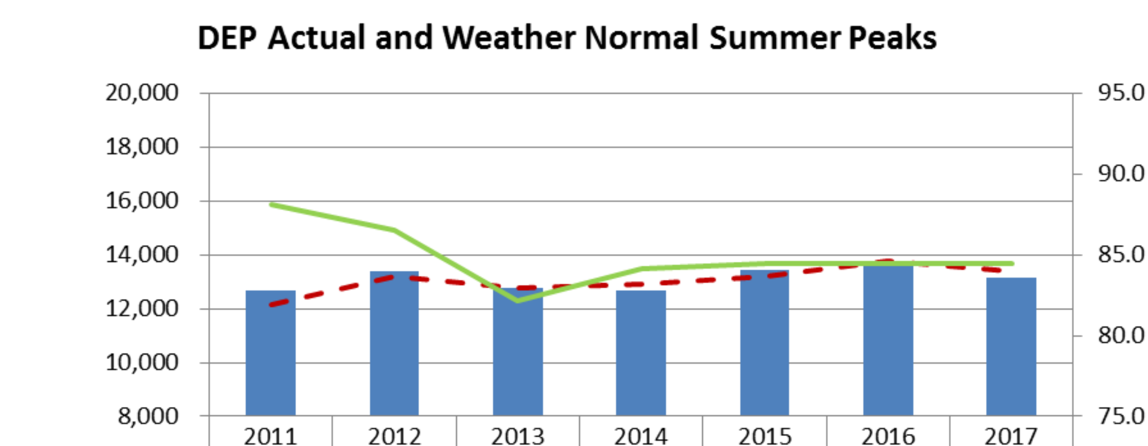
Table C-5 and C-6 shows the historical actual and weather normalized peaks for the system:

Table C-5: Winter Peaks



	2011	2012	2013	2014	2015	2016	2017	2018
Actual	12,522	11,826	12,897	14,993	16,429	13,801	15,020	16,016
WN Peak	13,107	12,760	12,994	14,374	14,519	14,026	14,857	14,967
Temp	29.0	31.5	27.1	19.1	20.1	26.0	23.5	19.8

Table C-6: Summer Peaks



	2011	2012	2013	2014	2015	2016	2017
Actual	12,686	13,405	12,785	12,663	13,415	13,578	13,143
WN Peak	12,146	13,198	12,757	12,922	13,206	13,777	13,375
Temp	88.1	86.5	82.2	84.1	84.5	84.5	84.4

Forecast Results:

A tabulation of the utility's sales and peak forecasts are shown as tables below:

- Table C-7: Forecasted energy sales by class (Including the impacts of UEE, rooftop solar, and electric vehicles)
- Table C-8: Summary of the load forecast without UEE programs and excluding any impacts from demand reduction programs
- Table C-9: Summary of the load forecast with UEE programs and excluding any impacts from demand reduction programs

These projections are at generation and include Wholesale.

Load duration curves, with and without UEE programs are shown as Figures C-1 and C-2.

The values in these tables reflect the loads that Duke Energy Progress is contractually obligated to provide and cover the period from 2019 to 2033.

As a note, all of the loads and energy in the tables and figures below are at generation, except for the class sales forecast, which is at the meter.

Table C-7: Forecasted energy sales by class

Year	Residential GWh	Commercial GWh	Industrial GWh	Other GWh	Retail GWh
2019	18,016	14,007	10,511	1,532	44,065
2020	18,236	14,073	10,591	1,524	44,425
2021	18,395	14,073	10,476	1,516	44,459
2022	18,638	14,120	10,433	1,507	44,697
2023	18,905	14,173	10,307	1,499	44,884
2024	19,234	14,303	10,388	1,490	45,416
2025	19,444	14,387	10,445	1,488	45,764
2026	19,686	14,515	10,514	1,483	46,197
2027	19,907	14,635	10,528	1,478	46,548
2028	20,176	14,813	10,661	1,475	47,125
2029	20,327	14,916	10,701	1,471	47,415
2030	20,532	15,003	10,700	1,465	47,700
2031	20,742	15,102	10,764	1,462	48,070
2032	21,015	15,236	10,819	1,458	48,528
2033	21,178	15,292	10,769	1,452	48,692
Avg. Annual Growth Rate	1.1%	0.6%	0.2%	-0.4%	0.7%

Note: Values are at meter

Table C-8: Summary of the load forecast without UEE programs and excluding any impacts from demand reduction programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2019	13,374	14,036	64,386
2020	13,409	14,060	64,212
2021	13,439	14,062	64,340
2022	13,557	14,168	64,297
2023	13,676	14,243	64,884
2024	13,850	14,429	65,868
2025	14,018	14,553	66,594
2026	14,264	14,724	66,725
2027	14,398	14,886	67,468
2028	14,642	15,090	68,473
2029	14,804	15,232	69,081
2030	14,959	15,367	69,657
2031	15,137	15,524	70,309
2032	15,333	15,704	71,069
2033	15,463	15,811	71,470
Avg. Annual Growth Rate	1.0%	0.8%	0.7%

Note: Values are at generation level

Figure C-1: Load Duration Curve without Energy Efficiency Programs and Before Demand Response Programs

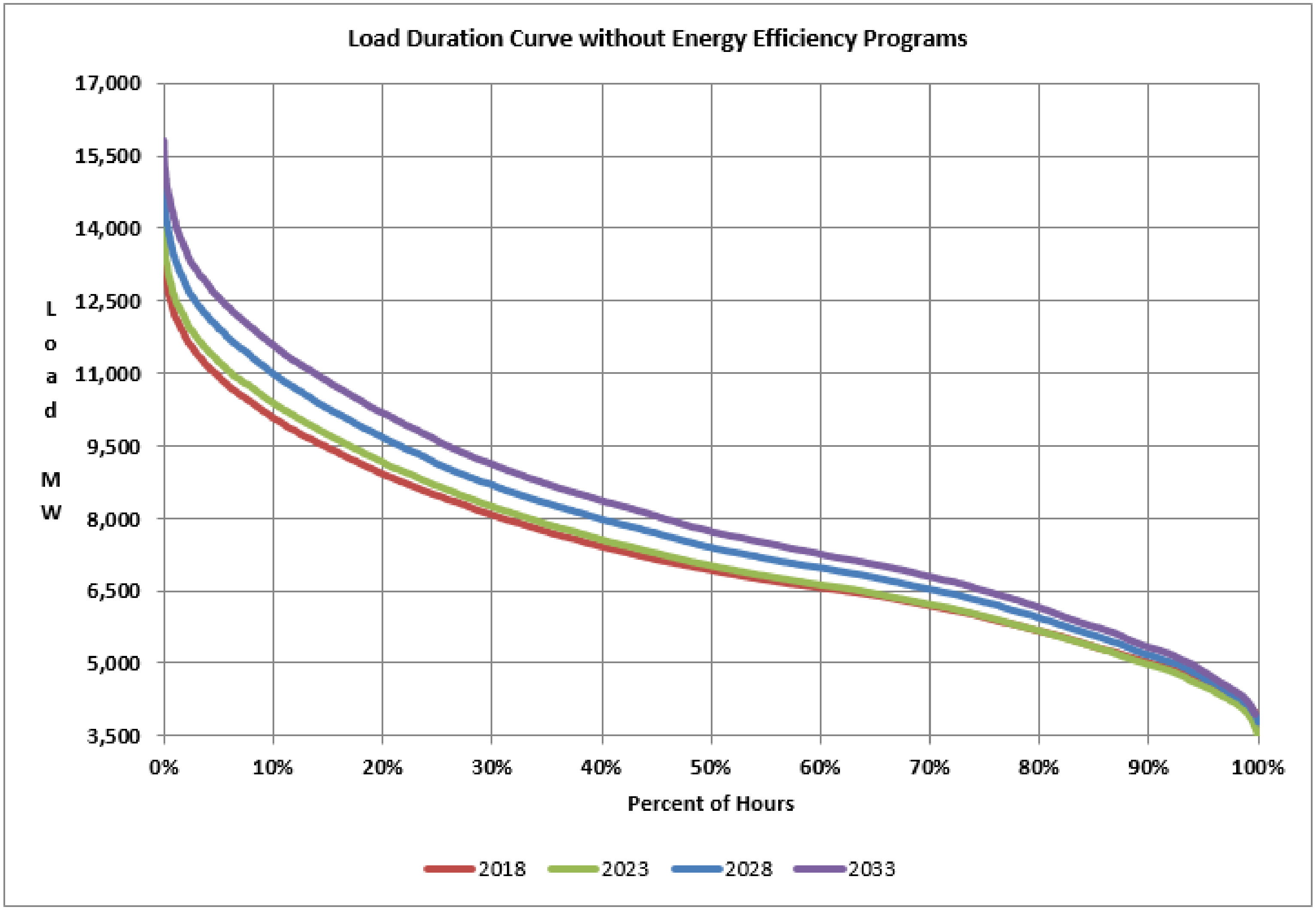
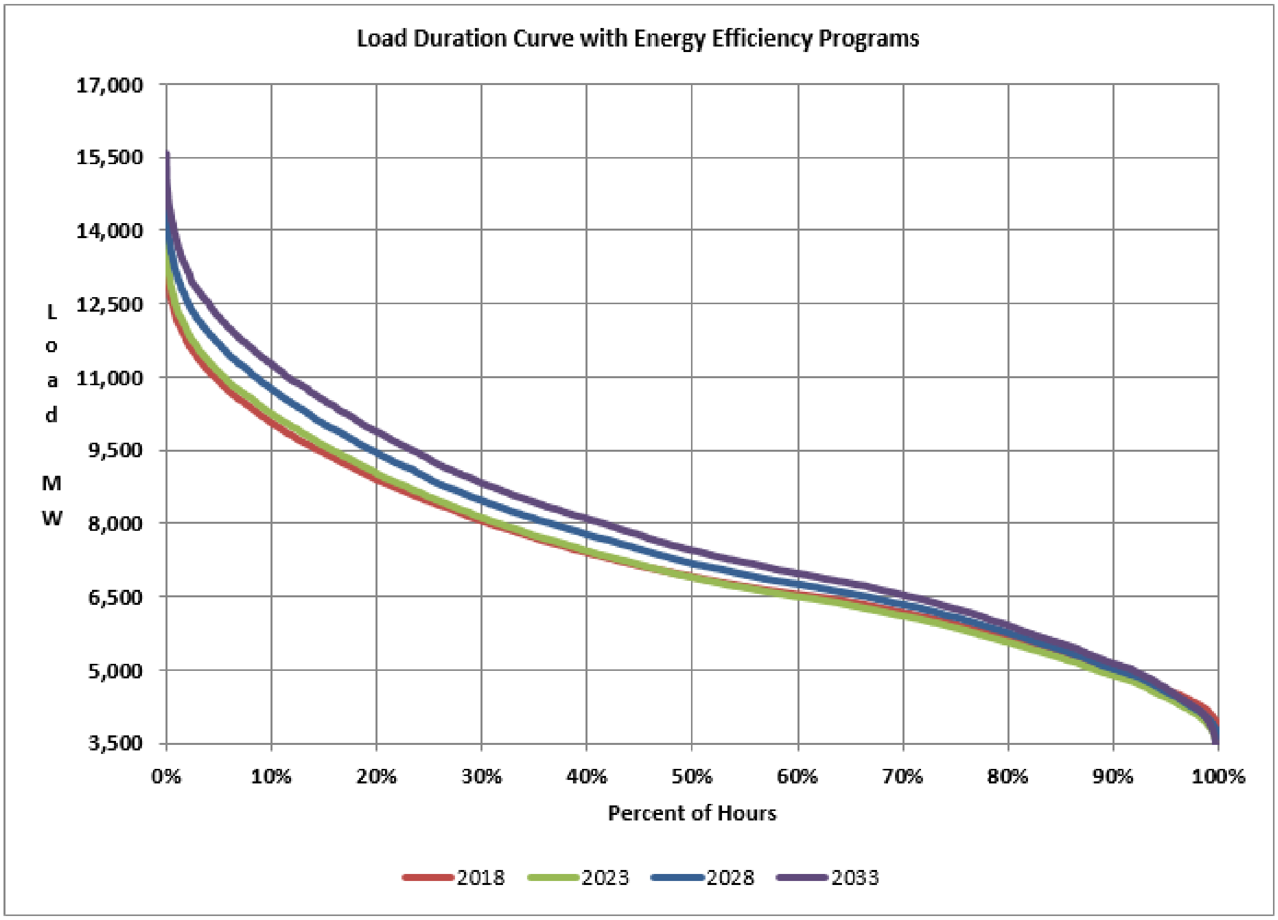


Table C-9: Summary of the load forecast with UEE programs and excluding any impacts from demand reduction programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2019	13,317	14,011	64,038
2020	13,322	14,016	63,669
2021	13,324	14,001	63,613
2022	13,416	14,089	63,393
2023	13,510	14,139	63,809
2024	13,658	14,308	64,622
2025	13,796	14,415	65,178
2026	14,014	14,568	65,145
2027	14,118	14,713	65,726
2028	14,336	14,903	66,593
2029	14,473	15,032	67,080
2030	14,605	15,155	67,548
2031	14,762	15,303	68,108
2032	14,941	15,475	68,787
2033	15,054	15,575	69,125
Avg. Annual Growth Rate	0.8%	0.7%	0.5%

Note: Values are at generation level

Figure C-2: Load Duration Curve with Energy Efficiency Programs & Before Demand Response Programs



APPENDIX D: ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT

Demand-Side Management and Energy Efficiency Programs:

DEP continues to pursue a long-term, balanced capacity and energy strategy to meet the future electricity needs of its customers. This balanced strategy includes a strong commitment to demand-side management (DSM) and energy efficiency (EE) programs, investments in renewable and emerging energy technologies, and state-of-the art power plants and delivery systems.

DEP uses EE and DSM programs in its IRP to efficiently and cost-effectively alter customer demands and reduce the long-run supply costs for energy and peak demand. These programs can vary greatly in their dispatch characteristics, size and duration of load response, certainty of load response, and level and frequency of customer participation. In general, programs are offered in two primary categories: EE programs that reduce energy consumption and DSM programs that reduce peak demand (demand-side management or demand response programs and certain rate structure programs).

Following are the EE and DSM programs currently available through DEP.

Residential EE Programs:

- Energy Efficiency Education
- Multi-Family Energy Efficiency
- My Home Energy Report
- Neighborhood Energy Saver (Low-Income)
- Residential Energy Assessments
- Residential New Construction
- Residential Smart $aver® Energy Efficiency
- Save Energy and Water Kit

Non-Residential EE Programs:

- Non-Residential Smart $aver® Energy Efficiency Products and Assessment
- Non-Residential Smart $aver® Performance Incentive
- Small Business Energy Saver

Combined Residential/Non-Residential EE Programs:

- Energy Efficient Lighting
- Distribution System Demand Response (DSDR)

Residential DSM Programs:

- EnergyWise^{SM} Home

Non-Residential DSM Programs:

- CIG Demand Response Automation
- EnergyWise^{SM} for Business

Energy Efficiency Programs:

Energy Efficiency programs are typically non-dispatchable education or incentive-based programs. Energy and capacity savings are achieved by changing customer behavior or through the installation of more energy-efficient equipment or structures. All cumulative effects (gross of Free Riders, at the Plant[12]) since the inception of these existing programs through the end of 2017 are summarized below. Please note that the cumulative impacts listed below include the impact of any Measurement and Verification performed since program inception and also note that a "Participant" in the information included below is based on the unit of measure for the specific energy efficiency measure (e.g. number of bulbs, kWh of savings, tons of refrigeration, etc.), and may not be the same as the number of customers that actually participate in these programs. The following provides more detail on DEP's existing EE programs.

Residential EE Programs:

Energy Efficiency Education Program:

The Energy Efficiency Education Program is an energy efficiency program available to students in grades K-12 enrolled in public and private schools who reside in households served by Duke Energy Progress. The Program provides principals and teachers with an innovative curriculum that educates students about energy, resources, how energy and resources are related, ways energy is wasted and how to be more energy efficient. The centerpiece of the current curriculum is a live

[12] "Gross of Free Riders" means that the impacts associated with the EE programs have not been reduced for the impact of Free Riders. "At the Plant" means that the impacts associated with the EE programs have been increased to include line losses.

theatrical production focused on concepts such as energy, renewable fuels and energy efficiency performed by two professional actors.

Following the performance, students are encouraged to complete a home energy survey with their family to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption and is available at no cost to student households at participating schools. Teachers receive supportive educational material for classroom and student take home assignments. The workbooks, assignments and activities meet state curriculum requirements.

Energy Efficiency Education			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	29,049	8,439	3,572

Multi-Family Energy Efficiency Program:

The Multi-Family Energy Efficiency Program provides energy efficient lighting and water measures to reduce energy usage in eligible multi-family properties. The Program allows Duke Energy Progress to target multi-family apartment complexes with an alternative delivery channel. The measures are installed in permanent fixtures by the program administrator or the property management staff. The program offers LEDs including A-Line, Globes and Candelabra bulbs and energy efficient water measures such as bath and kitchen faucet aerators, water saving showerheads and pipe wrap.

Multi-Family Energy Efficiency			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	885,774	48,814	6,042

My Home Energy Report Program:

The My Home Energy Report (MyHER) Program provides residential customers with a comparative usage report that engages and motivates customers by comparing energy use to similar residences in the same geographical area based upon the age, size and heating source of the home. The report also empowers customers to become more efficient by providing them with specific energy saving recommendations to improve the efficiency of their homes. The actionable energy savings tips, as well as measure-specific coupons, rebates or other Company program offers that may be included in a customer's report are based on that specific customer's energy profile.

The program includes an interactive online portal that allows customers to further engage and learn more about their energy use and opportunities to reduce usage. Electronic versions of the My Home Energy Report are sent to customers enrolled on the portal. In addition, all MyHER customers with an email address on file with the Company receive an electronic version of their report monthly.

My Home Energy Report			
	Number of	Gross Savings (at plant)	
Capability as of:	Participants	MWh Energy	Peak kW
December 31, 2017	795,734	117,852	19,964

Neighborhood Energy Saver (Low-Income) Program:

DEP's Neighborhood Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within the households of income qualifying residential customers. The Program utilizes a Company-selected vendor to: (1) provide an on-site energy assessment of the residence to identify appropriate energy conservation measures, (2) install a comprehensive package of energy conservation measures at no cost to the customer, and (3) provide one-on-one energy education. Program measures address end-uses in lighting, refrigeration, air infiltration and HVAC applications.

Program participants receive a free energy assessment of their home followed by a recommendation of energy efficiency measures to be installed at no cost to the resident. A team of energy technicians will install applicable measures and provide one-on-one energy education about each measure emphasizing the benefit of each and recommending behavior changes to reduce and control energy usage.

Neighborhood Energy Saver			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	37,278	18,479	2,648

Residential Energy Assessments Program:

The Residential Energy Assessments Program provides eligible customers with a free in-home energy assessment, performed by a Building Performance Institute (BPI) certified energy specialist and designed to help customers reduce energy usage and save money. The BPI certified energy specialist completes a 60 to 90-minute walk through assessment of a customer's home and analyzes energy usage to identify energy savings opportunities. The energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The customer also receives a customized report that identifies actions the customer can take to increase their home's efficiency.

In addition to a customized report, customers receive an energy efficiency starter kit with a variety of measures that can be directly installed by the energy specialist. The kit includes measures such as energy efficiency lighting, low flow shower head, low flow faucet aerators, outlet/switch gaskets, weather stripping and an energy saving tips booklet.

Residential Energy Assessments			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	65,704	9,590	1,602

Residential New Construction Program:

The Residential New Construction Program provides incentives for new single family and multi-family residential dwellings (projects of three stories and less) that fall within the 2012 North Carolina Residential Building Code to meet or exceed the 2012 North Carolina Energy Conservation Code High Efficiency Residential Option ("HERO"). If a builder or developer constructing to the HERO standard elects to participate, the Program offers the homebuyer an incentive guaranteeing the heating and cooling consumption of the dwelling's total annual energy costs. Additionally, the Program incents the installation of high-efficiency heating ventilating and air conditioning ("HVAC") and heat pump water heating ("HPWH") equipment in new single family, manufactured, and multi-family residential housing units.

New construction represents a unique opportunity for capturing cost effective EE savings by encouraging the investment in energy efficiency features that would otherwise be impractical or costlier to install at a later time.

Residential New Construction			
Cumulative as of:	Number of Participants	Gross Savings (at plant)	
		MWh Energy	Peak kW
December 31, 2017	15,498,975	42,889	17,187

Note: The participants and impacts are from both the Residential New Construction program and the previous Home Advantage program.

Residential Smart $aver® EE Program (formerly known as the Home Energy Improvement Program):

The Residential Smart $aver® EE Program offers DEP customers a variety of energy conservation measures designed to increase energy efficiency in existing residential dwellings. The Program utilizes a network of participating contractors to encourage the installation of: (1) high efficiency central air conditioning (AC) and heat pump systems with optional add on measures such as Quality Installation and Smart Thermostats, (2) attic insulation and sealing, (3) heat pump water heaters, and (4) high efficiency variable speed pool pumps.

The prescriptive menu of energy efficiency measures provided by the program allows customers the opportunity to participate based on the needs and characteristics of their individual homes. A referral channel provides free, trusted referrals to customers seeking reliable, qualified contractors for their energy saving home improvement needs.

This program previously offered HVAC Audits and Room AC's, however, those measures were removed due to no longer being cost-effective.

The tables below show actual program performance for all current and past program measures.

Residential Smart $aver® EE			
Cumulative as of:	Number of Participants	Gross Savings (at plant)	
		MWh Energy	Peak kW
December 31, 2017	160,600	67,315	39,696

Save Energy and Water Kit Program:

The Save Energy and Water Kit is designed to increase the energy efficiency within single family homes by offering low flow water fixtures and insulated pipe tape to residential customers with electric water heaters. Participants receive a free kit that includes installation instructions and varying numbers (based on the number of full bathrooms in their home) of bath aerators, shower heads, kitchen aerators and pipe insulation tape. The program has a website in place that customers can access to learn more about the program or watch videos produced to aid in the installation of the kit measures.

Save Energy and Water Kit			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	789,000	45,710	15,301

Non-Residential EE Programs:

Non-Residential Smart $aver Energy Efficient Products and Assessment Program *(formerly known as the Energy Efficiency for Business Program)*

The Non-Residential Smart $aver Energy Efficient Products and Assessment Program provides incentives to DEP commercial and industrial customers to install high efficiency equipment in applications involving new construction and retrofits and to replace failed equipment.

Commercial and industrial customers can have significant energy consumption but may lack knowledge and understanding of the benefits of high efficiency alternatives. The Program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the Program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products.

The program provides incentives through prescriptive measures, custom measures and technical assistance.

- *Prescriptive Measures*: Customers receive incentive payments after the installation of certain high efficiency equipment found on the list of pre-defined prescriptive measures, including lighting; heating, ventilating and air conditioning equipment; and refrigeration measures and equipment.
- *Custom Measures*: Custom measures are designed for customers with electrical energy saving projects involving more complicated or alternative technologies, whole-building projects, or those measures not included in the Prescriptive measure list. The intent of the

Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company's technical or financial assistance. Unlike the Prescriptive portion of the program, all Custom measure incentives require pre-approval prior to the project implementation.

- *Energy Assessments and Design Assistance*: Incentives are available to assist customers with energy studies such as energy audits, retro commissioning, and system-specific energy audits for existing buildings and with design assistance such as energy modeling for new construction. Customers may use a contracted Duke Energy vendor to perform the work or they may select their own vendor. Additionally, the Program assists customers who identify measures that may qualify for Smart $aver Incentives with their applications. Pre-approval is required.

Non-Residential Smart $aver® Energy Efficient Products and Assessment			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants*	MWh Energy	Peak kW
December 31, 2017	73,365,213	569,826	102,244

* Note: Participants have different units of measure.

Non-Residential Smart $aver Performance Incentive Program:

The Non-Residential Smart $aver® Performance Incentive Program offers financial assistance to qualifying commercial, industrial and institutional customers to enhance their ability to adopt and install cost-effective electrical energy efficiency projects. The Program encourages the installation of new high efficiency equipment in new and existing nonresidential establishments as well as efficiency-related repair activities designed to maintain or enhance efficiency levels in currently installed equipment. Incentive payments are provided to offset a portion of the higher cost of energy efficient installations that are not eligible under the Smart $aver® EE Products and Assessment program. The Program requires pre-approval prior to project initiation.

The types of projects covered by the Program include projects with some combination of unknown building conditions or system constraints, or uncertain operating, occupancy, or production schedules. The intent of the Program is to broaden participation in non-residential efficiency programs by being able to provide incentives for projects that previously were deemed too unpredictable to calculate an acceptably accurate savings amount, and therefore ineligible for incentives. This Program provides a platform to understand new technologies better. Only projects that demonstrate that they clearly reduce electrical consumption and/or demand are eligible for incentives.

The key difference between this program and the custom component of the Non-Residential Smart $aver Energy® Efficient Products and Assessment program is that Performance Incentive participants get paid based on actual measure performance, and involves the following two step process.

- Incentive #1: For the portion of savings that are expected to be achieved with a high degree of confidence, an initial incentive is paid once the installation is complete.
- Incentive #2: After actual performance is measured and verified, the performance-based part of the incentive is paid. The amount of the payout is tied directly to the savings achieved by the measures.

Non-Residential Smart $aver® Performance Incentive			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants*	MWh Energy	Peak kW
December 31, 2017	1	440	59

Small Business Energy Saver Program

The Small Business Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within qualifying non-residential customer facilities. Program measures address major end-uses in lighting, refrigeration, and HVAC applications. The program is available to existing non-residential customers that are not opted-out of the Company's EE/DSM Rider and have an average annual demand of 180 kW or less per active account.

Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from Duke Energy Progress. The customer makes the final determination of which measures will be installed after receiving the results of the energy assessment. The Company-authorized vendor schedules the installation of the energy efficiency measures at a convenient time for the customer, and electrical subcontractors perform the work.

Small Business Energy Saver			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	126,301,579	191,477	37,247

Note: Participants have different units of measure.

Combined Residential/Non-Residential Customer:

Energy Efficient Lighting Program:

The Energy Efficient Lighting Program partners with lighting manufacturers and retailers across North and South Carolina to provide marked-down prices at the register to DEP customers purchasing energy efficient lighting products. Starting in 2017, the Program removed CFLs and only offers LEDs and energy-efficient fixtures.

As the program enters its eighth year, the DEP Energy Efficient Lighting Program will continue to encourage customers to adopt energy efficient lighting through incentives on a wide range of energy efficient lighting products. Customer education is imperative to ensure customers are purchasing the right bulb for the application in order to obtain high satisfaction with lighting products and subsequent purchases.

Energy Efficient Lighting			
	Number of	Gross Savings (at plant)	
Cumulative as of:	Participants	MWh Energy	Peak kW
December 31, 2017	29,776,479	1,636,739	255,409

Distribution System Demand Response Program (DSDR):

Duke Energy Progress’ Distribution System Demand Response (DSDR) program manages the application and operation of voltage regulators (the Volt) and capacitors (the VAR) on the Duke Energy Progress distribution system. In general, the program tends to optimize the operation of these devices, resulting in a "flattening" of the voltage profile across an entire circuit, starting at the substation and continuing out to the farthest endpoint on that circuit. This flattening of the voltage profile is accomplished by automating the substation level voltage regulation and capacitors, line capacitors and line voltage regulators while integrating them into a single control system. This control system continuously monitors and operates the voltage regulators and capacitors to maintain the desired "flat" voltage profile. Once the system is operating with a relatively flat voltage profile across an entire circuit, the resulting circuit voltage at the substation can then be operated at a lower overall level. Lowering the circuit voltage at the substation, results in an immediate reduction of system loading during peak conditions.

Distribution System Demand Response			
		Gross Savings (at plant)	
Cumulative as of:	**Number of Participants**	**MWh Energy**	**Summer MW Capability**
December 31, 2017	NA	35,519	212

Since DEP's last biennial resource plan was filed on September 2, 2016, there have been 35 voltage control activations through June 30, 2018. The following table shows the date, starting and ending time, and duration for all voltage control activations from July 2016 through June 2018.

Voltage Control Activations			
Date	**Start Time**	**End Time**	**Duration (H:MM)**
7/5/2016	14:00	14:13	0:13
7/26/2016	15:30	19:11	3:41
7/27/2016	15:30	19:15	3:45
7/28/2016	15:30	19:00	3:30
8/19/2016	17:53	18:01	0:08
8/24/2016	13:42	14:00	0:18
11/22/2016	6:00	8:30	2:30
12/21/2016	9:00	10:00	1:00
1/8/2017	6:30	9:46	3:16
1/9/2017	6:30	9:37	3:07
3/16/2017	6:00	8:30	2:30
5/4/2017	13:00	14:30	1:30
5/12/2017	13:00	14:00	1:00
8/18/2017	16:00	19:00	3:00
10/9/2017	16:30	19:30	3:00
10/11/2017	16:00	20:00	4:00

Voltage Control Activations			
Date	**Start Time**	**End Time**	**Duration (H:MM)**
10/12/2017	16:00	20:00	4:00
10/23/2017	18:00	21:00	3:00
1/1/2018	19:00	22:00	3:00
1/2/2018	5:00	10:30	5:30
1/2/2018	19:00	22:00	3:00
1/3/2018	5:00	9:00	4:00
1/3/2018	19:00	22:00	3:00
1/4/2018	5:00	9:00	4:00
1/4/2018	19:00	22:00	3:00
1/5/2018	5:00	10:00	5:00
1/5/2018	19:00	22:00	3:00
1/6/2018	5:00	10:00	5:00
1/7/2018	5:00	10:00	5:00
1/14/2018	6:00	10:00	4:00
1/15/2018	5:00	9:00	4:00
1/16/2018	5:00	9:00	4:00
1/17/2018	18:00	22:00	4:00
1/18/2018	5:00	9:00	4:00
3/9/2018	5:30	8:30	3:00
3/13/2018	6:00	8:30	2:30
3/15/2018	6:00	8:30	2:30
3/22/2018	6:00	8:20	2:20
6/18/2018	16:30	20:00	3:30
6/19/2018	16:30	20:00	3:30
6/20/2018	16:30	20:00	3:30

Demand-Side Management Programs:

Residential EnergyWise ^{SM} ***Home Program:***

The Residential EnergyWise^{SM} Home Program allows DEP to install load control switches at the customer's premise to remotely control the following residential appliances:

- Central air conditioning or electric heat pumps

- Auxiliary strip heat on central electric heat pumps (Western Region only)
- Electric water heaters (Western Region only).

For each of the appliance options above, an initial one-time bill credit of $25 following the successful installation and testing of load control device(s) and an annual bill credit of $25 is provided to program participants in exchange for allowing the Company to control the listed appliances.

EnergyWise[SM] Home			
Cumulative as of:	Number of Participants*	2017 Capability (MW@Gen)	
		Summer	Winter
December 31, 2017	179,409	347	13.1

* Number of participants represents the number of measures under control.

The following table shows Residential EnergyWise[SM] Home Program activations that were not for testing purposes from July 1, 2016 through December 31, 2017.

EnergyWise[SM] Home Program Activations				
Date	Start Time	End Time	Duration (Minutes)	MW Load Reduction
7/24/2016	4:00 pm	6:00 pm	120	115
7/24/2016	6:00 pm	7:00 pm	60	1
9/8/2016	3:00 pm	6:00 pm	180	141
1/9/2017	6:30 am	9:30 am	180	11.6
8/21/2017	2:00 pm	3:30 pm	90	120.5

Commercial, Industrial, and Governmental (CIG) Demand Response Automation Program:

The CIG Demand Response Automation Program allows DEP to install load control and data acquisition devices to remotely control and monitor a wide variety of electrical equipment capable of serving as a demand response resource. The goal of this program is to utilize customer education, enabling two-way communication technologies, and an event-based incentive structure to maximize load reduction capabilities and resource reliability. The primary objective of this program is to reduce DEP's need for additional peaking generation. This is accomplished by reducing DEP's seasonal peak load demands, primarily during the summer months, through deployment of load control and data acquisition technologies.

CIG Demand Response Automation Statistics			
Cumulative as of:	Number of Participants	MW Capability	
		Summer	Winter
December 31, 2017	71	22.8	13.2

The table below shows information for each CIG Demand Response Automation Program non-test control event from July 1, 2016 through December 31, 2017.

CIG Demand Response Automation – Curtailable Option				
Date	Start Time	End Time	Duration (Minutes)	MW Load Reduction
7/8/2016	1:00 pm	7:00 pm	360	21.6
7/26/2016	1:00 pm	7:00 pm	360	17.5
7/13/2017	1:00 pm	7:00 pm	360	18.9
7/21/2017	1:00 pm	7:00 pm	360	21.1
8/18/2017	1:00 pm	7:00 pm	360	23.4

EnergyWise^{SM} for Business Program:

EnergyWise^{SM} for Business is both an energy efficiency and demand response program for non-residential customers that allows DEP to reduce the operation of participants' air conditioning units to mitigate system capacity constraints and improve reliability of the power grid.

Program participants can choose between a Wi-Fi thermostat or load control switch that will be professionally installed for free on each air conditioning or heat pump unit. In addition to equipment choice, participants can also select the cycling level they prefer (i.e., a 30%, 50% or 75% reduction of the normal on/off cycle of the unit). During a conservation period, DEP will send a signal to the thermostat or switch to reduce the on time of the unit by the cycling percentage selected by the participant. Participating customers will receive a $50 annual bill credit for each unit at the 30% cycling level, $85 for 50% cycling, or $135 for 75% cycling. Participants that have a heat pump unit with electric resistance emergency/back up heat and choose the thermostat can also participate in a winter option that allows control of the emergency/back up heat at 100% cycling for an additional $25 annual bill credit. Participants will also be allowed to override two conservation periods per year.

