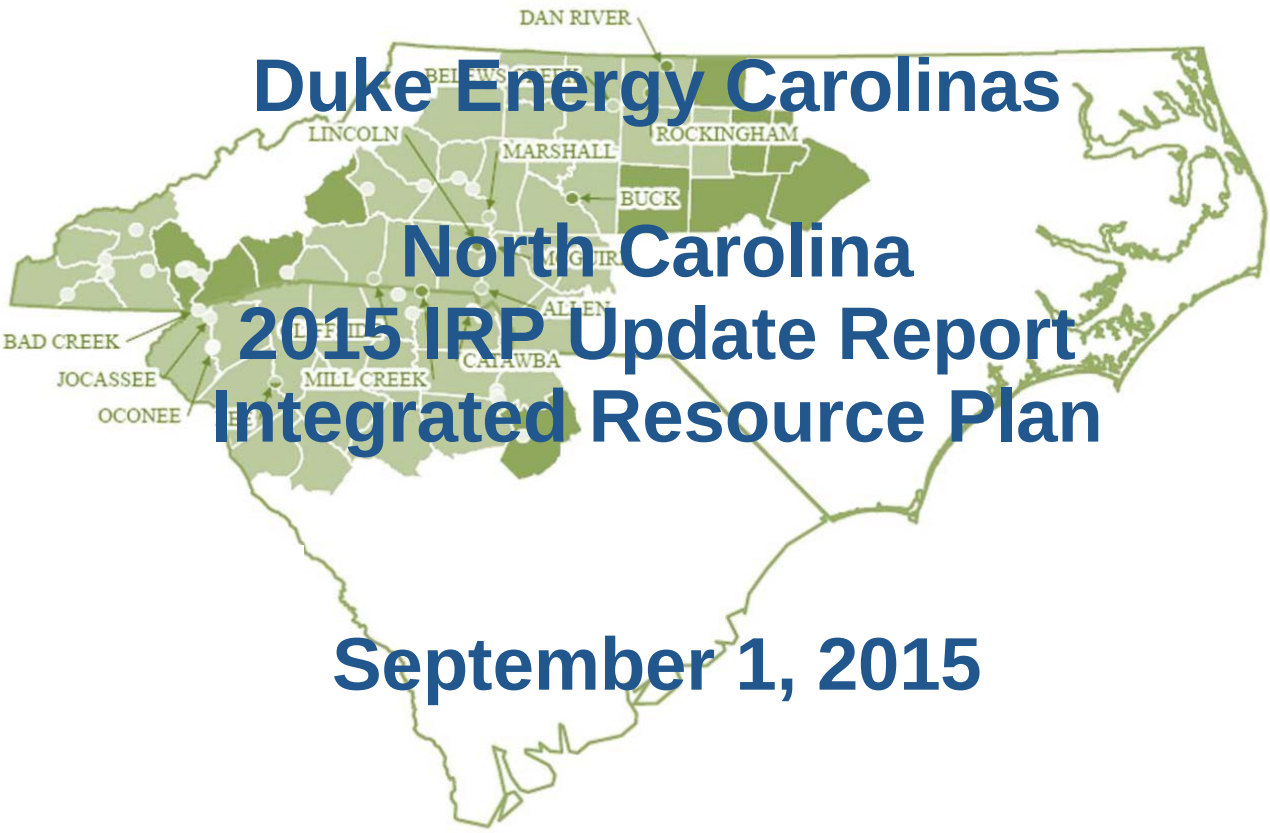
DUKE ENERGY® CAROLINAS



Duke Energy Carolinas

North Carolina 2015 IRP Update Report Integrated Resource Plan

September 1, 2015

PUBLIC

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1. INTRODUCTION

For more than a century, Duke Energy Carolinas (DEC) has provided affordable and reliable electricity to customers in North Carolina (NC) and South Carolina (SC) now totaling more than 2.4 million in number. The Company continues to serve its customers by planning for future demand requirements in the most reliable and economic way possible.

Historically, each year, as required by the North Carolina Utilities Commission (NCUC) and the Public Service Commission of South Carolina (PSCSC), DEC submits a long-range planning document called the Integrated Resource Plan (IRP) detailing potential infrastructure needed to match the forecasted electricity requirements for our customers over the next 15 years.

On July 20, 2015, the NCUC ordered that the IRP process between biennial IRPs be significantly streamlined. As such, the remainder of this document provides the information ordered by the NCUC for this update year IRP.

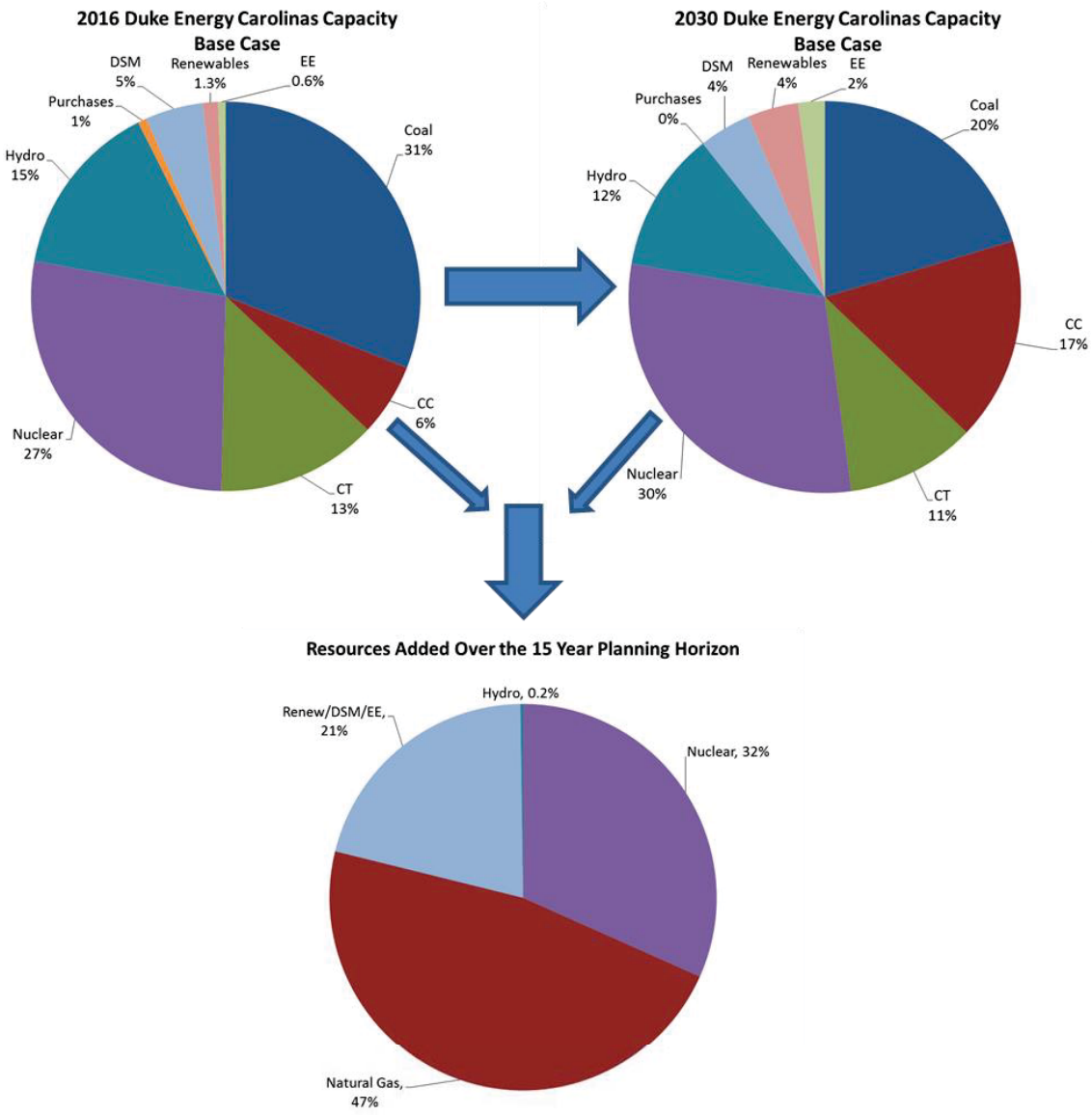
The Company files separate 2015 IRPs for North Carolina and South Carolina. However, the IRP analyzes the system as one DEC utility across both states including customer demand, energy efficiency (EE), demand side management (DSM), renewable resources and traditional supply-side resources. As such, the 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.

2. 2015 IRP SUMMARY

As 2015 is an update year for the IRP, DEC developed 2 cases based on the results of the 2014 IRP. The first case, or the "Base Case" is an update to the presented Base Case in the 2014 IRP, which includes the expectation of carbon legislation beginning in 2020. Additionally, a "No Carbon Sensitivity" was developed in which no carbon legislation is considered. All results presented in this IRP represent the Base Case, except where otherwise noted.

As shown in the 2015 IRP Base Case, projected incremental needs are driven by load growth and the retirement of aging coal-fired resources. The 2015 IRP seeks to achieve a reliable, economic long term power supply through a balance of incremental renewable resources EE, DSM, nuclear, and traditional supply-side resources planned over the coming years. In order to reliably and affordably meet our customers' needs into the future, the Company projects the need for incremental investments in these resources as depicted in the charts below.

Chart 2-A 2016 and 2030 Base Case Summer Capacity Mix and Sources of Incremental Capacity



The additional assets included over the 15 year planning horizon were selected as the most reliable and affordable resource mix to meet customer demand into the future. Furthermore, the selected mix of renewable resources, EE programs, DSM programs, nuclear generation, and state-of-the-art natural gas facilities also help the Company to maintain a diversified resource mix while reducing the environmental footprint associated with each unit of energy production.

3. IRP PROCESS OVERVIEW

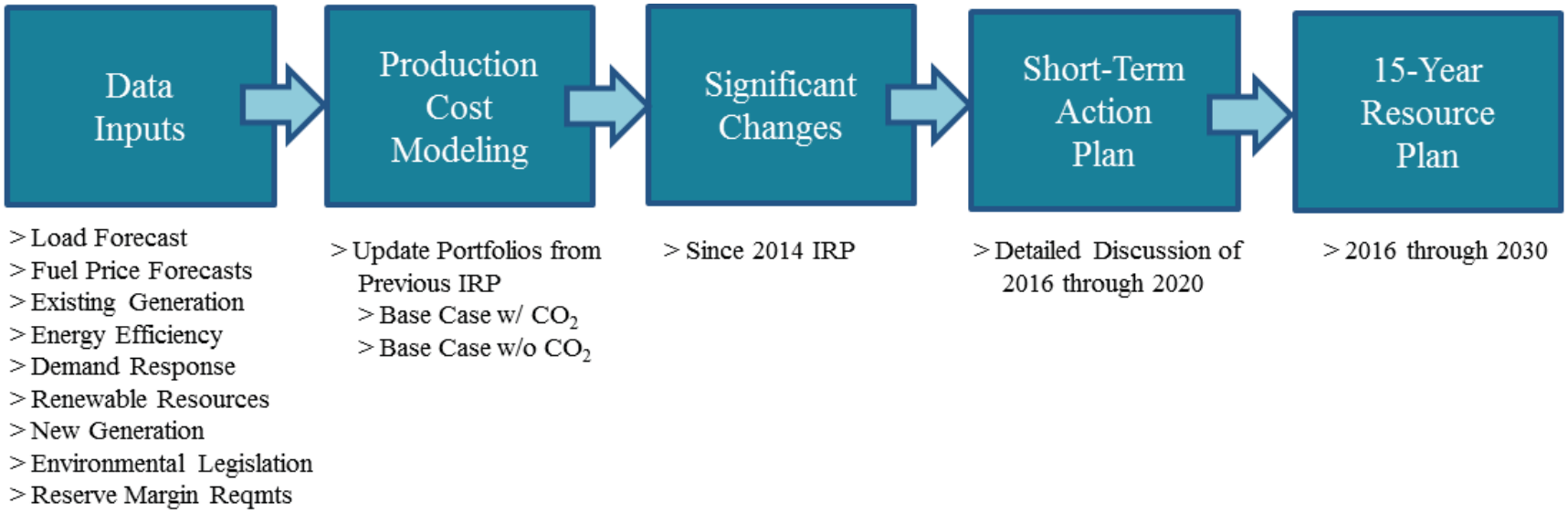
To meet the future needs of DEC's customers, it is necessary for the Company to adequately understand the load and resource balance. For each year of the planning horizon, the Company develops a load forecast of cumulative energy sales and hourly peak demand. To determine total resources needed, the 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 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 DEC considers the non-firm energy purchases and sales associated with the Joint Dispatch Agreement (JDA) with Duke Energy Progress (DEP) in the development of its independent Base Case. To accomplish this, DEC and DEP plans are determined simultaneously to minimize revenue requirements of the combined jointly dispatched system while maintaining independent reserve margins for each company.

The use of a 17% reserve margin represents an increase over last year's IRP that is discussed in more detail in Chapter 4. As discussed in Chapter 4, this increase does not materially impact the near-term resource needs of the Company as projected in the Short-Term Action Plan but rather influences the subsequent years of the plan.