Participants choosing the thermostat will be given access to a portal that will allow them to set schedules, adjust the temperature set points, and receive energy conservation tips and communications from DEP anywhere they have internet access. In addition to the portal access, participants will also receive conservation period notifications, so they can make adjustments to their schedules or notify their employees of upcoming conservation periods.

EnergyWise^{SM} for Business				
		MW Capability		MWh Energy
Cumulative as of:	Participants*	Summer	Winter	Savings (at plant)
December 31, 2017	2,302	3.4	0.6	1,400

* Number of participants represents the number of measures under control.

The following table shows EnergyWise^{SM} for Business program activations that were not for testing purposes from July 1, 2016 through December 31, 2017.

EnergyWise^{SM} for Business Program Activations				
Date	Start Time	End Time	Duration (Minutes)	MW Load Reduction
7/8/2016	3:30 pm	6:00 pm	150	0.3
7/14/2016	3:00 pm	6:00 pm	180	0.3
7/27/2016	3:00 pm	6:00 pm	180	0.3
6/14/2017	3:00 pm	6:00 pm	180	2.6
7/13/2017	3:00 pm	6:00 pm	180	2.6
7/21/2017	3:00 pm	6:00 pm	180	2.6
8/17/2017	3:30 pm	6:00 pm	150	2.6
8/22/2017	3:00 pm	6:00 pm	180	2.6

Discontinued Demand-Side Management and Energy Efficiency Programs:

Since the last biennial Resource Plan filing, the following DEP DSM/EE programs have been discontinued.

- **Appliance Recycling** – The Appliance Recycling Program promoted the removal and responsible disposal of operating refrigerators and freezers from DEP residential customers. The Program recycled approximately 95% of the material from the harvested appliances.

The implementation vendor for this program abruptly discontinued operations in November 2015 and the program was subsequently closed. The table below presents the final actual program accomplishments.

Residential Appliance Recycling			
	Number of	Gross Savings (at plant)	
Cumulative as of:	**Participants**	**MWh Energy**	**Peak kW**
December 31, 2017	48,022	51,127	6,098

- **Business Energy Report Pilot** – The Business Energy Report Pilot consisted of a periodic comparative usage report that compares a customer's energy use to their peer groups. Comparative groups were identified based on the customer's energy use, type of business, operating hours, square footage, geographic location, weather data and heating/cooling sources. Pilot participants received targeted energy efficiency tips in their report informing them of actionable ideas to reduce their energy consumption.

  With the cost effectiveness of the program declining below the allowable threshold, the program was terminated in 2017. Due to the program having a one-year measures life, there are no ongoing savings associated with the program.

- **CIG Demand Response Automation – Generator Option** – In response to EPA regulations finalized January 2013, a new Emergency Generator Option was implemented effective January 1, 2014, to allow customers with emergency generators to continue participation in demand response programs. To comply with the new rule, dispatch of the Emergency Generator Option was limited to NERC Level II (EEA2) except for an annual readiness test. On May 1, 2016, the DC Circuit Court of Appeals mandated vacatur of the provision that included demand response participation in the rule's 100-hour allowance. The vacatur resulted in the inability of existing Emergency Generator Option participants to continue participation as of May 1, 2016, and led DEP to close the program option and revise the rider to include only the incentive structure associated with the former Curtailable Option. The NCUC approved terminating this program measure effective September 2016, in response to the changes in EPA regulations.

DSM/EE Programs Prior to NC Senate Bill 3:

Prior to the passage of North Carolina Senate Bill 3 in 2007, DEP had a number of DSM/EE programs in place. These programs are available in both North and South Carolina and include the following:

Energy Efficient Home Program
Program Type: Energy Efficiency

In the early 1980s, DEP introduced an Energy Efficient Home program that provides residential customers with a 5% discount of the energy and demand portions of their electricity bills when their homes met certain thermal efficiency standards that were significantly above the existing building codes and standards. Homes that pass an ENERGY STAR® test receive a certificate as well as a 5% discount on the energy and demand portions of their electricity bills.

Curtailable Rates
Program Type: Demand Response

DEP began offering its curtailable rate options in the late 1970s, whereby industrial and commercial customers receive credits for DEP's ability to curtail system load during times of high energy costs and/or capacity constrained periods. There were no curtailable rate activations during the period from July 1, 2016 through December 31, 2017.

Time-of-Use Rates
Program Type: Demand Response

DEP has offered voluntary Time-of-Use (TOU) rates to all customers since 1981. These rates provide incentives to customers to shift consumption of electricity to lower-cost off-peak periods and lower their electric bill.

Thermal Energy Storage Rates
Program Type: Demand Response

DEP began offering thermal energy storage rates in 1979. The present General Service (Thermal Energy Storage) rate schedule uses two-period pricing with seasonal demand and energy rates applicable to thermal storage space conditioning equipment. Summer on-peak hours are noon to 8 p.m. and non-summer hours of 6 a.m. to 1 p.m. weekdays.

Real-Time Pricing
Program Type: Demand Response

DEP's Large General Service (Experimental) Real Time Pricing tariff was implemented in 1998. This tariff uses a two-part real-time pricing rate design with baseline load representative of historic usage. Hourly rates are provided on the prior business day. A minimum of 1 MW load is required. This rate schedule is presently fully subscribed.

The following table provides current information available at the time of this report on DEP's pre-Senate Bill 3 DSM/EE programs (i.e., those programs that were in effect prior to January 1, 2008). This information, where applicable, includes program type, capacity, energy, and number of customers enrolled in the program as of the end of 2017, as well as load control activations since those enumerated in DEP's last biennial resource plan. The energy savings impacts of these existing programs are embedded within DEP's load and energy forecasts.

Program Description	Type	Summer Capacity (MW)	Winter Capacity (MW)	Annual Energy (MWH)	Participants	Activations Since Last Biennial Report
Energy Efficiency Programs[13]	EE	466	N/A	NA	NA	NA
Real Time Pricing (RTP)	DSM	53	62	NA	105	NA
Commercial & Industrial TOU	DSM	10.9	10.9	NA	30,749	NA
Residential TOU	DSM	6.2	6.2	NA	28,011	NA
Curtailable Rates	DSM	284	241	NA	61	2

Future EE and DSM Programs:

DEP is continually seeking to enhance its DSM/EE portfolio by: (1) adding new or expanding existing programs to include additional measures, (2) program modifications to account for changing market conditions and new measurement and verification (M&V) results, and (3) other EE pilots.

Potential new programs and/or measures will be reviewed with the DSM Collaborative then submitted to the Public Utility Commissions as required for approval.

[13] Impacts from these existing programs are embedded within the load and energy forecast.

EE and DSM Program Screening:

The Company evaluates the costs and benefits of DSM and EE programs and measures by using the same data for both generation planning and DSM/EE program planning to ensure that demand-side resources are compared to supply side resources on a level playing field.

The analysis of energy efficiency and demand-side management cost-effectiveness has traditionally focused primarily on the calculation of specific metrics, often referred to as the California Standard tests: Utility Cost Test, Rate Impact Measure Test, Total Resource Cost Test, and Participant Test (PCT).

- The UCT compares utility benefits (avoided costs) to the costs incurred by the utility to implement the program, and does not consider other benefits such as participant savings or societal impacts. This test compares the cost (to the utility) to implement the measures with the savings or avoided costs (to the utility) resulting from the change in magnitude and/or the pattern of electricity consumption caused by implementation of the program. Avoided costs are considered in the evaluation of cost-effectiveness based on the projected cost of power, including the projected cost of the utility's environmental compliance for known regulatory requirements. The cost-effectiveness analyses also incorporate avoided transmission and distribution costs, and load (line) losses.
- The RIM Test, or non-participants test, indicates if rates increase or decrease over the long-run as a result of implementing the program.
- The TRC Test compares the total benefits to the utility and to participants relative to the costs to the utility to implement the program along with the costs to the participant. The benefits to the utility are the same as those computed under the UCT. The benefits to the participant are the same as those computed under the Participant Test, however, customer incentives are considered to be a pass-through benefit to customers. As such, customer incentives or rebates are not included in the TRC.
- The Participant Test evaluates programs from the perspective of the program's participants. The benefits include reductions in utility bills, incentives paid by the utility and any State, Federal or local tax benefits received.

The use of multiple tests can ensure the development of a reasonable set of cost-effective DSM and EE programs and indicate the likelihood that customers will participate.

Energy Efficiency and Demand-Side Management Program Forecasts:

Forecast Methodology:

In 2016, DEP commissioned a new EE market potential study to obtain new estimates of the technical, economic and achievable potential for EE savings within the DEP service area. The final reports (one for North Carolina and one for South Carolina) were prepared by Nexant Inc. and issued on December 19, 2016.

The Nexant study results are suitable for IRP purposes and for use in long-range system planning models. This study also helps to inform utility program planners regarding the extent of EE opportunities and to provide broadly defined approaches for acquiring savings. This study did not, however, attempt to closely forecast EE achievements in the short-term or from year to year. Such an annual accounting is highly sensitive to the nature of programs adopted as well as the timing of the introduction of those programs. As a result, it was not designed to provide detailed specifications and work plans required for program implementation. The study provides part of the picture for planning EE programs. Fully implementable EE program plans are best developed considering this study along with the experience gained from currently running programs, input from DEP program managers and EE planners, feedback from the DSM Collaborative and with the possible assistance of implementation contractors.

The Nexant market potential study (MPS) included projections of energy efficiency impacts over a 25-year period for a Base and Enhanced Scenario, which were used in conjunction with expected EE savings from DEP's five-year program plan to develop the Base Case and High Case EE savings forecasts, respectively, for this IRP. The Base Case EE savings forecast represents a merging of the projected near-term savings from DEP's five-year plan (2018-2022) with the long-term savings from the Nexant MPS (2028-onward). Savings during the five-year period (2023-2027) between the two sets of projections represents a merging of the two forecasts to ensure a smooth transition. The High Case EE savings forecast was developed by applying the difference between the Nexant Enhanced and Base Scenarios for all years to the final DEP Base Case forecast. Additionally, the cumulative savings projections for both the Base and High Case EE forecasts included an assumption that when the EE measures included in the forecast reach the end of their useful lives, the impacts associated with these measures are removed from the future projected EE impacts, a process defined as "rolloff".

The table below provides the projected MWh load impacts for both the Base Case and High Case forecasts of all DEP EE programs implemented since 2008 on a Net of Free Riders basis. The

Company assumes total EE savings will continue to grow on an annual basis throughout the planning, however, the components of future programs are uncertain at this time and will be informed by the experience gained under the current plan. Please note that this table includes a column that shows historical EE program savings since the inception of the EE programs in 2008 through the end of 2017, which accounts for approximately an additional 2,117 gigawatt-hour (GWh) of net energy savings.

The following forecast is presented without the effects of "rolloff":

Projected MWh Impacts of EE Programs

Base Case

Year	Annual MWh Load Reduction - Net	
	Including measures added in 2018 and beyond	Including measures added since 2008
2008-17		2,116,891
2018	230,996	2,347,887
2019	422,130	2,539,021
2020	605,468	2,722,359
2021	777,345	2,894,236
2022	945,787	3,062,678
2023	1,114,230	3,231,121
2024	1,282,674	3,399,565
2025	1,451,119	3,568,010
2026	1,619,565	3,736,456
2027	1,788,012	3,904,903
2028	1,956,460	4,073,351
2029	2,125,763	4,242,654
2030	2,295,309	4,412,200
2031	2,466,556	4,583,447
2032	2,639,409	4,756,301
2033	2,812,935	4,929,826

The MWh totals included in the table above represent the annual year-end impacts associated with EE programs, however, the MWh totals included in the load forecast portion of this document represent the sum of the expected hourly impacts.

Projected MWh Impacts of EE Programs
High Case

Year	Annual MWh Load Reduction - Net	
	Including measures added in 2018 and beyond	Including measures added since 2008
2008-17		2,116,891
2018	322,259	2,439,151
2019	609,785	2,726,676
2020	892,927	3,009,818
2021	1,170,540	3,287,431
2022	1,450,117	3,567,008
2023	1,733,062	3,849,953
2024	2,016,724	4,133,615
2025	2,296,783	4,413,674
2026	2,572,161	4,689,052
2027	2,842,447	4,959,338
2028	3,108,222	5,225,113
2029	3,368,994	5,485,885
2030	3,627,734	5,744,626
2031	3,887,228	6,004,119
2032	4,147,898	6,264,789
2033	4,409,638	6,526,529

The MWh totals included in the table above represent the annual year-end impacts associated with EE programs, however, the MWh totals included in the load forecast portion of this document represent the sum of the expected hourly impacts.

The MW impacts from the EE programs are included in the Load Forecasting section of this IRP. The table below provides the projected summer and winter peak MW load impacts of all current and projected DEP DSM programs.

Projected MW Load Impacts of DSM Programs

	Summer Peak MW Reduction					
Year	EnergyWise Home	CIG Demand Response	DSDR	Large Load Curtailable	EnergyWise for Business	Total Summer Peak
2018	367	27	211	284	5	894
2019	383	32	213	287	9	923
2020	400	39	215	290	14	958
2021	411	46	215	292	19	984
2022	417	54	217	295	24	1,007
2023	417	57	218	298	29	1,019
2024	418	57	221	300	29	1,024
2025	418	57	224	300	29	1,027
2026	419	57	228	300	29	1,032
2027	419	57	231	300	29	1,035
2028	420	57	236	300	29	1,041
2029	420	57	238	300	29	1,044
2030	421	57	241	300	29	1,047
2031	421	57	244	300	29	1,051
2032	422	57	248	300	29	1,055
2033	422	57	250	300	29	1,058

Note: For DSM programs, Gross and Net are the same.

Projected MW Load Impacts of DSM Programs

Year	Winter Peak MW Reduction					
	EnergyWise Home	CIG Demand Response	DSDR	Large Load Curtailable	EnergyWise for Business	Total Winter Peak
2018	13	11	211	241	1	478
2019	15	15	213	246	1	490
2020	16	19	215	249	2	501
2021	18	23	215	251	3	511
2022	19	27	217	254	4	521
2023	20	31	218	256	5	530
2024	21	31	221	259	5	537
2025	23	31	224	259	5	541
2026	24	31	228	259	5	546
2027	25	31	231	259	5	550
2028	26	31	236	259	5	557
2029	28	31	238	259	5	560
2030	29	31	241	259	5	564
2031	30	31	244	259	5	569
2032	31	31	248	259	5	574
2033	33	31	250	259	5	578

Note: For DSM programs, Gross and Net are the same.

Pursuing EE and DSM initiatives is not expected to meet the growing demand for electricity. DEP still envisions the need to secure additional generation, as well as cost-effective renewable generation, but the EE and DSM programs offered by DEP will address a significant portion of this need if such programs perform as expected.

Programs Evaluated but Rejected:

Duke Energy Progress has not rejected any cost-effective programs as a result of its EE and DSM program screening.

Current and Anticipated Consumer Education Programs:

In addition to the DSM/EE programs previously listed, DEP also has the following informational and educational programs.

- On Line Account Access
- "Lower My Bill" Toolkit
- Online Energy Saving Tips
- Energy Resource Center
- Large Account Management
- eSMART Kids Website
- Community Events

On Line Account Access:
On Line Account Access provides energy analysis tools to assist customers in gaining a better understanding of their energy usage patterns and identifying opportunities to reduce energy consumption. The service allows customers to view their past 24 months of electric usage including the date the bill was mailed; number of days in the billing cycle; and daily temperature information. This program was initiated in 1999.

"Lower My Bill" Toolkit:
This tool, implemented in 2004, provides on-line tips and specific steps to help customers reduce energy consumption and lower their utility bills. These range from relatively simple no-cost steps to more extensive actions involving insulation and heating and cooling equipment.

Online Energy Saving Tips:
DEP has been providing tips on how to reduce home energy costs since approximately 1981. DEP's web site includes information on household energy wasters and how a few simple actions can increase efficiency.

Energy Resource Center:
In 2000, DEP began offering its large commercial, industrial, and governmental customers a wide array of tools and resources to use in managing their energy usage and reducing their electrical demand and overall energy costs. Through its Energy Resource Center, located on the DEP web site, DEP provides newsletters, online tools and information which cover a variety of energy efficiency topics such as electric chiller operation, lighting system efficiency, compressed air systems, motor management, variable speed drives and energy audits.

Large Account Management:
All DEP commercial, industrial, and governmental customers with an annual electric bill greater than $250,000 are assigned to a DEP Account Executive (AE). The AEs are available to

personally assist customers in evaluating energy improvement opportunities and can bring in other internal resources to provide detailed analyses of energy system upgrades. The AEs provide their customers with a monthly electronic newsletter, which includes energy efficiency topics and tips. They also offer numerous educational opportunities in group settings to provide information about DEP's new DSM and EE program offerings and to help ensure the customers are aware of the latest energy improvement and system operational techniques.

e-SMART Kids Website:

DEP is offering an educational online resource for teachers and students in our service area called e-SMART Kids. The web site educates students on energy efficiency, conservation, and renewable energy and offers interactive activities in the classroom. It is available on the web at http://www.e-smartonline.net/safeelectricity/.

Community Events:

DEP representatives participated in community events across the service territory to educate customers about DEP's energy efficiency programs and rebates and to share practical energy saving tips. DEP energy experts attended events and forums to host informational tables and displays, and distributed handout materials directly encouraging customers to learn more about and sign up for approved DSM/EE energy saving programs.

Discontinued Consumer Education Programs:

DEP has not discontinued any consumer education programs since the last biennial Resource Plan filing.

Looking to the Future - Grid Modernization (Smart Grid Impacts):

Duke Energy Progress' Distribution System Demand Response (DSDR) program is an Integrated Volt-Var Control (IVVC) program that better manages the application and operation of voltage regulators (the Volt) and capacitors (the VAR) on the Duke Energy Progress distribution system. In general, the project tends to optimize the operation of these devices, resulting in a "flattening" of the voltage profile across an entire circuit, starting at the substation and continuing out to the farthest endpoint on that circuit. This flattening of the voltage profile is accomplished by automating the substation level voltage regulation and capacitors, line capacitors and line voltage regulators while integrating them into a single control system. This control system continuously monitors and operates the voltage regulators and capacitors to maintain the desired "flat" voltage profile. Once the system is operating with a relatively flat voltage profile across an entire circuit, the resulting circuit voltage at the substation can then be operated at a lower overall level. Lowering the circuit voltage at the substation, results in an immediate reduction of system loading during peak conditions.

APPENDIX E: FUEL SUPPLY

Duke Energy Progress' current fuel usage consists of a mix of coal, natural gas and uranium. Oil is used for peaking generation and natural gas continues to play an increasing role in the fuel mix due to lower pricing and the addition of a significant amount of combined cycle generation. A brief overview and issues pertaining to each fuel type are discussed below.

Natural Gas:

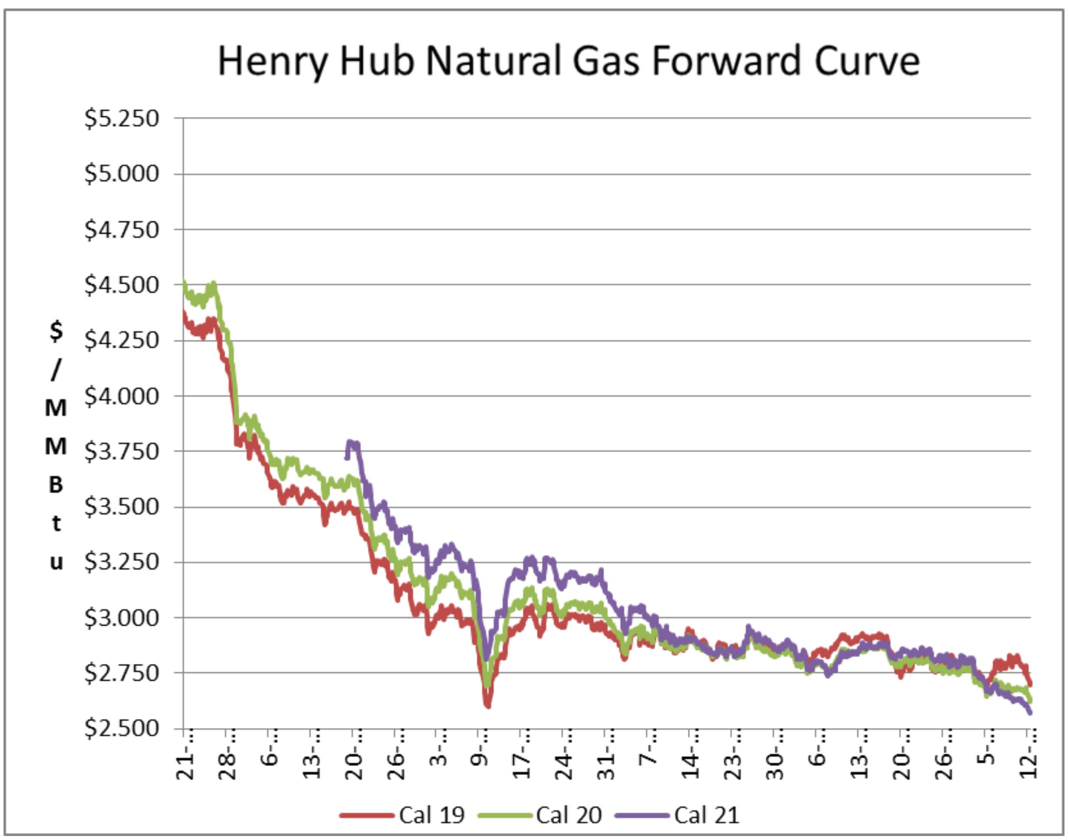
During 2017 NYMEX Henry Hub natural gas prices averaged approximately $3.10 per million BTU (MMBtu) and U.S. lower-48 net dry production averaged approximately 73 billion cubic feet per day (BCF/day). Natural gas spot prices at the Henry Hub averaged approximately $3.71 per MMBtu in January 2018. Henry Hub spot pricing decreased throughout the remaining winter months and averaged $2.65 per MMBtu at the end of March 2018 The lower short-term spot prices in February and March 2018 were driven by both fundamental supply and demand factors.

Average daily U.S. net dry production levels of approximately 76.7 BCF/day in the first quarter of 2018 were 5.4BCF/day higher than the comparable period in 2017. Storage ended the winter withdrawal season at approximately 1.4 trillion cubic feet (TCF) as of March 31, 2018. Lower-48 U.S. overall demand in the first quarter of 2018 was higher than normal due to the cold winter weather which raised residential heating needs and resulted in gas storage withdrawals through late April 2018.

Summer 2018 spot natural gas prices have decreased from the end of January 2018 prices that were in the low $3.60's per MMBtu. The Henry Hub spot price settled in a range between approximately $2.74 to $2.90 per MMBtu in mid-July 2018. Working gas in storage remains below the 5-year average and storage balances from a year ago, however, market prices have declined over the last few months with expectations of continued record supply of dry gas production approaching 81.3 Bcf/d forecasted by the latest July 2018 EIA short term gas outlook. Observed average NYMEX Henry Hub prices for the winter period November 2018 through March 2019 have decreased to approximately $2.90 per MMBtu from the prices observed in late March 2018. Although predicting actual storage balances at the end of the typical injection season is not possible, current projections are roughly 3.4 to 3.5 TCF of working gas in storage at the end of the injection season.

Natural gas consumption is expected to remain strong through the remainder of 2018 increasing 2.4 Bcf/d from 2017 levels, due primarily to increases in electric power usage. Per the EIA's short-term energy outlook released on July 10, 2018, this year also reflects higher residential and commercial demand because the first quarter of 2018 was colder than the first quarter of 2017. EIA expects the share of U.S. total utility-scale electricity generation from natural gas-fired power plants to rise from 32% in 2017 to 34% in 2018 and 35% in 2019. As a result, coal's forecast share of electricity generation falls from 30% in 2017 to 28% in 2018 and to 27% in 2019. The EIA estimates that total natural gas production will average 81.3Bcf/d in 2018, which will establish a new record. EIA also expects natural gas production will rise an additional 3.1 Bcf/d in 2019 to 84.5 Bcf/d. With advanced drilling techniques, producers appear able to adjust drilling programs in response to changing market prices to shorten or extend the term of the producing well. According to Baker Hughes, as of July 20, 2018, the U.S. Natural Gas rig count was at 187. This is flat from last year at the same time and up from all time low rig count of 81 in August of 2016.

In addition to the trends in shorter term natural gas spot price levels for 2018, in late February 2018, the observed forward market prices for the periods of 2019 through 2021 averaged approximately $2.77 per MMBtu. During this period, the forward price curve is relatively flat reflecting an expectation of balanced supply and demand fundamentals. Prices have decreased in the last few months to approximately $2.64 per MMBtu as of late July 2018. This is illustrated in the figure below.



Looking forward, the forward 5 and 10-year observable market curves are at $2.61 and $2.73 per MMBtu, respectively, as of the July 20, 2018 close. In addition, as of the close of business on July 21, 2018, the one (1), three (3) and five (5) years strips were all approximately $2.63 per MMBtu. As illustrated with these price levels and relationships, the forward NYMEX Henry Hub price curve is extremely flat with the periods of 2020 and 2021 currently trading at discounts to 2019 prices. The gas market is expected to remain relatively stable due to an improving economic picture which may allow supply and demand to further come into balance. Demand for natural gas from the power sector for 2018 is expected to be higher than coal generation due to coal retirements, which are tied to the implementation of the EPA's MATS rule covering mercury and acid gasses. This increase is expected to be followed by new demand in the industrial and LNG export sectors, which both ramp up through the 2020 timeframe. The long-term fundamental gas price outlook continues to be little changed from the previous forecast even though it includes higher overall demand. The North American gas resource picture is a story of unconventional gas production dominating the gas industry. Shale gas now accounts for approximately 97% of net natural gas production today, which has increased from approximately 38% in 2014. As noted earlier, per the Short-Term EIA outlook dated July 10, 2018, the EIA expects dry gas production to average 81.3 Bcf/d by the end of 2018 and rise by an additional 3.1 Bcf/d in 2019 to 84.5 Bcf/d. The United States was a net exporter of natural gas in the first quarter of 2018, with net exports averaging 0.5 Bcf/d. Rising LNG exports and pipeline exports have contributed to a shift from being a net importer of natural gas to an exporter. According to the EIA forecast, the US should have a total liquefaction capacity of 9.6 Bcf/d by the end of 2020.

The US power sector still represents the largest area of potential new gas demand, but increased usage is expected to be somewhat volatile as generation dispatch is sensitive to price. Looking forward, economic dispatch competition is expected to continue between gas and coal, although forward natural gas prices have continued to decline and there has been permanent loss in overall coal generation due to the number of coal unit retirements. Overall declines in energy consumption tend to result from the adoption of more energy-efficient technologies and policies that promote energy efficiency.

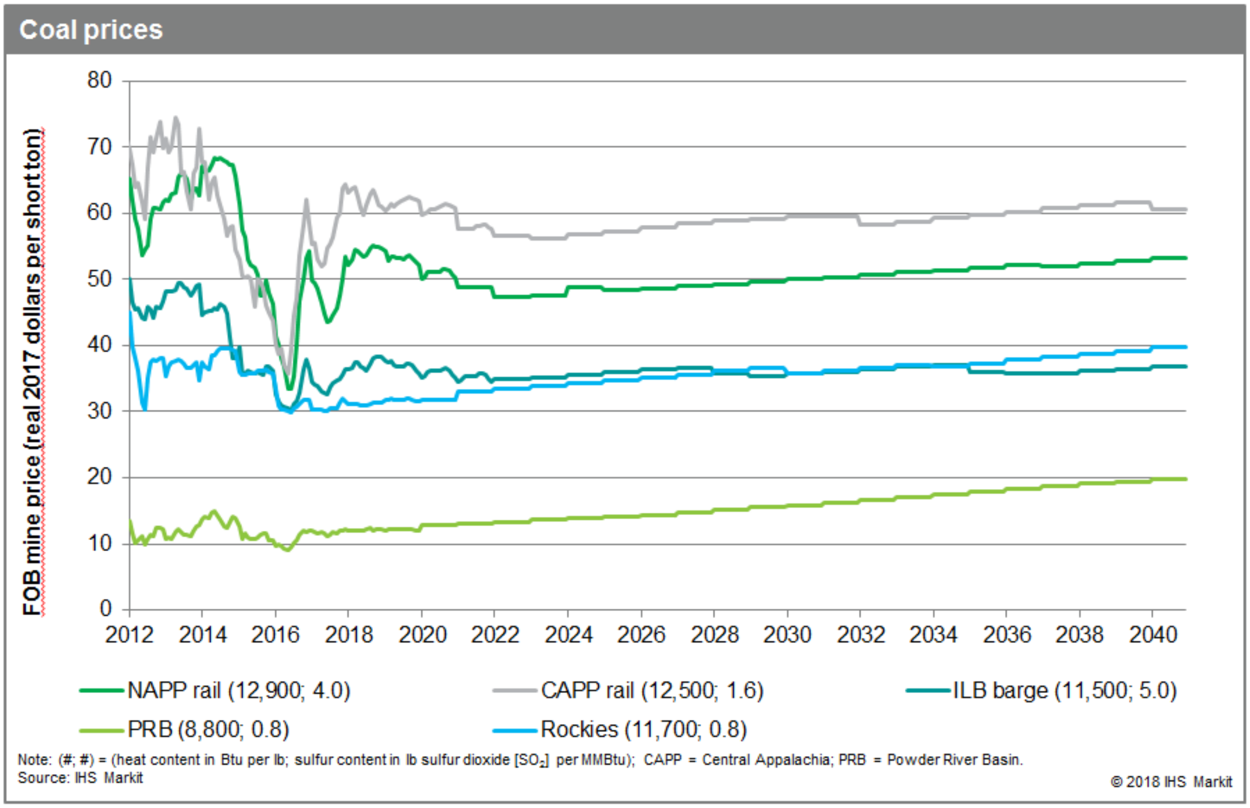
In order to ensure adequate natural gas supplies, transportation and storage, the company has gas procurement strategies that include periodic RFPs, market solicitations, and short-term market engagement activities to procure a reliable, flexible, diverse, and competitively priced natural gas supply and transportation portfolio that supports DEP's CC and CT facilities. With respect to storage and transportation needs, the company has continued to add incremental firm pipeline capacity and gas storage as it gas generation fleet as grown. The company will continue to evaluate competitive options to meet its growing need for gas pipeline infrastructure as the gas generation fleet grows.

Coal:

The main determinants for power sector coal demand are electricity demand growth and non-coal electric generation, namely nuclear, gas, hydro and renewables. With electricity demand growth remaining very low, continued steady nuclear and hydro generation, and increasing gas-fired and renewable generation, coal-fired generation continues to be the marginal fuel experiencing declines. According to the EIA, electric power sector demand has been steadily dropping and accounted for 665 million tons (86%) of total demand for coal in 2017. Additionally, projections show continued strong supply and low prices for natural gas which continues to result in reduced, but more volatile, coal burns. Increasing renewable generation, particularly in North Carolina, is also contributing to increased volatility for coal generation.

Coal markets continue to be impacted by a number of factors, including: (1) uncertainty around proposed, imposed, and stayed U.S. Environmental Protection Agency ("EPA") regulations for power plants; (2) continued abundant natural gas supply and storage resulting in lower natural gas prices, which has reduced overall coal demand; (3) continued changes in global market demand for both steam and metallurgical coal; (4) uncertainty surrounding regulations for mining operations; and (5) tightening supply as bankruptcies, consolidations and company reorganizations have allowed coal suppliers to restructure and settle into new, lower on-going production levels.

According to IHS Markit, future coal prices for the CAPP, NAPP and ILB coals are expected to be in a steady downward trend until 2022 when they flatten and begin to modestly and steadily rise. Future pricing for Western coals are expected to be steadily rising for the next 20 years.



The U.S. Supreme Court granted a stay, halting implementation of the EPA's Clean Power Plan pending the resolution of legal challenges to the program in court. Though stayed, the fundamental outlook anticipates the eventual implementation of CPP beginning in 2022 which makes coal capacity less desirable, resulting in a long-term decline in power generation from coal. IHS Markit expects 34 GW of coal plant retirements from 2017 to 2020 – with 16.6 GW in 2018 alone, followed by 44 GW from 2021 to 2025, and 23 GW from 2026 to 2030.

One bright spot is coal exports are at historically high levels (low 100 million tons range) which has provided some support for coal producers, but margins have been eroded by increased ocean freight costs and more volatile index pricing. IHS Markit expects US exports to remain strong, and there is additional potential upside if supply does truly tighten. A key to US export growth is low-cost but high-sulfur coal. Certain key markets (primarily India and Europe) have become accustomed to the high sulfur, and the low production costs for efficient long-wall production of these types of coals enables it to compete very well. In addition to the upside from India, Turkey now appears likely to increase the maximum sulfur allowed in its coal plants. This is bullish for NAPP and ILB exports.