For the 2015 Update IRP, the Company presents a Base Case with a CO_2 tax beginning in 2020. The current assumption of a CO_2 tax is intended to serve as a placeholder for future carbon regulation. Consistent with this assumption, the final Environmental Protection Agency (EPA) Clean Power Plan (CPP) was released in mid-August and each state is in the process of developing individual state plans to comply with the rule as discussed in Chapter 4. Furthermore, a primary focus of this update IRP is the Short-Term Action Plan (STAP), which runs from 2016 to 2020. It was determined that the inclusion of the CO_2 tax did not have a significant impact on the STAP, and therefore the majority of the data presented in this report is taken from the CO_2 case (Base Case).

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

Figure 3-A Simplified IRP Process



4. SIGNIFICANT CHANGES FROM THE 2014 IRP:

As an initial step in the IRP process, all production cost modeling data is updated to include the most current and relative data. Throughout the year, best practices are implemented to ensure the IRP best represents the Company's 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 newly included or updated data elements that had the most substantial impact on the 2015 IRP is provided below.

a) Load Forecast

The 2015 DEC Spring Load Forecast is updated to include the most current data. The process and models for the load forecast remain the same, however the method by which utility energy efficiency (UEE) [1] impacts are incorporated into the load forecast has changed since the 2014 IRP. UEE programs are energy efficiency programs that were developed and offered to customers by the Company. The impacts of UEE on the load forecast do not include load reductions from free-riders. Free-riders are those customers who would have adopted the energy efficiency programs regardless of incentives provided by the Company.

Program lives of UEE programs were previously considered indefinite in the IRP process, but in this year's IRP, are more clearly incorporated in the load forecast. Many UEE programs have a finite program life, much like the useful life of any generating resource. By including the useful life of the programs, the Company is better able to account for the UEE programs available to the DEC system, and as such, represent a more realistic and accurate representation of these programs. A numerical representation of the impacts of these changes and impacts to the load forecast are included in Chapter 5.

In the development of the load forecast, many variables may cause the load forecast projection to change. A brief comparison of the growth of the DEC load forecast is presented in Table 4-A and a more detailed discussion can be found in Chapter 5.

[1] The term UEE is utilized in the load forecasting sections which represents utility-sponsored EE impacts net of free riders. The term "Gross EE" represents UEE plus naturally occurring energy efficiency in the marketplace.

Table 4-A 2015 Load Forecast Growth Rates vs. 2014 Load Forecast Growth Rates (Retail and Wholesale Customers)

	2015 Forecast (2016 – 2030)			2014 Forecast (2015 – 2029)		
	Summer Peak Demand	Winter Peak Demand	Energy	Summer Peak Demand	Winter Peak Demand	Energy
Excludes impact of new EE programs	1.5%	1.5%	1.2%	1.8%	1.8%	1.5%
Includes impact of new EE programs	1.4%	1.4%	1.2%	1.4%	1.5%	1.0%

b) Renewable Energy

The Company is committed to full compliance with the North Carolina Renewable Energy Portfolio Standard (NC REPS). Currently signed projects and additional resources needed to fully comply with NC REPS are included in the 2015 IRP. There is currently a large influx of solar resources in the interconnection queue in the DEC system. With this influx, more solar projects are utilized to meet the NC REPS general compliance requirement, replacing biomass and wind resources that were represented in the 2014 IRP.

Additionally, the newly approved South Carolina Distributed Energy Resource Program (SC DERP) has been included. The SC DERP was approved by the PSCSC July 15, 2015. The Company's commitment to meet the increasing goals of this program through 2020 is included in the 2015 IRP.

Finally, growing customer demand for renewable generation is driving the need for additional solar resources. These resources are included as Green Source projects and are projected in the IRP. Such projects are incremental to NC REPS and SC DERP compliance renewables. Green Source projects include expected projects, whether Company-owned or procured that will increase the capacity of renewable generation on the DEC system.

As mentioned above, DEC has seen a large influx of solar resources in the interconnection queue. A summary of the projects currently in the interconnection queue is represented in Table 4-B. The table shows not only the amount of resources, but also the type of resources.

Table 4-B DEC QF Interconnection Queue

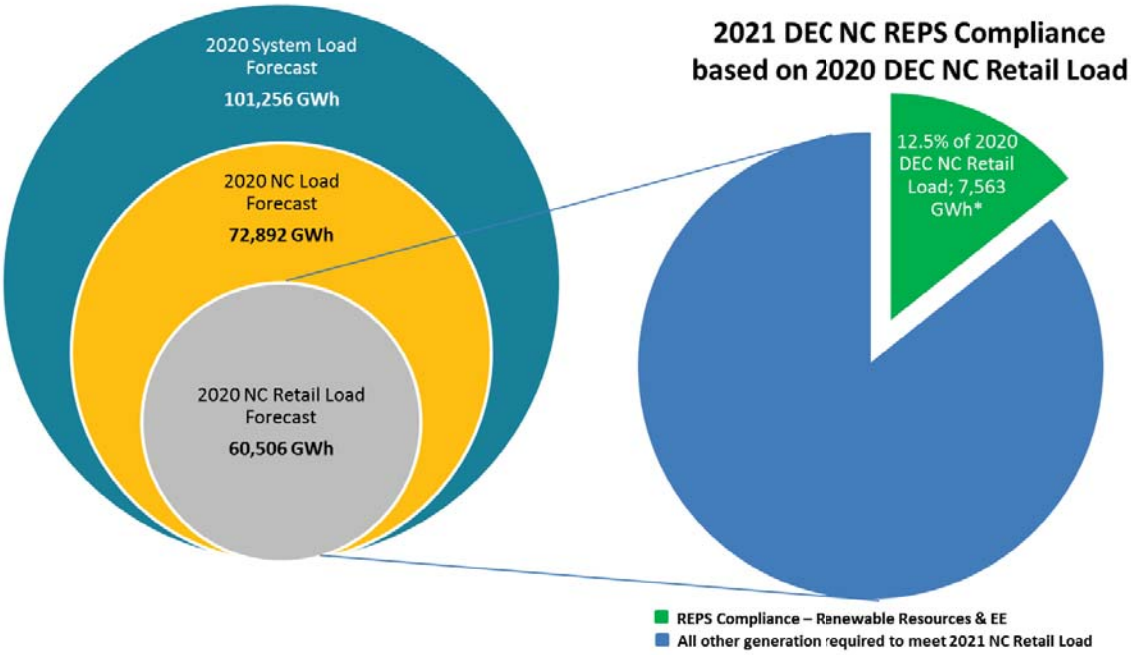
Utility	Facility State	Energy Source Type	Number of Pending Projects	Pending Capacity MW AC
DEC	**NC**	Biogas	2	6
		Hydroelectric	2	4
		Landfill Gas	2	3
		Solar	165	845
	NC Total		**171**	**858**
	SC	Biomass	1	0
		Solar	4	20
	SC Total		**5**	**20**
DEC Total			**176**	**878**

Renewables Compliance

A large portion of the renewable resources added over the planning horizon are a result of complying with NC REPS. The pie charts presented in Chapter 2 above represent the capacity of each asset by fuel type. However, the NC REPS compliance plan sets compliance targets based upon retail energy sales. As such, the renewable *capacity* percentage detailed above is not adequate for determining the Company's compliance with the NC REPS *energy* target.

In an effort to explain NC REPS compliance needs, Chart 4-A shows the energy forecasts and the ultimate NC REPS compliance need for DEC.

Chart 4-A DEC - Meeting NC REPS Compliance



* 7,563 GWh only represents the projected amount of Renewables and EE required to meet REPS compliance in 2021 based on the NC Retail load forecast for the year 2020. The cumulative EE and renewables energy on the DEC system is expected to be greater than what is represented here. Additionally, NC REPS allows 65% of the 2021 target to be met by EE and Out of State Renewable Energy Certificates (RECs).

c) Addition of Combined Heat & Power (CHP) to the IRP

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 CT and heat recovery steam generator (HRSG) is more efficient than the conventional method of producing usable heat and power separately via a gas package boiler.

Duke Energy is exploring and working with potential customers with good base thermal loads on a regulated Combined Heat and Power offer. The CHP asset will be included as part of Duke Energy's IRP as a placeholder for future projects as described below. The steam sales are credited back to the revenue requirement of the projects to reduce the total cost of this generation grid resource. Along with the potential to be a competitive cost generation resource, CHP can result in CO_2 emission reductions, and present economic development opportunities for the state.

Projections for CHP have been included in the following quantities in the 2015 IRP:

2018: 20 MW
2020: 20 MW

As CHP continues to be pursued, future IRP processes will incorporate additional CHP as appropriate.

Additional technologies evaluated as part of the 2015 IRP are discussed in Chapter 6.

d) <u>Reserve Margin</u>

In 2012, DEC and DEP hired Astrape Consulting to conduct a reserve margin study for each utility. Astrape conducted a detailed resource adequacy assessment that incorporated the uncertainty of weather, economic load growth, unit availability and transmission availability for emergency tie assistance. Astrape analyzed the optimal planning reserve margin based on providing an acceptable level of physical reliability and minimizing economic costs to customers. The most common physical 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 of 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. Based on past reliability assessments, results of the Astrape

analysis, and to enhance consistency and communication regarding reserve targets, both DEC and DEP had adopted a 14.5% minimum summer planning reserve margin for scheduling new resource additions.

In 2015, DEC and DEP have contracted again with Astrape Consulting to perform an updated resource adequacy study. The Companies believe that the study was warranted at this time due to several factors. First, the severe, extreme weather experienced in the service territory the last two winter periods was so impactful to the systems that additional review with the inclusion of recent years' weather history was warranted. Second, since the last reliability study the system has added, and projects to add, a large amount of resources that provide meaningful capacity benefits in the summer only. From a peak reduction perspective such summer oriented resources include solar generation, HVAC load control and chiller uprates to existing natural gas combined cycle units. The interconnection queue for solar facilities shows potential to add significantly to the solar resources already incorporated in the system.

Initial results of this updated study indicate that a 17% summer planning reserve margin is required to maintain the one day in 10 year LOLE standard. As such, DEC has utilized a 17% planning reserve margin in the 2015 IRP as opposed to the 14.5% reserve margin used in the 2014 IRP. However, preliminary findings also indicate that a summer-only reserve margin target may not be adequate for providing long term reliability given the increasing levels of summer-only resources. Additional study is needed to determine whether dual summer/winter planning reserve margin targets are required in the future. Once the final results are determined, any changes will be included in the 2016 IRP.

Adequacy of Projected Reserves

DEC's resource plan reflects summer reserve margins ranging from 17.0% to 25.6%. Reserves projected in DEC's IRP meet the minimum planning reserve margin target and thus satisfy the one day in 10 years LOLE criterion. The projected reserve margin exceeds the minimum 17% target by 3% or more in 2022, 2028 and 2030 as a result of the economic addition of a large combined-cycle facilities in those years. Also, the reserve margin exceeds

the minimum target by 3% in 2024 through 2027 due to the addition of baseload nuclear units in 2024 and 2026.

The IRP provides general guidance in the type and timing of resource additions. Since capacity is generally added in large blocks to take advantage of economies of scale, it should be noted that projected planning reserve margins in years immediately following new generation

additions will often be somewhat higher than the minimum target. 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. Development of detailed self-build projects and utilization of the Request for Proposals (RFP) process to consider purchased power alternatives will ensure the Company selects the most cost-effective resource additions. Reserves projected in DEC's IRP are appropriate for providing an economic and reliable power supply.

e) Fuel Costs

In the 2014 IRP, the first 5 years of natural gas prices were based on market data and the remaining years were based off of fundamental pricing. Market prices represent liquid, tradable gas prices offered at the present time, also called "future or forward prices." These prices represent an actual contractually agreed upon price that willing buyers and sellers agree to transact upon at a specified future date. As such, assuming market liquidity, they represent the markets view of spot prices for a given point in the future. Fundamental prices developed through external econometric modeling, on the other hand, represent a projection of fuel prices into the future taking into account changing supply and demand assumptions of the changing dynamics of the external marketplace. The natural gas market has become more liquid, and there are now multiple buyers and sellers of natural gas in the marketplace that are willing to transact at longer transaction terms. Due to the evolving natural gas market, DEC and DEP are using market based prices for the first 10 years of the planning period (2016 – 2025). Following the 10 years of market prices, the Companies transition to fundamental pricing over a 5 year period with 100% fundamental pricing in 2030 and beyond.

As in the 2014 IRP, coal prices continue to be based on 5 years of market data in the 2015 IRP. In order to account for the impact on coal prices by using a longer market based natural gas price, the companies are transitioning to fundamental coal pricing over a 10 year period (2021 to 2030), using the same growth rate as natural gas through that time period. Previously the Companies moved to fundamental coal prices once market prices were unavailable, but the Companies believe this creates an unrealistic disconnect between coal and natural gas prices in the medium term.

f) EPA Clean Power Plan (CPP)

On August 3, 2015, the EPA signed the final CO_2 emission limits rule for existing fossil-fuel power plants, known as the "Clean Power Plan". The regulation is promulgated under Section 111(d) of the Clean Air Act and is sometimes referred to as "111(d)". The rule is both lengthy (over 1550 pages) and complex. There have been considerable legal questions raised since the initial proposal and the rule remains controversial both at the state and federal levels.