The Company continues to maintain a comprehensive coal procurement strategy that has proven successful over the years in limiting average annual fuel price changes while actively managing the dynamic demands of its fossil fuel generation fleet in a reliable and cost-effective manner. Aspects of this procurement strategy include having an appropriate mix of contract and spot purchases for coal, staggering coal contract expirations which thereby limit exposure to market price changes, diversifying coal sourcing as economics warrant, as well as working with coal suppliers to incorporate additional flexibility into their supply contracts. In response to the unpredictable and volatile nature of the demand for coal, the Company has implemented more frequent procurement practices. However, coal inventory levels have dropped and recent experience has shown that producers and transporters of coal are experiencing significant challenges with responding to unexpected periods of increased demand.

Nuclear Fuel:

To provide fuel for Duke Energy's nuclear fleet, the Company maintains a diversified portfolio of natural uranium and downstream services supply contracts from around the world.

Requirements for uranium concentrates, conversion services and enrichment services are primarily met through a portfolio of long-term supply contracts. The contracts are diversified by supplier, country of origin and pricing. In addition, DEP staggers its contracting so that its portfolio of long-term contracts covers the majority of fleet fuel requirements in the near-term and decreasing portions of the fuel requirements over time thereafter. By staggering long-term contracts over time, the Company's purchase price for deliveries within a given year consists of a blend of contract prices negotiated at many different periods in the markets, which has the effect of smoothing out the Company's exposure to price volatility. Diversifying fuel suppliers reduces the Company's exposure to possible disruptions from any single source of supply. Near-term requirements not met by long-term supply contracts have been and are expected to be fulfilled with spot market purchases.

Due to the technical complexities of changing suppliers of fuel fabrication services, DEP generally sources these services to a single domestic supplier on a plant-by-plant basis using multi-year contracts.

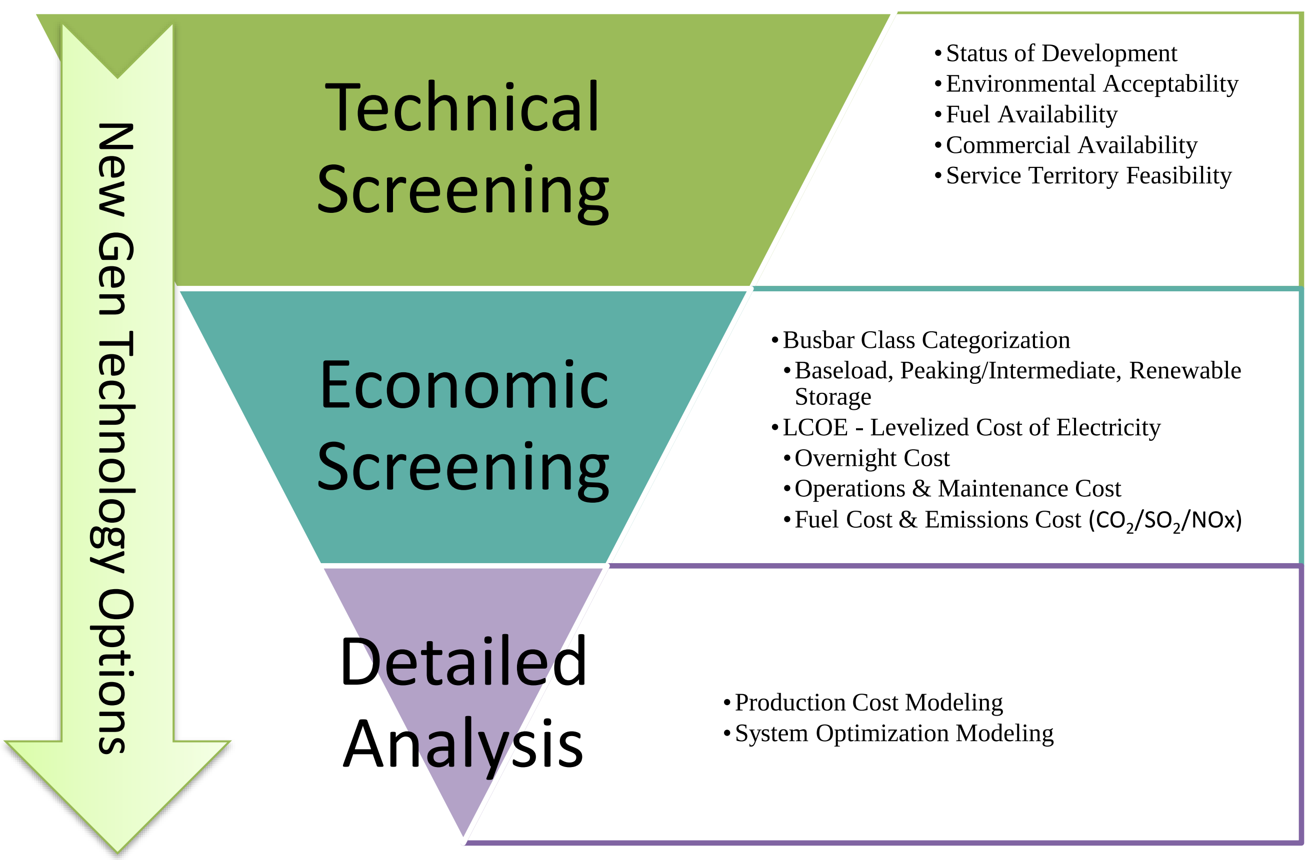
As fuel with a low cost basis is used and lower-priced legacy contracts are replaced with contracts at higher market prices, nuclear fuel expense is expected to increase in the future. Although the costs of certain components of nuclear fuel are expected to increase in future years, nuclear fuel costs are expected to be competitive with alternate generation and customers will continue to benefit from the Company's diverse generation mix.

APPENDIX F: SCREENING OF GENERATION ALTERNATIVES

The Company screens generation technologies prior to performing detailed analysis in order to develop a manageable set of possible generation alternatives. Generating technologies are screened from both a technical perspective, as well as an economic perspective. In the technical screening, technology options are reviewed to determine technical limitations, commercial availability issues and feasibility in the Duke Energy Progress service territory.

Economic screening is performed using relative dollar per kilowatt-year ($/kW-yr) versus capacity factor screening curves. The technologies must be technically and economically viable in order to be passed on to the detailed analysis phase of the IRP process.

Figure F-1: New Generation Technologies Screening Process

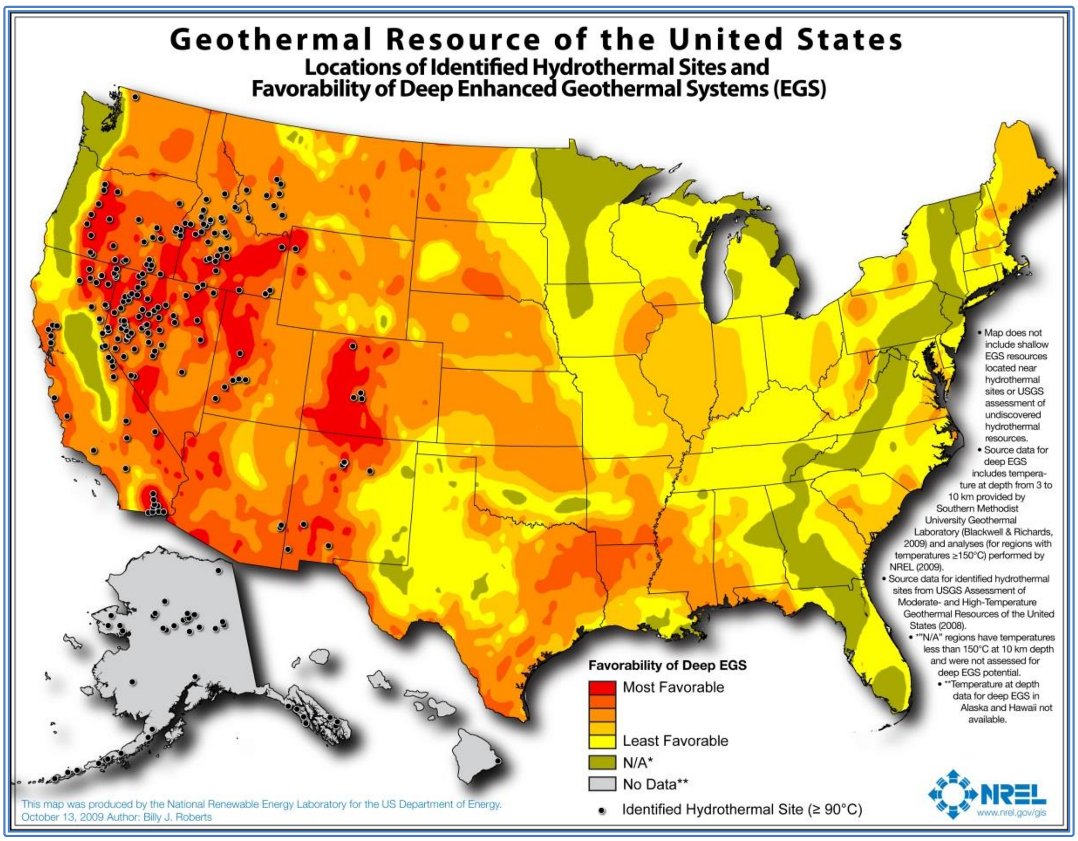


Technical Screening:

The first step in the Company's supply-side screening process for the IRP is a technical screening of the technologies to eliminate those that have technical limitations, commercial availability issues, or are not feasible in the Duke Energy Progress service territory. A brief explanation of the technologies excluded at this point and the basis for their exclusion follows:

Geothermal was eliminated because there are no suitable geothermal resources in the region to develop into a power generation project. See Figure F-2, below.

Figure F-2: NREL Geothermal Resource Map of the US.

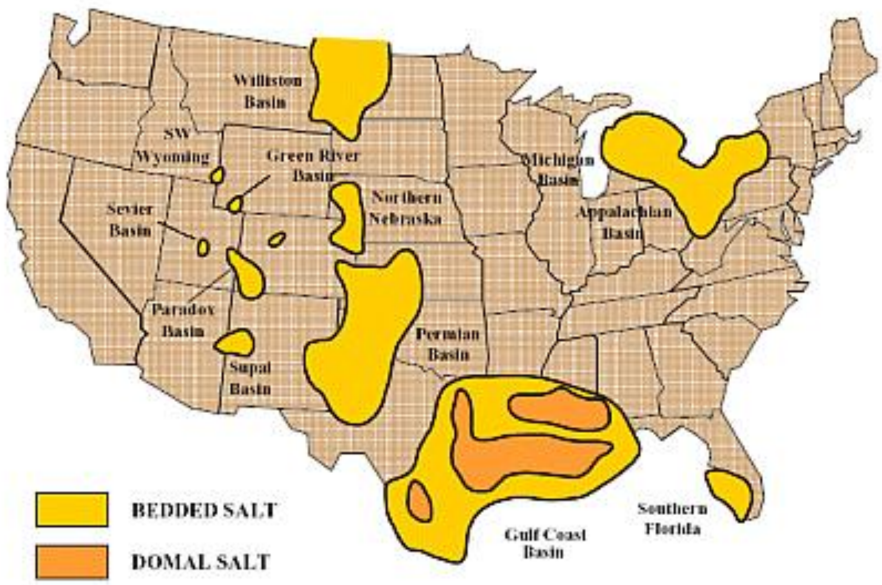


Pumped Storage Hydropower (PSH) is the only conventional, mature, commercial, utility-scale electricity storage option available currently. This technology consumes off-peak electricity by pumping water from a lower reservoir to an upper reservoir.

When the electric grid needs more electricity and when electricity prices are higher, water is released from the upper reservoir. As the water flows from the upper reservoir to the lower reservoir, it goes through a hydroelectric turbine to generate electricity. Many operational pumped storage hydropower plants are providing electric reliability and reserves for the electric grid in high demand situations. PSH can provide a high amount of power because its only limitation is the capacity of the upper reservoir. Typically, these plants can be as large as 4,000 MW, and have an efficiency of 76% - 85% (EPRI, 2012). Therefore, this technology is effective at meeting electric demand and transmission overload by shifting, storing, and producing electricity. This is important because an increasing supply of intermittent renewable energy generation such as solar will cause challenges to the electric grid. PSH installations are greatly dependent on regional geography and face several challenges including: environmental impact concerns, a long permitting process, and a relatively high initial capital cost. Duke Energy currently has two PSH assets, Bad Creek Reservoir and Jocassee Hydro with an approximate combined generating capacity of 2,140 MW.

Compressed Air Energy Storage (CAES), although demonstrated on a utility scale and generally commercially available, is not a widely applied technology and remains relatively expensive. Traditional systems require a suitable storage site, commonly underground where the compressed air is used to boost the output of a gas turbine. The high capital requirements for these resources arise from the fact that suitable sites that possess the proper geological formations and conditions necessary for the compressed air storage reservoir are relatively scarce, especially in the Carolinas. However, above-ground compressed air energy storage (AGCAES) technologies are under development but at a much smaller scale, approximately 0.5 – 20 MW. Several companies have attempted to develop cost effective CAES systems using above ground storage tanks. Most attempts to date have not been commercially successful, but their development is being monitored.

Figure F-3: Compressed Air Energy Storage (CAES) - Potential U.S. Salt Cavern Site Depiction, NETL.



Liquid Air Energy Storage (LAES) uses electricity to cool air until it liquefies, stores the liquid air in a tank, brings the liquid air back to a gaseous state (by exposure to ambient air or with waste heat from an industrial process) and uses that gas to turn a turbine and generate electricity. Although demonstrated through several pilot projects, the scaling of this technology and the resultant economics is not yet completely understood. As research and pilots continues with LAES, Duke Energy will continue to monitor as the technology offers bulk energy storage without the need for reservoir construction.

Small Modular Nuclear Reactors (SMR) are generally defined as having capabilities of less than 300 MW per reactor. They typically have the capability of grouping a number of reactors in the same location to achieve the desired power generating capacity for a plant. In 2012, the U.S. Department of Energy (DOE) solicited bids for companies to participate in a small modular reactor grant program with the intent to "promote the accelerated commercialization of SMR technologies to help meet the nation's economic energy security and climate change objectives." SMRs continue to gain interest as they contribute no emissions to the atmosphere and, unlike their predecessors, provide flexible operations capabilities, as well as, reduced footprints coupled with inherently safer designs.

NuScale Power is the leader in SMR design and licensing in the US. They recently announced that its small modular reactor will be able to generate 20% more power than originally planned. The increase is from 50 MW to 60 MW for each module (reactor) or 600 MW to 720 MW for a 12-module plant. The increase requires very little additional capital cost so it lowers the projected cost of a 12-module facility by approximately 16% per kilowatt. The approval date for the SMR Design Certification Application (DCA) is September 2020. NuScale will need NRC approval of a revised DCA before SMR customers will be able to take advantage of the additional power.

Other SMR designs under development domestically include the Holtec SMR-160, a 160 MW pressurized water reactor being developed for deployment both in the U.S. and abroad. In addition, GE Hitachi (GEH) recently announced the development of a new SMR, the BWRX300.

While SMRs were "screened out" in the Technical Screening phase of the technology evaluations, they were allowed to be selected as a resource in the System Optimizer (SO) model in order to allow the model to meet the high CO_2 emission constraints in the sensitivity analysis. As a result, SMRs have been depicted on the busbar screening curves as an informative item. Duke Energy will be monitoring the progress of the SMR projects for potential consideration and evaluation for future resource plans as they provide an emission free source of fuel diverse, flexible generation.

Advanced Reactors are typically defined as nuclear power reactors employing fuel and/or coolant significantly different from that of current light water reactors (LWRs) and offering advantages related to safety, cost, proliferation resistance, waste management and/or fuel utilization. These reactors are characteristically typed by coolant with the main groups including liquid metal cooled, gas cooled, and molten salt fueled/cooled. There are approximately 25 domestic companies working on one or multiple advanced reactor designs funded primarily by venture capital investment, and even more designs are being considered at universities and national labs across the country. There is also significant interest internationally, with at least as many international companies pursuing their own advanced reactor designs in several countries across the world.

Specifics of the reactor vary significantly by both coolant type and individual designs. The reactors are projected to range in size from the single MW scale to over 1000 MW, with the majority of the designs proposing a modular approach that can scale capacity based on demands. All designs are exploring a flexible deployment approach which could scale power outputs to align with renewable/variable outputs. The first commercially available advanced reactors are targeting the late 2020s for deployment, although most designs are projected to be available in the 2030s. Significant legislative efforts are currently being made to further the development of advanced reactors in both the house and senate at the national level, and new bills continue to be introduced.

Duke Energy has been part of an overall industry effort to further the development of advanced reactors since joining the Nuclear Energy Institute Advanced Reactor Working Group at its formation in early 2015. Additionally, Duke Energy participates on two Advanced Reactor companies' industry boards and has hosted several reactor developers for early design discussions. Duke Energy has also participated in several other industry efforts such as EPRI's Owner-Operator Requirements Document, which outlines requirements and recommendations for Advanced Reactor designs. Duke Energy will continue to allot resources to follow the progress of the advanced reactor community and will provide input to the proper internal constituents as additional information becomes available.

Fuel Cells, although originally envisioned as being a competitor for combustion turbines and central power plants, are now targeted to mostly distributed power generation systems. The size of the distributed generation applications ranges from a few kW to tens of MW in the long-term. Cost and performance issues have generally limited their application to niche markets and/or subsidized installations. While a medium level of research and development continues, this technology is not commercially viable/available for utility-scale application.

Supercritical CO_2 Brayton Cycle is of increasing interest; however, the technology is not mature or ready for commercialization. Several pilots are underway and Duke Energy will continue to monitor their development as a potential source of future generation needs.

Poultry waste and swine waste digesters remain relatively expensive and are often faced with operational and/or permitting challenges. Research, development, and demonstration continue, but these technologies remain generally too expensive or face obstacles that make them impractical energy choices outside of specific mandates calling for use of these technologies. See Appendix D for more information regarding current and planned Duke Energy poultry and swine waste projects.

Off-shore Wind, although demonstrated on a utility scale and commercially available, is not a widely applied technology and not easily permitted in the United States although that trend may be changing. This technology remains expensive even with the five-year tax credit extension granted in December 2015. There are over twenty-five projects in various phases of development in U.S. coastal waters and more are anticipated as technology and construction advancements allow for installation in deeper waters further offshore. The Block Island project developed by Deepwater Wind is the first to reach commercial operation, and Duke Energy Renewables is performing remote monitoring and control services for the project. This 30 MW project is located about 3 miles off the coast of Rhode Island.

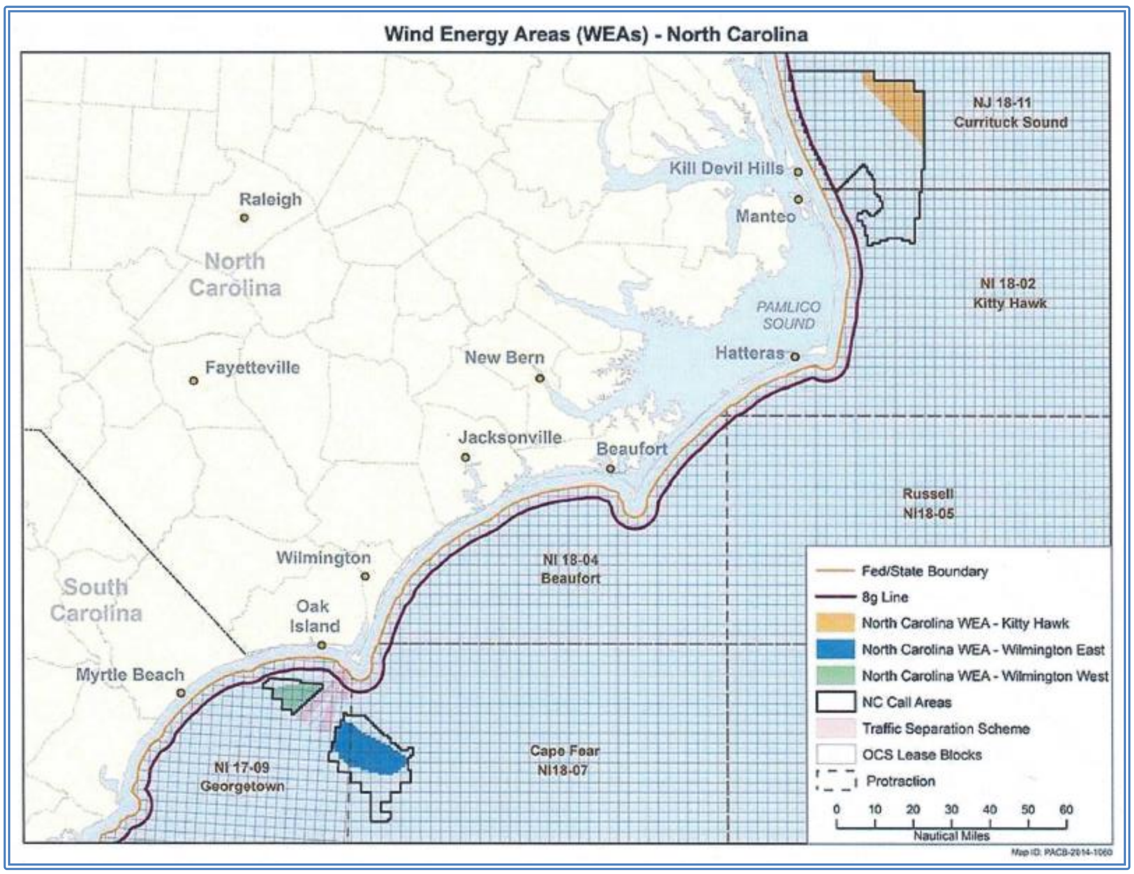
Duke Energy and NREL studied the potential for offshore integration off the coast of the Carolinas in March 2013. In 2015, the U.S. Bureau of Ocean Energy Management (BOEM) completed environmental assessments at three potential Outer Continental Shelf (OCS) sites off the coast of North Carolina. In March 2017, BOEM administered a competitive lease auction for wind energy in federal waters and awarded Avangrid Renewables the rights to develop an area off the shores of Kitty Hawk. Avangrid has plans for a project that may be as large as 1,500 MW.

Several coastal states including New York, New Jersey, Maryland, Massachusetts, California, and Hawaii are facilitating industry growth. New York has an Offshore Wind Master Plan aimed at 2,400 MW of offshore projects by 2030, and Statoil is developing the 1,500 MW Empire Wind project near New York City, aiming for completion in 2025.

The unique constraints of the industry and the increasingly competitive global market are driving R&D improvements that allow wind farms to be sited further offshore. Installation and siting require careful consideration to bathymetry and offshore construction concerns, but siting is further complicated by shipping lanes, fishing rights, wildlife migration patterns, military operations, and other environmental concerns. Plus, coastal residents and tourists prefer an unobstructed ocean view, so the larger turbines require longer distances to keep them out of sight.

Industry leaders are working to define equipment and installation standards and codes. They are coordinating with the oil and gas industry to improve construction processes and working with the telecommunications industry to advance submarine cable technologies. Improved foundation designs are helping to reduce installation time and costs, and floating designs are being tested for deployment in deep waters.

Figure F-4: NC Wind Energy Areas (WEAs) (developed in joint venture by Duke Energy and NREL)



Solar Steam Augmentation systems utilize solar thermal energy to supplement a Rankine steam cycle such as that in a fossil generating plant. The supplemental steam could be integrated into the steam cycle and support additional MW generation similar in concept to the purpose of duct firing a heat recovery steam generator. This technology, although attractive has several hurdles yet to clear, including a clean operating history and initial capital cost reductions. This technology is very site specific and Duke Energy will continue to monitor developments in the area of steam augmentation.

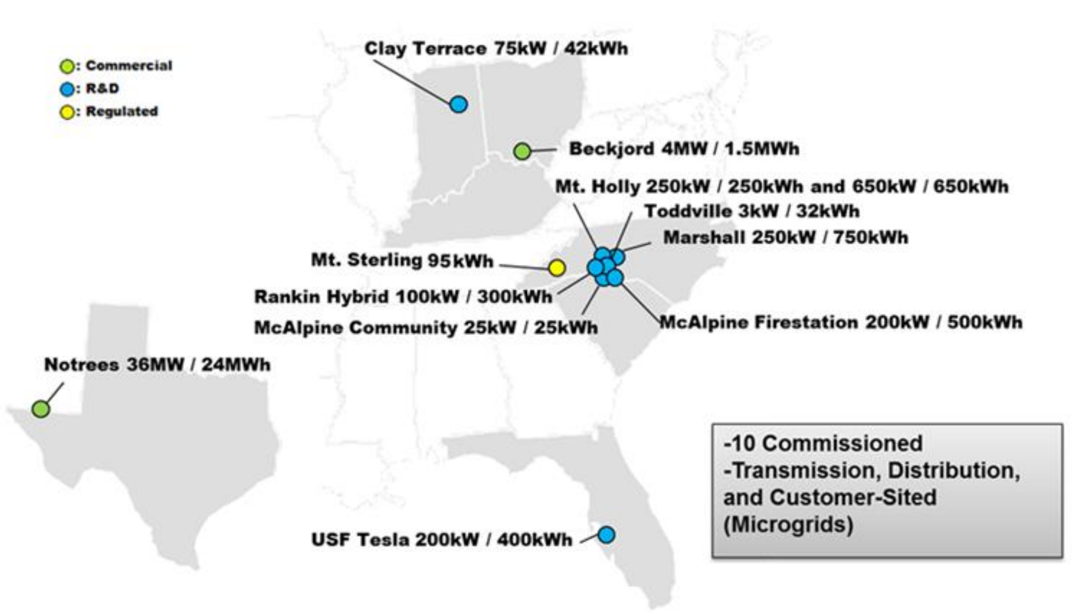
A brief explanation of the technology additions for 2018 and the basis for their inclusion follows:

Addition of Battery Storage Options to the IRP:

Energy storage solutions are becoming a viable tool in support of grid stability at peak demand times and in support of energy shifting and smoothing from renewable sources. Energy Storage in the form of battery storage is becoming more feasible with the advances in battery technology (Tesla Lithium-ion battery technology) and the reduction in battery cost; however, their uses (even within Duke Energy) have been concentrated on frequency regulation, solar smoothing, and/or energy shifting from localized renewable energy sources with a high incidence of intermittency (i.e. solar and wind applications). In order to generically evaluate the potential value of a generation-connected battery storage system an unencumbered battery dedicated to capacity and energy services will be utilized for screening purposes. *Encumbrances* to the battery are other uses which may limit, or even eliminate the battery system's ability to provide capacity and energy storage services. These encumbrances may include (but are not limited to) frequency response, asset deferral, back-up power, black start, ancillary services, etc. Duke Energy recognizes the potential benefits that battery connected systems can provide, especially at the Transmission & Distribution level which resides outside the scope of this IRP. Evaluation of potential T&D benefits, along with other uses that can be "stacked" with these T&D benefits, are being assessed on a case-by-case basis at this time through pilot projects.

Duke Energy has several projects in operation since 2011, mainly in support of regulating output voltages/frequencies from renewable energy sources to the grid. Each of these applications supports frequency regulation, solar smoothing, or energy shifting from a local solar array. See Figure F-5, below for a depiction of the existing, operational battery energy storage assets.

Figure F-5: Existing, Operational Duke Energy Battery Storage Assets



These examples are only a few in support of a growing trend of coupling Battery Storage with an intermittent renewable energy source such as solar or wind in an effort to stabilize output and increase a facility's (renewable plus storage) net capacity factor.

Battery Briefing:

Electrochemical energy storage systems utilize chemical reactions within a battery cell to facilitate electron flow, converting electrical energy to chemical energy when charging and generating an electric current when discharged. Electrochemical technology is continually developing as one of the leading energy storage and load following technologies due to its modularity, ease of installation and operation, and relative design maturity. Development of electrochemical batteries has shifted into three categories, commonly termed "flow," "conventional," and "high temperature" battery designs. Each battery type has unique features yielding specific advantages compared to one another.

A **conventional battery** contains a cathodic and an anodic electrode and an electrolyte sealed within a cell container than can be connected in series to increase overall facility storage and output. During charging, the electrolyte is ionized such that when discharged, a reduction-oxidation reaction occurs, which forces electrons to migrate from the anode to the cathode thereby generating electric current. Batteries are designated by the electro-chemicals utilized within the cell; the most popular conventional batteries are lead acid and lithium ion type batteries.

Lead acid batteries are the most mature and commercially accessible battery technology, as their design has undergone considerable development since conceptualized in the late 1800s. The Department of Energy (DOE) estimates there is approximately 110 MW of lead acid battery storage currently installed worldwide. Although lead acid batteries require relatively low capital cost, this technology also has inherently high maintenance costs and handling issues associated with toxicity, as well as low energy density (yields higher land and civil work requirements). Lead acid batteries also have a relatively short life cycle at 5 to 10 years, especially when used in high cycling applications.

Lithium ion (Li-ion) batteries contain graphite and metal-oxide electrodes and lithium ions dissolved within an organic electrolyte. The movement of lithium ions during cell charge and discharge generates current. Li-ion technology has seen a resurgence of development in recent years due to its high energy density, low self-discharge, and cycling tolerance. Many Li-ion manufacturers currently offer 15-year warranties or performance guarantees. Consequently, Li- ion has gained traction in several markets including the utility and automotive industries.

Li-ion battery prices are trending downward, and continued development and investment by manufacturers are expected to further reduce production costs. While there is still a wide range of project cost expectations due to market uncertainty, Li-ion batteries are anticipated to expand their reach in the utility market sector. At present, Li-ion Battery Technology is the only battery technology considered for the 2018 IRP.

Flow batteries utilize an electrode cell stack with externally stored electrolyte material. The flow battery is comprised of positive and negative electrode cell stacks separated by a selectively permeable ion exchange membrane, in which the charge-inducing chemical reaction occurs, and liquid electrolyte storage tanks, which hold the stored energy until discharge is required. Various control and pumped circulation systems complete the flow battery system in which the cells can be stacked in series to achieve the desired voltage difference.

The battery is charged as the liquid electrolytes are pumped through the electrode cell stacks, which serve only as a catalyst and transport medium to the ion-inducing chemical reaction. The excess positive ions at the anode are allowed through the ion-selective membrane to maintain electroneutrality at the cathode, which experiences a buildup of negative ions. The charged electrolyte solution is circulated back to storage tanks until the process is allowed to repeat in reverse for discharge as necessary.

In addition to external electrolyte storage, flow batteries differ from traditional batteries in that energy conversion occurs as a direct result of the reduction-oxidation reactions occurring in the electrolyte solution itself. The electrode is not a component of the electrochemical fuel and does not participate in the chemical reaction. Therefore, the electrodes are not subject to the same deterioration that depletes electrical performance of traditional batteries, resulting in high cycling life of the flow battery. Flow batteries are also scalable such that energy storage capacity is determined by the size of the electrolyte storage tanks, allowing the system to approach its theoretical energy density. Flow batteries are typically less capital intensive than some conventional batteries but require additional installation and operation costs associated with balance of plant equipment.

High temperature batteries operate similarly to conventional batteries, but they utilize molten salt electrodes and carry the added advantage that high temperature operation can yield heat for other applications simultaneously. The technology is considered mature with ongoing commercial development at the grid level. The most popular and technically developed high temperature option is the Sodium Sulfur (NaS) battery. Japan-based NGK Insulators, the largest NaS battery manufacturer, installed a 4 MW system in Presidio, Texas in 2010 following operation of systems totaling more than 160 MW since the project's inception in the 1980s.

The NaS battery is typically a hermetically sealed cell that consists of a molten sulfur electrolyte at the cathode and molten sodium electrolyte at the anode, separated by a Beta-alumina ceramic membrane and enclosed in an aluminum casing. The membrane is selectively permeable only to positive sodium ions, which are created from the oxidation of sodium metal and pass through to combine with sulfur resulting in the formation of sodium polysulfides. As power is supplied to the battery in charging, the sodium ions are dissociated from the polysulfides and forced back through the membrane to re-form elemental sodium. The melting points of sodium and sulfur are approximately 98 ^{o}C and 113 ^{o}C, respectively. To maintain the electrolytes in liquid form and for optimal performance, the NaS battery systems are typically operated and stored at around 300 ^{o}C, which results in a higher self-discharge rate of 14 percent to 18 percent. For this reason, these systems are usually designed for use in high-cycling applications and longer discharge durations.

NaS systems are expected to have an operable life of around 15 years and are one of the most developed chemical energy storage technologies. However, unlike other battery types, costs of NaS systems have historically held, making other options more commercially viable at present.

Generation Flexibility:

As more intermittent generation becomes associated with Duke's system, the greater need there may be for generation that has rapid load shifting and ancillary support capabilities. This generation would need to be dispatchable, possess desirable capacity, and ramp at a desired rate. Some of the technologies that have 'technically' screened in possess these qualities or may do so in the near future. Effort is being made to value the characteristics of flexibility and quantify that value to the system. As a result of the flexible generation need, some features of 'generic' plant's base designs have been modified to reflect the change in cost and performance to accomplish a more desired plant characteristic to diminish the impact of the intermittent generation additions.

Economic Screening:

The Company screens all technologies using relative dollar per kilowatt-year ($/kW-yr) versus capacity factor screening curves, also referred to as *busbar* curves. The *Busbar* curve estimates the revenue requirement (i.e. life-cycle cost) of power from a supply option at the "busbar," the point at which electricity leaves the plant (i.e. the high side of the step-up transformer). Duke Energy provides some additional evaluation of a generic transmission and/or interconnection cost adder associated with each technology.