EPA has made substantial changes from the proposed rule it released in June 2014 and a complete analysis will take time. The rule maintains a building block approach and preserves the first three building blocks of heat rate improvement, re-dispatch to natural gas and construction of renewables. Building block 4, which in the proposal established energy efficiency targets, has been eliminated from the final rule. There are new elements in the final rule including additional compliance options, a model trading program and a "clean energy incentive program" to encourage early investments in renewable generation and demand-side energy efficiency.

Regulation under Section 111(d) of the Clean Air Act requires EPA to set the program requirements in a guideline document it issues to the states. The document must include:

"An emission guideline that reflects the application of the best system of emission reduction … that has been adequately demonstrated for designated facilities," taking into account both the "cost of achieving such emission reductions" as well as the "remaining useful life of sources."

States use the EPA guidance document to develop their own regulations – often referred to as a state implementation plan (SIP). States have primary implementation and enforcement authority and responsibility for the regulation.

State emission reduction goals were calculated based on EPA's determination of the "Best System of Emission Reduction" (BSER) for existing plants. Since no technology is commercially available to reduce CO_2 emissions at fossil fueled power plants, EPA proposed that the application of building blocks across the entire electric generation system was appropriate for determining the degree of emission reduction that would be achievable.

States have until September 6, 2016 to submit a complete plan or a partial plan with an extension request. States receiving an extension must submit a final SIP. by September 6, 2018. EPA plans to take one year to review state plans (this could be a significant challenge for the

Agency to accomplish). Duke Energy's compliance obligations will be finalized once a state compliance plan has been approved. If a state chooses not to submit a plan or a plan is deemed to be inadequate, EPA will impose a federal plan on the state.

North Carolina

The North Carolina 2030 rate target increased from 992 lbs. CO_2/MWh (proposed rule) to 1,136 lbs./MWh (final rule). In addition, the final rule includes a 2030 mass cap for North Carolina of 51,266,234 tons of CO_2. It remains unclear if the increased rate will make it easier or more difficult to comply, given the uncertainty surrounding the treatment of new natural gas combined cycle (NGCC) units. Early indications are that the NC Department of Environment and Natural Resources (NC DENR) will pursue submittal of a final plan based on what utilities can achieve at the individual affected unit, referred to as 'Building Block 1', to the EPA by the September 2016 deadline. With seven operational coal-fired stations and a growing fleet of NGCC units, the final rule and implementation plan will certainly impact generation in North Carolina, but the extent of these impacts remains unclear.

South Carolina

The South Carolina 2030 rate target increased from 772 lbs. CO_2/MWh (proposed rule) to 1,156 lbs./MWh (final rule). In addition, the final rule includes a 2030 mass cap for South Carolina of 25,998,968 tons of CO_2. The SC Department of Health and Environmental Control has a robust stakeholder group evaluating options and intends to apply for the two year extension, pushing back the date for submittal of a final rule to September 2018. Duke Energy operates no coal-fired generation in South Carolina, so the impact of the rule is anticipated to be minimal.

g) Transmission Planned or Under Construction

This section contains the planned transmission line additions since the 2014 IRP. Only those projects added since the 2014 IRP are included. Additionally, a discussion of the system adequacy of DEC's transmission system is included. Table 4-C lists the 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-C: DEC Transmission Line Additions

	Location		Capacity	Voltage	
Year	**From**	**To**	**MVA**	**KV**	**Comments**
2017	Ripp Switching Station	Riverbend Steam Station	N/A	230	Install new switching station along the Ripp - Riverbend 230kV transmission line to tie in new NTE generation.
2016	Peach Valley Tie	Riverview Switching Station	N/A	230	Install a switchable 3% series reactor on the Peach Valley – Riverview 230 kV transmission line.
2019	Foothills 500/230 kV Tie (New)	Duke Energy Progress Asheville Plant 230 kV station	1008	230	Construct a new 45 mile double circuit 230 kV transmission line with 1533 ACSS at 200°C
2022	Central Tie	Shady Grove Tie	930	230	Re-conductor approximately 18 miles of the Central – Shady Grove 230 kV transmission line with bundled 954 ACSR at 120°C.

The Foothills 500/230 kV Tie is included in the DEC transmission plan based on a Transmission Service Request (TSR) from DEP as part of DEP's Western Carolinas Modernization Project (WCMP). The details of the WCMP are discussed in DEP's 2015 IRP**.**

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, 2015.

(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;

There are presently no new lines 161 kV and above under construction in DEC's service area. There is one 230 kV line presently being upgraded:

McGuire Nuclear Station – Riverbend Steam Station 230 kV Line Upgrade

Project Description: Re-conductor approximately 6 miles of the McGuire – Riverbend 230 kV transmission line with 1533 ACSS at 200°C

a. County location of end point(s); Mecklenburg County
b. Approximate length; 6 miles
c. Typical right-of-way width for proposed type of line; 150 feet
d. Typical tower height for proposed type of line; 125 – 165 feet
e. Number of circuits; 2
f. Operating voltage; 230 kV
g. Design capacity; 1008 MVA
h. Estimated date for starting construction; March 2015
i. Estimated in-service date; December 2015

DEC Transmission System Adequacy

Duke Energy Carolinas 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 DEC transmission model is incorporated into models used by regional reliability groups in developing plans to maintain interconnected transmission system reliability. DEC works with DEP, NCEMC and ElectriCities to develop an annual NC Transmission Planning Collaborative (NCTPC) plan for the DEC and DEP 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, DEC, and DEP.

The Company monitors transmission system reliability by evaluating changes in load, generating capacity, transactions and topography. A detailed annual screening ensures compliance with DEC's Transmission Planning Guidelines for voltage and thermal loading. The annual screening uses methods that comply with SERC policy and NERC Reliability Standards and the screening results identify the need for future transmission system expansion and upgrades.

Transmission planning and requests for transmission service and generator interconnection are interrelated to the resource planning process. DEC currently evaluates all transmission reservation

requests for impact on transfer capability, as well as compliance with the Company's Transmission Planning 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.

Southeastern Reliability Corporation (SERC) audits DEC every three years for compliance with NERC Reliability Standards. Specifically, the audit requires DEC 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 DEC in May 2014. The scope of this audit included standards impacting the Transmission Planning area. DEC received "No Findings" from the audit team in the Transmission Planning area.

DEC 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. The reliability groups' 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 have ensured DEC's transmission system is expected to continue to provide reliable service to its native load and firm transmission customers.

5. LOAD FORECAST

The Duke Energy Carolinas' Spring 2015 Forecast provides projections of the energy and peak demand needs for its service area. The forecast covers the time period of 2016 – 2030 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 and appliance efficiency trends. Population is also used in the Residential customer model. While regression analysis has consistently yielded reasonable results over the years, processes are continually reviewed and compared between jurisdictions in an effort to improve upon the load forecasting process. Large unforeseen events, however, such as the "great recession" or the loss of large wholesale customers, will cause forecasts to differ from actual results.

The economic projections used in the Spring 2015 Forecast are obtained from Moody's Analytics, a nationally recognized economic forecasting firm, and include economic forecasts for the states of North Carolina and South Carolina.

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, electric price 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 projected growth rate of Residential in the Spring 2015 Forecast after all adjustments for UEE programs, Solar and Electric Vehicles from 2016-2030 is 1.3%.

The Commercial forecast also uses a 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 is expected to be the fastest growing Class, with a projected growth rate of 1.5%, after all adjustments.

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 0.8% over the forecast horizon, after all adjustments.

County population projections are obtained from the North Carolina Office of State Budget and Management as well as the South Carolina Budget and Control Board. These are then used to derive the total population forecast for the counties that comprise the DEC service area.

Weather impacts are incorporated into the models by using Heating Degree Days and Cooling Degree Days with a base temperature of 65 degrees. The forecast of degree days is based on a 10-year average.

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 in the Spring 2015 Forecast. 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.

Assumptions

Below are the projected average annual growth rates of several key drivers from DEC's Spring 2015 Forecast:

	2016-2030
Real Income	2.7%
Mfg. IPI	2.1%
Population	1.0%

In addition to economic, demographic, and efficiency trends, the forecast also incorporates the expected impacts of utility-sponsored energy efficient programs, as well as projected effects of electric vehicles and behind the meter solar technology.

Wholesale

The wholesale contracts that are included in the load forecast are listed in Table 10-A in Chapter 10.

Historical Values

It should be noted that the long-term structural decline of the Textile industry and the recession of 2008-2009 have had an adverse impact on DEC sales. The worst of the Textile decline appears to be over, and Moody's Analytics expects the Carolina's economy to show solid growth going forward.

In tables 5-A & 5-B below the history of DEC customers and sales are given. As a note, the values in Table 5-B are not weather adjusted.

Table 5-A Retail Customers (Thousands, Annual Average)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential	1,840	1,877	1,916	2,012	2,024	2,034	2,041	2,053	2,068	2,089
Commercial	311	317	322	334	331	333	335	337	339	342
Industrial	7	7	7	7	7	7	7	7	7	7
Other	13	13	13	14	14	14	14	14	14	15
Total	2,171	2,214	2,259	2,367	2,377	2,389	2,397	2,411	2,428	2,452

Table 5-B Electricity Sales (GWh Sold – Years Ended December 31)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential	26,108	25,816	27,459	27,335	27,273	30,049	28,323	26,279	26,895	27,976
Commercial	25,679	26,030	27,433	27,288	26,977	27,968	27,593	27,476	27,765	28,421
Industrial	25,495	24,535	23,948	22,634	19,204	20,618	20,783	20,978	21,070	21,577
Other	269	271	278	284	287	287	287	290	293	303
Total Retail	77,550	76,653	79,118	77,541	73,741	78,922	76,985	75,022	78,035	78,278
Wholesale	1,580	1,694	2,454	3,525	3,788	5,166	4,866	5,176	5,824	6,559
Total System	79,130	78,347	81,572	81,066	77,528	84,088	81,851	80,199	83,859	84,837

Utility Energy Efficiency

A new process for reflecting the impacts of UEE on the forecast was introduced in the Spring of 2015. In the latest forecast, the concept of 'Program Life' for a program was included in the calculations. 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 models 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.

- Column A: Total energy demand for DEC before any reduction for UEE
- Column B: Total incremental cumulative UEE
- Column C: Roll-off amount of the historical UEE programs
- Column D: Roll-off amount of the incremental future UEE programs
- Column E: Total net UEE benefits (column B less columns C & D)
- Column F: Total DEC energy demand after incorporating UEE (column A less column E)

Table 5-C UEE Program Life Process (MWh)

	A	B	C	D	E	F
	Forecast Before EE	Total Cumulative EE	Roll-Off Historical UEE	Roll-Off Forecasted UEE	UEE to Subtract From Forecast	Forecast After UEE
2015	97,982,308	2,873,708	47,012	0	2,826,696	95,155,613
2016	99,917,423	3,271,121	174,381	0	3,096,740	96,820,683
2017	101,531,374	3,674,346	459,003	0	3,215,343	98,316,032
2018	103,285,531	4,079,047	802,259	0	3,276,788	100,008,743
2019	103,351,876	4,487,148	1,172,938	0	3,314,210	100,037,666
2020	104,654,462	4,895,248	1,480,766	15,527	3,398,955	101,255,507
2021	105,711,347	5,303,349	1,776,255	56,283	3,470,811	102,240,536
2022	106,993,783	5,711,449	2,013,612	144,371	3,553,466	103,440,317
2023	108,272,081	6,119,549	2,207,592	263,372	3,648,585	104,623,496
2024	109,759,123	6,527,650	2,344,071	432,850	3,750,730	106,008,393
2025	110,943,675	6,935,750	2,401,759	711,975	3,822,016	107,121,660
2026	112,334,984	7,343,851	2,421,015	1,055,253	3,867,583	108,467,401
2027	113,696,808	7,751,951	2,421,015	1,443,797	3,887,138	109,809,670
2028	115,344,683	8,160,051	2,421,015	1,842,280	3,896,756	111,447,927
2029	116,722,458	8,568,152	2,421,015	2,247,713	3,899,424	112,823,034
2030	117,890,622	8,691,375	2,421,015	2,655,580	3,614,780	114,275,842

Note: UEE Data is net of free riders

Results

Tabulations of class forecasts of customers and sales are given in Table 5-D and Table 5-E. The sales forecasts are after all adjustments for UEE, Solar and Electric Vehicles.