The screening within each general class of busbar (Baseload, Peaking/Intermediate, and Renewables), as well as the final screening across the general classes uses a spreadsheet-based screening curve model developed by Duke Energy. This model is considered proprietary, confidential and competitive information by Duke Energy. For the 2018 IRP year, Duke Energy has provided an additional busbar to represent Storage technology comparisons. As Storage technologies are not traditional generating resource options, they should be compared independently from generating resources. In addition, there has been no *charging* cost associated with the storage busbar buildup. This charging cost is excluded as it is dependent upon what the next marginal unit is in the dispatch stack as to what would be utilized to "charge" the storage resource. For resource options inclusive of or coupled with storage, it is assumed that the storage resource is being directly charged by the generating resource (i.e. Solar PV plus Battery Storage option).

This screening (busbar) curve analysis model includes the total costs associated with owning and maintaining a technology type over its lifetime and computes a levelized $/kW-year value over a range of capacity factors. The Company repeats this process for each supply technology to be screened resulting in a family of lines (curves). The lower envelope along the curves represents the least costly supply options for various capacity factors or unit utilizations. Some technologies have screening curves limited to their expected operating range on the individual graphs. Lines that never become part of the lower envelope, or those that become part of the lower envelope only at capacity factors outside of their relevant operating ranges, have a very low probability of being part of the least cost solution, and generally can be eliminated from further analysis.

The Company selected the technologies listed below for the screening curve analysis. While Clean Power Plan (CPP) regulation may effectively preclude new coal-fired generation, Duke Energy Progress has included ultra-supercritical pulverized coal (USCPC) with carbon capture sequestration (CCS) and integrated gasification combined cycle (IGCC) technologies with CCS of 1400 pounds/net MWh capture rate as options for base load analysis consistent with the pending version of the EPA Clean Power Plan for new coal plants. Additional detail on the expected impacts from EPA regulations to new coal-fired options is included in Appendix G. 2018 additions include Solar PV plus Battery Storage, additional Lithium ion Battery Storage options, and Pumped Storage Hydro as a renewable technology.

Dispatchable (Winter Ratings)

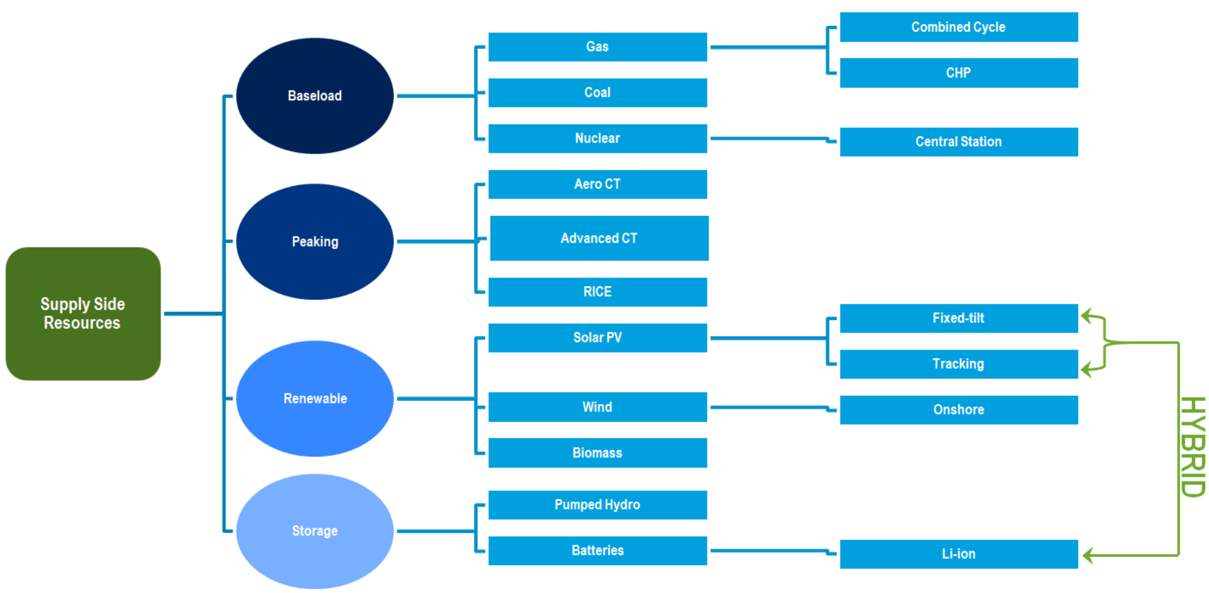
- Base load – 782 MW Ultra-Supercritical Pulverized Coal with CCS
- Base load – 557 MW 2x1 IGCC with CCS
- Base load – 2 x 1,117 MW Nuclear Units (AP1000)
- Base load – 667 MW – 1x1x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 1,339 MW – 2x2x1 Advanced Combined Cycle (No Inlet Chiller and Fired)
- Base load – 22 MW – Combined Heat & Power (Combustion Turbine)
- Base load – 9 MW – Combined Heat & Power (Reciprocating Engine)
- Base load – 600 MW – Small Modular Reactor (SMR)
- Peaking/Intermediate – 196 MW 4 x LM6000 Combustion Turbines (CTs)
- Peaking/Intermediate – 202 MW, 12 x Reciprocating Engine Plant
- Peaking/Intermediate – 574 MW 2 x G/H-Class Combustion Turbines (CTs)
- Peaking/Intermediate – 754 MW 2 x J-Class Combustion Turbines (CTs)
- Peaking/Intermediate – 919 MW 4 x 7FA.05 Combustion Turbines (CTs)

- Storage – 5 MW / 5 MWh Li-ion Battery
- Storage – 20 MW / 80 MWh Li-ion Battery
- Storage – 1,400 MW Pumped Storage Hydro (PSH)
- Renewable – 2 MW Solar PV plus 2 MW / 8 MWh Li-ion Battery
- Renewable – 75 MW Wood Bubbling Fluidized Bed (BFB, biomass)
- Renewable – 5 MW Landfill Gas

<u>Non-Dispatchable (Nameplate)</u>

- Renewable – 150 MW Wind - On-Shore
- Renewable – 50 MW Solar PV, Fixed-tilt (FT)
- Renewable – 50 MW Solar PV, Single Axis Tracking (SAT)

Figure F-6: Duke Energy, Screened-In Supply Side Resource Alternatives



Information Sources:

The cost and performance data for each technology being screened is based on research and information from several sources. These sources include, but may not be limited to the following internal Departments: Duke Energy's Project Management & Construction, Emerging Technologies, and Generation & Regulatory Strategy. The following external sources may also be utilized: proprietary third-party engineering studies, the Electric Power Research Institute (EPRI) Technical Assessment Guide (TAG®), and Energy Information Administration (EIA). In addition, fuel and operating cost estimates are developed internally by Duke Energy, or from other sources such as those mentioned above, or a combination of the two. EPRI information or other information or estimates from external studies are not site-specific, but generally reflect the costs and operating parameters for installation in the Carolinas. Finally, every effort is made to ensure that capital, operating and maintenance costs (O&M), fuel costs and other parameters are current and include similar scope across the technologies being screened. The supply-side screening analysis uses the same fuel prices for coal and natural gas, and NO_x, SO_2, and CO_2 allowance prices as those utilized downstream in the detailed analysis (discussed in Appendix A). Screening curves were developed for each technology to show the economics with and without carbon costs (i.e. No CO_2, With CO_2) in the four major categories defined (Baseload, Peaking/Intermediate, Renewable, Storage).

Screening Results:

The results of the screening within each category are shown in the figures below. Results of the baseload screening show that natural gas combined cycle generation is the least-cost base load resource. With lower gas prices, larger capacities and increased efficiency, natural gas combined cycle units have become more cost-effective at higher capacity factors in all carbon scenario screening cases (i.e. No CO_2, With CO_2). Although CHP can be competitive with CC, it is site specific, requiring a local steam and electrical load. The baseload curves also show that projected SMR nuclear generation may be a cost-effective option at high capacity factors with CO_2 costs included. Carbon capture systems have been demonstrated to reduce coal-fired CO_2 emissions to levels similar to natural gas and will continue to be monitored as they mature; however, their current cost and uncertainty of safe, reliable storage options has limited the technical viability of this technology in Duke Energy territories.

The peaking technology screening included F-frame combustion turbines, fast start aero-derivative combustion turbines, and fast start reciprocating engines. The screening curves show the F-frame CTs to be the most economic peaking resource unless there is a special application that requires the fast start capability of the aero-derivative CTs or reciprocating engines. Reciprocating engine plants offer the lowest heat rates and fastest start times among simple cycle options. Simple cycle aero-derivative gas turbines still remain in close contention with reciprocating engines. Should a need be identified for one of these two types of resources, a more in-depth analysis would be performed.

The renewable screening curves show solar is a more economical alternative than wind and landfill gas generation. Solar and wind projects are technically constrained from achieving high capacity factors making them unsuitable for intermediate or baseload duty cycles. Landfill gas and biomass projects are limited based on site availability but are dispatchable. Solar projects, like wind, are not dispatchable and therefore less suited to provide consistent peaking capacity/energy. Aside from their technical limitations, solar and wind technologies are not currently economically competitive generation technologies without State and Federal subsidies. These renewable resources do play an important role in meeting the Company's NC REPS requirements and sustainability initiatives.

Centralized generation, as depicted above, will remain the backbone of the grid for Duke Energy in the near term; however, in addition it is likely that distributed generation and storage (see ISOP discussions) will begin to share more and more grid responsibilities over time as technologies such as energy storage increase our grid's flexibility and tolerance for intermittent, distributed resources.

The screening curves are useful for comparing costs of resource types at various capacity factors but cannot be solely utilized for determining a long-term resource plan because future units must be optimized with an existing system containing various resource types. Results from the screening curve analysis provide guidance for the technologies to be further considered in the more detailed quantitative analysis phase of the planning process.

Capital Cost Forecast:

A capital cost forecast was developed with support from a third party to project not only Renewables and Battery Storage capital costs, but the costs of all resource technologies technically screened in. The Technology Forecast Factors were sourced from the Energy Information Administration (EIA) Annual Energy Outlook (AEO) 2017 which provides costs projections for various technologies through the planning period as an input to the National Energy Modeling System (NEMS) utilized by the EIA for the AEO.

Using 2018 as a base year, an "annual forecast factor is calculated based on the macroeconomic variable tracking the metals and metal products producer price index, thereby creating a link between construction costs and commodity prices." (NEMS Model Documentation 2016, July 2017)

From *NEMS Model Documentation 2016, July 2017*:

"*Uncertainty about investment costs for new technologies is captured in the Electric Capacity Planning module of NEMS (ECP) using technological optimism and learning factors.*

- *The technological optimism factor reflects the inherent tendency to underestimate costs for new technologies. The degree of technological optimism depends on the complexity of the engineering design and the stage of development. As development proceeds and more data become available, cost estimates become more accurate and the technological optimism factor declines.*

- *Learning factors represent reductions in capital costs due to learning-by-doing. Learning factors are calculated separately for each of the major design components of the technology. For new technologies, cost reductions due to learning also account for international experience in building generating capacity. Generally, overnight costs for new, untested components are assumed to decrease by a technology specific percentage for each doubling of capacity for the first three doublings, by 10% for each of the next five doublings of capacity, and by 1% for each further doubling of capacity. For mature components or conventional designs, costs decrease by 1% for each doubling of capacity."*

The resulting Forecast Factor Table developed from the EIA technology maturity curves for each corresponding technology screened is depicted in Table F-1. A third-party vendor assisted in the alignment of the technologies screened to their representative forecast factors available from the EIA for technologies not captured by the EIA. Examples of this include Reciprocating Internal Combustion Engines (RICE), Battery Storage, and gas turbine technology configurations among others.

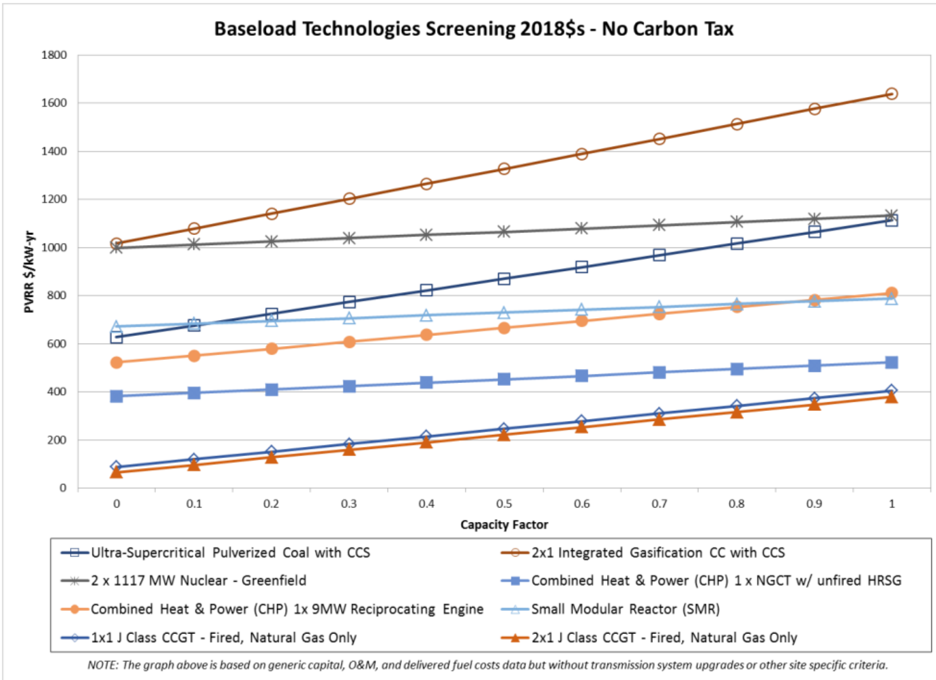
Table F-1: Snip from Forecast Factor Table by Technology (EIA - AEO 2017)

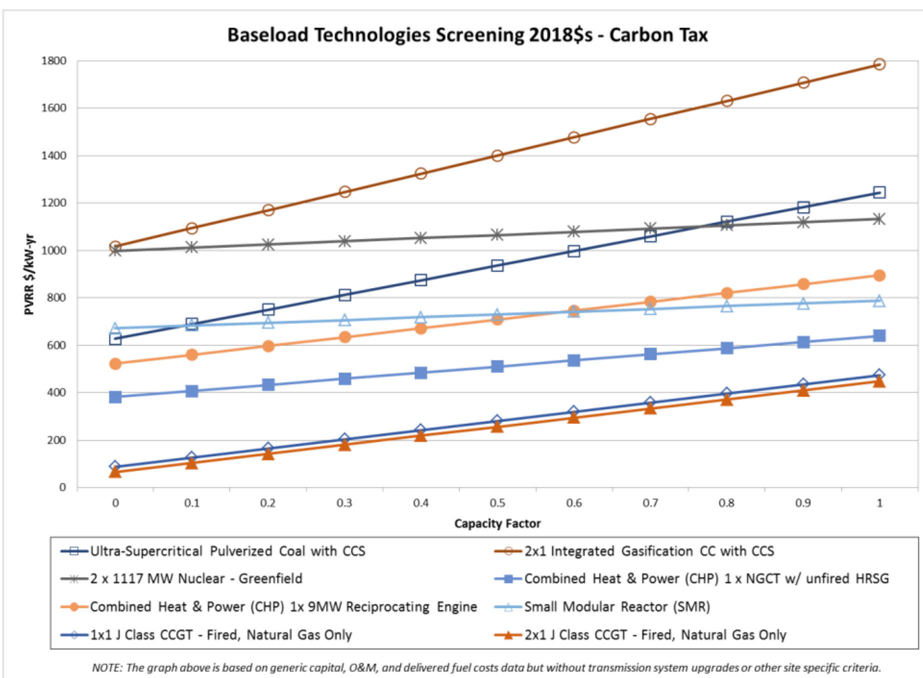
Year	Aero CT	F Class Frame CT	J Class Frame CT	RICE	Onshore Wind	1x1 J Class Combined Cycle	2x1 J Class Combined Cycle
2018	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2019	0.996	0.995	0.995	0.996	0.996	0.995	0.995
2020	0.993	0.990	0.990	0.993	0.993	0.991	0.990
2021	0.989	0.984	0.984	0.989	0.989	0.986	0.984
2022	0.983	0.978	0.978	0.983	0.983	0.980	0.978
2023	0.974	0.967	0.967	0.974	0.974	0.970	0.967
2024	0.965	0.957	0.957	0.965	0.965	0.960	0.957
2025	0.954	0.942	0.942	0.954	0.954	0.947	0.942
2026	0.941	0.920	0.920	0.941	0.941	0.928	0.920
2027	0.928	0.902	0.902	0.928	0.928	0.913	0.902
2028	0.918	0.877	0.877	0.918	0.918	0.894	0.877
2029	0.910	0.859	0.859	0.910	0.910	0.879	0.859
2030	0.901	0.840	0.840	0.901	0.901	0.864	0.840
2031	0.892	0.827	0.827	0.892	0.892	0.853	0.827
2032	0.884	0.815	0.815	0.884	0.884	0.842	0.815

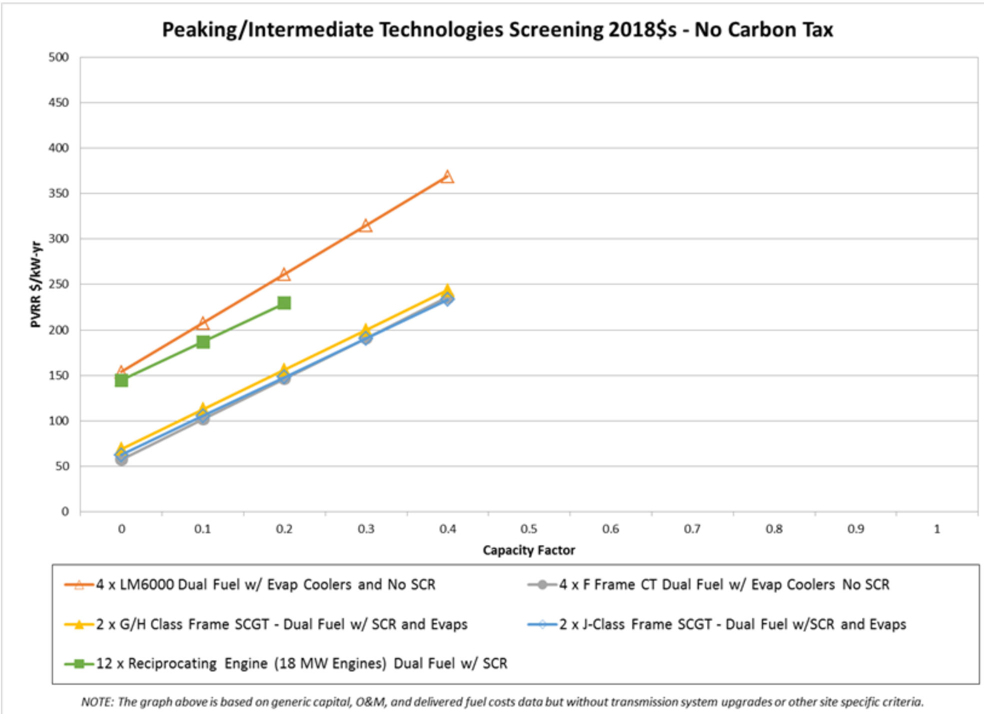
These forecast factors were blended with additional third-party capital cost projections for more rapidly developing technologies (i.e. Solar PV, Battery Storage) in order to provide a consistent forecast through the planning period for all technologies evaluated.

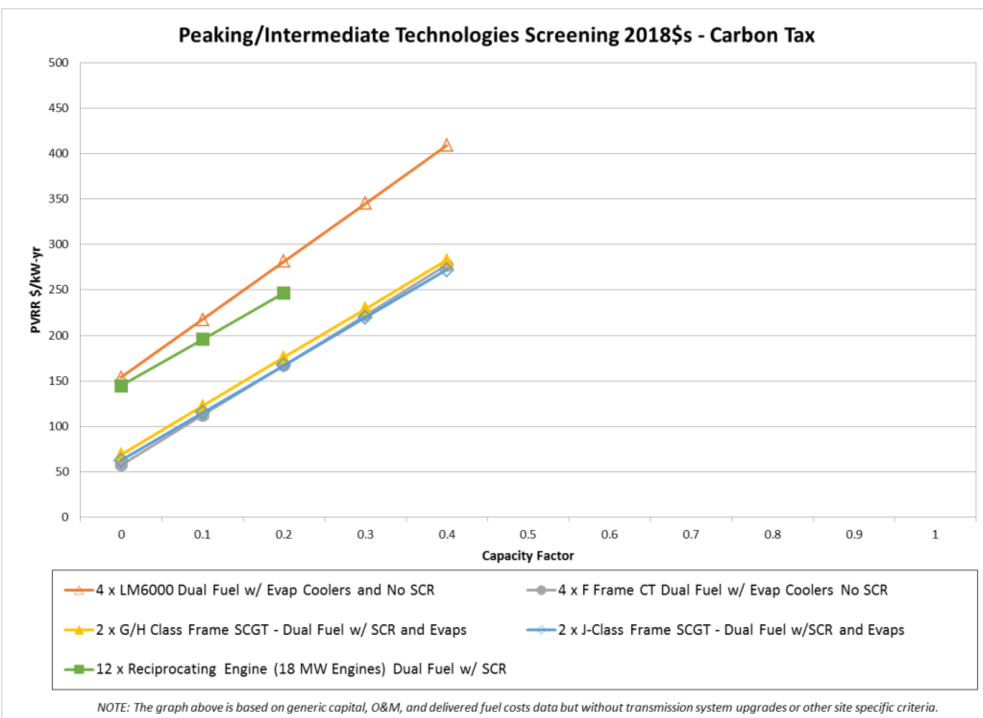
Screening Curves:

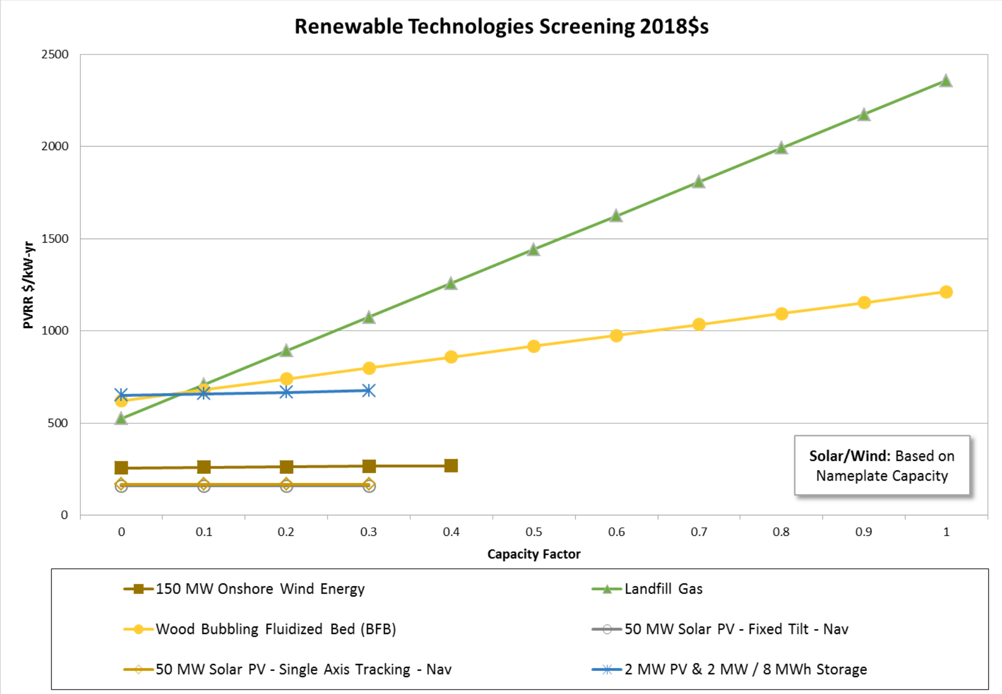
The following pages contain the technology screening curves for baseload, peaking/intermediate, renewable and storage technologies.


Baseload Technologies Screening 2018$s - No Carbon Tax
PVRR $/kW-yr
Capacity Factor
Ultra-Supercritical Pulverized Coal with CCS
2x1 Integrated Gasification CC with CCS
2 x 1117 MW Nuclear - Greenfield
Combined Heat & Power (CHP) 1 x NGCT w/ unfired HRSG
Combined Heat & Power (CHP) 1x 9MW Reciprocating Engine
Small Modular Reactor (SMR)
1x1 J Class CCGT - Fired, Natural Gas Only
2x1 J Class CCGT - Fired, Natural Gas Only
NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.

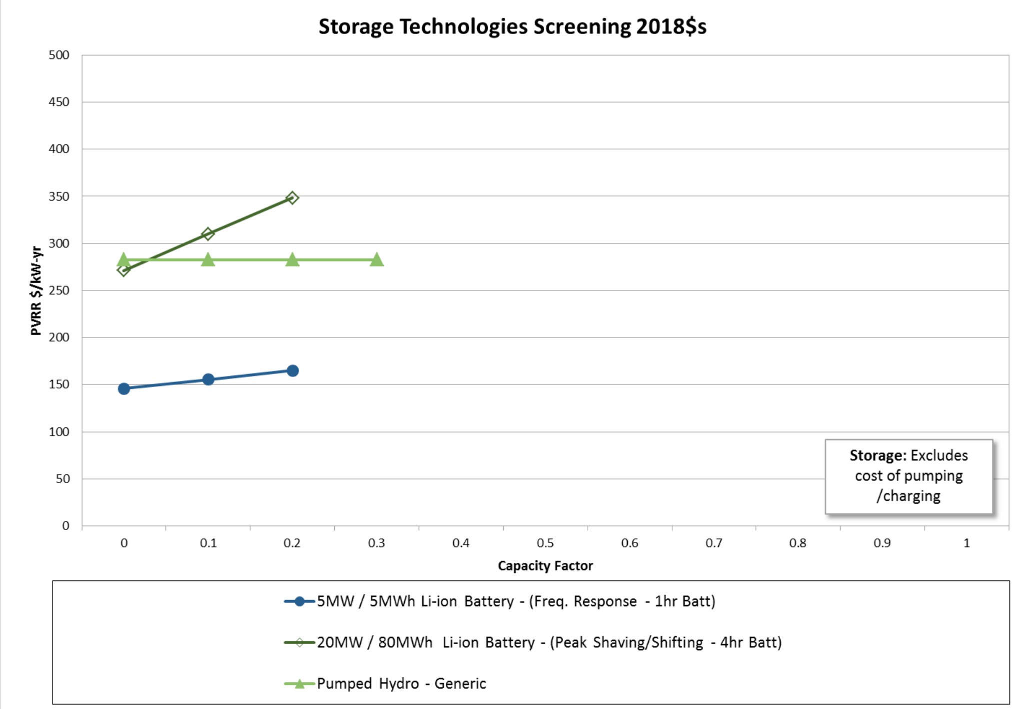

Baseload Technologies Screening 2018$s - Carbon Tax
PVRR $/kW-yr
Capacity Factor
Ultra-Supercritical Pulverized Coal with CCS
2x1 Integrated Gasification CC with CCS
2 x 1117 MW Nuclear - Greenfield
Combined Heat & Power (CHP) 1 x NGCT w/ unfired HRSG
Combined Heat & Power (CHP) 1x 9MW Reciprocating Engine
Small Modular Reactor (SMR)
1x1 J Class CCGT - Fired, Natural Gas Only
2x1 J Class CCGT - Fired, Natural Gas Only
NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.


Peaking/Intermediate Technologies Screening 2018$s - No Carbon Tax
PVRR $/kW-yr
Capacity Factor
4 x LM6000 Dual Fuel w/ Evap Coolers and No SCR
4 x F Frame CT Dual Fuel w/ Evap Coolers No SCR
2 x G/H Class Frame SCGT - Dual Fuel w/ SCR and Evaps
2 x J-Class Frame SCGT - Dual Fuel w/SCR and Evaps
12 x Reciprocating Engine (18 MW Engines) Dual Fuel w/ SCR
NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.


Peaking/Intermediate Technologies Screening 2018$s - Carbon Tax
PVRR $/kW-yr
Capacity Factor
4 x LM6000 Dual Fuel w/ Evap Coolers and No SCR
4 x F Frame CT Dual Fuel w/ Evap Coolers No SCR
2 x G/H Class Frame SCGT - Dual Fuel w/ SCR and Evaps
2 x J-Class Frame SCGT - Dual Fuel w/SCR and Evaps
12 x Reciprocating Engine (18 MW Engines) Dual Fuel w/ SCR
NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.



NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.



NOTE: The graph above is based on generic capital, O&M, and delivered fuel costs data but without transmission system upgrades or other site specific criteria.

APPENDIX G: ENVIRONMENTAL COMPLIANCE

Legislative and Regulatory Issues:

Duke Energy Progress, which is subject to the jurisdiction of Federal agencies including the Federal Energy Regulatory Commission, EPA, and the NRC, as well as State commissions and agencies, is potentially impacted by State and Federal legislative and regulatory actions. This section provides a high-level description of several issues Duke Energy Progress is actively monitoring or engaged in that could potentially influence the Company's existing generation portfolio and choices for new generation resources.

Air Quality:

Duke Energy Progress is required to comply with numerous State and Federal air emission regulations, including the Cross State Air Pollution Rule (CSAPR) NO_x and SO_2 cap-and-trade program, the Mercury and Air Toxics Standards (MATS) rule, and the 2002 North Carolina Clean Smokestacks Act (NC CSA).

As a result of complying with the NC CSA, Duke Energy Progress reduced its SO_2 emissions by approximately 97% from 2000 to 2017. The law also required additional reductions in NO_X emissions beyond Federal requirements, and Duke Energy Progress has achieved an overall reduction of 94% from 1996 to 2017. This landmark legislation, which was passed by the North Carolina General Assembly in June of 2002, calls for some of the lowest state-mandated emission levels in the nation, and was passed with Duke Energy Progress' input and support.

The following is a summary of the major air related federal regulatory programs that are currently impacting or that could impact Duke Energy Progress operations in North Carolina.

Cross-State Air Pollution Rule (CSAPR):

In August 2011, EPA finalized the Cross-State Air Pollution Rule. The CSAPR established state-level caps on annual SO_2 and NO_X emissions and ozone season NO_X emissions from electric generating units (EGUs) across the Eastern U.S., including North Carolina. The CSAPR was set up as a two-phase program with Phase I taking effect in 2012 and Phase II taking effect in 2014. Legal challenges to the rule resulted in Phase I implementation being delayed until 2015 and Phase II implementation being delayed until 2017. Duke Energy Progress complied with Phase I of the CSAPR and with the Phase II annual programs beginning in 2017.

The CSAPR ozone season NO_X program was designed to address interstate transport for the 80 parts per billion (ppb) ozone standard that was established in 1997. In 2008 the EPA lowered the ozone standard to 75 ppb. In September 2016, EPA published the CSAPR Update Rule to revise Phase II of the CSAPR ozone season NO_X program to address interstate transport for the 75 ppb standard. EPA did not include North Carolina in the CSAPR Update rule, stating that the state is not linked to any downwind nonattainment or maintenance receptors for the seasonal ozone standard. Beginning in 2017, Duke Energy Progress plants are not subject to any CSAPR ozone season NOx emission limitations.

Mercury and Air Toxics Standards (MATS) Rule:

In February 2012, EPA finalized the MATS rule to regulate emissions of mercury and other hazardous air pollutants from coal-fired EGUs. The rule established unit-level emission limits for mercury, acid gases, and non-mercury metals. Compliance with the emission limits was required by April 16, 2015, or April 16, 2016 if the state permitting authority granted up to a 1-year compliance extension. Duke Energy Progress is complying with all rule requirements.

National Ambient Air Quality Standards (NAAQS):

8-Hour Ozone NAAQS:

In October 2015, EPA finalized a revision to the 8-Hour Ozone NAAQS, lowering it from 75 to 70 ppb. EPA finalized area designations for the 2015 ozone standard in late 2017 and early 2018. EPA did not designate any nonattainment areas in North Carolina.

The 70 ppb ozone standard is being challenged in court by numerous parties. Some are challenging the standard as being too low, while others are challenging the standard as not being low enough. Duke Energy Progress cannot predict the outcome of the litigation or assess the potential impact of the lower standard on future operations in North Carolina at this time.

SO_2 NAAQS:

On June 22, 2010, EPA finalized a rule establishing a 75 ppb 1-hour SO_2 NAAQS. Since then, EPA has completed two rounds of area designations, neither of which resulted in any areas in North Carolina being designated nonattainment.

In August 2015, the EPA finalized its Data Requirements Rule which established requirements for state air agencies to characterize SO_2 air quality levels around certain EGUs using ambient air quality monitoring or air quality modeling. The Data Requirements Rule also laid out the timeline for state air agencies to complete air quality characterizations and submit the information to EPA, and for EPA to finalize area designations.

The North Carolina Department of Environmental Quality provided air quality modeling to EPA to characterize SO_2 air quality around the Duke Energy Progress Mayo station, and has established air quality monitoring sites around the Duke Energy Progress Asheville and Roxboro stations. Data collected at these two sites between 2017 and 2019 will be used to demonstrate whether the areas around those facilities meet attainment. In 2017, EPA issued a determination with respect to the Mayo station modeling submittal. EPA classified the area surrounding the Mayo station as "unclassifiable" because of the proximity to the Roxboro station, and will make an additional determination after the air quality monitoring site near the Roxboro station has collected three years of data.

On June 8, 2018, after the five-year review required under the Clean Air Act, EPA proposed to retain the 2010 SO_2 NAAQS.