Table 5-D Retail Customers (Thousands, Annual Average)

	Residential Customers	Commercial Customers	Industrial Customers	Other Customers	Retail Customers
2016	2,139	348	7	15	2,510
2017	2,164	353	7	15	2,540
2018	2,188	358	7	15	2,568
2019	2,212	362	7	16	2,596
2020	2,234	366	7	16	2,623
2021	2,257	370	7	16	2,651
2022	2,280	375	7	16	2,678
2023	2,303	380	7	16	2,709
2024	2,326	384	7	16	2,733
2025	2,349	389	7	17	2,761
2026	2,371	394	7	17	2,789
2027	2,394	398	7	17	2,816
2028	2,417	403	7	17	2,844
2029	2,440	408	7	17	2,872
2030	2,462	413	7	17	2,899

Table 5-E Electricity Sales (GWh Sales - Years Ended December 31)

	Residential Gwh	Commercial Gwh	Industrial Gwh	Other Gwh	Retail Gwh
2016	27,871	29,033	21,922	294	79,119
2017	28,162	29,390	22,095	291	79,936
2018	28,508	29,811	22,298	287	80,904
2019	28,858	30,261	22,471	282	81,872
2020	29,234	30,724	22,668	277	82,903
2021	29,573	31,080	22,851	271	83,774
2022	29,975	31,527	23,041	264	84,807
2023	30,355	31,983	23,233	258	85,829
2024	30,811	32,524	23,417	252	87,004
2025	31,144	32,989	23,612	246	87,990
2026	31,573	33,525	23,818	241	89,156
2027	32,022	34,067	23,998	235	90,322
2028	32,546	34,714	24,231	230	91,721
2029	32,990	35,306	24,418	225	92,939
2030	33,448	35,900	24,633	219	94,201

Tabulations of the utility's forecasts, including peak loads for summer and winter seasons of each year and annual energy forecasts, both with and without the impact of UEE programs, are shown below in Tables 5-G and 5-H.

Load duration curves, with and without UEE programs, follow Tables 5-G and 5-H, and are shown as Charts 5-A and 5-B.

The values in these tables reflect the loads that Duke Energy Carolinas is contractually obligated to provide and cover the period from 2016 to 2030.

For the period 2016-2030, the Spring 2015 Forecast resulted in the following growth rates:

Table 5-F Growth Rates of Retail and Wholesale Customers (2016-2030)

	2015 Forecast (2016 – 2030)		
	Summer Peak Demand	**Winter Peak Demand**	**Energy**
Excludes impact of new EE programs	1.5%	1.5%	1.2%
Includes impact of new EE programs	1.4%	1.4%	1.2%

The peaks and sales in the tables and charts below are at the generator, except for the Class sales forecast, which is at meter.

Table 5-G Load Forecast without Energy Efficiency Programs & Before Demand Reduction Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2016	18,764	17,972	99,917
2017	19,129	18,330	101,531
2018	19,566	18,735	103,286
2019	19,659	18,846	103,352
2020	19,992	19,133	104,654
2021	20,296	19,449	105,711
2022	20,607	19,687	106,994
2023	20,908	19,959	108,272
2024	21,217	20,259	109,759
2025	21,524	20,543	110,944
2026	21,810	20,851	112,335
2027	22,131	21,134	113,697
2028	22,462	21,476	115,345
2029	22,770	21,797	116,722
2030	23,125	22,105	117,891

Chart 5-A Load Duration Curve without Energy Efficiency Programs & Before Demand Reduction Programs

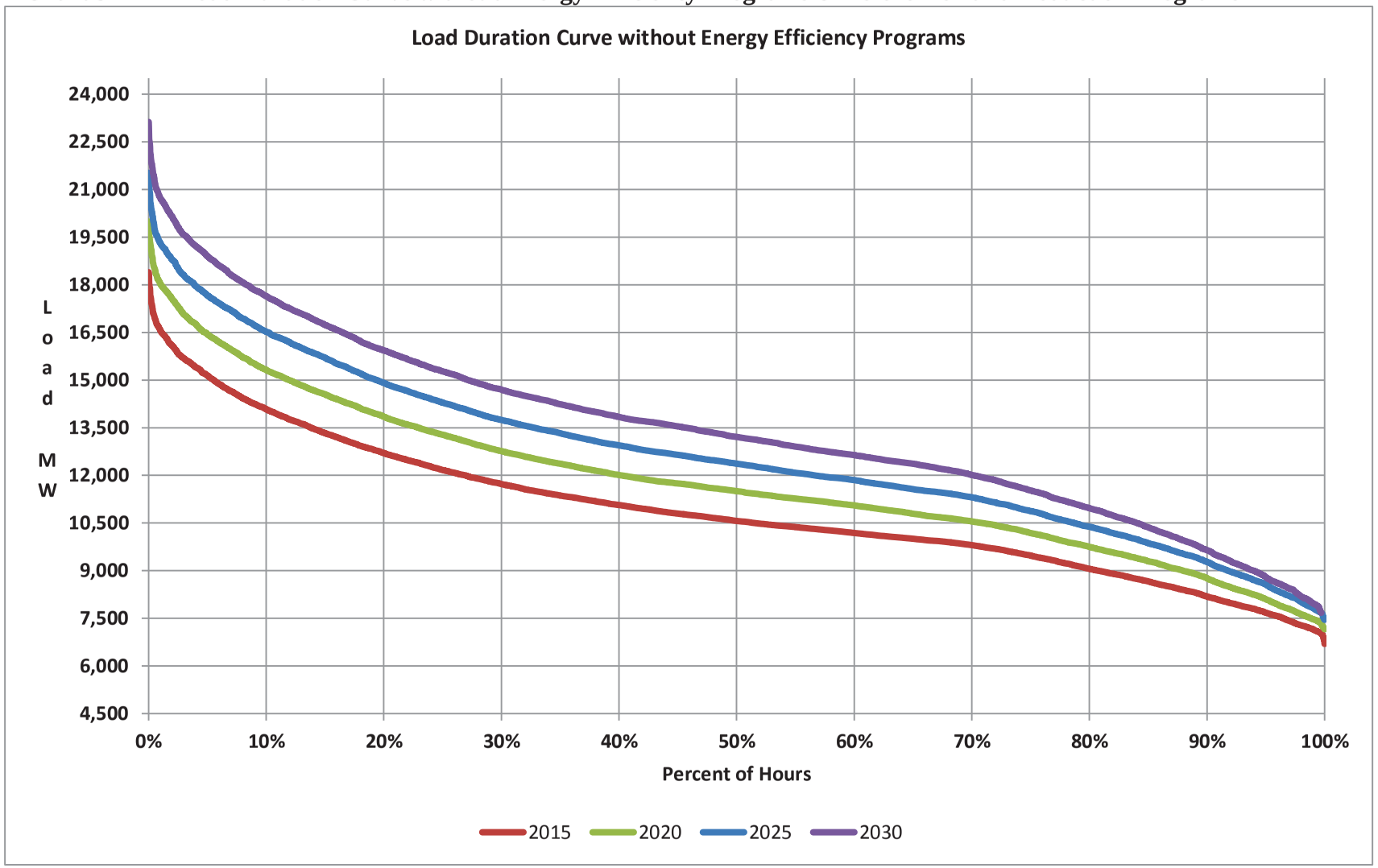
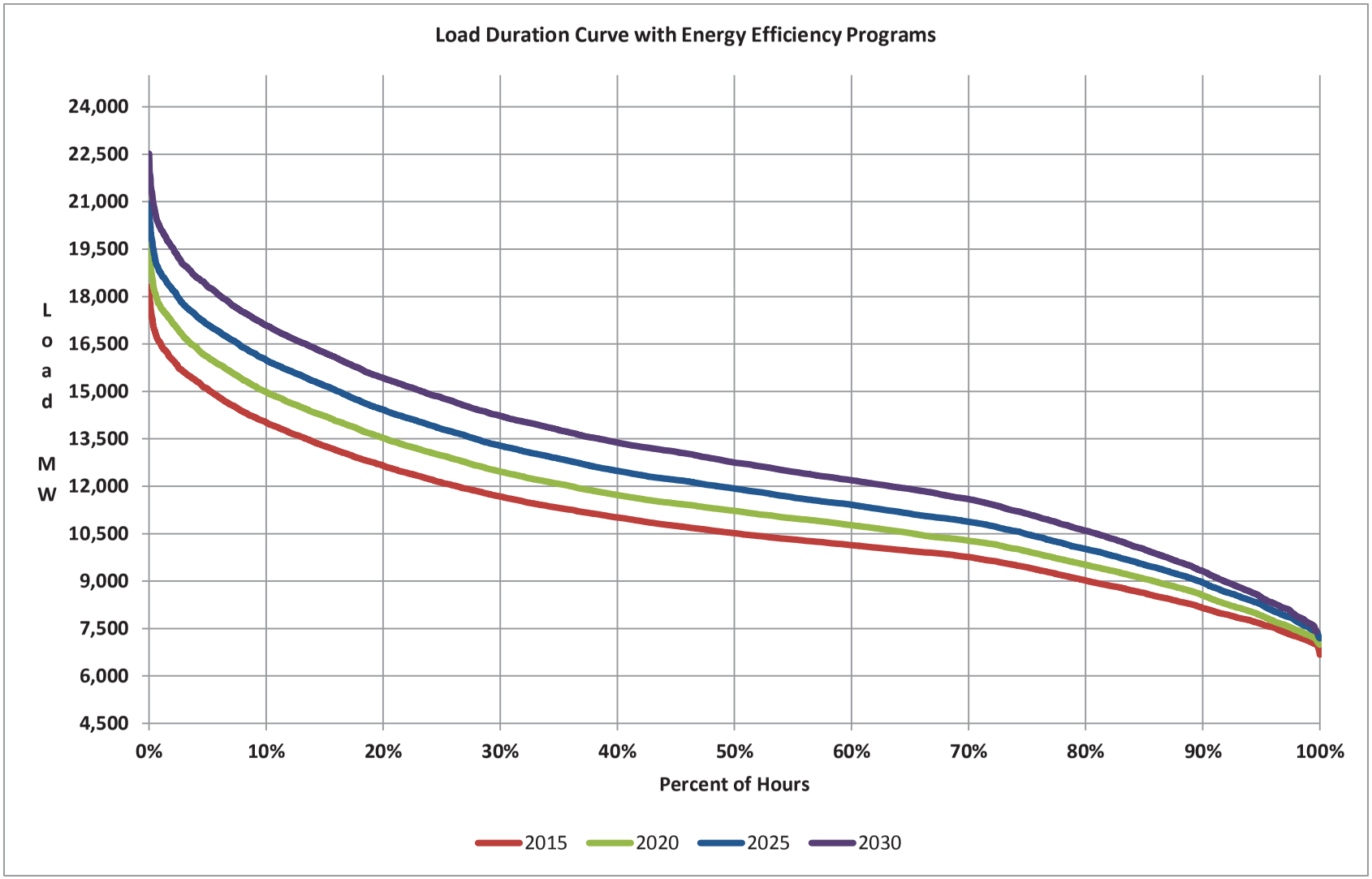


Table 5-H Load Forecast with Energy Efficiency Programs & Before Demand Reduction Programs

YEAR	SUMMER (MW)	WINTER (MW)	ENERGY (GWH)
2016	18,625	17,896	96,821
2017	18,927	18,213	98,316
2018	19,303	18,579	100,009
2019	19,334	18,651	100,038
2020	19,611	18,878	101,256
2021	19,859	19,156	102,241
2022	20,121	19,360	103,440
2023	20,377	19,602	104,623
2024	20,649	19,877	106,008
2025	20,934	20,145	107,122
2026	21,209	20,445	108,467
2027	21,527	20,726	109,810
2028	21,859	21,067	111,448
2029	22,164	21,386	112,823
2030	22,517	21,693	114,276

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



6. DEVELOPMENT OF THE RESOURCE PLAN

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

Table 6-A Load, Capacity and Reserves Table - Summer

Summer Projections of Load, Capacity, and Reserves for Duke Energy Carolinas 2015 Annual Plan