Fine Particulate Matter ($PM_{2.5}$) NAAQS:

On December 14, 2012, the EPA finalized a rule establishing a 12 microgram per cubic meter annual $PM_{2.5}$ NAAQS. The EPA finalized area designations for this standard in December 2014. That designation process did not result in any areas in North Carolina being designated nonattainment.

Greenhouse Gas Regulation:

On August 3, 2015, the EPA finalized a rule establishing CO_2 new source performance standards for coal and natural gas combined cycle EGUs that initiated or that initiates construction after January 8, 2014. The EPA finalized emission standards of 1,400 lb CO_2 per gross MWh of electricity generation for coal units and 1,000 lb CO_2 per gross MWh for NGCC units. The standard for coal units can only be achieved with carbon capture and sequestration technology. Duke Energy Progress views the EPA rule as barring the development of new coal-fired generation because CCS is not a demonstrated and available technology for applying to coal units. Duke Energy Progress considers the standard for NGCC units to be achievable. Numerous parties have filed petitions with the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) challenging the EPA's final emission standard for new coal units. On March 28, 2017, President Trump signed an executive order directing EPA to review the rule and determine whether to suspend, revise or rescind it. On the same day, the Department of Justice (DOJ) filed a motion with the D.C. Circuit Court requesting that the court stay the litigation of the rule while it is reviewed by EPA. Subsequent to the DOJ motion, the D.C. Circuit Court canceled oral argument in the case. On August 10, 2017, the court ordered that the litigation be suspended indefinitely. The rule remains in effect pending the outcome of litigation and EPA's review. EPA has not announced a schedule for completing its review. Duke Energy Progress cannot predict the outcome of these matters but does not expect the impacts of the current final standards will be material to the company's operations.

On October 23, 2015, the EPA published in the Federal Register the final Clean Power Plan (CPP) rule to regulate CO_2 emissions from existing fossil fuel-fired EGUs. The CPP established CO_2 emission rates and mass cap goals that apply to existing fossil fuel-fired EGUs (existing EGUs are units that commenced construction prior to January 8, 2014). Petitions challenging the rule were filed by numerous groups and on February 9, 2016, the Supreme Court issued a stay of the final CPP rule, halting implementation of the CPP until legal challenges are resolved. Oral arguments before 10 of the 11 judges on the D.C. Circuit Court were heard on September 27, 2016. The court has not issued its opinion in the case.

On March 28, 2017, President Trump signed an executive order directing EPA to review the CPP and determine whether to suspend, revise or rescind the rule. On the same day, the Department of Justice filed a motion with the D.C. Circuit Court requesting that the court stay the litigation of the rule while it is reviewed by EPA. On April 28, 2017, the court issued an order to suspend the litigation for 60 days. On August 8, 2017, the court, on its own motion, extended the suspension of the litigation for an additional 60 days. On October 16, 2017, EPA issued a Notice of Proposed Rulemaking (NPR) to repeal the CPP based on a change to EPA's legal interpretation of the section of the Clean Air Act on which the CPP was based. The comment period on EPA's NPR ended April 26, 2018. On December 28, 2017, EPA issued an Advance Notice of Proposed Rulemaking (ANPRM) in which it sought public comment on various aspects of a potential CPP replacement rule. The comment period on the ANPRM ended February 26, 2018. On July 9, 2018, EPA sent a proposed CPP replacement rule to the Office of Management and Budget for review; after that review is completed, EPA will issue its proposal for public comment. Litigation of the CPP remains on hold in the D.C. Circuit Court and the February 2016 U.S. Supreme Court stay of the CPP remains in effect. Duke Energy Progress cannot predict the outcome of these matters.

Water Quality and By-product Issues:

CWA 316(b) Cooling Water Intake Structures:

Federal regulations implementing §316(b) of the Clean Water Act (CWA) for existing facilities were published in the Federal Register on August 15, 2014 with an effective date of October 14, 2014. The rule regulates cooling water intake structures at existing facilities to address environmental impacts from fish being impinged (pinned against cooling water intake structures) and entrainment (being drawn into cooling water systems and affected by heat, chemicals or physical stress). The final rule establishes aquatic protection requirements at existing facilities and new on-site generation that withdraw 2 million gallons per day (MGD) or greater from rivers, streams, lakes, reservoirs, estuaries, oceans, or other waters of the United States. All DEP nuclear fueled, coal-fired and combined cycle stations, in North and South Carolina are affected sources, with the exception of Smith Energy[14].

The rule establishes two standards, one for impingement and one for entrainment. To demonstrate compliance with the impingement standard, facilities must choose and implement one of the following options:

- Closed cycle re-circulating cooling system; or
- Demonstrate the maximum design through screen velocity is less than 0.5 feet per second (fps) under all conditions; or
- Demonstrate the actual through screen velocity, based on measurement, is less than 0.5 fps; or
- Install modified traveling water screens and optimize performance through a two-year study; or
- Demonstrate a system of technologies, practices, and operational measures are optimized to reduce impingement mortality; or
- Demonstrate the impingement latent mortality is reduced to no more than 24% annually based on monthly monitoring.

In addition to these options, the final rule allows the state permitting agency to establish less stringent standards if the capacity utilization rate is less than 8% averaged over a 24-month contiguous period. The rule, also, allows the state permitting agency to determine no further action

[14] Richmond County supplies cooling water to Smith Energy; therefore the rule is not applicable.

warranted if impingement is considered *de minimis*. Compliance with the impingement standard is not required until requirements for entrainment are established.

The entrainment standard does not mandate the installation of a technology but rather establishes a process for the state permitting agency to determine necessary controls, if any, are required to reduce entrainment mortality on a site-specific basis. Facilities that withdraw greater than 125 MGD are required to submit information to characterize the entrainment and assess the engineering feasibility, costs, and benefits of closed-cycle cooling, fine mesh screens and other technological and operational controls. The state permitting agency can determine no further action is required, or require the installation of fine mesh screens, or conversion to closed-cycle cooling.

The rule requires facilities with a NPDES permit that expire after July 14, 2018 to submit all necessary 316(b) reports with the renewal application. For facilities with a NPDES permit that expire prior to July 14, 2018 or are in the renewal process, the state permitting agency is allowed to establish an alternate submittal schedule. We expect submittals to be due in the 2019 to 2022 timeframe and intake modifications, if necessary to be required in the 2021 to 2025 timeframe, depending on the NPDES permit renewal date and compliance schedule developed by the state permitting agency.

Steam Electric Effluent Guidelines:

Federal regulations revising the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category (ELG Rule) were published in the Federal Register on November 3, 2015 with an effective date of January 4, 2016. While the ELG Rule is applicable to all steam electric generating units, waste streams affected by these revisions are generated at DEP's coal-fired facilities. The revisions prohibit the discharge of bottom and fly ash transport water, and flue gas mercury control wastewater, and establish technology based limits on the discharge of wastewater generated by Flue Gas Desulfurization (FGD) systems, and leachate from coal combustion residual landfills and impoundments. The rule, also, establishes technology based limits on gasification wastewater, but this waste stream is not generated at any of the DEP facilities. As originally written, the new limits must be incorporated into the applicable stations' National Pollutant Discharge Elimination System permit based on a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023, except the limits for CCR leachate, which are effective upon issuance of the permit after the effective date of the rule. For discharges to publicly owned treatment works (POTW), the limits must be met by November 1, 2018, as originally written. Petitions challenging the rule were filed by several groups and all challenges to the rule were consolidated in the Fifth Circuit Court of Appeals. On August 22, 2017, the Fifth Circuit Court of Appeals granted EPA's Motion to Govern Further Proceedings, thereby severing and suspending the claims related to flue gas desulfurization wastewater, bottom ash transport water and gasification wastewater.

Separate from the litigation, on August 11, 2017, EPA announced the decision to conduct a rulemaking to potentially revise the new, more stringent BAT effluent limitations and pretreatment standards for existing sources in the ELG rule that apply to bottom ash transport water and FGD wastewater. Subsequently, EPA finalized a rule on September 18, 2017, postponing the earliest applicability date for bottom ash transport water and FGD wastewater from Nov. 1, 2018 to Nov. 1, 2020 and retained the end applicability date of Dec. 31, 2023. Also, as part of the rule, EPA reiterated its intent to conduct a new rulemaking to review the limitation guidelines for bottom ash transport water and FGD wastewater. EPA projects that a new rule on these two issues will be finalized by December 2019.

The extent to which the rule will affect a particular steam electric generating unit will depend on the treatment technology currently installed at the station. A summary of the impacts are as follows:

- Fly Ash Transport Water: All DEP coal-fired units either handling fly ash dry during normal operation or are scheduled to be retired prior to the compliance date. However, to ensure fly ash is handled dry without disruptions to generation, dry fly ash reliability projects are being completed.

- Bottom Ash Transport Water: All DEP coal-fired units, except for Asheville and Mayo Steam Station, are installing a closed-loop bottom ash transport water recirculating system.

- FGD Wastewater: All DEP coal-fired units, except for Asheville and Mayo Steam Station, are upgrading or completely replacing the existing FGD wastewater treatment system.

- CCR Leachate: The revised limits for CCR leachate from impoundments and landfills are the same as the previous existing limits for low volume waste. Potential impacts are being evaluated on a facility-specific basis.

Coal Combustion Residuals:

In January 2009, following Tennessee Valley Authority's Kingston ash pond dike failure December 2008, Congress issued a mandate to EPA to develop federal regulations for the disposal of coal combustion residuals. CCR includes fly ash, bottom ash, and flue gas desulfurization solids. As part of that rulemaking, EPA conducted structural integrity inspections of surface impoundments nationwide that were used for disposal of CCR. On April 17, 2015, EPA finalized the first federal regulations for the disposal of CCR ("CCR rule"). The CCR rule regulates CCR as a nonhazardous waste under Subtitle D of RCRA and allows for beneficial use of CCR with some restrictions. The effective date of the rule was October 19, 2015.

The CCR rule applies to all new and existing landfills, new and existing surface impoundments still receiving CCR and existing surface impoundments that are no longer receiving CCR but contain liquid located at stations currently generating electricity (regardless of fuel source). The CCR rule establishes national minimum criteria that includes location restrictions, design standards, structural integrity criteria, groundwater monitoring and corrective action, closure requirements and post-closure care, and recordkeeping, reporting and other operational procedures to ensure the safe disposal and management of CCR.

On March 15, 2018, EPA proposed amendments to the CCR rule to reflect the rule's implementation through state or federal permit programs and to address issues that were remanded back to the agency by the U.S. Court of Appeals for the D.C. Circuit following a settlement with industry and environmental petitioners. On July 17, 2018, EPA finalized a set of changes to the federal CCR rule ("Phase One, Part One rule"), revising the groundwater protection standards for four constituents and revising the deadline to commence closure of unlined coal ash impoundments that fail to meet groundwater protection standards or the aquifer separation location requirement. EPA also finalized changes that apply only to states with approved CCR permit programs, or where EPA is permitting authority. Currently, no Duke Energy states have approved permit programs. EPA has stated it will address the other proposed revisions in a subsequent rulemaking.

Notably, the Phase One, Part One rule did not change any of the major compliance requirements in the CCR rule, including design criteria, location restrictions, requirements for groundwater monitoring, structural integrity standards, inspections and corrective action.

In addition to the requirements of the federal CCR regulation, CCR landfills and surface impoundments will continue to be independently regulated by the state. On September 20, 2014, the North Carolina Coal Ash Management Act of 2014 (CAMA) became law and was amended on July 14, 2016.

CAMA establishes requirements regarding the beneficial use of CCR, the closure of existing CCR surface impoundments, the disposal of CCR at active coal plants, and the handling of surface and groundwater impacts from CCR surface impoundments. CAMA requires eight CCR surface impoundments in North Carolina to be closed no later than December 31, 2019. It also requires state regulators to provide risk ranking classifications to determine the method and timing for closing the remaining CCR surface impoundments. Currently, North Carolina Department of Environmental Quality (NCDEQ) has categorized all remaining CCR surface impoundments as intermediate risk. CAMA also grants NCDEQ the authority to change an impoundment's classification based on completion of dam safety repairs and the establishment of permanent replacement water supplies within a one-half-mile radius of CCR impoundments. The impact from both state and federal CCR regulations to Duke Energy Progress is significant.

APPENDIX H: NON-UTILITY GENERATION AND WHOLESALE

This appendix contains wholesale sales contracts, firm wholesale purchased power contracts and non-utility generation contract.

Table H-1: Wholesale Sales Contracts [CONFIDENTIAL]

[redacted]

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Table H-2: Firm Wholesale Purchased Power Contracts [CONFIDENTIAL]

[redacted]

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NON-UTILITY GENERATION FACILITIES – NORTH CAROLINA AND SOUTH CAROLINA

Please refer to the DEC and DEP Small Generator Interconnection Consolidated Annual Reports filed on April 2, 2018 in NCUC Docket No. E-100, Sub 113B for details on the DEP North and South Carolina NUGS. The DEP NUG facilities are comprised of 99% intermediate facilities while the remaining 1% represents both baseload and peaking facilities. Currently, hydro is considered baseload, diesel is considered peaking, solar and other renewables are considered intermediate.

NON-UTILITY GENERATION FACILITIES – SOUTH CAROLINA

Table H-3 contains non-utility generation contracts for facilities located in South Carolina.

Please refer to the attachment, Table H-3 DEC Non-Utility Generator Listing – South Carolina Facilities.

APPENDIX I: QF INTERCONNECTION QUEUE

Qualified Facilities contribute to the current and future resource mix of the Company. QFs that are under contract are captured as designated resources in the base resource plan. QFs that are not yet under contract but in the interconnection queue may contribute to the undesignated additions identified in the resource plans. It is not possible to precisely estimate how much of the interconnection queue will come to fruition, however the current queue clearly supports solar generation's central role in DEP's NC REPS compliance plan and HB 589.

Below is a summary of the interconnection queue as of June 30, 2018:

Table I-1: DEP QF Interconnection Queue

Utility	Facility State	Energy Source Type	Number of Pending Projects	Pending Capacity (MW AC)
DEP	NC	Battery	2	13.8
		Biomass	1	4.2
		Natural Gas	4	562.7
		Other	1	11.0
		Solar	299	4,519.2
	NC Total		**307**	**5,110.9**
DEP	SC	No Data	5	10.0
		Solar	150	2,464.8
	SC Total		**155**	**2,474.8**
DEP Total			**462**	**7,585.6**

Note: (1) Above table includes all QF projects that are in various phases of the interconnection queue and not yet generating energy.
(2) Table does not include net metering interconnection requests.

APPENDIX J: TRANSMISSION PLANNED OR UNDER CONSTRUCTION

This appendix lists the planned transmission line additions. A discussion of the adequacy of DEP's transmission system is also included. Table J-1 lists the transmission line projects that are planned to meet reliability needs. This appendix also provides information pursuant to the North Carolina Utility Commission Rule R8-62.

Table J-1: DEP Transmission Line Additions

	Location		Capacity	Voltage	
Year	**From**	**To**	**MVA**	**KV**	**Comments**
2018	Jacksonville	Wallace	556	230	Uprate
2018	Roxboro Plant	Person (Middle)	1084	230	Uprate
2018	Roxboro Plant	Person (Hyco)	1084	230	Uprate
2018	Richmond	Raeford	1195	230	Relocate, new
2018	Ft. Bragg Woodruff St.	Raeford	1195	230	Relocate, new
2020	Vanderbilt	West Asheville	307	115	Upgrade
2020	Asheboro	Asheboro East North Line	307	115	Upgrade
2020	Sutton Plant	Castle Hayne North Line	239	115	Upgrade
2020	Cleveland Matthews Rd. Tap	Cleveland Matthews Rd	621	230	New
2020	Sutton Plant	Wallace	580	230	Uprate
2020	Jacksonville	Grants Creek	1195	230	New
2020	Newport	Harlowe	681	230	New

Rule R8-62: Certificates of environmental compatibility and public convenience and necessity for the construction of electric transmission lines in North Carolina.

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(1) For existing lines, the information required on FERC Form 1, pages 422, 423, 424, and 425, except that the information reported on pages 422 and 423 may be reported every five years.

Please refer to the Company's FERC Form No. 1 filed with NCUC in April 2018.

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(2) *For lines under construction, the following:*

a. Commission docket number;
b. Location of end point(s);
c. Length;
d. Range of right-of-way width;
e. Range of tower heights;
f. Number of circuits;
g. Operating voltage;
h. Design capacity;
i. Date construction started;
j. Projected in-service date;

Richmond – Raeford 230 kV Line loop-in:

Project Description: Loop-In the existing 230 kV transmission line from the Richmond 230 kV Substation in Richmond County to the Ft. Bragg Woodruff St 230 kV Substation in Cumberland County at Raeford 230 kV Substation in Hoke County.

a. Docket number: E-2, Sub 1111
b. County location of end point(s); Hoke County
c. Approximate length; 4 miles
d. Typical right-of-way width for proposed type of line; 125 feet
e. Typical tower height for proposed type of line; 80 -120 feet
f. Number of circuits; 1
g. Operating voltage; 230 kV
h. Design capacity; 1195 MVA
i. Date for starting construction; July 2017
j. Estimated in-service date; December 2018

Ft. Bragg Woodruff St – Raeford 230 kV Line loop-in:

Project Description: Loop-In the existing 230 kV transmission line from the Richmond 230 kV Substation in Richmond County to the Ft. Bragg Woodruff St 230 kV Substation in Cumberland County at Raeford 230 kV Substation in Hoke County.

a. Docket number: E-2, Sub 1111
b. County location of end point(s); Hoke County
c. Approximate length; 4 miles
d. Typical right-of-way width for proposed type of line; 125 feet
e. Typical tower height for proposed type of line; 80 – 120 feet
f. Number of circuits; 1
g. Operating voltage; 230 kV
h. Design capacity; 1195 MVA
i. Estimated date for starting construction; July 2017
j. Estimated in-service date; December 2018

(p) Plans for the construction of transmission lines in North Carolina (161 kV and above) shall be incorporated in filings made pursuant to Commission Rule R8-60. In addition, each public utility or person covered by this rule shall provide the following information on an annual basis no later than September 1:

(3) For all other proposed lines, as the information becomes available, the following:

a. county location of end point(s);
b. approximate length;

c. typical right-of-way width for proposed type of line;
d. typical tower height for proposed type of line;
e. number of circuits;
f. operating voltage;
g. design capacity;
h. estimated date for starting construction (if more than 6-month delay from last report, explain); and
i. estimated in-service date (if more than 6-month delay from last report, explain). (NCUC Docket No. E-100, Sub 62, 12/4/92; NCUC Docket No. E-100, Sub 78A, 4/29/98.)

The following pages represent those projects in response to Rule R8-62 part (3).

Cleveland Matthews Road 230 kV Tap Line:

Project Description: Construct new 230 kV transmission line from the Erwin-Selma 230 kV Line in Johnston County to the Cleveland Matthews Road 230 kV Substation in Johnston County.

a. County location of end point(s); Johnston County
b. Approximate length; 11.5 miles
c. Typical right-of-way width for proposed type of line; 125 feet
d. Typical tower height for proposed type of line; 80 – 120 feet
e. Number of circuits; 1
f. Operating voltage; 230 kV
g. Design capacity; 621 MVA
h. Estimated date for starting construction; October 2018
i. Estimated in-service date; June 2020

Jacksonville – Grants Creek 230 kV Line:

Project Description: Construct new 230 kV transmission line from the Jacksonville 230 kV Substation in Onslow County to the Grants Creek 230 kV Substation in Onslow County.

j. County location of end point(s); Onslow County
k. Approximate length; 15 miles
l. Typical right-of-way width for proposed type of line; 125 feet
m. Typical tower height for proposed type of line; 80 – 120 feet
n. Number of circuits; 1
o. Operating voltage; 230 kV
p. Design capacity; 1195 MVA
q. Estimated date for starting construction; October 2018
r. Estimated in-service date; June 2020

Newport – Harlowe 230 kV Line:

Project Description: Construct new 230 kV transmission line from the Newport 230 kV Substation in Carteret County to the Harlowe 230 kV Substation in Carteret County.

a. County location of end point(s); Carteret County
b. Approximate length; 8 miles
c. Typical right-of-way width for proposed type of line; 125 feet
d. Typical tower height for proposed type of line; 80 – 120 feet
e. Number of circuits; 1
f. Operating voltage; 230 kV
g. Design capacity; 681 MVA
h. Estimated date for starting construction; January 2019
i. Estimated in-service date; June 2020

DEP Transmission System Adequacy:

DEP monitors the adequacy and reliability of its transmission system and interconnections through internal analysis and participation in regional reliability groups. Internal transmission planning looks 10 years ahead at available generating resources and projected load to identify transmission system upgrade and expansion requirements. Corrective actions are planned and implemented in advance to ensure continued cost-effective and high-quality service. The DEP transmission model is incorporated into models used by regional reliability groups in developing plans to maintain interconnected transmission system reliability. DEP works with DEC, North Carolina Electric Membership Corporation (NCEMC) and ElectriCities to develop an annual NC Transmission Planning Collaborative (NCTPC) plan for the DEP and DEC systems in both North and South Carolina. In addition, transmission planning is coordinated with neighboring systems including South Carolina Electric & Gas (SCE&G) and Santee Cooper under a number of mechanisms including legacy interchange agreements between SCE&G, Santee Cooper, DEP, and DEC.

The Company monitors transmission system reliability by evaluating changes in load, generating capacity, transactions and topography. A detailed annual screening ensures compliance with DEP's Transmission Planning Summary guidelines for voltage and thermal loading. The annual screening uses methods that comply with SERC Reliability Corporation (SERC) policy and North American Electric Reliability Corporation (NERC) Reliability Standards and the screening results identify the need for future transmission system expansion and upgrades. The transmission system is planned to ensure that no equipment overloads and adequate voltage is maintained to provide reliable service. The most stressful scenario is typically at projected peak load with certain equipment out of service. A thorough screening process is used to analyze the impact of potential equipment failures or other disturbances. As problems are identified, solutions are developed and evaluated.

Transmission planning and requests for transmission service and generator interconnection are interrelated to the resource planning process. DEP currently evaluates all transmission reservation requests for impact on transfer capability, as well as compliance with the Company's Transmission Planning Summary guidelines and the FERC Open Access Transmission Tariff (OATT). The Company performs studies to ensure transfer capability is acceptable to meet reliability needs and customers' expected use of the transmission system. Generator interconnection requests are studied in accordance with the Large and Small

Generator Interconnection Procedures in the OATT and the North Carolina and South Carolina Interconnection Procedures.

SERC audits DEP every three years for compliance with NERC Reliability Standards. Specifically, the audit requires DEP to demonstrate that its transmission planning practices meet NERC standards and to provide data supporting the Company's annual compliance filing certifications. SERC conducted a NERC Reliability Standards compliance audit of DEP in December 2016. DEP received "No Findings" from the audit team.

DEP participates in a number of regional reliability groups to coordinate analysis of regional, sub-regional and inter-balancing authority area transfer capability and interconnection reliability. Each reliability group's purpose is to:

- Assess the interconnected system's capability to handle large firm and non-firm transactions for purposes of economic access to resources and system reliability;

- Ensure that planned future transmission system improvements do not adversely affect neighboring systems; and

- Ensure interconnected system compliance with NERC Reliability Standards.

Regional reliability groups evaluate transfer capability and compliance with NERC Reliability Standards for the upcoming peak season and five- and ten-year periods. The groups also perform computer simulation tests for high transfer levels to verify satisfactory transfer capability.

Application of the practices and procedures described above ensures that DEP's transmission system continues to provide reliable service to its native load and firm transmission customers.

APPENDIX K: ECONOMIC DEVELOPMENT

Customers Served Under Economic Development:

In the NCUC Order issued in Docket No. E-100, Sub 73 dated November 28, 1994, the NCUC ordered North Carolina utilities to review the combined effects of existing economic development rates within the approved IRP process and file the results in its short-term action plan. The incremental load (demand) for which customers are receiving credits under economic development rates and/or self-generation deferral rates (Rider EC), as well as economic redevelopment rates (Rider ER) as of June 2018 is:

Rider EC:
25 MW for North Carolina
7 MW for South Carolina

Rider ER:
1.2 MW for North Carolina
0 MW for South Carolina

APPENDIX L: CROSS-REFERENCE OF IRP REQUIREMENTS AND SUBSEQUENT ORDERS

The following table cross-references IRP regulatory requirements for NC R8-60 in North Carolina identifies where those requirements are discussed in the IRP.

Requirement	Location	Reference	Updated
15-year Forecast of Load, Capacity and Reserves	Ch 12, Tables 12, E&F	NC R8-60 (c) 1	Yes
Comprehensive analysis of all resource options	Ch 7, 12, App A, F	NC R8-60 (c) 2	Yes
Assessment of Purchased Power	App H	NC R8-60 (d)	Yes
Assessment of Alternative Supply-Side Energy Resources	Ch 6, 7, 12, App A, F	NC R8-60 (e)	Yes
Assessment of Demand-Side Management	Ch 4, App D	NC R8-60 (f)	Yes
Evaluation of Resource Options	Ch 7, 12, App A, D, F	NC R8-60 (g)	Yes
Short-Term Action Plan	Ch 13	NC R8-60 (h) 3	Yes
REPS Compliance Plan	Attachment	NC R8-60 (h) 4	Yes
Forecasts of Load, Supply-Side Resources, and Demand-Side Resources			
• 10-year History of Customers and Energy Sales	App C	NC R8-60 (i) 1(i)	Yes
• 15-year Forecast w & w/o Energy Efficiency	Ch 3 & App C	NC R8-60 (i) 1(ii)	Yes
• Description of Supply-Side Resources	Ch 6, 7, 11, App D, F	NC R8-60 (i) 1(iii)	Yes
Generating Facilities			
• Existing Generation	Ch 2, App B	NC R8-60 (i) 2(i)	Yes
• Planned Generation	Ch 12 & App A	NC R8-60 (i) 2(ii)	Yes
• Non-Utility Generation	Ch 5, App H	NC R8-60 (i) 2(iii)	Yes
Reserve Margins	Ch 8, 12, Table 12,E&F	NC R8-60 (i) 3	Yes
Wholesale Contracts for the Purchase and Sale of Power			
• Wholesale Purchased Power Contracts	App H	NC R8-60 (i) 4(i)	Yes
• Request for Proposal	Ch 13	NC R8-60 (i) 4(ii)	Yes
• Wholesale Power Sales Contracts	App C & H	NC R8-60 (i) 4(iii)	Yes
Transmission Facilities	Ch 2, App J	NC R8-60 (i) 5	Yes
Energy Efficiency and Demand-Side Management			
• Existing Programs	Ch 4 & App D	NC R8-60 (i) 6(i)	Yes
• Future Programs	Ch 4 & App D	NC R8-60 (i) 6(ii)	Yes
• Rejected Programs	App D	NC R8-60 (i) 4(iii)	Yes
• Consumer Education Programs	App D	NC R8-60 (i) 4(iv)	Yes
Assessment of Alternative Supply-Side Energy Resources			
• Current and Future Alternative Supply-Side Resources	Ch 6, 7, 11, App F	NC R8-60 (i) 7(i)	Yes
• Rejected Alternative Supply-Side Resources	Ch 7, App F	NC R8-60 (i) 7(ii)	Yes
Evaluation of Resource Options (Quantitative Analysis)	App A	NC R8-60 (i) 8	Yes
Levelized Bus-bar Costs	App F	NC R8-60 (i) 9	Yes
Smart Grid Impacts	App D	NC R8-60 (i) 10	Yes
Legislative and Regulatory Issues	App G		Yes
Greenhouse Gas Reduction Compliance Plan	App G		Yes
Other information (Economic Development)	App K		Yes

The following table cross-references Subsequent Orders for information that is required by the NCUC for inclusion in future IRP documents.

Change	Location	Source (Docket and Order Date)	Updated
IOUs should continue to monitor and report any changes of more than 10% in the energy and capacity savings derived from DSM and EE between successive IRPs, and evaluate and discuss any changes on a program-specific basis. Any issues impacting program deployment should be thoroughly explained and quantified in future IRPs.	App D	E-100, Sub 141, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 6/26/15, ordering paragraph 7 E-100, Sub 128, Order Approving 2011 Annual Updates to 2010 IRPs and 2011 REPS Compliance Plans, dated 5/30/12, ordering paragraph 8	N/A
Each IOU shall continue to include a discussion of the status of EE market potential studies or updates in their future IRPs.	App D	E-100, Sub 141, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 6/26/15, ordering paragraph 8 E-100, Sub 128, Order Approving 2011 Annual Updates to 2010 IRPs and 2011 REPS Compliance Plans, dated 5/30/12, ordering paragraph 9	Yes
All IOUs shall include in future IRPs a full discussion of the drivers of each class' load forecast, including new or changed demand of a particular sector or sub-group.	Ch 3, App C	E-100, Sub 141, Order Approving Integrated Resource Plan Annual Update Reports and REPS Compliance Plans, dated 6/26/15, ordering paragraph 9 E-100, Sub 137, Order Approving Integrated Resource Plan Annual Update Reports and REPS Compliance Plans, dated 6/30/14, ordering paragraph 9 E-100, Sub 133, Order Denying Rulemaking Petition (Allocation Methods), dated 10/30/12, ordering paragraph 4	Yes

Change	Location	Source (Docket and Order Date)	Updated
To the extent an IOU selects a preferred resource scenario based on fuel diversity, the IOU should provide additional support for its decision based on the costs and benefits of alternatives to achieve the same goals.	N/A	E-100, Sub 141, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 6/26/15, ordering paragraph 13 E-100, Sub 137, Order Approving Integrated Resource Plan Annual Update Reports and REPS Compliance Plans, dated 6/30/14, ordering paragraph 13 E-100, Sub 137, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 10/14/13, ordering paragraph 16	N/A
Future IRP filings by DEP and DEC shall continue to provide information on the number, resource type and total capacity of the facilities currently within the respective utility's interconnection queue as well as a discussion of how the potential QF purchases would affect the utility's long-range energy and capacity needs.	Ch 5 App A App I	E-100, Sub 141, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 6/26/15, ordering paragraph 14 E-100, Sub 137, Order Approving Integrated Resource Plan Annual Update Reports and REPS Compliance Plans, dated 6/30/14, ordering paragraph 14	Yes
Consistent with the Commission's May 7, 2013 Order in M-100, Sub 135, the IOUs shall include with their 2014 IRP submittals verified testimony addressing natural gas issues, as detailed in the body of that Order.	N/A	E-100, Sub 141, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 6/26/15, ordering paragraph 15 E-100, Sub 137, Order Approving Integrated Resource Plan Annual Update Reports and REPS Compliance Plans, dated 6/30/14, ordering paragraph 15 E-100, Sub 137, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 10/14/13, ordering paragraph 17	N/A

Change	Location	Source (Docket and Order Date)	Updated
DEP and DNCP shall provide additional details and discussion of projected alternative supply side resources similar to the information provided by DEC.	Ch 6, 7, 12, App A, F	E-100, Sub 137, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 10/14/13, ordering paragraph 14	Yes
DEC and DEP should consider additional resource scenarios that include larger amounts of renewable energy resources similar to DNCP's Renewable Plan, and to the extent those scenarios are not selected, discuss why the scenario was not selected.	Ch 5, 12, App A	E-100, Sub 137, Order Approving Integrated Resource Plans and REPS Compliance Plans, dated 10/14/13, ordering paragraph 15	Yes
DEP, DEC and DNCP shall annually review their REPS compliance plans from four years earlier and disclose any redacted information that is no longer a trade secret. [This is filed in the docket of the prior IRP rather than the new IRP.]	Attached NC REPS Compliance Plan	E-100, Sub 137, Order Granting in Part and Denying in Part Motion for Disclosure, dated 6/3/13, ordering paragraph 3	Yes
[2013] Duke shall show the peak demand and energy savings impacts of each measure/option in the Program separately from each other, and separately from the impacts of its other existing PowerShare DSM program options in its future IRP and DSM filings, and in its evaluation, measurement, and verification reports for each measure of the Program. [2011] Duke shall show the impacts of the Program separately from the impacts of its existing PowerShare DSM options in future IRP and DSM filings, and Duke shall conduct and present separate M&V of the Program's impacts.	App D	E-7, Sub 953, Order Approving Amended Program, dated 1/24/13, ordering paragraph 4 (PowerShare Call Option Nonresidential Load and Curtailment Program) E-7, Sub 953, Order Approving Program, dated 3/31/11, ordering paragraph 4	Yes

Change	Location	Source (Docket and Order Date	Updated
DEP will incorporate into future IRPs any demand and energy savings resulting from the Energy Efficiency Education Program, My Home Energy Report Program, Multi-Family Energy Efficiency Program, Small Business Energy Saver Program, and Residential New Construction Program.	App D	E-2, Sub 1060, Order Approving Program, dated 12/18/14, p. 2 E-2, Sub 1059, Order Approving Program, dated 12/18/14, p. 2 E-2, Sub 989, Order Approving Program, dated 12/18/14, p. 3 E-2, Sub 1022, Order Approving Program, dated 11/5/12, footnote 2 (Small Business Energy Saver) E-2, Sub 1021, Order Approving Program, dated 10/2/12, footnote 3 (Residential New Construction Program)	Yes
Each utility shall include in each biennial report potential impacts of smart grid technology on resource planning and load forecasting: a present and five-year outlook – see R8-60(i)(10).	App D	E-100, Sub 126, Order Amending Commission Rule R8-60 and Adopting Commission Rule R8-60.1, dated 4/11/12	Yes
DEP shall reflect plant retirements and address its progress in retiring its unscrubbed coal units by updates in its annual IRP filings.	Exec Summ, App B	E-2, Sub 960, Order Approving Plan, dated 1/28/10, ordering paragraph 2 (Wayne County CCs CPCN)	Yes

ATTACHMENT I:
The Duke Energy Progress NC Renewable Energy & Energy Efficiency Portfolio Standard (NC REPS) Compliance Plan

NC REPS COMPLIANCE PLAN CONTENTS:

I. INTRODUCTION

Duke Energy Progress, LLC (DEP or the Company) submits its annual Renewable Energy and Energy Efficiency Portfolio Standard (NC REPS or REPS) Compliance Plan (Compliance Plan) in accordance with NC Gen. Stat. § 62-133.8 and North Carolina Utilities Commission (the Commission) Rule R8-67(b). This Compliance Plan, set forth in detail in Section II and Section III, provides the required information and outlines the Company's projected plans to comply with NC REPS for the period 2018 to 2020 (the Planning Period). Section IV addresses the cost implications of the Company's REPS Compliance Plan.