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Load Forecast															
1 Duke System Peak	18,811	19,176	19,613	19,706	20,039	20,296	20,607	20,908	21,217	21,524	21,810	22,131	22,462	22,770	23,125
Catawba Owner Backstand	47	47	47	47	47	0	0	0	0	0	0	0	0	0	0
2 Firm Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Cumulative New EE Programs	(140)	(202)	(263)	(325)	(381)	(438)	(486)	(531)	(568)	(590)	(601)	(604)	(603)	(606)	(608)
4 Adjusted Duke System Peak	**18,672**	**18,974**	**19,350**	**19,381**	**19,658**	**19,859**	**20,121**	**20,377**	**20,649**	**20,934**	**21,209**	**21,527**	**21,859**	**22,164**	**22,517**
Existing and Designated Resources															
5 Generating Capacity	20,368	20,389	20,734	21,104	21,114	21,120	21,120	21,120	21,120	21,120	21,120	21,120	21,120	19,993	19,993
6 Designated Additions / Uprates	21	345	670	10	6	0	0	0	0	0	0	0	0	0	0
7 Retirements / Derates	0	0	(300)	0	0	0	0	0	0	0	0	0	(1,127)	0	0
8 Cumulative Generating Capacity	**20,389**	**20,734**	**21,104**	**21,114**	**21,120**	**21,120**	**21,120**	**21,120**	**21,120**	**21,120**	**21,120**	**21,120**	**19,993**	**19,993**	**19,993**
Purchase Contracts															
9 Cumulative Purchase Contracts	**228**	**223**	**217**	**177**	**172**	**86**	**68**	**56**	**46**	**46**	**37**	**37**	**35**	**10**	**2**
Non-Compliance Renewable Purchases	69	64	58	56	54	54	54	42	33	33	23	23	21	10	2
Non-Renewables Purchases	159	159	159	121	118	32	14	14	14	14	14	14	14	0	0
Undesignated Future Resources															
10 Nuclear	0	0	0	0	0	0	0	0	1,117	0	1,117	0	0	0	0
11 Combined Cycle	0	0	0	0	0	0	895	0	0	0	0	0	895	0	895
12 Combustion Turbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 CHP	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0
Renewables															
14 **Cumulative Renewables Capacity**	212	200	202	459	708	961	1,044	1,057	1,079	1,093	1,110	1,122	1,140	1,160	1,171
15 Cumulative Production Capacity	**20,829**	**21,157**	**21,542**	**21,769**	**22,040**	**22,207**	**23,167**	**23,168**	**24,297**	**24,311**	**25,435**	**25,448**	**25,232**	**25,227**	**26,124**
Demand Side Management (DSM)															
16 Cumulative DSM Capacity	**1,056**	**1,064**	**1,097**	**1,127**	**1,151**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**	**1,202**
17 Cumulative Capacity w/ DSM	**21,885**	**22,221**	**22,639**	**22,897**	**23,191**	**23,409**	**24,369**	**24,370**	**25,499**	**25,513**	**26,637**	**26,650**	**26,434**	**26,429**	**27,326**
Reserves w/ DSM															
18 Generating Reserves	3,214	3,247	3,289	3,515	3,533	3,550	4,248	3,993	4,850	4,580	5,428	5,122	4,575	4,266	4,809
19 % Reserve Margin	**17.2%**	**17.1%**	**17.0%**	**18.1%**	**18.0%**	**17.9%**	**21.1%**	**19.6%**	**23.5%**	**21.9%**	**25.6%**	**23.8%**	**20.9%**	**19.2%**	**21.4%**

Table 6-B Load, Capacity and Reserves Table – Winter

Winter Projections of Load, Capacity, and Reserves for Duke Energy Carolinas 2015 Annual Plan

		16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30
Load Forecast															
1	Duke System Peak	18,019	18,377	18,782	18,846	19,180	19,449	19,687	19,959	20,259	20,543	20,851	21,134	21,476	21,797
2	Firm Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Cumulative New EE Programs	(75)	(117)	(157)	(195)	(255)	(293)	(326)	(357)	(382)	(398)	(406)	(408)	(409)	(411)
4	**Adjusted Duke System Peak**	**17,943**	**18,260**	**18,626**	**18,651**	**18,925**	**19,156**	**19,360**	**19,602**	**19,877**	**20,145**	**20,445**	**20,726**	**21,067**	**21,386**
Existing and Designated Resources															
5	Generating Capacity	21,155	21,200	21,970	21,970	21,980	21,986	21,986	21,986	21,986	21,986	21,986	21,986	21,986	20,825
6	Designated Additions / Uprates	45	1,070	0	10	6	0	0	0	0	0	0	0	0	0
7	Retirements / Derates	0	(300)	0	0	0	0	0	0	0	0	0	0	(1,161)	0
8	**Cumulative Generating Capacity**	**21,200**	**21,970**	**21,970**	**21,980**	**21,986**	**21,986**	**21,986**	**21,986**	**21,986**	**21,986**	**21,986**	**21,986**	**20,825**	**20,825**
Purchase Contracts															
9	**Cumulative Purchase Contracts**	**193**	**191**	**185**	**146**	**141**	**49**	**31**	**19**	**18**	**18**	**17**	**17**	**16**	**1**
	Non-Compliance Renewable Purchases	28	26	20	19	17	17	17	5	4	4	3	3	2	1
	Non-Renewables Purchases	165	165	165	127	124	32	14	14	14	14	14	14	14	0
Undesignated Future Resources															
10	Nuclear	0	0	0	0	0	0	0	0	1,117	0	1,117	0	0	0
11	Combined Cycle	0	0	0	0	0	0	935	0	0	0	0	0	935	0
12	Combustion Turbine	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	CHP	0	0	20	0	20	0	0	0	0	0	0	0	0	0
Renewables															
14	**Cumulative Renewables Capacity**	114	94	89	113	145	179	194	195	203	206	206	204	206	208
15	**Cumulative Production Capacity**	**21,507**	**22,255**	**22,264**	**22,259**	**22,312**	**22,254**	**23,185**	**23,174**	**24,298**	**24,302**	**25,417**	**25,415**	**25,191**	**25,178**
Demand Side Management (DSM)															
16	**Cumulative DSM Capacity**	**554**	**551**	**553**	**556**	**558**	**553**	**553**	**553**	**553**	**553**	**553**	**553**	**553**	**553**
17	**Cumulative Capacity w/ DSM**	**22,061**	**22,806**	**22,817**	**22,814**	**22,870**	**22,807**	**23,738**	**23,727**	**24,851**	**24,855**	**25,970**	**25,968**	**25,744**	**25,731**
Reserves w/ DSM															
18	Generating Reserves	4,118	4,546	4,191	4,163	3,946	3,651	4,378	4,125	4,974	4,710	5,525	5,242	4,677	4,345
19	**% Reserve Margin**	**22.9%**	**24.9%**	**22.5%**	**22.3%**	**20.8%**	**19.1%**	**22.6%**	**21.0%**	**25.0%**	**23.4%**	**27.0%**	**25.3%**	**22.2%**	**20.3%**

DEC - Assumptions of Load, Capacity, and Reserves Table

The following notes are numbered to match the line numbers on the Summer Projections of Load, Capacity, and Reserves tables. All values are MW except where shown as a Percent.

1. Planning is done for the peak demand for the Duke System including Nantahala.

   A firm wholesale backstand agreement for 47 MW between Duke Energy Carolinas and PMPA starts on 1/1/2014 and continues through the end of 2020. This backstand is included in Line 1.

2. No additional firm sales are included.

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 January 2015.

   Includes 101 MW Nantahala hydro capacity, and total capacity for Catawba Nuclear Station less 832 MW to account for NCMPA1 firm capacity sale.

6. A short-term 300 MW PPA is included in 2017, and removed in the fall of 2017.

   This PPA is a placeholder to ensure compliance with the minimum planning reserve margin and will be re-evaluated in the coming months.

   Lee Combined Cycle is reflected in 2018 (670 MW). This is the DEC capacity net of 100 MW to be owned by NCEMC.

   Capacity Additions include Duke Energy Carolinas hydro units scheduled to be repaired and returned to service. The units are returned to service in the 2016-2020 timeframe and total 17 MW.

   Also included is a 65 MW capacity increase due to nuclear uprates at Catawba, McGuire, and Oconee. Timing of these uprates is shown from 2016-2017.

7. The short-term 300 MW PPA is removed in the fall of 2017.

   A planning assumption for coal retirements has been included in the 2015 IRP.

   Allen Steam Station (1127 MW) is assumed to retire in 2028.

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

Nuclear Stations are assumed to retire at the end of their current license extension.

No nuclear facilities are assumed to retire in the 15 year study period.

The Hydro facilities for which Duke has submitted an application to FERC for license renewal are assumed to continue operation through the planning horizon.

All retirement dates are subject to review on an ongoing basis.

8. Sum of lines 5 through 7.

9. Cumulative Purchase Contracts including purchased capacity from PURPA Qualifying Facilities, an 86 MW Cherokee County Cogeneration Partners contract which began in June 1998 and expires June 2020 and miscellaneous other QF projects.

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

   Renewables in these line items are not used for NC REPS compliance.

10. New nuclear 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 that year.

    Addition of 1,117 MW Lee Nuclear Unit additions in 2024 and 2026.

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 that year.

    Addition of 895 MW of combined cycle capacity in 2022, 2028 and 2030.

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

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

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 that year.

No combustion turbine resources were selected in the Base Case.

13. New 20 MW combined heat and power units included in 2018 and 2020. The 2015 IRP represents the first time that CHP resources have been included in the IRP.

14. Cumulative solar, biomass, hydro and wind resources to meet NC REPS and SC DERP compliance.

    Also includes Green Source solar projects.

15. Sum of lines 8 through 14.

16. Cumulative Demand Response programs including load control and DSDR.

17. Sum of lines 15 and 16.

18. The difference between lines 17 and 4.

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

    Line 18 divided by Line 4.

    Minimum target planning reserve margin is 17%.

Technologies Considered

Similar to the 2014 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 2015 IRP.

As in the 2014 IRP, the Company conducted an economic screening analysis of various technologies. Through the screening process, the following technologies were considered as part of the more detailed quantitative analysis phase of the planning process in the 2015 IRP, with changes from the 2014 IRP highlighted and explained in further detail below.

- Base load – 723 MW Supercritical Pulverized Coal with CCS
- Base load – 525 MW IGCC with CCS
- Base load – 2 x 1,117 MW Nuclear units (AP1000)
- Base load – **895 MW** – 2x2x1 Advanced Combined Cycle (Inlet Chiller and Duct Fired)
- **Base load – 20 MW – CHP** (CT with HRSG)
- Peaking/Intermediate – **828 MW** 4-7FA CTs
- Renewable – 150 MW Wind - On-Shore
- Renewable – 5 MW Landfill Gas
- Renewable – 25 MW Solar Photovoltaic (PV)

Combined Cycle base capacities and technologies: Based on proprietary third party engineering studies, the 2x2x1 Advanced CC saw an increase in base load of 29 MWs. The older version base 2x1 CC and the 3x1 Advanced CC 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.

Combustion Turbine base capacities and technologies: Based on proprietary third party engineering studies, the F-Frame CT technology saw an increase in base load of 36 MWs. The LM6000 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.

CHP: As mentioned previously, two 20-MW Combined Heat & Power units are considered in the 2015 IRP and are included as resources for meeting future generation needs. Duke Energy is exploring and working with potential customers with good base thermal loads on a regulated CHP

offer and, as CHP continues to be implemented, future IRP processes will incorporate additional CHP as appropriate.

In addition to the technologies listed above, Li-ion batteries with off-peak charging were considered in the screening process as an energy storage option. Energy Storage in the form or battery storage is becoming more feasible with the advances in battery technology and the reduction in battery cost; however, their uses 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).

Centralized generation will likely remain the backbone of the grid for Duke Energy in the long term; however, in addition to centralized generation it is possible that distributed generation will begin to share more and more grid responsibilities over time as technologies such as energy storage increase our grid's flexibility. At this point however, the screening analysis shows that costs are still prohibitive for large scale battery technologies to be considered in the IRP.

Expansion Plan and Resource Mix

A tabular presentation of the 2015 Base Case resource plan represented in the above LCR table is shown below:

Table 6-C DEC Base Case Resources – Summer (with CO_2)

Duke Energy Carolinas Resource Plan [1] Base Case - Summer				
Year	**Resource**		**MW**	
2016	Nuclear Uprates	Hydro Units Return to Service [2]	20	1
2017	Nuclear Uprates		45	
2018	Lee CC [3]	CHP	670	20
2019	Hydro Units Return to Service [4]		10	
2020	Hydro Units Return to Service [4]	CHP	6	20
2021	-		-	
2022	New CC		895	
2023	-		-	
2024	New Nuclear		1117	
2025	-		-	
2026	New Nuclear		1117	
2027	-		-	
2028	New CC		895	
2029	-		-	
2030	New CC		895	

Notes: (1) Table includes both designated and undesignated capacity additions
(2) Bryson City and Mission hydro units return to service
(3) Lee CC capacity is net of NCEMC ownership of 100 MW
(4) Rocky Creek Units currently offline for refurbishment; these are expected return to service dates