In 2007, the North Carolina General Assembly enacted Session Law 2007-397 (Senate Bill 3), codified in relevant part as NC Gen. Stat. § 62-133.8, in order to:

- Diversify the resources used to reliably meet the energy needs of consumers in the State;
- Provide greater energy security through the use of indigenous energy resources available within the State;
- Encourage private investment in renewable energy and energy efficiency; and
- Provide improved air quality and other benefits to energy consumers and citizens of the State.

As part of the broad policy initiatives listed above, Senate Bill 3 established the NC REPS, which requires the investor-owned utilities, electric membership corporations or co-operatives, and municipalities to procure or produce renewable energy, or achieve energy efficiency savings, in amounts equivalent to specified percentages of their respective retail megawatt-hour (MWh) sales from the prior calendar year.

Duke Energy Progress seeks to advance these State policies and comply with its REPS obligations through a diverse portfolio of cost-effective renewable energy and energy efficiency resources. Specifically, the key components of Duke Energy Progress' 2018 Compliance Plan include: (1) purchases of renewable energy certificates (RECs); (2) constructing and operating Company-owned renewable facilities; (3) energy efficiency programs that will generate savings that can be counted towards the Company's REPS obligation; and (4) research studies to enhance the Company's ability to comply with its future REPS obligations. The Company believes that these actions yield a diverse portfolio of qualifying resources and allow a flexible mechanism for compliance with the requirements of NC Gen. Stat. § 62-133.8.

In addition, the Company has undertaken, and will continue to undertake, specific regulatory and operational initiatives to support REPS compliance, including: (1) submission of regulatory applications to pursue reasonable and appropriate renewable energy and energy efficiency initiatives in support of the Company's REPS compliance needs; (2) solicitation, review, and analysis of proposals from renewable energy suppliers offering RECs and diligent pursuit of the most attractive opportunities, as appropriate; and (3) development and implementation of administrative processes to manage the Company's REPS compliance operations, such as procuring and managing renewable resource contracts, accounting for RECs, safely interconnecting renewable energy suppliers, reporting renewable generation to the North Carolina Renewable Energy Tracking System (NC-RETS), and forecasting renewable resource availability and cost in the future.

The Company believes these actions collectively constitute a thorough and prudent plan for compliance with NC REPS and demonstrate the Company's commitment to pursue its renewable energy and energy efficiency strategies for the benefit of its customers.

II. REPS COMPLIANCE OBLIGATION

Duke Energy Progress calculates its NC REPS Compliance Obligations[1] for 2018, 2019, and 2020 based on interpretation of the statute (NC Gen. Stat. § 62-133.8), the Commission's rules implementing Senate Bill 3 (Rule R8-67), and subsequent Commission orders, as applied to the Company's actual or forecasted retail sales in the Planning Period. The Company's contracts with wholesale customers for whom it supplied REPS compliance services terminated on December 31, 2017, therefore, this Compliance Plan only reflects REPS compliance services for DEP's retail customers. Table 1 below shows the Company's retail customers' REPS Compliance Obligation.

[1] For the purposes of this Compliance Plan, Compliance Obligation is more specifically defined as Duke Energy Progress' native load obligations for the Company's retail sales. The Company's contracts with the Town of Sharpsburg, the Town of Statonsburg, the Town of Lucama, the Town of Black Creek and the Town of Winterville terminated on December 31, 2017

Table 1: Duke Energy Progress' NC REPS Compliance Obligation

Compliance Year	Previous Year DEP Retail Sales (MWhs) (1)	Solar Set-Aside (RECs)	Swine Set-Aside (RECs)	Poultry Set-Aside (RECs)	REPS Requirement (%)	Total REPS Compliance Obligation (RECs)
2018	36,829,899	73,660	25,781	197,318	10%	3,682,990
2019	37,521,080	75,042	26,265	253,695	10%	3,752,108
2020	37,685,819	75,372	52,760	253,695	10%	3,768,582

(1) Annual compliance REC requirements are determined based on prior-year MWh sales. Retail sales figures shown for compliance years 2019 and 2020 are estimates of 2018 and 2019 retail sales, respectively.

As shown in Table 1, the Company's requirements in the Planning Period include the solar energy resource requirement (Solar Set-Aside), swine waste resource requirement (Swine Waste Set-Aside), and poultry waste resource requirement (Poultry Waste Set-Aside). In addition, the Company must also ensure that, in total, the RECs that it produces or procures, combined with energy efficiency savings, is an amount equivalent to 10% of its prior-year retail sales in compliance years 2018, 2019 and 2020. The Company refers to this as its Total Obligation. For clarification, the Company refers to its Total Obligation, net of the Solar, Swine Waste, and Poultry Waste Set-Aside requirements, as its General Requirement.

III. REPS COMPLIANCE PLAN

In accordance with Commission Rule R8-67b(1)(i), the Company describes its planned actions to comply with the Solar, Swine Waste, and Poultry Waste Set-Asides, as well as the General Requirement below. The discussion first addresses the Company's efforts to meet the Set-Aside requirements and then outlines the Company's efforts to meet its General Requirement in the Planning Period.

A. SOLAR ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(d), the Company must produce or procure solar RECs equal to a minimum of 0.20% of the prior year's total electric energy in megawatt-hours (MWh) sold to retail customers in North Carolina in 2018, 2019 and 2020.

Based on the Company's actual retail sales in 2017, the Solar Set-Aside is 73,660 RECs in 2018. Based on forecasted retail sales, the Solar Set-Aside is projected to be approximately 75,042 RECs in 2019 and 75,372 RECs in 2020. The Company has fully satisfied and vastly exceeded the minimum Solar Set-Aside requirements in the Planning Period through a combination of Power Purchase Agreements and Company-owned solar facilities, including those listed below.

- Camp Lejeune Solar Facility – 13MW, located in Onslow County, placed in service in November 2015;
- Warsaw Solar Facility – 65MW, located in Duplin County, placed in service in December 2015;
- Fayetteville Solar Facility – 23MW, located in Bladen County, placed in service in December 2015; and
- Elm City Solar Facility – 40MW, located in Wilson County, placed in service in March 2016.

Additional details with respect to the REC purchase agreements are set forth in Exhibit A.

B. SWINE WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(e), as amended by the North Carolina Utilities Commission (NCUC) *Order Modifying the Swine and Poultry Waste Set-Aside Requirement and Providing Other Relief*, Docket No. E-100, Sub 113 (October 2017), for compliance years 2018 and 2019, at least 0.07%, and in 2020, at least 0.14%, of prior-year total retail electric energy sold in aggregate by utilities in North Carolina must be supplied by energy derived from swine waste. The Company's Swine Waste Set-Aside is estimated to be 25,781 RECs in 2018, 26,265 RECs in 2019, and 52,760 RECs in 2020.

Swine waste-to-energy compliance challenges have been numerous and varied. Three paths to the creation of swine waste-to-energy RECs have been identified, although each face unique challenges.

1. On-farm generation

Projects consisting of digestion and generation on a single farm or tight cluster of farms often face gas production and feedstock agreement challenges, as well as interconnection difficulties. The Company understands that many farms in NC are contract growers and have only limited term agreements with the integrators. Accordingly, many contract growers are not in a position to provide a firm supply of waste sufficient to support project financing. On July 27, 2017 Governor Cooper signed into law the "Competitive Energy Solutions for North Carolina" bill or House Bill 589 (HB 589) (SL 2017-92), which includes establishing an expedited interconnection review process for swine and poultry waste facilities that are two megawatts or less in size. This provision should help overcome some of the interconnection difficulties projects have experienced in the past.

2. Centralized digestion

This type of system would benefit farmers that cannot individually construct and operate an anaerobic digester manure handling system on their own due to the capital expense or just don't have the number of animals required to operate a digester successfully or cost effectively. Farms located close to each other could share the cost of the centrally located digester system. The centralized digester operated by an individual or private company would carry out the operation and maintenance of the digester and its mechanical systems. It would have the same advantages as on-farm digesters of odor reduction, pathogen and weed seed destruction, biogas production and a stable effluent ready to fertilize fields and crops. A downside with centralized digestion exists if the liquid swine waste has to be transported to the central site. One project has overcome this risk by co-locating the facility adjacent to a swine processing plant.

The Company recognizes that NIMBY (Not In My Back Yard) issues may scuttle some developers' plans for overcoming fuel supply and interconnection problems faced by more rural, on-farm projects.

3. Directed biogas

In theory, directed biogas[2] reduces costs by using large, efficient, centralized generation in the place of smaller, less-efficient reciprocating engines typical of other projects. Technological advances in this field have helped drive pricing down to comparable levels of on-site generation for swine projects. The Company has worked diligently with Piedmont Natural Gas and others in the Alternative Gas stakeholder group to help develop alternative natural gas specifications and contracts that developers can utilize for interconnection. Continued challenges in this area include pipeline interconnection, gas clean-up requirements prior to injection and the general lack of physical proximity between clusters of farms and pipeline infrastructure.

The Company has entered into two contracts to purchase swine waste-derived directed biogas from projects in North Carolina. One of these projects, Optima KV, successfully interconnected with Piedmont Natural Gas in March 2018 and is sending biogas to DEP's Smith Energy Complex where swine RECs are being generated. The Company continues to explore opportunities for additional directed biogas in North Carolina through discussions with

[3] "Directed Biogas" is defined as pipeline quality methane, injected into the pipeline system, and nominated to Duke Energy Progress generating facilities; this methane is biogenically derived from Swine Waste, Poultry Waste, and general Biomass sources.

developers as well as participation in a collaborative group working to deploy renewable natural gas in Eastern North Carolina.

On June 19, 2018, the NCUC issued an *Order Approving Appendix F and Establishing Pilot Program* in Docket No. G-9, Sub 698. This Order introduces some uncertainty surrounding the future of swine and poultry waste-derived directed biogas projects, as it establishes a three-year pilot program where Piedmont Natural Gas (Piedmont) will provide information to the NCUC regarding the impact of Alternative Gas[3] on its system operations and its customers. Piedmont and other Alternative Gas suppliers may apply to the Commission to participate in the pilot program; however, it must be demonstrated to the Commission that such additions will be useful in gathering the information and data sought by the Commission. At the end of the three-year period, the Commission will consider additional modifications to Appendix F, which sets forth the terms and conditions under which Piedmont will accept Alternative Gas into its system, based on the experience gained during the pilot period. Therefore, since NCUC approval is now required for any new swine or poultry-derived biogas project to be accepted into the pilot program, there's an additional level of uncertainty surrounding new swine and poultry-derived directed biogas projects coming online and the timing of these projects. All of these factors have presented challenges to timely project development of these resources as well as the relatively high cost that will likely be required to ultimately develop and deliver RECs from swine and poultry waste fuel.

In an effort to meet compliance with the Swine Waste Set Aside, the Company (1) continues direct negotiations for additional supplies of both in-state and out-of-state resources; (2) works diligently to understand the technological, permitting, and operational risks associated with various methods of producing qualifying swine RECs and to aid developers in overcoming those risks; when those risks cannot be overcome, the Company works with developers via contract amendments to adjust for outcomes that the developers believe are achievable based on new experience; (3) explores modifications to current biomass and set-asides contracts by working with developers to add swine waste to their fuel mix; (4) continues pursuit of swine-derived directed biogas from North Carolina facilities to be directed to DEP's combined cycle plants for combustion and generation; (5) utilizes the broker market for out-of-state swine RECs available in the market; (6) engages the North Carolina Pork Council (NCPC) in a project evaluation collaboration effort that will allow the Company and the NCPC to discuss project viability, as

[3] "Alternative Gas" is defined in Appendix F as gas capable of combustion in customer appliances or facilities which is similar in heat content and chemical characteristics to natural gas produced from traditional underground well sources and which is intended to act as a substitute or replacement for Natural Gas (as that term is defined in Piedmont's North Carolina Service Regulations). Alternative Gas shall include but not be limited to biogas, biomethane, and landfill gas, as well as any other type of natural gas equivalent produced or manufactured from sources other than traditional underground well sources.

appropriate with respect to the Company's obligations to keep certain sensitive commercial information confidential; and (7) participates in the North Carolina Energy Policy Council Biogas Working Group.

In addition, in December 2017, DEP, together with Duke Energy Carolinas (jointly, "The Companies"), issued a Request for Proposals soliciting proposals for swine waste fueled biogas, the supply of electric power fueled by swine waste, or swine RECs. This RFP solicited up to 750,000 MMBtu (million British thermal units), or the equivalent in MWh (megawatt hours) which is approximately 110,000 MWh from project developers. The Companies received seven responses to the RFP, have evaluated the proposals, and are in contract discussions with two of the projects. In addition, the Companies are working with three other bids from the RFP while the respondents further develop their projects before moving forward.

In spite of Duke Energy Progress' active and diligent efforts to comply with its Swine Waste Set-Aside requirements, the Company will not be able to procure sufficient volumes of RECs to meet the requirements in 2018. DEP's ability to meet the 2018 compliance requirement is dependent on the performance of swine waste-to-energy developers under current contracts, many of which have encountered difficulties in achieving the full REC output of their contracts due to issues including local opposition to siting of the facilities, interconnection challenges, the inability to secure firm and reliable sources of swine waste feedstock from waste producers in North Carolina, and technological challenges encountered when ramping up production. In addition, two contracts for swine waste RECs were terminated due to failure to perform. Due to its expected non-compliance in 2018, the Company will submit a motion to the Commission for approval of a request to lower the 2018 compliance requirement to 0.02% of prior-year retail sales and delay all subsequent increases by one year.

The Company's ability to comply in 2019 and 2020 remains subject to multiple variables, particularly related to counterparty achievement of projected delivery requirements and commercial operation milestones. Additional details with respect to the Company's compliance efforts and REC purchase agreements are set forth in Exhibit A and the Company's semiannual progress reports, filed confidentially in Docket No. E-100 Sub113A. The Company remains actively engaged in seeking additional resources and continues to make every reasonable effort to comply with the swine waste set-aside requirements.

C. POULTRY WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(f), as amended by NCUC *Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief*, Docket No. E-100, Sub 113 (October 2017), for calendar year 2018, at least 700,000 MWhs, and for 2019 and 2020, at least 900,000 MWhs, or an equivalent amount of energy, shall be produced or procured each year from poultry waste, as defined per the Statute and additional clarifying Orders. As the Company's retail sales share of the State's total retail megawatt-hour sales is approximately 28%, the Company's Poultry Waste Set-Aside is estimated to be 197,318 RECs in 2018, 253,695 RECs in 2019, and 253,695 in 2020.

In an effort to meet compliance with the Poultry Waste Set-Aside, the Company (1) continues direct negotiations for additional supplies of both in-state and out-of-state resources with multiple counterparties; (2) works diligently to understand the technological, permitting, and operational risks associated with various methods of producing qualifying poultry RECs and to aid developers in overcoming those risks; when those risks cannot be overcome, the Company works with developers via contract amendments to adjust for more realistic outcomes; (3) explores leveraging current biomass contracts by working with developers to add poultry waste to their fuel mix; (4) explores adding thermal capabilities to current poultry sites to bolster REC production; (5) explores poultry-derived directed biogas at facilities located in North Carolina and directing such biogas to combined cycle plants for combustion and electric generation; (6) utilizes the broker market for out-of-state poultry RECs available in the market; and (7) participates in the North Carolina Energy Policy Council Biogas Working Group.

Duke Energy Progress is in a position to comply with its Poultry Waste Set-Aside requirement in 2018, but the Company's ability to procure sufficient volumes of RECs to meet its pro-rata share of the increased Poultry Waste Set-Aside requirements in 2019 and 2020 remains uncertain and largely subject to counterparty performance. One new poultry facility has come online in 2018 and another is expected to come online in 2019. However, a third is undergoing an outage to perform repairs and three contracts for out-of-state poultry waste RECs were terminated due to failure to perform or force majeure issues. DEP's ability to comply in 2019 and 2020 is dependent on facilities producing at their contracted levels, and historical experience indicates that facilities usually experience some start-up issues and take time to reach full expected production levels. Ramping up to meet the increased compliance targets for 2019 - 2020 has been problematic because suppliers have either delayed projects or lowered the volume of RECs to be produced. The Company is, nevertheless, encouraged by the growing use of thermal poultry RECs and the proposals that it has recently received from developers.

In order for all electric suppliers to be able to meet the state-wide poultry waste set-aside requirement, the Company, along with the other North Carolina electric suppliers, will submit a motion to the Commission for approval of a request to reduce the 2018 Poultry Waste Set-Aside requirement to 300,000 MWh, and delay the subsequent increases to 700,000 MWh and 900,000 MWhs until 2019 and 2020, respectively.

The Company remains actively engaged in seeking additional resources and continues to make every reasonable effort to comply with the Poultry Waste Set-Aside requirements. Additional details with respect to the Company's compliance efforts and REC purchase agreements are set forth in Exhibit A and the Company's semiannual progress reports, filed confidentially in Docket No. E-100 Sub113A.

D. GENERAL REQUIREMENT RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8, DEP is required to comply with its Total Obligation in 2018, 2019 and 2020 by submitting for retirement a total volume of RECs equivalent to 10% of prior-year retail sales in North Carolina. Based on the Company's actual retail sales in 2017, the Total Requirement is 3,682,990 RECs in 2018. Based on forecasted retail sales, the Total Requirement is projected to be approximately 3,752,108 RECs in 2019, and 3,768,582 RECs in 2020. This requirement net of the Solar, Swine Waste, and Poultry Waste Set-Aside requirements, referred to as the General Requirement, is estimated to be 3,386,231 RECs in 2018, 3,397,106 RECs in 2019, and 3,386,755 RECs in 2020. The various resource options available to the Company to meet the General Requirement are discussed below, as well as the Company's plan to meet the General Requirement with these resources. The Company has contracted for, or otherwise procured, sufficient resources to meet its General Requirement in the Planning Period. The Company submits that the actions and plans described herein represent a reasonable and prudent plan for meeting the General Requirement.

1. Use of Solar Resources for General Requirement

Duke Energy Progress plans to meet a significant portion of the General Requirement with RECs from solar facilities. Solar energy has emerged as a predominant renewable energy resource in the Southeast, and the Company views the downward trend in solar equipment and installation costs over the past several years as a positive development. As such, the Company is using solar resources to contribute to our compliance efforts beyond the Solar Set-Aside minimum threshold for NC REPS, and will continue to do so during the Planning Period.

i. Net Metering Facilities

Under the current Net Metering for Renewable Energy Facilities Rider offered by DEP (Rider NM-4B), a customer receiving electric service under a schedule other than a time-of-use schedule with demand rates shall provide any RECs to DEP at no cost. Per the NCUC's June 2018 *Order Approving Rider and Granting Waiver Request*, filed in Docket No. E-2, Sub 1106, since net metering generators are not individually metered, DEP is permitted to estimate the RECs generated by these facilities using the PVWatts Solar Calculator developed by the National Renewable Energy Laboratory. Thus, DEP will follow the calculations approved by the NCUC to estimate the number of RECs generated from net metering facilities and will use these RECs for REPS compliance.

ii. North Carolina Solar Rebate Program

North Carolina HB 589 introduced a solar rebate program, which offers incentives to residential and nonresidential customers for the installation of small customer owned or leased solar energy facilities participating in the Company's net metering tariff. The incentive is limited to 10 kilowatts alternating current (kW AC) for residential solar installations and 100 kW AC for nonresidential solar installations. The program incentive shall be limited to 10,000 kW of installed capacity annually starting January 1, 2018 and continuing until December 31, 2022. Since all customers participating in the Solar Rebate Program must be participating in DEP's net metering tariff, DEP retains the rights to the RECs from these facilities, as described in the net metering section above. In addition, under HB 589, DEP shall be authorized to recover all reasonable and prudent costs of incentives provided to customers and program administrative costs through the REPS Rider.

2. Energy Efficiency

During the Planning Period, the Company plans to meet up to 25% of the Total Obligation with Energy Efficiency (EE) savings, which is the maximum allowable amount under NC Gen. Stat. § 62-133.7(b)(2)c. The Company continues to develop and offer its customers new and innovative EE programs that will deliver savings and count towards its future NC REPS requirements. The Company has attached a list of those EE measures that it plans to use toward REPS compliance, including projected impacts and a description of the measure, as Exhibit B.

3. Biomass Resources

Duke Energy Progress plans to meet a portion of the General Requirement through a variety of biomass resources, including landfill gas to energy, combined heat and power, and direct combustion of biomass fuels. The Company is purchasing RECs from multiple biomass facilities in the Carolinas, including landfill gas to energy facilities and biomass-fueled combined heat and power facilities, all of which qualify as renewable energy facilities. Please see Exhibit A for more information on each of these contracts.

Duke Energy Progress notes, however, that reliance on direct-combustion biomass remains limited in long-term planning horizons, in part due to continued uncertainties around the developable potential of such resources in the Carolinas and the projected availability of more cost-effective forms of renewable resources.

4. Hydroelectric Power

Duke Energy Progress plans to use hydroelectric power from hydroelectric generation suppliers whose facilities have received Qualifying Facility (QF or QF Hydro) status. RECs from QF Hydro facilities will be used towards the General Requirements of Duke Energy Progress' retail customers. Please see Exhibit A for more information on these contracts.

5. Wind

Duke Energy Progress considers wind a potential viable option to support increased diversity of the renewables portfolio and potentially long-term general compliance needs. While the Company may rely upon wind resources for future REPS compliance, the extent and timing will depend on deliverability, policy changes and market prices. Additional opportunities may exist to transmit wind energy from out of state regions where wind is more prevalent into the Carolinas.

6. Competitive Procurement of Renewable Energy (CPRE)

North Carolina HB 589 introduced a competitive procurement process for adding 2,660 MW (subject to adjustment) of additional renewable energy and capacity in the Carolinas, with proposals issued over a 45-month period beginning on February 21, 2018, when the NCUC approved the CPRE Program. The Tranche 1 CPRE RFP was issued on July 10, 2018 with proposals due on October 9, 2018. Renewable energy facilities eligible to participate in the CPRE solicitation(s) include those facilities that use renewable energy resources identified in G. S. § 62-133.8(a)(8), the REPS statute. DEP plans to use the RECs acquired through the CPRE RFP solicitations as needed for its future REPS compliance requirements and has therefore included the planned MW allocation and timeline in its REPS compliance planning process. Please see the CPRE Program Plan, which is included as Attachment II to this IRP, for additional information.

E. SUMMARY OF RENEWABLE RESOURCES

The Company has evaluated, procured, and/or developed a variety of types of renewable energy and energy efficiency resources to meet its NC REPS requirements within the compliance Planning Period. As noted above, several risks and uncertainties exist across the various types of resources and the associated parameters of the NC REPS requirements. The Company continues to carefully monitor opportunities and unexpected developments across all facets of its compliance requirements. Duke Energy Progress submits that it has crafted a prudent, reasonable plan with a diversified balance of renewable resources that will allow the Company to comply with its NC REPS obligation over the Planning Period.

IV. COST IMPLICATIONS OF REPS COMPLIANCE PLAN

A. CURRENT AND PROJECTED AVOIDED COST RATES

The Current Avoided Energy and Capacity costs included in the table below represent key data elements used to determine the PP (NC) tariff rates filed for DEP in Docket No. E-100, Sub 148.

The “Energy” columns reflect the cost of fuel and variable O&M per kwh embedded in the filed tariff energy rates. The “Capacity” column is based on the installed cost and capacity rating of a combustion turbine unit as reflected in the filed capacity rates.

The Projected Avoided Energy Costs included below reflect updated estimates of the same data elements provided with the current costs. The capacity cost shown is a placeholder based on the current avoided cost filing.

The avoided costs contained herein are subject to change, including (but not limited to) fuel price projections, variable O&M estimates, turbine costs and equipment capability.

Table 2: Current and Projected Avoided Cost Rates Table

[BEGIN CONFIDENTIAL]

[redacted]

[END CONFIDENTIAL]

B. PROJECTED TOTAL NORTH CAROLINA RETAIL AND WHOLESALE SALES AND YEAR-END NUMBER OF CUSTOMER ACCOUNTS BY CLASS

Table 3: Retail Sales

	2017 Actual	2018 Forecast	2019 Forecast	2020 Forecast
Retail MWh Sales	36,829,899	37,521,080	37,685,819	38,051,362

The MWh sales reported above are those applicable to REPS compliance years 2018-2021, and represent actual MWh sales for 2017, and projected MWh sales for 2018-2020.

Table 4: Retail Year-end Number of Customer Accounts

	2017 (Actual)	2018 (Projected)	2019 (Projected)	2020 (Projected)
Residential Accts	1,204,664	1,218,411	1,232,738	1,247,020
General Accts	196,549	198,899	201,023	203,179
Industrial Accts	1,866	1,851	1,834	1,816

The number of accounts reported above are those applicable to the cost caps for compliance years 2018–2021, and represent the actual number of REPS accounts for year-end 2017, and the projected number of REPS accounts for year-end 2018–2020.

C. PROJECTED ANNUAL COST CAP COMPARISON OF TOTAL AND INCREMENTAL COSTS, REPS RIDER AND FUEL COST IMPACT

Projected compliance costs for the Planning Period are presented in the cost tables below by calendar year. The cost cap data is based on the number of accounts as reported above.

Table 5: Projected Annual Cost Caps and Fuel Related Cost Impact

	2018	2019	2020
Total projected REPS compliance costs	$ 251,128,943	$ 258,001,476	$ 267,507,096
Recovered through the Fuel Rider	$ 209,892,045	$ 210,646,041	$ 212,139,327
Total incremental costs (REPS Rider)	$ 41,236,898	$ 47,355,435	$ 55,367,769
Total including Regulatory Fee	$ 41,294,711	$ 47,421,825	$ 55,445,392
Projected Annual Cost Caps (REPS Rider)	$ 63,874,278	$ 64,583,052	$ 65,271,008

EXHIBIT A

Duke Energy Progress, LLC's 2018 REPS Compliance Plan
Duke Energy Progress' Renewable Resource Procurement from 3rd Parties
(signed contracts as of June 30, 2018)

[BEGIN CONFIDENTIAL]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted] **[END CONFIDENTIAL]**

EXHIBIT B

Duke Energy Progress, LLC's 2018 REPS Compliance Plan
Duke Energy Progress, LLC's EE Programs and Projected REPS Impacts

Forecast of Annual Energy Efficiency Impacts for the REPS Compliance Planning Period 2018-2020 (kWh)			
Residential Programs	**2018**	**2019**	**2020**
Energy Education Program for Schools	1,706,838	1,558,153	1,184,239
Multi-Family Energy Efficiency	12,903,924	9,349,647	7,105,989
My Home Energy Report	36,275,384	0	0
Neighborhood Energy Saver	1,797,238	1,279,252	972,266
Residential Energy Assessments	2,018,551	1,536,956	1,168,129
Residential New Construction	1,246,449	8,358,761	6,352,889
Residential Smart $aver® EE	2,760,819	2,973,461	2,259,912
Save Energy and Water Kit	25,889,028	19,847,824	15,084,893
Sub Total	**84,598,231**	**44,904,054**	**34,128,318**
Non Residential Programs	**2018**	**2019**	**2020**
Non-Residential Smart $aver Products and Assessment	64,844,522	66,508,038	72,134,894
Non-Residential Smart $aver Performance Incentive	1,492,508	5,715,382	6,198,927
Small Business Energy Saver	44,276,963	38,433,483	41,685,116
EnergyWise^{SM} for Business	3,196,245	1,322,020	1,433,868
Sub Total	**113,810,239**	**111,978,923**	**121,452,805**
Combined Residential and Non-Residential Programs	**2018**	**2019**	**2020**
Energy Efficient Lighting	57,338,634	47,190,199	35,865,851
Sub Total	**57,338,634**	**47,190,199**	**35,865,851**
Total	**255,747,104**	**204,073,176**	**191,446,974**

DEP ENERGY EFFICIENCY PROGRAMS

DEP uses the following energy efficiency (EE) programs in its IRP to efficiently and cost-effectively alter customer demands and reduce the long-run supply costs for energy and peak demand.

Residential EE Programs

- Energy Efficiency Education
- Multi-Family Energy Efficiency
- My Home Energy Report
- Neighborhood Energy Saver (Low-Income)
- Residential Energy Assessments
- Residential New Construction
- Residential Smart $aver® EE
- Residential Smart $aver® Energy Efficiency
- Save Energy and Water Kit

Non-Residential EE Programs

- Non-Residential Smart $aver® Energy Efficiency Products and Assessment
- Non-Residential Smart $aver® Performance Incentive
- Small Business Energy Saver
- EnergyWise^{SM} for Business

Combined Residential/Non-Residential EE Programs

- Energy Efficient Lighting

Residential EE Programs

Energy Efficiency Education Program

The Energy Efficiency Education Program is an energy efficiency program available to students in grades K-12 enrolled in public and private schools who reside in households served by Duke Energy Progress. The Program provides principals and teachers with an innovative curriculum that educates students about energy, resources, how energy and resources are related, ways energy is wasted and how to be more energy efficient. The centerpiece of the current curriculum is a live theatrical production focused on concepts such as energy, renewable fuels and energy efficiency performed by two professional actors.

Following the performance, students are encouraged to complete a home energy survey with their family to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption and is available at no cost to student households at participating schools. Teachers receive supportive educational material for classroom and student take home assignments. The workbooks, assignments and activities meet state curriculum requirements.

Multi-Family Energy Efficiency Program

The Multi-family Energy Efficiency Program provides energy efficient lighting and water measures to reduce energy usage in eligible multi-family properties. The Program allows Duke Energy Progress to target multi-family apartment complexes with an alternative delivery channel. The measures are installed in permanent fixtures by the program administrator or the property management staff. The program offers LEDs including A-Line, Globes and Candelabra bulbs and energy efficient water measures such as bath and kitchen faucet aerators, water saving showerheads and pipe wrap.

My Home Energy Report Program

The My Home Energy Report (MyHER) Program provides residential customers with a comparative usage report that engages and motivates customers by comparing energy use to similar residences in the same geographical area based upon the age, size and heating source of the home. The report also empowers customers to become more efficient by providing them with specific energy saving recommendations to improve the efficiency of their homes. The actionable energy savings tips, as well as measure-specific coupons, rebates or other Company program offers that may be included in a customer's report are based on that specific customer's energy profile.

The program includes an interactive online portal that allows customers to further engage and learn more about their energy use and opportunities to reduce usage. Electronic versions of the My Home Energy Report are sent to customers enrolled on the portal. In addition, all MyHER customers with an email address on file with the Company receive an electronic version of their report monthly.

Neighborhood Energy Saver (Low-Income) Program

DEP's Neighborhood Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within the households of income qualifying residential customers. The Program utilizes a Company-selected vendor to: (1) provide an on-site energy assessment of the residence to identify appropriate energy conservation measures, (2) install a comprehensive package of energy conservation measures at no cost to the customer, and (3) provide one-on-one energy education. Program measures address end-uses in lighting, refrigeration, air infiltration and HVAC applications.

Program participants receive a free energy assessment of their home followed by a recommendation of energy efficiency measures to be installed at no cost to the resident. A team of energy technicians will install applicable measures and provide one-on-one energy education about each measure emphasizing the benefit of each and recommending behavior changes to reduce and control energy usage.

Residential Energy Assessments Program

The Residential Energy Assessments Program provides eligible customers with a free in-home energy assessment, performed by a Building Performance Institute (BPI) certified energy specialist and designed to help customers reduce energy usage and save money. The BPI certified energy specialist completes a 60 to 90-minute walk through assessment of a customer's home and analyzes energy usage to identify energy savings opportunities. The energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The customer also receives a customized report that identifies actions the customer can take to increase their home's efficiency.

In addition to a customized report, customers receive an energy efficiency starter kit with a variety of measures that can be directly installed by the energy specialist. The kit includes measures such as energy efficiency lighting, low flow shower head, low flow faucet aerators, outlet/switch gaskets, weather stripping and an energy saving tips booklet.

Residential New Construction Program

The Residential New Construction Program provides incentives for new single family and multi-family residential dwellings (projects of three stories and less) that fall within the 2012 North Carolina Residential Building Code to meet or exceed the 2012 North Carolina Energy Conservation Code High Efficiency Residential Option (HERO). If a builder or developer constructing to the HERO standard elects to participate, the Program offers the homebuyer an incentive guaranteeing the heating and cooling consumption of the dwelling's total annual energy costs. Additionally, the Program incents the installation of high-efficiency heating ventilating and air conditioning (HVAC) and heat pump water heating (HPWH) equipment in new single family, manufactured, and multi-family residential housing units.