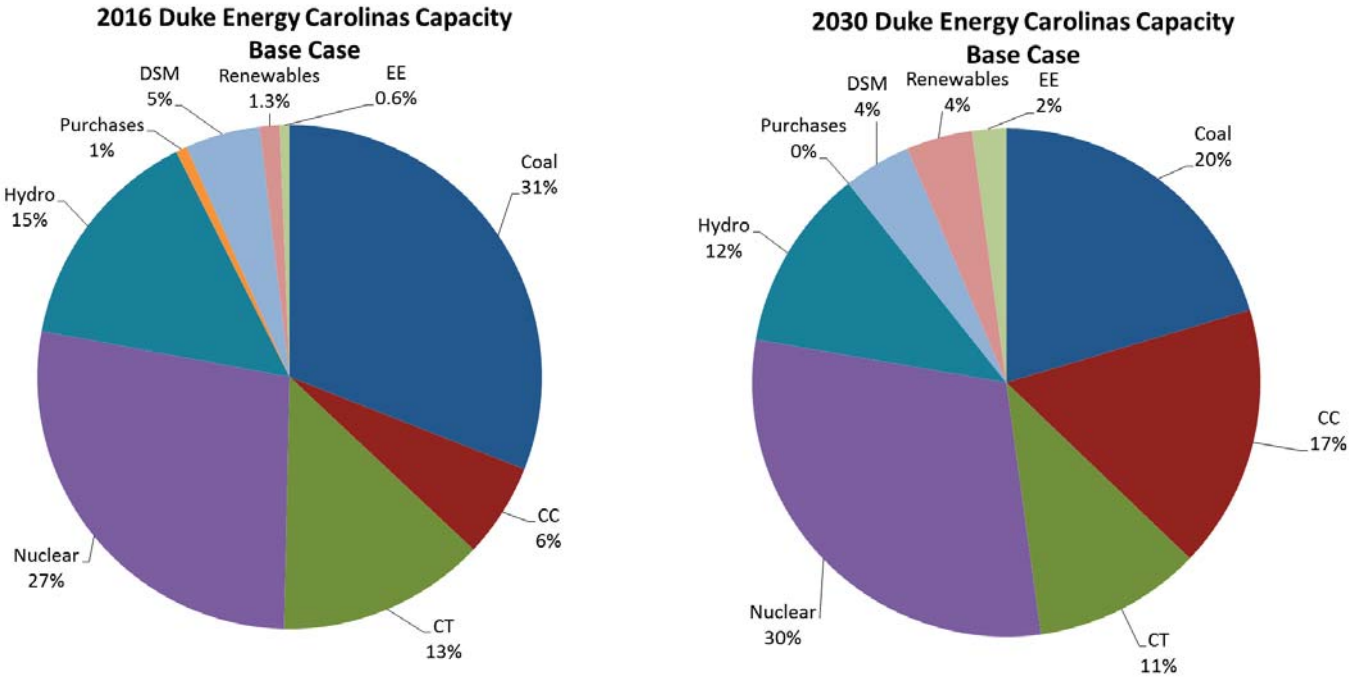
Table 6-D DEC Base Case Resources (with CO_2) Cumulative Summer Totals

DEC Base Case Resources
Cumulative Summer Totals - 2016 - 2030

Nuclear	2299
CC	3355
CT	0
Hydro	17
CHP	40
Total	5711

The following charts illustrate both the current and forecasted capacity by fuel type for the DEC system, as projected in the Base Case. As demonstrated in Chart 6-A, the capacity mix for the DEC system changes with the passage of time. In 2030, the Base Case projects that DEC will have a smaller reliance on coal and a higher reliance on gas-fired resources, nuclear, renewable resources and EE as compared to the current state.

Chart 6-A 2016 & 2030 Base Case Summer Capacity Mix



As a sensitivity, the Company developed a No Carbon Price scenario (No Carbon Sensitivity). The expansion plan for this case is shown below in Table 6-E. Table 6-F summarizes the capacity additions for the No Carbon Sensitivity case by technology type.

Table 6-E No Carbon Sensitivity - Summer

Duke Energy Carolinas Resource Plan [1] No Carbon Sensitivity - Summer				
Year	**Resource**		**MW**	
2016	Nuclear Uprates	Hydro Units Return to Service [2]	20	1
2017	Nuclear Uprates		45	
2018	Lee CC [3]	CHP	670	20
2019	Hydro Units Return to Service [4]		10	
2020	Hydro Units Return to Service [4]	CHP	6	20
2021	-		-	
2022	New CC		895	
2023	-		-	
2024	-		-	
2025	New CC		895	
2026	-		-	
2027	New CT		414	
2028	New CT		1242	
2029	New CT		414	
2030	New CC		895	

Notes: (1) Table includes both designated and undesignated capacity additions
(2) Bryson City and Mission hydro units return to service
(3) Lee CC capacity is net of NCEMC ownership of 100 MW
(4) Rocky Creek Units currently offline for refurbishment; these are expected return to service dates

Table 6-F No Carbon Sensitivity Cumulative Summer Totals

DEC No Carbon Sensitivity Resources
Cumulative Summer Totals - 2016 - 2030

Nuclear	65
CC	3355
CT	2070
Hydro	17
CHP	40
Total	5547

7. 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 DEC 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) modifying programs to account for changing market conditions and new measurement and verification (M&V) results and (3) considering other EE research and development pilots.

- Over the 5 year period represented by the Short-Term Action Plan, DEC projects to add an incremental 241 MW of EE, and 95 MW of DSM.

Continued Focus on Renewable Energy Resources

- DEC is committed to full compliance with NC REPS in North Carolina and SC DERP in South Carolina. Due to pending expiries of Federal and State tax subsidies for solar development, the Company has experienced a substantial increase in solar QFs in the interconnection queue. With this significant level of interest in solar development, DEC continues to procure renewable purchase power resources, when economically viable, as part of its Compliance Plans. DEC is also pursuing the addition of new utility-owned solar on the DEC system.

- DEC continues to evaluate market options for renewable generation and procure capacity, as appropriate. PPAs have been signed with developers of solar PV and landfill gas resources. Additionally, REC purchase agreements have been executed for purchases of unbundled RECs from wind, solar PV, solar thermal and hydroelectric facilities.

- Over the 5-year period represented by the Short-Term Action Plan, DEC projects to add an incremental 1,093 MW of renewable resources (nameplate).

- DEC continues to pursue CHP opportunities, as appropriate.

Continue to Pursue New Nuclear

Duke Energy Carolinas sees significant value in new nuclear generation. Today, nuclear and gas generation are effectively the only base load electrical generating options available for construction, and new nuclear generation is the only carbon-free, base load generation option available. Coupling that situation with Duke Energy's long term aspiration to reduce carbon dioxide emissions and the EPA's recently released Clean Power Plan, that value is patently evident. Furthermore, Oconee Nuclear Station's operating licenses expire in 2033-2034. The NRC is expected to finalize its guidance for Second License Renewal (SLR) in mid-2017. The Company believes Oconee Nuclear Station is an excellent candidate for SLR; however before a decision is made the scope, cost and complexity of required modifications, upgrades, and other improvements need to be fully understood and evaluated once the NRC issues its SLR guidance.

Duke Energy continues the work necessary to obtain combined construction and operating licenses (COLs) for the William States Lee III Nuclear Station (Lee Nuclear). The Lee COL application references and incorporates the Westinghouse AP1000 NRC certified design. As that design is refined and modified through Westinghouse's design finalization activities and construction of AP1000 units in China and the United States, a handful of issues have arisen that must be resolved by the Nuclear Regulatory Commission (NRC) prior to issuance of the Lee COL. Assuming no new significant issues are identified, issuance of the COL is expected by late 2016.

Given the long cycle times to license and build a new nuclear electric generation station, it is essential to continue the licensing work on Lee Nuclear as a hedge against extensive carbon dioxide regulation, uncertain load growth, volatile fuel prices, and the possibility of not relicensing the existing operating nuclear stations.

Addition of Clean Natural Gas Resources

- Continue construction of the Lee combined cycle plant (Lee CC) at the Lee Steam Station site located in Anderson, SC. As demonstrated in recent IRP plans, a capacity need was identified in 2017/2018 to allow DEC to meet its customers' load demands. The Company received a Certificate of Environmental Compatibility and Public Convenience and Necessity (CECPCN) in an order dated May 2, 2014, to move forward with the construction of the Lee

CC. For the Lee CC project, site clearing and grubbing is complete and the project site is to grade. The engineering phase is approximately 50% complete through the end of June and the first foundation is planned to be placed by mid-August.

- Operate Lee Steam Station Unit 3 as a natural gas-fired unit. Lee Unit 3 has been successfully converted to a natural gas-fired facility. This conversion was completed in April of 2015. The unit was available for the summer peak of 2015.

Expiration of Wholesale Sales Contracts (CONFIDENTIAL)

In the 2016-2020 timeframe, DEC has [redacted] of wholesale sales contracts that are scheduled to expire. At this time, DEC is not relying on contract extensions for these contracts. As such, these contract expirations are included in the IRP and Short-Term Action Plan. A summary of those expirations is shown in Table 7-A below. In addition to the expirations shown in this five year period, additional contracts expire during the 15 year IRP study period.

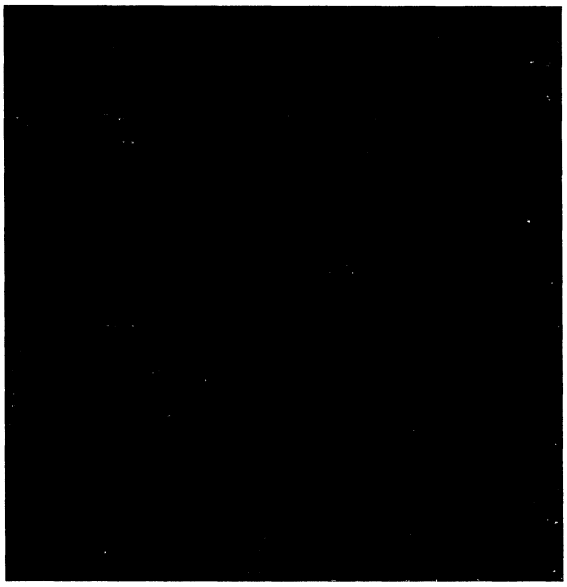
Table 7-A Wholesale Sales Contract Expirations (CONFIDENTIAL)

[redacted]

Expiration of Wholesale Purchase Contracts (CONFIDENTIAL)

In the 2016-2020 timeframe, DEC has [redacted] of wholesale purchases that are scheduled to expire. At this time, DEC is not relying on contract extensions on these contracts. As such, these contract expirations are included in the IRP and Short-Term Action Plan. A summary of those expirations is shown in Table 7-B below. In addition to the expirations shown in this five year period, additional contracts expire during the 15 year IRP study period.

Table 7-B Wholesale Purchase Contract Expirations (CONFIDENTIAL)



Continued Focus on System Reliability and Resource Adequacy for DEC System

As previously stated, DEC has retained Astrape Consulting to conduct a reserve margin study to examine the resource adequacy of the DEC system. Based upon the recent extreme winter weather, the potential for continued extreme weather, and the large amount of expected solar resource additions, the Company felt that new examination of the reliability of the system and the adequacy of the resources was warranted.

Initial results of this updated study indicate that a 17% summer planning reserve margin is required to maintain the one day in 10 year LOLE. As such, DEC has utilized a 17% planning reserve margin in the 2015 IRP as opposed to the 14.5% reserve margin used in the 2014 IRP. However, preliminary findings also indicate that a summer-only reserve margin target may not be adequate for providing long term reliability given the increasing levels of summer-only resources. Additional study is needed to determine whether dual summer/winter planning reserve margin targets are

required in the future. Once the final results are determined, any changes will be included in the 2016 IRP.

The 2015 IRP includes a placeholder for a short-term 300 MW purchased power agreement (PPA) in the summer of 2017 to satisfy the increase in the planning reserve margin to 17%. The need for this short-term PPA will be reevaluated after the reserve margin study is completed and there is greater certainty regarding reserve margin target(s), load and resource needs.

Continued Focus on Regulatory, Environmental Compliance & Wholesale Activities

- Retired older coal generation. As of April 2015, Duke Energy Carolinas has no remaining older, un-scrubbed coal units in operation. The Company has retired approximately 1,700 MW of un-scrubbed, older coal units.

- Continue to be on target for compliance with the Cliffside 6 Air Quality Permit Plan by 2018:
    - Completed retirement of Buck, Riverbend, Dan River and Lee coal units.
    - Completed Bridgewater hydro units capacity increase.
    - EE, DSM, renewable energy, and nuclear uprates currently achieved combined with future projections continue to exceed the total annual required emission reduction by 2018.
    - Updated projected emission reductions based on the 2015 IRP are 9,298,091 tons of CO_2 equivalent emissions.

- Continue to prepare for the final rule of EPA's Clean Power Plan.

- Continue to investigate the future environmental control requirements and resulting operational impacts associated with existing and potential environmental regulations such as MATS, the Coal Combustion Residuals rule, the Cross-State Air Pollution Rule (CSAPR), and the new ozone National Ambient Air Quality Standard (NAAQS).

- Aggressively pursue compliance in North Carolina and South Carolina in addressing coal ash management and ash pond remediation. Ensure timely compliance plans and their associated costs are contemplated within the planning process and future integrated resource plans, as appropriate.

- Continue to pursue existing and potential opportunities for wholesale power sales agreements within the Duke Energy balancing authority area.

- Continue to monitor energy-related statutory and regulatory activities.

- Continue to examine the benefits of joint capacity planning and pursue appropriate regulatory actions.

A summarization of the capacity resources for the Base Case in the 2015 IRP is shown in Table 7-C below. Capacity retirements and additions are presented as incremental values in the year in which the change is projected to occur. The values shown for renewable resources, EE and DSM represent cumulative totals.

Table 7-C DEC Short-Term Action Plan

Duke Energy Carolinas Short-Term Action Plan								
			Compliance Renewable Resources (Cumulative Nameplate MW)			Other Non-Compliance Renewables (Cumulative Nameplate MW) [4]		
Year	Retirements	Additions	Wind [2]	Solar [2]	Biomass/Hydro [3]	Solar/Biomass/Hydro	EE	DSM [5]
2016		20 MW Nuc 1.1 MW Hydro Units Return to Service [1]	0	212	101	153	140	1056
2017		45 MW Nuc 300 MW PPA [7]	0	219	81	154	202	1064
2018	300 MW PPA [7]	670 MW Lee CC [6] 20 MW CHP	0	227	74	158	263	1097
2019		10 MW Hydro Units [8] Return to Service	0	798	70	155	325	1127
2020		6 MW Hydro Units [8] Return to Service 20 MW CHP	0	1332	75	154	381	1151

Notes:

(1) Bryson City & Mission hydro units are currently offline for refurbishment; this is expected return to service date.

(2) Capacity is shown in nameplate ratings. For planning purposes, wind presents a 13% contribution to peak and solar has a 46% contribution to peak.

(3) Biomass includes swine and poultry contracts.

(4) Other renewables includes NUGs and Green Source Projects.

(5) Includes impacts of grid modernization.

(6) 670 MW is net of NCEMC portion of Lee CC.

(7) This is a summer PPA; PPA is a placeholder in the summer of the year needed to meet 17% minimum planning reserve margin, and removed in the fall of that same year.

(8) Rocky Creek Hydro units are currently offline for refurbishment; this is expected return to service date.

8. OWNED GENERATION

DUKE ENERGY CAROLINAS OWNED GENERATION

Duke Energy Carolinas' 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 Carolinas-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. In 2014, Duke Energy Carolinas' nuclear and coal-fired generating units met the vast majority of customer needs by providing 58% and 32%, respectively, of Duke Energy Carolinas' energy from generation. Hydroelectric generation, Combustion Turbine generation, Combined Cycle generation, solar generation, long term PPAs, and economical purchases from the wholesale market supplied the remainder.

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

Existing Generating Units and Ratings [a, b, c, d]
All Generating Unit Ratings are as of January 1, 2015

Coal						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Allen	1	167	162	Belmont, NC	Coal	Intermediate
Allen	2	167	162	Belmont, NC	Coal	Intermediate
Allen	3	270	261	Belmont, NC	Coal	Intermediate
Allen	4	282	276	Belmont, NC	Coal	Intermediate
Allen	5	275	266	Belmont, NC	Coal	Intermediate
Belews Creek	1	1135	1110	Belews Creek, NC	Coal	Base
Belews Creek	2	1135	1110	Belews Creek, NC	Coal	Base
Cliffside	5	556	552	Cliffside, NC	Coal	Base
Cliffside	6	844	844	Cliffside, NC	Coal	Base
Marshall	1	380	380	Terrell, NC	Coal	Intermediate
Marshall	2	380	380	Terrell, NC	Coal	Intermediate
Marshall	3	658	658	Terrell, NC	Coal	Base
Marshall	4	660	660	Terrell, NC	Coal	Base
Total Coal		6,909	6,821			

Combustion Turbines						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Lee	7C	41	41	Pelzer, SC	Natural Gas/Oil-Fired	Peaking
Lee	8C	41	41	Pelzer, SC	Natural Gas/Oil-Fired	Peaking
Lincoln	1	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	2	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	3	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	4	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	5	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	6	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	7	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	8	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	9	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	10	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	11	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	12	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	13	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	14	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	15	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Lincoln	16	93	79.2	Stanley, NC	Natural Gas/Oil-Fired	Peaking
Mill Creek	1	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	2	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	3	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	4	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	5	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	6	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	7	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Mill Creek	8	92.4	74.4	Blacksburg, SC	Natural Gas/Oil-Fired	Peaking
Rockingham	1	179	165	Rockingham, NC	Natural Gas/Oil-Fired	Peaking
Rockingham	2	179	165	Rockingham, NC	Natural Gas/Oil-Fired	Peaking
Rockingham	3	179	165	Rockingham, NC	Natural Gas/Oil-Fired	Peaking
Rockingham	4	179	165	Rockingham, NC	Natural Gas/Oil-Fired	Peaking
Rockingham	5	179	165	Rockingham, NC	Natural Gas/Oil-Fired	Peaking
Total NC		2,383	2,092.2			
Total SC		821.2	677.4			
Total CT		3,204	2,770			

Natural Gas Fired Boiler						
		Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Lee	3	173	170	Pelzer, SC	Natural Gas	Peaking
Total Nat. Gas		173	170			

Combined Cycle						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Buck	CT11	187.2	172.9	Salisbury, N.C.	Natural Gas	Base
Buck	CT12	186.8	172.8	Salisbury, N.C.	Natural Gas	Base
Buck	ST10	314.0	309.0	Salisbury, N.C.	Natural Gas	Base
Buck CTCC		688.0	654.7			
Dan River	CT8	177.8	159.9	Eden, N.C.	Natural Gas	Base
Dan River	CT9	176.4	161.6	Eden, N.C.	Natural Gas	Base
Dan River	ST7	317.7	316.2	Eden, N.C.	Natural Gas	Base
Dan River CTCC		671.9	637.7			
Total CTCC		1,359.9	1,292.4			

Pumped Storage						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Jocassee	1	195	195	Salem, SC	Pumped Storage	Peaking
Jocassee	2	195	195	Salem, SC	Pumped Storage	Peaking
Jocassee	3	195	195	Salem, SC	Pumped Storage	Peaking
Jocassee	4	195	195	Salem, SC	Pumped Storage	Peaking
Bad Creek	1	340	340	Salem, SC	Pumped Storage	Peaking
Bad Creek	2	340	340	Salem, SC	Pumped Storage	Peaking
Bad Creek	3	340	340	Salem, SC	Pumped Storage	Peaking
Bad Creek	4	340	340	Salem, SC	Pumped Storage	Peaking
Total Pumped Storage		2,140	2,140			

Hydro						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
99 Islands	1	2.4	2.4	Blacksburg, SC	Hydro	Peaking
99 Islands	2	2.4	2.4	Blacksburg, SC	Hydro	Peaking
99 Islands	3	2.4	2.4	Blacksburg, SC	Hydro	Peaking
99 Islands	4	2.4	2.4	Blacksburg, SC	Hydro	Peaking
99 Islands	5	0	0	Blacksburg, SC	Hydro	Peaking
99 Islands	6	0	0	Blacksburg, SC	Hydro	Peaking
Bear Creek	1	9.45	9.45	Tuckasegee, NC	Hydro	Peaking
Bridgewater	1	15	15	Morganton, NC	Hydro	Peaking
Bridgewater	2	15	15	Morganton, NC	Hydro	Peaking
Bridgewater	3	1.5	1.5	Morganton, NC	Hydro	Peaking
Bryson City	1	.48	.48	Whittier, NC	Hydro	Peaking
Bryson City	2	.48	.48	Whittier, NC	Hydro	Peaking
Cedar Cliff	1	6.4	6.4	Tuckasegee, NC	Hydro	Peaking
Cedar Cliff	2	0.4	0.4	Tuckasegee, NC	Hydro	Peaking
Cedar Creek	1	15	15	Great Falls, SC	Hydro	Peaking
Cedar Creek	2	15	15	Great Falls, SC	Hydro	Peaking
Cedar Creek	3	15	15	Great Falls, SC	Hydro	Peaking
Cowans Ford	1	81.3	81.3	Stanley, NC	Hydro	Peaking
Cowans Ford	2	81.3	81.3	Stanley, NC	Hydro	Peaking
Cowans Ford	3	81.3	81.3	Stanley, NC	Hydro	Peaking
Cowans Ford	4	81.3	81.3	Stanley, NC	Hydro	Peaking
Dearborn	1	14	14	Great Falls, SC	Hydro	Peaking
Dearborn	2	14	14	Great Falls, SC	Hydro	Peaking
Dearborn	3	14	14	Great Falls, SC	Hydro	Peaking
Fishing Creek	1	11	11	Great Falls, SC	Hydro	Peaking
Fishing Creek	2	9.5	9.5	Great Falls, SC	Hydro	Peaking
Fishing Creek	3	9.5	9.5	Great Falls, SC	Hydro	Peaking
Fishing Creek	4	11	11	Great Falls, SC	Hydro	Peaking
Fishing Creek	5	8	8	Great Falls, SC	Hydro	Peaking
Franklin	1	0.5	0.5	Franklin, NC	Hydro	Peaking
Franklin	2	0.5	0.5	Franklin, NC	Hydro	Peaking
Gaston Shoals	3	0	0	Blacksburg, SC	Hydro	Peaking
Gaston Shoals	4	1	1	Blacksburg, SC	Hydro	Peaking
Gaston Shoals	5	1	1	Blacksburg, SC	Hydro	Peaking
Gaston Shoals	6	1.7	1.7	Blacksburg, SC	Hydro	Peaking

Hydro cont.						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Great Falls	1	3	3	Great Falls, SC	Hydro	Peaking
Great Falls	2	3	3	Great Falls, SC	Hydro	Peaking
Great Falls	3	0	0	Great Falls, SC	Hydro	Peaking
Great Falls	4	0	0	Great Falls, SC	Hydro	Peaking
Great Falls	5	3	3	Great Falls, SC	Hydro	Peaking
Great Falls	6	3	3	Great Falls, SC	Hydro	Peaking
Great Falls	7	0	0	Great Falls, SC	Hydro	Peaking
Great Falls	8	0	0	Great Falls, SC	Hydro	Peaking
Keowee	1	76	76	Seneca, SC	Hydro	Peaking
Keowee	2	76	76	Seneca, SC	Hydro	Peaking
Lookout Shoals	1	9.3	9.3	Statesville, NC	Hydro	Peaking
Lookout Shoals	2	9.3	9.3	Statesville, NC	Hydro	Peaking
Lookout Shoals	3	9.3	9.3	Statesville, NC	Hydro	Peaking
Mission	1	0.6	0.6	Murphy, NC	Hydro	Peaking
Mission	2	0.6	0.6	Murphy, NC	Hydro	Peaking
Mission	3	0.6	0.6	Murphy, NC	Hydro	Peaking
Mountain Island	1	14	14	Mount Holly, NC	Hydro	Peaking
Mountain Island	2	14	14	Mount Holly, NC	Hydro	Peaking
Mountain Island	3	17	17	Mount Holly, NC	Hydro	Peaking
Mountain Island	4	17	17	Mount Holly, NC	Hydro	Peaking
Nantahala	1	50	50	Topton, NC	Hydro	Peaking
Oxford	1	20	20	Conover, NC	Hydro	Peaking
Oxford	2	20	20	Conover, NC	Hydro	Peaking
Queens Creek	1	1.44	1.44	Topton, NC	Hydro	Peaking
Rhodhiss	1	9.5	9.5	Rhodhiss, NC	Hydro	Peaking
Rhodhiss	2	11.5	11.5	Rhodhiss, NC	Hydro	Peaking
Rhodhiss	3	12.4	12.4	Rhodhiss, NC	Hydro	Peaking
Rocky Creek	1	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	2	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	3	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	4	0	0	Great Falls, SC	Hydro	Peaking

Hydro cont.						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
Rocky Creek	5	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	6	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	7	0	0	Great Falls, SC	Hydro	Peaking
Rocky Creek	8	0	0	Great Falls, SC	Hydro	Peaking
Tuxedo	1	3.2	3.2	Flat Rock, NC	Hydro	Peaking
Tuxedo	2	3.2	3.2	Flat Rock, NC	Hydro	Peaking
Tennessee Creek	1	9.8	9.8	Tuckasegee, NC	Hydro	Peaking
Thorpe	1	19.7	19.7	Tuckasegee, NC	Hydro	Peaking
Tuckasegee	1	2.5	2.5	Tuckasegee, NC	Hydro	Peaking
Wateree	1	17	17	Ridgeway, SC	Hydro	Peaking
Wateree	2	17	17	Ridgeway, SC	Hydro	Peaking
Wateree	3	17	17	Ridgeway, SC	Hydro	Peaking
Wateree	4	17	17	Ridgeway, SC	Hydro	Peaking
Wateree	5	17	17	Ridgeway, SC	Hydro	Peaking
Wylie	1	18	18	Fort Mill, SC	Hydro	Peaking
Wylie	2	18	18	Fort Mill, SC	Hydro	Peaking
Wylie	3	18	18	Fort Mill, SC	Hydro	Peaking
Wylie	4	18	18	Fort Mill, SC	Hydro	Peaking
Total NC		629.9	629.9			
Total SC		470.3	470.3			
Total Hydro		1,100.2	1,100.2			

Solar						
		Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
NC Solar		3.55	3.55	NC	Solar	Intermediate
Total Solar		3.55	3.55			