New construction represents a unique opportunity for capturing cost effective EE savings by encouraging the investment in energy efficiency features that would otherwise be impractical or more costly to install at a later time.

Residential Smart $aver® Energy Efficiency Program

The Residential Smart $aver® Energy Efficiency Program offers DEP customers a variety of energy conservation measures designed to increase energy efficiency in existing residential dwellings. The Program utilizes a network of participating contractors to encourage the installation of: (1) high efficiency central air conditioning (AC) and heat pump systems with optional add on measures such as Quality Installation and Smart Thermostats, (2) attic insulation and sealing, (3) heat pump water heaters, and (4) high efficiency variable speed pool pumps.
The prescriptive menu of energy efficiency measures provided by the program allows customers the opportunity to participate based on the needs and characteristics of their individual homes. A referral channel provides free, trusted referrals to customers seeking reliable, qualified contractors for their energy saving home improvement needs.

Save Energy and Water Kit Program

The Save Energy and Water Kit is designed to increase the energy efficiency within single family homes by offering low flow water fixtures and insulated pipe tape to residential customers with electric water heaters. Participants receive a free kit that includes installation instructions and varying numbers (based on the number of full bathrooms in their home) of bath aerators, shower heads, kitchen aerators and pipe insulation tape. The program has a website in place that customers can access to learn more about the program or watch video's produced to aid in the installation of the kit measures.

Non-Residential EE Programs

Non-Residential Smart $aver® Energy Efficient Products and Assessment Program

The Non-Residential Smart $aver® Energy Efficient Products and Assessment Program provides incentives to DEP commercial and industrial customers to install high efficiency equipment in applications involving new construction and retrofits and to replace failed equipment.

Commercial and industrial customers can have significant energy consumption but may lack knowledge and understanding of the benefits of high efficiency alternatives. The Program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the Program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products.

The program provides incentives through prescriptive measures, custom measures and technical assistance.

- *Prescriptive Measures*: Customers receive incentive payments after the installation of certain high efficiency equipment found on the list of pre-defined prescriptive measures, including lighting; heating, ventilating and air conditioning equipment; and refrigeration measures and equipment.
- *Custom Measures*: Custom measures are designed for customers with electrical energy saving projects involving more complicated or alternative technologies, whole-building projects, or those measures not included in the Prescriptive measure list. The intent of the Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company's technical or financial assistance. Unlike the Prescriptive portion of the program, all Custom measure incentives require pre-approval prior to the project implementation.
- *Energy Assessments and Design Assistance*: Incentives are available to assist customers with energy studies such as energy audits, retro commissioning, and system-specific energy audits for existing buildings and with design assistance such as energy modeling for new construction. Customers may use a contracted Duke Energy vendor to perform the work or they may select their own vendor. Additionally, the Program assists customers who identify measures that may qualify for Smart $aver Incentives with their applications. Pre-approval is required.

Non-Residential Smart $aver® Performance Incentive Program

The Non-Residential Smart $aver® Performance Incentive Program offers financial assistance to qualifying commercial, industrial and institutional customers to enhance their ability to adopt and install cost-effective electrical energy efficiency projects. The Program encourages the installation of new high efficiency equipment in new and existing nonresidential establishments as well as efficiency-related repair activities designed to maintain or enhance efficiency levels in currently installed equipment. Incentive payments are provided to offset a portion of the higher cost of energy efficient installations that are not eligible under the Smart $aver® EE Products and Assessment program. The Program requires pre-approval prior to project initiation.

The types of projects covered by the Program include projects with some combination of unknown building conditions or system constraints, or uncertain operating, occupancy, or production schedules. The intent of the Program is to broaden participation in non-residential efficiency programs by being able to provide incentives for projects that previously were deemed too unpredictable to calculate an acceptably accurate savings amount, and therefore ineligible for incentives. This Program provides a platform to understand new technologies better. Only projects that demonstrate that they clearly reduce electrical consumption and/or demand are eligible for incentives.

The key difference between this program and the custom component of the Non-Residential Smart $aver® Energy Efficient Products and Assessment program is that Performance Incentive participants get paid based on actual measure performance, and involves the following two step process.

- Incentive #1: For the portion of savings that are expected to be achieved with a high degree of confidence, an initial incentive is paid once the installation is complete.
- Incentive #2: After actual performance is measured and verified, the performance-based part of the incentive is paid. The amount of the payout is tied directly to the savings achieved by the measures.

Small Business Energy Saver Program

The Small Business Energy Saver Program reduces energy usage through the direct installation of energy efficiency measures within qualifying non-residential customer facilities. Program measures address major end-uses in lighting, refrigeration, and HVAC applications. The program is available to existing non-residential customers that are not opted-out of the Company's EE/DSM rider and have an average annual demand of 180 kW or less per active account.

Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from Duke Energy Progress. The customer makes the final determination of which measures will be installed after receiving the results of the energy assessment. The Company-authorized vendor schedules the installation of the energy efficiency measures at a convenient time for the customer, and electrical subcontractors perform the work.

EnergyWise℠ for Business Program

EnergyWise℠ for Business is both an energy efficiency and demand response (DR) program for non-residential customers. Program participants can choose between a Wi-Fi thermostat or load control switch that will be professionally installed for free on each air conditioning or heat pump unit. The WiFi thermostat option provides both EE and DR savings opportunities, while the load control switch option only offers DR savings capability. Only the EE component of the program is assumed to provide energy savings.

- ***EE Component***
  Participants choosing the thermostat will be given access to a portal that will allow them to set schedules, adjust the temperature set points, and receive energy conservation tips and

communications from DEC. In addition to the portal access, participants will also receive conservation period notifications, so they can make adjustments to their schedules or notify their employees of the upcoming conservation periods.

- ***DR Component:***
  The DR portion of the program allows DEP to reduce the operation of participants' air conditioning units to mitigate system capacity constraints and improve reliability of the power grid. In addition to equipment choice, participants can also select the cycling level they prefer (i.e., a 30%, 50% or 75% reduction of the normal on/off cycle of the unit). During a conservation period, DEP will send a signal to the thermostat or switch to reduce the on time of the unit by the cycling percentage selected by the participant. Participating customers will receive a $50 annual bill credit for each unit at the 30% cycling level, $85 for 50% cycling, or $135 for 75% cycling. Participants that have a heat pump unit with electric resistance emergency/back up heat and choose the thermostat can also participate in a winter option that allows control of the emergency/back up heat at 100% cycling for an additional $25 annual bill credit. Participants will also be allowed to override two conservation periods per year.

Combined Residential/Non-Residential Customer Programs

Energy Efficient Lighting Program

The Energy Efficient Lighting Program partners with lighting manufacturers and retailers across North and South Carolina to provide marked-down prices at the register to DEP customers purchasing energy efficient lighting products. Starting in 2017, the Program removed CFLs and only offers LEDs and energy-efficient fixtures.

As the program enters its eighth year, the DEP Energy Efficient Lighting Program will continue to encourage customers to adopt energy efficient lighting through incentives on a wide range of energy efficient lighting products. Customer education is imperative to ensure customers are purchasing the right bulb for the application in order to obtain high satisfaction with lighting products and subsequent purchases.

DUKE ENERGY PROGRESS

ATTACHMENT II: The Duke Energy Progress Competitive Procurement of Renewable Energy (CPRE) Plan

Duke Energy Carolinas, LLC's & Duke Energy Progress, LLC's Competitive Procurement of Renewable Energy (CPRE) Program Plan Update September 1, 2018

Introduction:

In accordance with North Carolina Utilities Commission ("NCUC" or the "Commission") Rule R8-71(g), Duke Energy Carolinas, LLC ("DEC"), and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or "the Companies") provide this update to the Program Plan for the Companies' Competitive Procurement of Renewable Energy ("CPRE") Program ("Program").

The CPRE Program is being implemented pursuant to N.C. Gen. Stat. § 62-110.8, as enacted by North Carolina Session Law 2017-192 ("HB 589"). This updated Program Plan presents the Companies' current plans for implementing the CPRE Program. The following provides a brief summary of significant events since the initial Program Plan was filed on November 27, 2017, in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, as part of the initial CPRE Program Petition filing.

On January 9, 2018, the NCUC approved Accion, Inc. to act as the independent administrator ("IA") of the CPRE Program by its *Order Approving the Independent Administrator of the CPRE Program* in Docket No. E-100, Sub 151.

On February 21, 2018, the NCUC issued its *Order Modifying and Approving Joint CPRE Program* ("Program Order"). The Program Order directed certain modifications to the initial Program Guidelines, which were incorporated into the CPRE Tranche 1 RFP documents that served as the Companies' Guidelines for purposes of the Tranche 1 RFP.[4]

On June 8, 2018, Duke filed its Tranche 1 Pro Forma Power Purchase Agreement ("PPA"). On June 25, 2018, the NCUC issued its *Order Denying Joint Motion, Approving Pro Forma PPA, and Providing Other Relief* approving the PPA for use in Tranche 1.

The Companies delivered the final RFP to the IA on July 5, 2018. On July 10, 2018, the IA issued the final Tranche 1 RFP documents opening the RFP to bids. By its order dated August 10, 2018, the Commission delayed the close of the Tranche 1 RFP window until October 9, 2018. The Companies anticipate completing Tranche 1 by the end of May 2019.

[4] As explained in the Companies' letter filed on May 11, 2018, the Tranche 1 summary RFP document constituted the updated CPRE Program Guidelines as required under Rule R8-71(f)(1)(ii) and conformed with the requirement of the Commission's Program Order to modify the initial CPRE Program Guidelines.

1. CPRE Compliance Plan

1.1. Implementation of Aggregate CPRE Program requirements

Under N.C. Gen. Stat. § 62-110.8(a), the Companies are responsible for procuring renewable energy and capacity through a competitive procurement program in a manner that allows the Companies to continue to reliably and cost-effectively serve customers' future energy needs. The Companies are required to procure energy and capacity from renewable energy facilities in the aggregate amount of 2,660 MW through requests for proposals (RFPs). The CPRE RFPs must be reasonably allocated over a term of 45 months beginning with the Commission's approval of the CPRE Program on February 21, 2018.

Renewable energy facilities eligible to participate in the CPRE RFPs include those facilities that use renewable energy resources identified in N.C. Gen. Stat. § 62-133.8(a)(8), have a nameplate capacity rating of 80 MW or less, and are placed in service after the date of the electric public utility's initial competitive procurement. The renewable energy facilities to be developed or acquired by the Companies or procured from a third party through a power purchase agreement under the CPRE Program must also deliver to the Companies all of the environmental and renewable attributes associated with the power.

The Companies can satisfy the CPRE Program requirements through any of the following:

> (i) Renewable energy facilities to be acquired from third parties and subsequently owned and operated by the Companies;
>
> (ii) Self-developed renewable energy facilities to be constructed, owned, and operated by the Companies up to the 30% cap identified in N.C. Gen. Stat. § 62-110.8(b)(4)[5]; or
>
> (iii) The purchase of renewable energy, capacity, and environmental and renewable attributes from renewable energy facilities owned and operated by third parties that commit to allow the Companies rights to dispatch, operate, and control the solicited renewable energy facilities in the same manner as the Companies' own generating resources.

Per N.C. Gen. Stat. § 62-110.8(b), electric public utilities may jointly or individually implement these aggregate competitive procurement requirements. The Companies plan to continue to jointly issue CPRE RFP solicitations to implement the CPRE Program while independently meeting their CPRE

[5] The Companies voluntarily agreed to recognize both Self-developed Proposals, as well as third-party PPA Proposals offered by any Duke Energy affiliate bid into the CPRE RFP Solicitation(s), as being subject to the 30% cap.

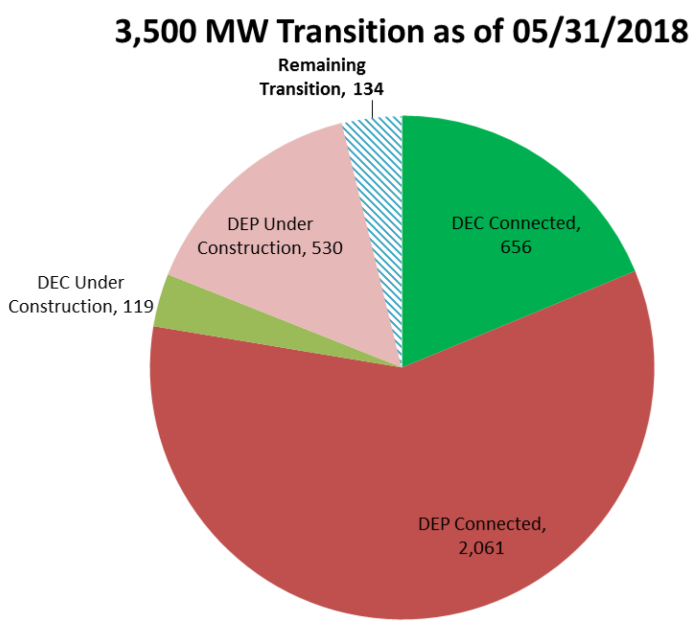
planning, reporting, and cost recovery obligations. The Companies are jointly filing this updated CPRE Program Plan for administrative efficiency.

1.2. Projected Uncontrolled Renewable Energy Generating Capacity

N.C. Gen. Stat. § 62-110.8(b)(1) provides that if prior to the end of the initial 45-month competitive procurement period, the Companies have executed PPAs and interconnection agreements for renewable energy capacity within their Balancing Authorities (BAs) that are not subject to economic dispatch or curtailment and were not procured pursuant to N.C. Gen. Stat. § 62-159.2 (Transition MW or Transition MW Projects) having an aggregate capacity in excess of 3,500 MW, the Commission shall reduce the competitive procurement aggregate amount by the amount of such exceedance (such adjusted targeted procurement amount, the CPRE Targeted Amount). If the aggregate capacity of such Transition MW Projects is less than 3,500 MW at the end of the initial 45-month competitive procurement period, the Commission shall require the Companies to conduct an additional competitive procurement in the amount of such deficit.

As of May 31, 2018, approximately 3,370 MW of Transition MW Projects are installed or under construction, leaving a deficit of approximately 130 MW, as seen in Figure 1. Note, at the time the initial Program Plan was filed in November, 2017, approximately 2,900 MW of Transition MW Projects were installed or under construction.

Figure 1. Status of Transition Renewable Energy Capacity by BA as of May 31, 2018



In addition to this 3,370 MW of Transition MW Projects that are installed/under construction as of May 31, 2018, there are a substantial number of additional projects that have already obtained a PPA or established a legally enforceable obligation (LEO) to sell to the Companies under the Commission-approved Docket No. E-100, Sub 140 or Docket No. E-100, Sub 148 standard offer avoided cost contracts or negotiated avoided cost contracts (Legacy PURPA Contracts), along with other pre-existing renewable energy procurement programs and solicitations within North Carolina and South Carolina. At this time, the Companies project that these additional projects will cause the 3,500 MW cap on Transition MW Projects to be exceeded. In fact, the Transition MW Projects could grow to as high as 4,700 MW (~1,100 DEC and ~3,600 DEP) by the end of the allotted CPRE procurement period (i.e., 45 months from the date of Commission approval of the initial CPRE program plan) (CPRE Procurement Period).

Figure 2 specifies additional projects that are "Pending Construction" but do not have both a signed Interconnection Agreement and a signed PPA at this time. With the addition of the "Pending Construction" projects alone, the 3,500 MW Transition threshold will be exceeded. In addition, the "Potential Additional MW" line item shown in Figure 2 reflects the Companies' projection of additional MWs that may be added to the Transition MW. The number was derived based on applying a materialization factor to the projects that have an established a LEO to sell to the Companies, plus potential capacity under the South Carolina Distributed Energy Resource Program Act. This includes a substantial number of MW of potential Transition MW Projects that are authorized to retain the rights to previously established LEOs under Section 1.(c) of HB 589. This increase in the number of Potential Additional MW is primarily attributable to a settlement agreement filed with the Commission on January 31, 2018 in Docket No. E-100, Sub 101. As previously noted, a project must have executed a PPA and an Interconnection Agreement prior to the end of the CPRE Procurement Period in order to qualify as a Transition MW. Given the uncertainty about the number of projects that will satisfy the statutory criteria, the Companies are currently projecting a range for total Transition MW of between 4,200 to 4,700.

Figure 2. Potential Transition MW

	DEC	DEP	TOTAL
Current Connected/ Under Construction	775	2,591	**3,366**
Pending Construction	139	275	**414**
Sub-Total	**914**	**2,866**	**3,780**
Potential Additional MW's*	80 to 175	350 to 725	350 to 820
TOTAL	**~1,000 to 1,100**	**~3,200 to 3,600**	**~4,200 to 4,700**

*Includes projects with a signed PPA, but no Interconnection Agreement as well as projects with a LEO but no PPA. The upper end of the range is based on the Companies' estimates of materialization rates for these projects. The lower end of the "Total" range is a more conservative assumed materialization rate.

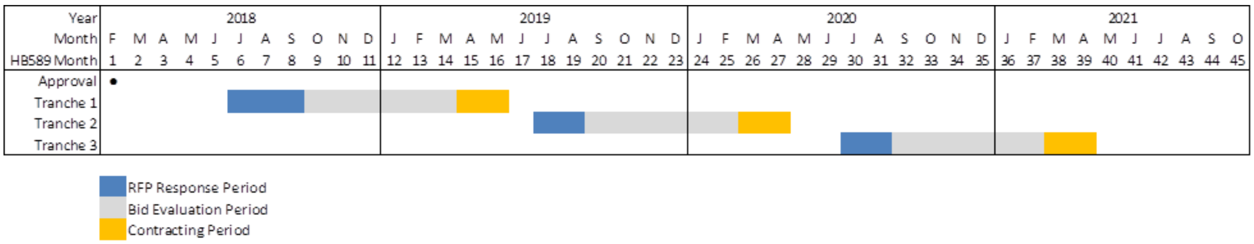
projections have assumed that there will be no re-allocation of capacity to the CPRE program for unsubscribed MW under G.S. 62-159.2 (Renewable Energy Procurement for Major Military Installations, Public Universities and Other Large Customers).

1.3. Planned RFP Solicitations

The Companies issued the Tranche 1 CPRE RFP on July 10, 2018, which seeks to procure approximately 680 MW of renewable energy capacity in the aggregate that meet the RFP criteria. The due date for proposal submission into the Tranche 1 RFP was originally set to September 11, 2018 but was extended to October 9, 2018 by order of the Commission issued August 10, 2018, in Docket No-100, Sub 101. All other Tranche 1 dates have been similarly extended. At this time, the Companies cannot comment on RFP activity as this solicitation is still open.

In consideration of the further refinement of the RFP process through the development of the Tranche 1 process as well as the likely reduced overall CPRE procurement target (a total of 1,460 to 1,960 MW), the Companies now propose to conduct a total of three solicitations (i.e., two additional solicitations after Tranche 1) according to the schedule set forth in Figure 3. Note, this is a change from the initial Program Plan filing which assumed four solicitations. This schedule is subject to change based on the actual number of Transition MWs, the results of previous Tranches and the desired size (MW) of future solicitations.

Figure 3. Planned CPRE RFP Solicitation Schedule



1.4. Allocations of Resources

As prescribed by N.C. Gen. Stat. § 62-110.8(c), the Companies have the authority to determine the location and allocated amount of each CPRE RFP to be procured within their respective service territories taking into consideration:

(i) the State's desire to foster diversification of siting of renewable energy resources throughout the State;
(ii) the efficiency and reliability impacts of siting of additional renewable energy facilities in each public utility's service territory; and
(iii) the potential for increased delivered cost to a public utility's customers as a result of siting additional renewable energy facilities in a public utility's service territory, including additional costs of ancillary services that may be imposed due to the operational or locational characteristics of a specific renewable energy resource technology, such as non-dispatchability, unreliability of availability, and creation or exacerbation of system congestion that may increase redispatch costs.

The Companies are currently planning to allocate and procure the CPRE Program Total Obligation through the Tranche 1-3 CPRE RFP Solicitations, discussed above, by soliciting the amounts of renewable energy resource capacity shown in Figure 4.

Figure 4. Planned CPRE Solicitation Targets by Tranche

	DEC (Approximate MW)	DEP (Maximum MW)
Tranche 1 – Issued	**600**	**80**
Tranche 2	400 to 600	80
Tranche 3	220 to 520	80
Total	1,220 to 1,720	240

This allocation reflects the same consideration that informed the Companies' initial allocation of MW as described in the Companies' initial Program Plan. The Tranche 1 CPRE RFP results, as well as the Companies' system operational experience integrating additional renewable energy resource capacity into the DEC and DEP BAs and distribution and transmission system operations, will inform the manner in which future CPRE Program Plans propose to allocate the remaining CPRE Targeted Amount between the DEC and DEP service territories. As a result, the planned CPRE solicitation targets for DEC and DEP shown in Figure 4 are subject to change. The targeted MWs for DEP are shown as the maximum potential MWs to procure in each solicitation. DEP may elect to procure fewer than 80 MWs based on the nature and competitiveness of the bids.

The Companies took into consideration the following factors prescribed by N.C. Gen. Stat. § 62-110.8(c) when establishing the allocation of MWs to DEC and DEP:

(i) Fostering Diversification of Siting of Additional Renewable Energy Resources [6]

The Companies' primary objective is to procure cost-effective renewable energy resource facilities that allow DEC and DEP to reliably dispatch, operate, and control the facilities in the same manner as utility-owned generating resources, while diversifying the siting of renewable energy facilities across the Companies' BAs. The CPRE Program recognizes the State's desire to foster diversification of additional renewable energy facilities and to more effectively integrate additional utility-scale solar and other resources into the Companies' system operations. The Companies have developed the CPRE Program Plan allocations to meet the goals of diversifying the locations and avoiding inefficient or unreliable over-concentration of additional renewable energy facilities, and improving

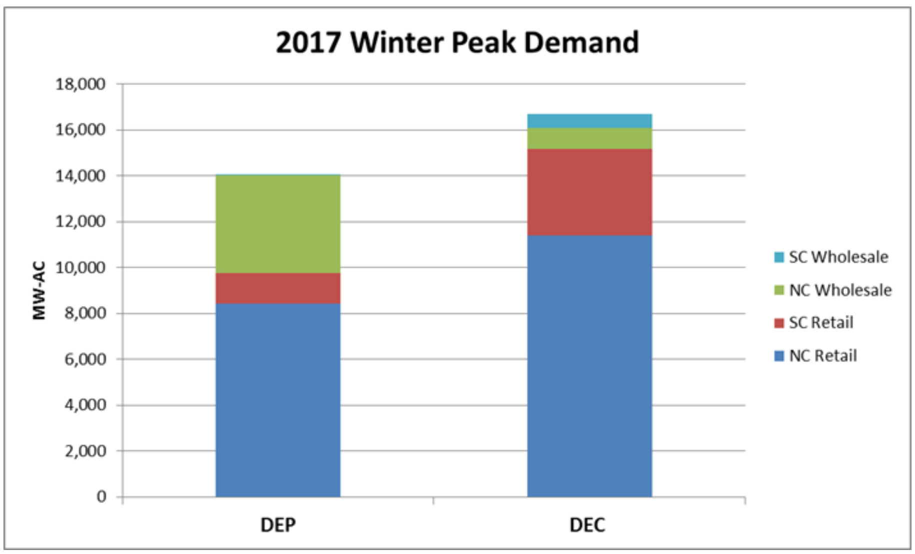
[6] The Companies anticipate that a large percentage of the renewable energy facilities bidding proposals into the Tranche 1 CPRE RFP Solicitation will be utility-scale solar generating facilities, and have primarily analyzed the need for additional diversification of siting for utility-scale solar resources. The Companies may consider the need to analyze diversification of siting of other renewable energy resource technologies in future CPRE Program Plans, depending on interest from other technologies in the Tranche 1 CPRE RFP Solicitation.

planning for the siting of additional facilities across the Companies' BAs and within their respective service territories throughout North Carolina and South Carolina.

Adding CPRE Utility-Scale Solar in DEC will Foster Improved Diversification as Existing Utility-Scale Solar is Concentrated in DEP

DEP is a smaller BA than DEC. In 2017, the DEC winter peak load was approximately 16,700 MW in comparison to the DEP winter peak load of approximately 14,200 MW, as seen in Figure 5.

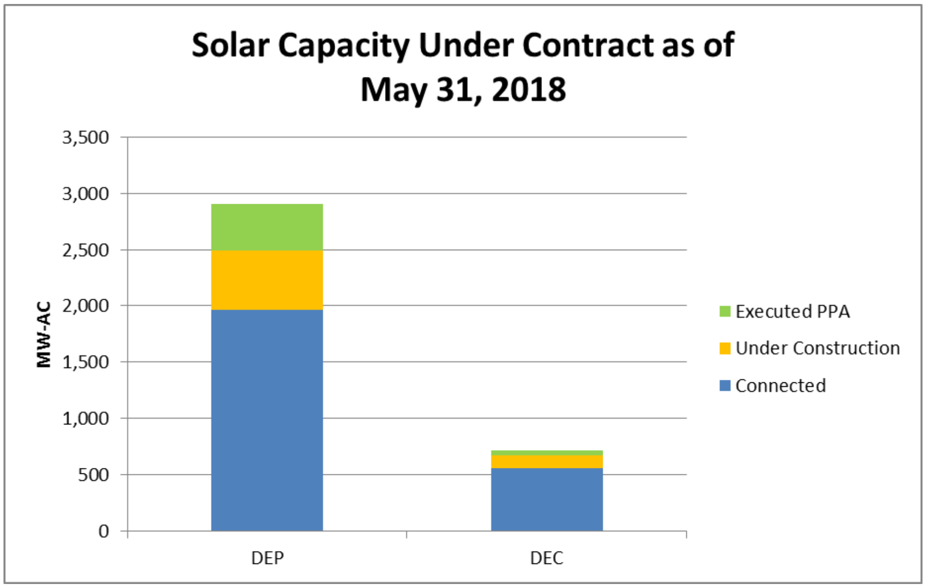
Figure 5. 2017 Peak Load by BA[7]



While DEP is a smaller BA, the Companies have experienced a significantly greater concentration of utility-scale solar development in DEP compared to DEC. As of May 31, 2018, the Companies are contractually obligated to purchase from third-party owners approximately 3,600 MW of solar under REPS and Legacy PURPA Contracts in addition to 225 MW of utility-owned solar. As shown in Figure 6, this utility-scale solar growth has been especially significant in DEP, where approximately 80% of the total MW installed and/or under contract are located.

[7] Peak demand values shown in Figure 5 are for 2017 winter peak production demand allocators from the 2018 Cost of Service study.

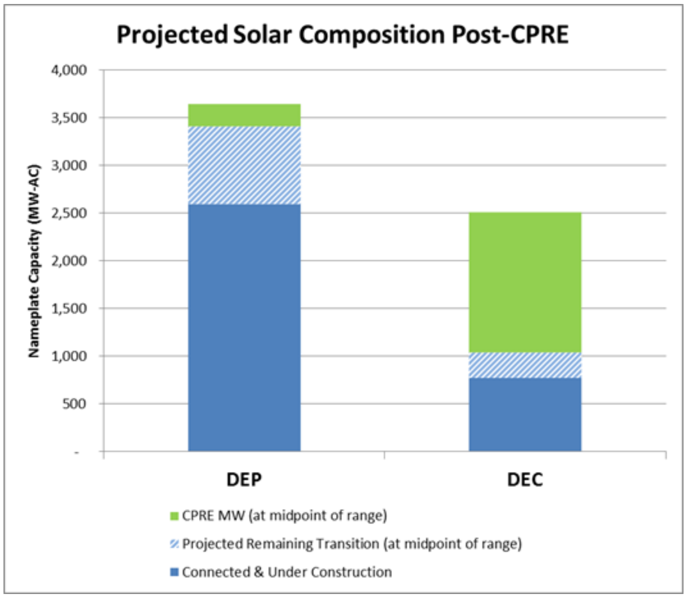
Figure 6. Solar Capacity under Contract as of May 31, 2018



If the total solar energy capacity in DEC and DEP were to be spread across the service territories based on each utility's respective peak load, the DEC service territory should have approximately 60% of the solar energy capacity rather than its current ~20%.

To achieve the goals of diversifying the siting of renewable energy facilities throughout the Companies' service territories in a manner that promotes efficiency, reliability, and mitigates cost impact on the Companies' customers, the Companies' Tranche 1 RFP, as well as the planned total CPRE Program procurement allocation (provided in Figure 4), seeks proposals primarily in the DEC service territory in North Carolina and South Carolina. If the Transition MW proceed as expected and the CPRE targets are met with primarily or all solar capacity, the Companies' plans will result in a more balanced allocation of solar capacity between DEC and DEP, as shown in Figure 7. Note Figure 7 assumes DEP procurements in CPRE total the maximum 240 MWs shown in Figure 4. If DEP reduces or eliminates this procurement amount in future CPRE Program Plans then this would cause the DEC totals to be higher.

Figure 7. Projected Solar Capacity by BA Post-CPRE [8]



(ii) System Operations and Reliability Impacts

In developing the proposed allocation of CPRE Program resources between the DEP and DEC service territories, the Companies also considered the operational efficiency and reliability impacts of siting additional renewable energy facilities within the DEC and DEP BAs. The highly concentrated levels of uncontrolled Legacy PURPA Contract solar that are currently installed, under construction, and under contract to be installed in the DEP BA has caused the Companies to primarily allocate the planned CPRE Program procurement towards the larger DEC BA, where significantly less utility-scale solar is installed today. The Companies' planned CPRE Program allocation between the DEC and DEP BAs is also supported by the growing levels of operationally excess energy and increasingly steep ramping requirements in the DEP BA. These operational challenges recently required DEP system operators to curtail QF solar resources in response to imminent system emergency conditions. The Companies report system emergency curtailments to the Commission quarterly in Docket Nos. E-2, Sub 1178 and E-7, Sub 1175.

[8] The projected amounts in Figure 7**Error! Reference source not found.** assume the midpoint of the range of solicitation amounts in Figure 4. Figure 7 also assumes that all renewable energy procured through CPRE will be solar, though non-solar renewable energy procurements are possible through CPRE.

Independent BA System Operations Basics

DEP and DEC are each independent BAs responsible for maintaining compliance with North American Electric Reliability Corporation (NERC) reliability standards to ensure reliable operations on their systems, as well as managing power flows between their systems and other utility systems. DEP and DEC must independently control their respective network resources to meet system loads and maintain compliance with reliability regulations within their separate BAs. Each BA must independently comply with NERC's mandatory Reliability Standards on a unified basis across the entire BA that encompasses territory in both North Carolina and South Carolina.

DEP's and DEC's system operators independently plan and operate each BA's generating resources to reliably meet increasing and decreasing intra-day and day-ahead system loads within reliability and generating unit availability and operating limits. These reliability requirements place the burden on the DEP and DEC BAs to balance generation resources (including new dispatchable CPRE renewable energy facilities), unscheduled energy injections (existing QF and renewable energy contracts), and load demand in real-time, all of which is essential to providing reliable firm native load service. To meet this objective, DEP and DEC must independently plan for and maintain a "Security Constrained Unit Commitment" of baseload and load-following assets, regulation resources, operating reserves, and spinning reserves, working together to ensure real-time frequency support and balancing.

The Companies' baseload[9] and must-run regulation units[10] represent the foundational resources necessary to meet load requirements, provide reliability, and meet mandatory NERC Reliability Standards. In the aggregate, the operationally constrained minimum reliable output of these generators represents the Lowest Reliability Operating Level (LROL) of the BA's Security Constrained Unit Commitment. These essential generating resources cannot be de-committed in real time nor on an intra-day basis, because they must run within specified engineering levels and provide essential frequency and regulation support to the BA, and because they are needed to meet upcoming peak demands, such as the evening peak demands and next day peak demands. The LROL represents the level on the BA at which continued energy injections into the BA above the BA's load causes the BA to have operationally excess energy.[11]

[9] The Companies' baseload units are firm native load generating resources such as nuclear, coal, and large natural gas combined cycle units that form the foundation of reliable service to meet the core system demand.

[10] Must-run regulation and regulation reserves resources are generating resources that must run to provide load balancing regulation and frequency regulation support to maintain reliability by supporting system frequency to the required target of 60 Hz in compliance with mandatory NERC Reliability Standards.

[11] The Companies testified to the importance of managing system operations to maintain the LROL of the BA's Security Constrained Unit Commitment in the 2016 avoided cost proceeding. *See In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities – 2016*, Pre-filed Direct Testimony of John S. Holeman, III, at 7-8, 12-13 Docket No E-100, Sub 148 (filed February 21, 2017).

As has been discussed in recent avoided cost and IRP filings and in the initial CPRE Program Plan filed in November, 2017 integration of additional solar is increasingly causing operationally excess energy and extreme ramping events in DEP. Further increases of solar generation in the DEP BA will continue to increase the risk of future potential NERC noncompliance and associated reliability risks, unless DEP has adequate dispatch control rights to proactively plan and dispatch generation resources on its system. Continued addition of solar generation in the DEP BA will exacerbate existing reliability challenges and increase the potential future risks of NERC noncompliance. The DEP BA's growing experience managing operationally excess energy and increasingly steep ramping requirements as additional unscheduled and uncontrolled solar generation comes online will also increase the likelihood of emergency curtailment in DEP. DEC currently is better positioned to accommodate additional solar resources without creating routine instances of operationally excess energy. However, DEC will also eventually face similar issues with operationally excess energy and ramping as additional solar generation is added to the system. This further emphasizes the importance of the additional contractual curtailment rights available to DEC and DEP for the CPRE facilities.

(iii) Potential for Increased Delivered Cost; Ancillary Services

The Companies have evolved and will continue to evolve the modeling necessary to quantify the increased delivered costs and additional ancillary services needed to maintain NERC Balancing Authority compliance due to siting additional renewable energy facilities in DEC or DEP. Through evaluation of the prior two factors discussed, the Companies have allocated the vast majority of MWs to be procured through CPRE to DEC and did not specifically evaluate the potential for increased delivered cost and additional ancillary services in determine the planned allocations set forth above. However, this third factor may influence future decisions to further adjust this allocation in future plans.

Allocation of Resources

In summary, the growing concentration of legacy PURPA solar facilities installed in the DEP BA, associated operational challenges and reliability risks on the DEP system and growing risks of uncompensated system emergency curtailments in DEP, as well as projections of each BA's respective ability to reliably accommodate additional solar energy have informed the Companies' decision to allocate CPRE development primarily in the DEC service territory. The Companies anticipate that the designated allocation of CPRE Program capacity may continue to evolve over the CPRE Procurement Period, and the Companies intend to meet the CPRE Program requirements in a manner that ensures continued reliable electric service to customers while procuring cost-effective renewable energy resource capacity located within the DEC and DEP service territories. The

Companies will update the planned allocation, if it is determined that changes are appropriate, through subsequent CPRE Program Plan filings.

1.5. Locational Designation

For purposes of the Tranche 1 CPRE RFP Solicitation, the Companies published Grid Locational Guidance information to the Independent Administrator's website on May 10, 2018 and also held a webinar open to all registrants to review and discuss these materials and answer questions from potential market participants and other interested parties. This guidance was intended to provide market participants with information on areas that have known transmission and distribution limitations as a result of the amount of existing or approved renewable energy facilities in the area. The goal of providing this grid locational guidance was to minimize the need for costly network upgrades to integrate CPRE renewable energy facilities and to provide information to market participants for use when planning development activities for the proposals to be submitted into the Tranche 1 CPRE RFP. The grid locational guidance information was in the form of a map and a table of circuits and substations that have known or increasing constraints.

The Companies continue to evaluate how to provide similar guidance in future Tranches and will provide this guidance when pre-solicitation documents for Tranche 2 are published, or potentially earlier, to provide potential participants in CPRE as much information as possible to enable the most cost-effective proposals to be bid into the RFP.

2. CPRE Tranche 1 RFP Document and Pro Forma PPA

The Companies' final Tranche 1 RFP document and pro-forma PPA are available on the Independent Administrator's website.[12] The Tranche 1 RFP constitutes the Companies' Program Guidelines for the current solicitation.

Comments on stakeholder engagement regarding the Pro forma PPA

Consistent with the directive in the NCUC's order approving the CPRE Program in February 2018 in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, the Companies have modified a number of PPA terms and conditions based upon feedback received through two formal comment periods and continued to engage with stakeholders to determine if consensus can be reached on additional revisions to the PPA. More specifically, based on comments filed by stakeholders in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156, the Companies made significant revisions to the November 2017 version of the Pro forma PPA before publishing the updated Pro-Forma PPA on May 11 as a pre-solicitation document for

[12] https://decprerfp2018.accionpower.com/

Tranche 1 of the RFP. Market Participants and other interested parties then had a second opportunity to review the Pro Forma PPA (along with other draft solicitation documents). These comments were provided via the IA website. The Companies and the IA evaluated all of the comments received on the draft documents, including the Pro Forma PPA and proceeded to make further, significant revisions to the Pro Forma PPA before publishing the final PPA to be used in the Tranche 1 solicitation on June 8, 2018. The IA detailed the results of the comment period in their report which was completed on June 20, 2018 and posted to the website on June 21, 2018. In this report, the IA concluded that the Companies gave full consideration to each observation and the IA agreed with the changes that the Companies elected to make to the PPA. On June 25, 2018 the Commission approved the final Pro forma PPA for use in Tranche 1 of the CPRE program.

The Companies held an additional stakeholder meeting regarding the PPA on August 7, 2018 via webinar. Approximately 50 participants called in to the webinar. The Companies presented a summary of the process that led to the Commission approval of the Tranche 1 PPA and summarized key changes made during the course of this process in response to comments and suggestions made by stakeholders. The Companies then opened the floor to questions from the webinar participants. Several of these questions were unrelated to the PPA and these individuals were directed to use the message board and Q&A process on the IA website. The comments on the PPA itself were very limited. The Companies provided responses to these comments on the call and reiterated the commitment to take these comments into consideration during the drafting of the Tranche 2 PPA document. Pursuant to the Commission's CPRE rules, the pre-solicitation process for Tranche 2 will allow for an additional comment opportunity that will also be supervised by the Independent Administrator.

3. Other Program Plan Updates

Energy Storage

Recognizing the improving cost effectiveness of energy storage technologies, planned future adoption by the Companies and consideration by other utilities in recent competitive generation procurements, the Companies' made the determination that Renewable plus Storage Proposals—if thoughtfully integrated into the Companies' system operations—should be accepted for consideration in the Tranche 1 CPRE RFP. For this reason, the Companies' Tranche 1 RFP and pro forma Tranche 1 PPA enable market participants the option to offer Renewable plus Storage Proposals as part of the Tranche 1 RFP.

To facilitate equitable consideration in the RFP, as well as to ensure effective integration of energy storage with the Companies' system operations under the CPRE Program framework, the Companies incorporated into the Pro Forma PPA a limited number of modifications, including a two-page "Storage Operating Protocol" in Exhibit 10.

The Companies intend to continue to evaluate energy storage technologies and to pursue the most effective means to deploy these resources. This ongoing work coupled with the results of the Tranche 1 solicitation will inform the Companies approach to energy storage subsequent Tranches in CPRE.

Impacts to the Transmission System from Distribution Connected Projects

North Carolina is unique in terms of the significant, and growing, levels of uncontrolled third-party owned utility-scale solar connected to the Distribution system. The Companies continue to monitor the growing impact to Transmission system operations of solar projects connected at the Distribution level. As the cumulative number of MW in this category grows, these projects are increasingly affecting the Transmission system upgrades required to accommodate new generation. Currently, DEP has approximately 1,400 MWs of Distribution -connected solar capacity while DEC has approximately 400 MWs. With additional Distribution connected projects in the queue in both DEP and DEC, this will continue to have a growing impact on the Transmission system.

Interconnection Evaluation of CPRE Proposals

To be considered an eligible participant to bid into the Tranche 1 CPRE RFP, a developer sponsoring a proposal will be required to submit an Interconnection Request under the applicable interconnection procedures on or before the CPRE RFP proposal due date, and otherwise comply with the CPRE Program Guidelines.

In order to improve the efficiency of the Interconnection system impact evaluation process, and to accommodate the requirements of CPRE, DEC and DEP have requested Commission approval to utilize a system impact grouping study process to more efficiently evaluate CPRE Proposals within the current serial study process. The Companies anticipate potentially hundreds of projects bidding thousands of megawatts of new renewable energy capacity into the CPRE RFPs. Continuing to utilize the serial queueing and study process under the current state interconnection procedures would not allow DEC and DEP to efficiently identify the most cost effective portfolio of resources that are bid into each CPRE RFP to satisfy the capacity solicited through that RFP. The serial queuing process requires assignment of priority rights to available transmission capacity on a first-come, first served basis, and does not contemplate a scenario like the CPRE RFP process in which market participants voluntarily bid into the solicitation with an expectation of possibly being selected among numerous winning suppliers who have offered to supply capacity at the minimum price offered.

For each Tranche in CPRE, a Queue Position is assigned based on a “CPRE Queue Number” for all Solar Generator Interconnection Customers that elect to submit proposals into those solicitations and thereby voluntarily agree to be “grouped” and competitively ranked for study with all other Interconnection Customers that elect to submit Proposals.
The Companies will also permit projects to be designated and accepted by the IA into the Companies’ CPRE Tranches RFP as “Late Stage Proposals”, which will be evaluated based upon system upgrades preliminarily determined through a previously-completed System Impact Study or finally determined under a previously-issued Interconnection Agreement. Projects designated as Late Stage Proposals will be considered as part of the baseline study for the CPRE evaluation and will not be evaluated as part of the grouping study. Importantly, the bid prices for Late Stage Proposals must include any Upgrades needed to interconnect the generating facility while “earlier-stage” projects participating in the CPRE Queue Number and grouping study are not required to include potential Upgrades in their Proposal price.

In addition to seeking Commission approval of this System Impact Grouping Study process for purpose of the Tranche 2 RFP, the Companies are also evaluating whether implementing a System Impact Grouping Study in parallel with the serial study queue is sustainable for future CPRE RFP tranches. The Companies are now managing nearly 13,000 MW of solar interconnection requests in the queues across North Carolina and South Carolina. This volume will likely continue to grow as additional CPRE tranches are planned. In order to manage the growing challenges and complexities of the interconnection queuing and study process, the Companies are evaluating new interconnection queue management best practices, including fully transitioning to employing temporal cluster studies for all projects requesting interconnection, including projects requesting to bid into future CPRE RFP tranches.

4. *Additional Information to be Provided in Future Year Plan Filings*

The Commission’s February 21, 2018 order in Docket Nos. E-2, Sub 1159 and E-7, Sub 1156 imposed additional reporting requirements in addition to those specified in Rule R8-71(g). However, the additional reporting requirements relate to information that will not be available until completion of the Tranche 1 RFP. The additional reporting requirements are as follows:

- Summary of facilities procured through CPRE that count towards the 30% limit established under N.C. Gen. Stat. § 62-110.8.

- Reports on the curtailment of CPRE Program facilities as part of its reporting, including a comparison with the curtailment of Duke's own facilities.[13]

The Companies will provide the required information in subsequent CPRE Program Plan. Note, in addition to these, Duke will provide details on grid upgrades required and estimated costs of such upgrades associated with each Tranche/ Solicitation in its annual compliance filings (due in March each year for DEC and June each year for DEP).

[13] The Companies will identify any emergency conditions or force majeure curtailments of CPRE facilities in the quarterly reporting filed in quarterly in Docket Nos. E-2, Sub 1178 and E-7, Sub 1175.

BUILDING A **SMARTER** ENERGY FUTURE℠

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Front Cover Photos (Top to Bottom):

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Hydro: Tillery
Nuclear: Harris
Solar
Energy Efficiency

Back Cover Photos (Top to Bottom):

Uptown Charlotte, NC
Energy Control Board
Helping Our Customers
Duke Energy Lineman
Duke Energy Transmission Line

Exhibit 1B

STATEMENT OF NEED

1.1 BIENNIAL AND ANNUAL IRP REPORTS

DEP's 2018 Integrated Resource Plan Biennial Report ("IRP") and the 2019 IRP Updated Plan is included as Exhibit 1A. The Company's 2018 IRP discusses the Woodfin Solar Facility in the Western Carolinas Modernization Plan ("WCMP") update sections. The IRP envisions the inclusion of the 5 MW-AC Solar photovoltaic ("PV") generator as part of the Company's commitment to the WCMP referenced on page 52 of the Company's 2018 IRP. The Woodfin Solar Facility will enable the Company to provide safe, cost-effective, and reliable service for DEP's customers. Additionally, by constructing and operating the solar facility, the Company will gain valuable experience owning and operating a ballasted solar facility on a landfill site.

1.2 RESOURCE AND FUEL DIVERSITY

The comprehensive planning process for the 2018 IRP demonstrates that a combination of renewable resources, DSM/EE programs, and additional base load, intermediate, and peaking generation are required over the next fifteen years to reliably meet customer demand. The solar PV generation of the Woodfin Solar Facility will contribute to the diverse resource mix identified in the IRP. The solar facility does not require any additional fuel to operate, and no fuel will be stored at the site.

1.3 STATEMENT OF NEED

While PV solar installations provide little to no capacity value at the time of the Company's winter peak, solar does provide valuable energy with zero fuel cost. As such, the Woodfin Solar Facility will contribute to meeting the energy needs of the DEP system.

Additionally, as part of the WCMP that was approved in Docket No. E-2, Sub 1089, the Commission accepted DEP's commitment to solar and storage projects and directed DEP "to file as soon as practicable the CPCN to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region. The Commission further urges DEP to move forward in a timely manner with the 5 MW storage project in the Asheville region."

(WCMP CPCN Order at p. 38) Along with furthering its commitment to site solar and storage technologies in the western region, the Woodfin Solar Facility and future Company facilities will support the goals and objectives of the WCMP and complies with the WCMP CPCN Order.

The Woodfin Solar Facility is projected to produce approximately 9,413 MWh per year. This corresponds to a 21.5% net capacity factor. The service life of the asset is 25 years.

Exhibit 2

SITING AND PERMITTING INFORMATION

2.1. General Site Information

A color map showing the proposed site boundary and layout, with all major equipment, the E911 street address and GPS coordinates is included as Appendix 1.

The Woodfin Facility is located in Buncombe County and Appendix 2 shows its geographic location.

2.2. Site Owner, Site Justification and Additional Site Details

The Site Owner is Buncombe County

In order to identify sites suitable for solar in the Greater Asheville Region, DEP conducted a GIS solar suitability survey. Many alternative sites were evaluated, including Company-owned land. Due to limitations in terms of parcel size, topography (e.g., slope), availability of land and distribution circuit limitations that would be suitable to support a 15 MW solar installation, DEP has been exploring the possibility of multiple, distributed solar installations in lieu of a single, larger installation.

The Woodfin Site was determined to have the following beneficial characteristics: (1) the site is on a municipal landfill and zoned for industrial land use and has approximately 30 acres of relatively flat, buildable area on one parcel, (2) the acreage is sufficient for siting multiple MW of solar generation and the site is primarily clear of trees and debris; (3) the point of interconnection is located adjacent to the planned project and on the same property and does not require additional land rights or permitting to access the interconnection facilities; (4) the site is not adjacent to residential customers; (5) the site does not require tree clearing to support the solar; and (6) the site is owned by a single landowner willing to enter into a lease agreement in support of the project and community's goals.

While developing solar on a landfill can have an impact on costs due to the inability to penetrate the landfill cap, the size and other positive characteristics described help to balance overall project costs and limit local environmental impacts. In addition, finding available sites within the Asheville region that can support a solar facility of this scale while limiting environmental impacts (such as tree clearing and wetland disturbance) is challenging given topography and high land cost in the Asheville region.

During DEP's solar siting process, DEP was made aware that Buncombe County was interested in making their site available for solar development to support the County's renewable energy and climate change goals. DEP presented Buncombe County with a proposal to allow DEP to lease the landfill site to support the Western Carolinas Modernization Project's goal to advance solar development in this area.

A Ground Lease Agreement was executed with Buncombe County in August 2018. The term of the Ground Lease Agreement is 25 years from the date of operation and includes three optional five year renewal terms. **[BEGIN CONFIDENTIAL]** - [redacted] **[END CONFIDENTIAL]**.

There is an existing County-owned facility on land immediately to the North and adjacent to the proposed solar site. That is the site of the Buncombe County Public Safety Training Center. It houses both classroom space for law enforcement as well as first responders, as well as training units (burn tower) for fire department staff, and an indoor firing range for law enforcement. Other than this facility, the Company is not aware of any other existing or proposed plans for other developments at or adjacent to the proposed site of federal, state, local governmental and private entities.

The following is further background concerning the site selected.

Geological

A review of data provided by the North Carolina Geologic Map Information Service shows the Site is located within the Ashe Metamorphic Suite and Tullulah Falls Formation geological unit. This geologic unit is composed primarily of muscovite-biotite gneiss. According to the USDA soil report, Udorthents, loamy, 2 to 50 percent slopes (Ud) underlies the Site; this soil is comprised of sandy clay loam, loamy and stony mine spoil or earthy fill derived from metamorphic rock. However, as the land is the location of a historic landfill, native soils within the project area are likely to be disturbed. Therefore, the findings of the USDA NRCS Soil Report cannot be relied upon for accurate depiction of the conditions of the Site.

Aesthetic

The Site is located in the town of Woodfin, and it is zoned as Heavy Industrial (H-1). The Site is buffered by forested vegetation to the north, west, and south. The Site is visible from NC Highway 251 to the northeast. Site access is limited to the north via NC Highway 251.

Ecological

Protected Species

Based on desktop database and literature review and field observations, the Site consists predominantly of a historic landfill that has been graded and regularly maintained. The Site consists of grasses and herbaceous vegetation typical of the active land use. The Site does not include suitable habitat for federally listed endangered or threatened species but is potentially suitable for two (2) state listed threatened plant species, Schweinitz’s ragwort (Packera schweinitziana) and yellow ladies’-tresses (Spiranthes ochroleuca) were identified as having potential preferred habitat onsite. Both identified species are state threatened plant species that live on grassy balds. Although these species have the potential to be located onsite, no penalties are assessed if state threatened and endangered plant species are harmed in the course of legal land management practices.

The Migratory Bird Treaty Act (“MBTA”) protects more than 1,000 bird species that occur in the U.S., including 13 species of conservation with ranges encompassing the Site. Under the MBTA, it is unlawful to take any migratory bird, or any part, nest, or egg of any such bird. Although tree clearing is not anticipated for construction activities, Duke Energy’s Natural Resource Group has developed specific tree-clearing protocols that are incorporated into project planning and disseminated to all sub-contractors.

The Bald and Golden Eagle Protection Act provides similar protection to those two raptor species. According to NCNHP, the nearest observation of the bald eagle occurred less than one (1) mile from the project area along the French Broad River. Although bald eagles are known to utilize the nearby FrenchBroad River, no nesting trees or foraging habitat is located within the Site. Therefore, the bald eagle is notanticipated to inhibit the project. According to NCNHP, no golden eagles have been observed within one (1) mile of the project area. TheSite does not provide the preferred foraging or nesting habitat for this species; therefore, the golden eagle is not anticipated to inhibit the project

Habitat

According to the USGS National Land Cover Database (Homer et al. 2015), the Site consists primarily of pasture/hay with small areas of developed, open land and barren land located in the eastern and southeastern portions of the Site. Available aerial imagery (Google Earth 2017) depicts the project area as cleared and graded with a remote-controlled airplane tarmac facility in the western portion of the Site. According to the USGS topographic map, the Site ranges in elevation from approximately 2,100 to approximately 2,200 feet above mean sea level (AMSL).

Review of the USFWS IPaC Resource List reveals no critical habitats for federally listed species within or adjacent to the project area. A review of the Protected Areas Database of the U.S. (PAD-US 2018) reveals no protected areas within the Site; however, seven (7) protected areas are located within five (5) miles of the Site, including the Buncombe County Park, a Conservation Trust of North Carolina Easement, the Sandy Mush Game Land, a Southern Appalachian Highlands Conservancy Easement, the Southern Appalachian Highlands Conservancy Preserve, the Thomas Wolfe Memorial State Historic Site, and the Western Governors Residence.

Meteorological

A search of available online data from the National Oceanographic and Atmospheric Administration database was conducted for Woodfin covering a three-decade span (1971 thru 2000). Average annual precipitation was 41.4 inches, with the warmest month being July (average high 84.5 F) and the coldest being January (average low 24.8 F).

Seismic

Based on a review of USGS geologic data for North Carolina, the nearest mapped fault is located approximately 0.5 miles northwest of the Site. According to the

USGS Seismic Hazard map for North Carolina, the area is in a low to moderate risk zone for earthquakes.

Water Supply

There are no planned or existing water supplies on the Site.

Population

Woodfin had a population of 6,123 people as of the 2010 census. It is part of the Asheville Metropolitan Statistical Area (AMSA). The AMSA between 2000 and 2010 has experienced a large increase in population (15%) going from 369,186 to 424,859 people.

2.3. Transmission Line

The Woodfin Solar Facility will interconnect with a distribution line (as shown on both Appendix 1 and 2).

2.4. Nameplate Generating Capacity

The nameplate generating capacity is 5 MW AC / 6.3 MW DC

2.5. Permitting Information

No federal, state or local air quality programs are associated with this facility. The facility is in an Outstanding Resources Waters area which requires more rapid revegetation standards after land disturbance and requires a 30' vegetated setback from any streams or other waterbodies, if present.

Below is a list of Agencies from which approvals will be sought.

Federal

- US Army Corps of Engineers (USACE):

  - Jurisdictional Determination

- Environmental Protection Agency (EPA):
  - Spill Prevention and Control Plan (SPCC)
    - Prepare and update as required. No submittal or filing required.

- Federal Aviation Administration
  - File a Notice of Proposed Construction

- Federal Energy Regulatory Commission (FERC):
  - Notice of Self-Certification

<u>North Carolina</u>

- NC Division of Waste Management (NC DEQ DWM):
  - Modification of landfill post-closure permit

- NC Division of Energy, Mineral, and Land Resources (NC DEMLR):
  - Stormwater General Permit NCG010000 (aka Erosion and Sedimentation Control Plan)

- NC Division of Water Resources (NC DWR):
  - Post-Construction Stormwater Pollution Prevention Plan (SPPP)

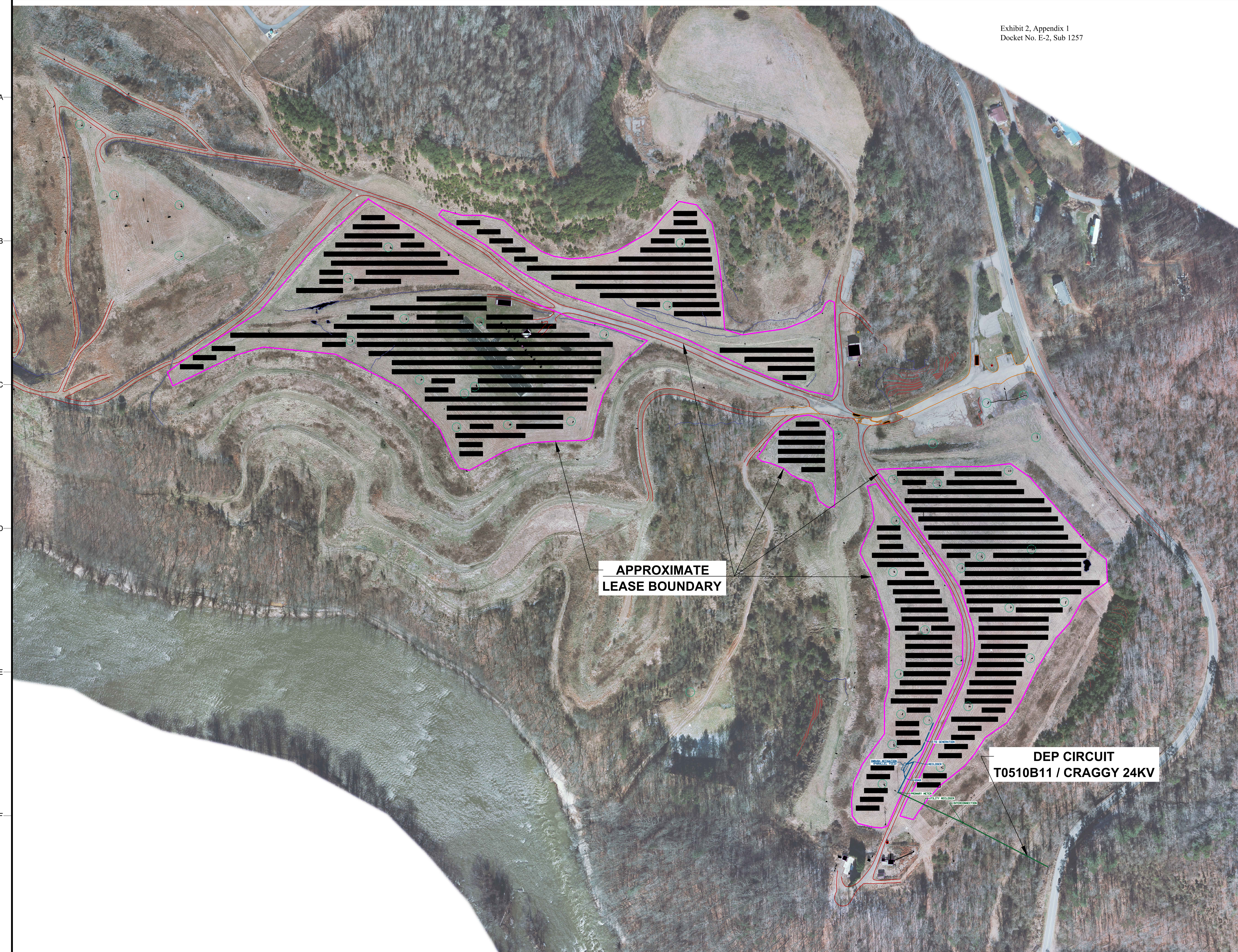
- NC Public Utilities Commission:
  - Certificate of Public Convenience and Necessity (CPCN)

- NC Department of Transportation:
  - Oversize/Overweight Permit (if necessary)

- Buncombe County:
  - Building Permit

- Town of Woodfin
  - Zoning Conditional Use Permit

Exhibit 2, Appendix 1
Docket No. E-2, Sub 1257



PLANT INFORMATION

SITE LOCATION (LAT, LONG)	35.660255, -82.602075
SITE ADDRESS	2720 RIVERSIDE DRIVE WOODFIN, NC 28804
POI	DEP T0510B11 CRAGGY 24KV
AC CAPACITY	5,000 KW AC
DC CAPACITY	6,267 KW DC
TILT ANGLE	20 DEGREES FIXED
INVERTER MAKE AND MODEL	SMA SUNNY TRIPOWER CORE1 62-US
INVERTER CAPACITY AND QUANTITY	62.5 KW 80 TOTAL
MODULE MAKE AND MODEL	HANWHA QCELLS Q.PEAK DUO L-G6.2
MODULE CAPACITY AND QUANTITY	420 W 14,922 TOTAL

TITLE
WOODFIN SOLAR POWER PLANT

FOR
DUKE ENERGY

SCALE: NTS
DWG TYPE:
JOB NO:
DATE: 06/26/2020
DES:
DFTR:
CHKD:
ENGR:
APPD:
FILENAME:

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x35.5"		0

Woodfin Solar Vicinity Map

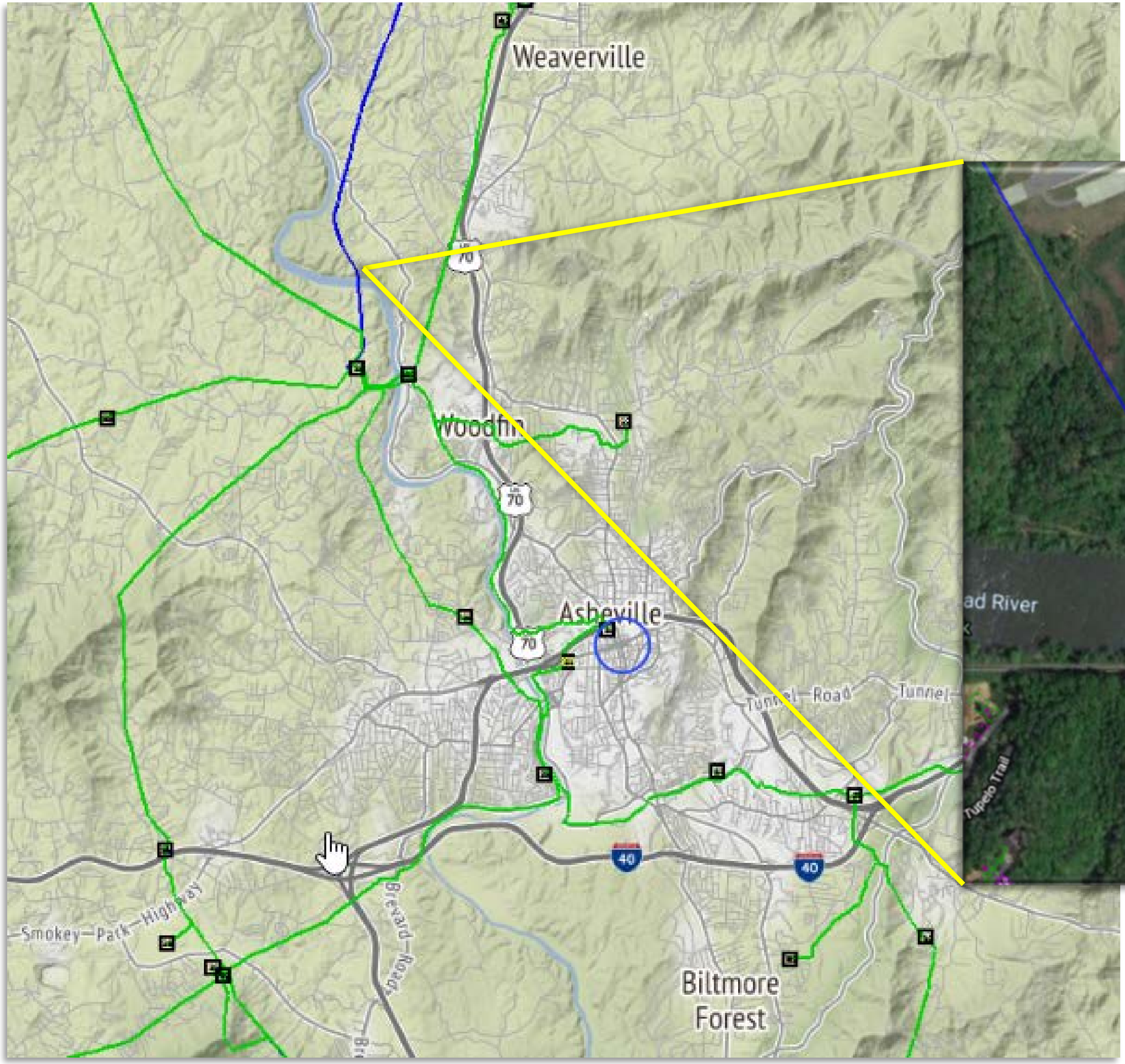


Exhibit 3

EQUIPMENT AND COST INFORMATION

3.1 Estimated Construction Costs

The estimated cost of the Woodfin Solar Facility is approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. The estimate includes **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** for Engineering Procurement & Construction ("EPC"), major equipment, labor, and associated permitting and development costs and approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** for construction oversight, contingency, escalation and AFUDC. No new substation or transmission line or upgrade to substation or transmission line will be required.

3.2 Estimated Construction Costs Expressed as $/MW

Approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

3.3 Estimated Annual Operating Expenses by Category

Average annual operating expense is **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

3.4 Estimated Annual Operating Expenses Expressed as $/<u>MWH</u>

Approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** averaged over 25 years

3.5 Projected Cost of Major Components and Schedule for Incurring Costs

[BEGIN CONFIDENTIAL] [redacted]

[redacted] **[END CONFIDENTIAL]**

3.6 Utility Revenue Requirement During Construction

The Construction Work in Progress for this project will not be included in rate base, but instead will accrue AFUDC of $242,000. Therefore, there should be no impact on revenue requirements during the construction period.

3.7 Anticipated In-Service Expenses During the First Year

[BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

3.8 Anticipated Impact on Customers Rates. Estimated Construction Costs

0.020% rate impact in Year 1

Exhibit 4

CONSTRUCTION SCHEDULE AND OTHER FACILITY INFORMATION

4.1. Anticipated Construction Schedule

Should the Commission approve the CPCN request, the Woodfin Solar Facility construction would be targeted to allow for commission of the project by July of 2021, assuming timely authorization to procure major equipment and obtain necessary permits and approvals. A more detailed schedule can be seen below.

Activity Name	Milestone Date
Notice to Proceed	Dec-20
Engineering/Procure Equipment	Dec-20
Site Mobilization	Feb-21
Placed in Service	Jun-21
Final Commission	Jul-21

4.2. Additional Generating Facility Information

The specific equipment suppliers have not been selected at this time for every component. However, the following is a description of the major components of the Woodfin Solar Facility.

Solar Array

The solar array is expected to consist of 829 strings of 420W modules for a total capacity of 6.267 MWdc.

Racking System

A ballasted racking system will be used to mount the modules. The racking will be set at a fixed tilt of 20°.

Solar Power Conversion Devices

Duke Energy plans to use a total of 80 SMA Sunny Tripower Core1 string inverters. Each sting inverter has a capacity of 62.5 kW. This provides a total solar system rating of 5.000 MW.

4.3. Qualifications and Selection Process for Principal Contractors

Duke Energy conducted a competitive bid process by issuing an RFP to bidders with the potential capability to fulfill functional and/or turnkey roles. The EPC bid evaluation considered safety, cost, experience and compliance with terms and conditions. A shortlist of highly qualified contractors has been determined and, pending Commission approval, the Company will move forward with EPC negotiation in October 2020. The EPC contract will include detailed design, procurement of the solar facility major equipment and balance-of-plant items, and construction.

4.4. Risk Factors Related to the Construction and Operation of the Generating Facility.

There would be no additional risk for the construction or operation of this solar facility compared to other facilities owned or operated by Duke Energy. The minimum daily low temperature recorded in January for the period between 1870 to 2018 happened on January 21, 1985. This minimum low temperature was -26.67 ℃. The SMA Core1 inverter specified for the solar generation facility is rated to operate in the following ambient temperature range: -25 ℃ – 60 ℃. Due to rare occurrence of the temperature going below -25 ℃ and due to the size of the asset, Duke Energy Progress has determined that it is not cost effective to add auxiliary heating at this point.