Nuclear						
	Unit	Winter (MW)	Summer (MW)	Location	Fuel Type	Resource Type
McGuire	1	1160.1	1138.5	Huntersville, NC	Nuclear	Base
McGuire	2	1187.2	1157.6	Huntersville, NC	Nuclear	Base
Catawba	1	1173.7	1140.1	York, SC	Nuclear	Base
Catawba	2	1179.8	1150.1	York, SC	Nuclear	Base
Oconee	1	865	847	Seneca, SC	Nuclear	Base
Oconee	2	872	848	Seneca, SC	Nuclear	Base
Oconee	3	881	859	Seneca, SC	Nuclear	Base
Total NC		2,347.3	2,296.1			
Total SC		4,971.5	4,844.2			
Total Nuclear		7,318.8	7,140.3			

Total Generation Capability		
	Winter Capacity (MW)	Summer Capacity (MW)
TOTAL DEC SYSTEM - NC	13,361	13,134
TOTAL DEC SYSTEM - SC	8,571	8,300
TOTAL DEC SYSTEM	22,202	21,434

Note (a): Unit information is provided by State, but resources are dispatched on a system-wide basis.
Note (b): Summer and winter capability does not take into account reductions due to future environmental emission controls.
Note (c): Catawba Units 1 and 2 capacity reflects 100% of the station's capability, and does not factor in the North Carolina Municipal Power Agency #1's (NCMPA#1) decision to sell or utilize its 832 MW retained ownership in Catawba.
Note (d): The Catawba units' multiple owners and their effective ownership percentages are:

Catawba Owner	Percent Of Ownership
Duke Energy Carolinas	19.25%
North Carolina Electric Membership Corporation (NCEMC)	30.75%
NCMPA#1	37.5%
PMPA	12.5%

Planned Uprates			
Unit	**Date**	**Winter MW**	**Summer MW**
McGuire 1 [a,b]	Oct 2014	20	20
Catawba 1 [a,b]	Oct 2015	20	20
Oconee 1 [b]	Nov 2016	15	15
Oconee 2 [b]	Nov 2016	15	15
Oconee 3 [b]	Nov 2016	15	15
Dan River CC [b]	Mar 2015	24	24
Buck CC [b]	Feb 2015	14	14

Note a: The capacity represented in this table is the total operating capacity addition and is not adjusted for the Joint Exchange Agreement for Catawba and McGuire. The adjusted values are utilized in the resource plan.

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

Retirements				
Unit & Plant Name	**Location**	**Capacity (MW) Summer**	**Fuel Type**	**Retirement Date**
Buck 3[a]	Salisbury, NC	75	Coal	05/15/11
Buck 4[a]	Salisbury, NC	38	Coal	05/15/11
Cliffside 1[a]	Cliffside, NC	38	Coal	10/1/11
Cliffside 2[a]	Cliffside, NC	38	Coal	10/1/11
Cliffside 3[a]	Cliffside, NC	61	Coal	10/1/11
Cliffside 4[a]	Cliffside, NC	61	Coal	10/1/11
Dan River 1[a]	Eden, NC	67	Coal	04/1/12
Dan River 2[a]	Eden, NC	67	Coal	04/1/12
Dan River 3[a]	Eden, NC	142	Coal	04/1/12
Buzzard Roost 6C[b]	Chappels, SC	22	Combustion Turbine	10/1/12
Buzzard Roost 7C[b]	Chappels, SC	22	Combustion Turbine	10/1/12
Buzzard Roost 8C	Chappels, SC	22	Combustion Turbine	10/1/12
Buzzard Roost 9C[b]	Chappels, SC	22	Combustion Turbine	10/1/12
Buzzard Roost 10C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Buzzard Roost 11C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Buzzard Roost 12C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Buzzard Roost 13C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Buzzard Roost 14C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Buzzard Roost 15C[b]	Chappels, SC	18	Combustion Turbine	10/1/12
Riverbend 8C[b]	Mt. Holly, NC	0	Combustion Turbine	10/1/12
Riverbend 9C[b]	Mt. Holly, NC	22	Combustion Turbine	10/1/12
Riverbend 10C[b]	Mt. Holly, NC	22	Combustion Turbine	10/1/12
Riverbend 11C[b]	Mt. Holly, NC	20	Combustion Turbine	10/1/12
Buck 7C[b]	Spencer, NC	25	Combustion Turbine	10/1/12
Buck 8C[b]	Spencer, NC	25	Combustion Turbine	10/1/12
Buck 9C[b]	Spencer, NC	12	Combustion Turbine	10/1/12
Dan River 4C[b]	Eden, NC	0	Combustion Turbine	10/1/12
Dan River 5C[b]	Eden, N.C.	24	Combustion Turbine	10/1/12
Dan River 6C[b]	Eden, N.C.	24	Combustion Turbine	10/1/12
Riverbend 4[a]	Mt. Holly, NC	94	Coal	04/1/13
Riverbend 5[a]	Mt. Holly, NC	94	Coal	04/1/13
Riverbend 6[c]	Mt. Holly, NC	133	Coal	04/1/13
Riverbend 7[c]	Mt. Holly, NC	133	Coal	04/1/13
Buck 5[c]	Spencer, NC	128	Coal	04/1/13
Buck 6[c]	Spencer, NC	128	Coal	04/1/13
Lee 1[d]	Pelzer, SC	100	Coal	11/6/14
Lee 2[d]	Pelzer, SC	100	Coal	11/6/14
Lee 3[e]	Pelzer, SC	170	Coal	05/12/15
	Total	2,037 MW		

Note a: Retirement assumptions associated with the conditions in the NCUC Order in Docket No. E-7, Sub 790, granting a CPCN to build Cliffside Unit 6.

Note b: The old fleet combustion turbines retirement dates were accelerated to 2012 based on derates, availability of replacement parts and the general condition of the remaining units.

Note c: The decision was made to retire Buck 5 & 6 and Riverbend 6 & 7 early on April 1, 2013. The original expected retirement date was April 15, 2015.

Note d: Lee Steam Units 1 and 2 were retired November 6, 2014.

Note e: The conversion of the Lee 3 coal unit to a natural gas unit was effective March 12, 2015.

Planning Assumptions – Unit Retirements

Unit & Plant Name	Location	Capacity (MW)	Fuel Type	Expected Retirement
Allen 1[a]	Belmont, NC	162	Coal	6/2028
Allen 2[a]	Belmont, NC	162	Coal	6/2028
Allen 3[a]	Belmont, NC	261	Coal	6/2028
Allen 4[a]	Belmont, NC	276	Coal	6/2028
Allen 5[a]	Belmont, NC	266	Coal	6/2028
Oconee 1[b, c]	Seneca, SC	862	Nuclear	5/2033
Oconee 2[b, c]	Seneca, SC	863	Nuclear	5/2033
Oconee 3[b, c]	Seneca, SC	874	Nuclear	5/2033
Total		3726		

Note a: Retirement assumptions are for planning purposes only; dates are based on useful life expectations of the unit.

Note b: Nuclear retirements for planning purposes are based on the end of current operation license.

Note c: Oconee capacity includes scheduled uprates (15 MW/unit).

Operating License Renewal

Planned Operating License Renewal				
Plant & Unit Name	**Location**	**Original Operating License Expiration**	**Date of Approval**	**Extended Operating License Expiration**
Catawba Unit 1	York, SC	12/6/2024	12/5/2003	12/5/2043
Catawba Unit 2	York, SC	2/24/2026	12/5/2003	12/5/2043
McGuire Unit 1	Huntersville, NC	6/12/2021	12/5/2003	6/12/2041
McGuire Unit 2	Huntersville, NC	3/3/2023	12/5/2003	3/3/2043
Oconee Unit 1	Seneca, SC	2/6/2013	5/23/2000	2/6/2033
Oconee Unit 2	Seneca, SC	10/6/2013	5/23/2000	10/6/2033
Oconee Unit 3	Seneca, SC	7/19/2014	5/23/2000	7/19/2034
Bad Creek (PS)(1-4)	Salem, SC	N/A	8/1/1977	7//31/2027
Jocassee (PS) (1-4)	Salem, SC	N/A	9/1/1966	8/31/2016
Cowans Ford (1-4)	Stanley, NC	8/31/2008	Pending	8/31/2064 (Est)
Keowee (1&2)	Seneca, SC	N/A	9/1/1966	8/31/2016
Rhodhiss (1-3)	Rhodhiss, NC	8/31/2008	Pending	8/31/2064 (Est)
Bridge Water (1-3)	Morganton, NC	8/31/2008	Pending	8/31/2064 (Est)
Oxford (1&2)	Conover, NC	8/31/2008	Pending	8/31/2064 (Est)
Lookout Shoals (1-3)	Statesville, NC	8/31/2008	Pending	8/31/2064 (Est)
Mountain Island (1-4)	Mount Holly, NC	8/31/2008	Pending	8/31/2064 (Est)
Wylie (1-4)	Fort Mill, SC	8/31/2008	Pending	8/31/2064 (Est)
Fishing Creek (1-5)	Great Falls, SC	8/31/2008	Pending	8/31/2064 (Est)
Great Falls (1-8)	Great Falls, SC	8/31/2008	Pending	8/31/2064 (Est)
Dearborn (1-3)	Great Falls, SC	8/31/2008	Pending	8/31/2064 (Est)
Rocky Creek (1-8)	Great Falls, SC	8/31/2008	Pending	8/31/2064 (Est)
Cedar Creek (1-3)	Great Falls, SC	8/31/2008	Pending	8/31/2064 (Est)
Wateree (1-5)	Ridgeway, SC	8/31/2008	Pending	8/31/2064 (Est)
Gaston Shoals (3-6)	Blacksburg, SC	12/31/1993	6/1/1996	5/31/2036
Tuxedo (1&2)	Flat Rock, NC	N/A	N/A	N/A
Ninety Nine (1-6)	Blacksburg, SC	12/31/1993	6/1/1996	5/31/2036
Cedar Cliff (1)	Tuckasegee, NC	1/31/2006	5/1/2011	4/30/2041
Bear Creek (1)	Tuckasegee, NC	1/31/2006	5/1/2011	4/30/2041
Tennessee Creek (1)	Tuckasegee, NC	1/31/2006	5/1/2011	4/30/2041
Nantahala (1)	Topton, NC	2/28/2006	2/1/2012	1/31/2042

Planned Operating License Renewal cont.				
Plant & Unit Name	**Location**	**Original Operating License Expiration**	**Date of Approval**	**Extended Operating License Expiration**
Queens Creek (1)	Topton, NC	9/30/2001	3/1/2002	2/29/2032
Thorpe (1)	Tuckasegee, NC	1/31/2006	5/1/2011	4/30/2041
Tuckasegee (1)	Tuckasegee, NC	1/31/2006	5/1/2011	4/30/2041
Bryson City (1&2)	Whittier, NC	7/31/2005	7/1/2011	6/30/2041
Franklin (1&2)	Franklin, NC	7/31/2005	9/1/2011	8/31/2041
Mission (1-3)	Murphy, NC	7/31/2005	10/1/2011	9/30/2041

9. CONCLUSIONS

DEC continues to focus on the needs of customers by meeting the growing demand in the most economical and reliable manner possible. The Company continues to improve the IRP process by determining best practices and making changes to more accurately and realistically represent the DEC System in its planning practices. The 2015 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 planning reserve margin. Over the 15-year planning horizon, DEC expects to require 4,816 MW of additional generating resources in addition to the incremental renewable resources, 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, DEC's 2015 IRP focuses on the following:

- Complete construction of the Lee CC plant in Anderson, SC scheduled for operation in November of 2017.
- Continue the work necessary to obtain COLs for Lee Nuclear.
- Complete the resource adequacy study currently underway with Astrape Consulting.
- Procure CHP resources as cost-effective and diverse generation sources, as appropriate.
- Continue to meet NC REPS and SC DERP compliance plans by adding additional renewable resources and EE to the DEC system.
- Continue to grow DSM in the Carolinas region.

Long-Term

Beyond the next 5 years, DEC's 2015 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 nuclear units in the 15 year planning horizon.
- Procure CHP resources as cost-effective and diverse generation sources, as appropriate.
- Continue to meet and SC DERP compliance plans by investing in additional renewable resources and EE on the DEC system.
- Continue to invest in DSM in the Carolinas region.

DEC's goal is to continue to diversify the DEC 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, nuclear, renewables and EE and DSM.

10. NON-UTILITY GENERATION & WHOLESALE

The following information describes the tables included in this chapter.

Wholesale Sales Contracts

This table includes wholesale sales contracts that are included in the 2015 Load Forecast. This information is **CONFIDENTIAL**.

Wholesale Purchase Contracts

This table includes all wholesale purchase contracts that are included as resources in the 2015 IRP. This information is **CONFIDENTIAL**.

Non-Utility Generation Contracts

This table includes all Non-Utility Generation contracts that have been signed since the 2014 IRP. This list includes contracts signed since June 1, 2014, as this was the date utilized in the tables in Appendix H in the 2014 IRP. This list is up to date as of June 30, 2015. This information is **CONFIDENTIAL**, so the customer names have been redacted.

Table 10-A Wholesale Sales Contracts (CONFIDENTIAL)

Notes:

- Backstand contract values represent the reserve margin amount. For example, for NCEMC Backstand of Catawba 1, 17% * 630 = 107 MWs
- For wholesale contracts, Duke Carolinas/Duke Progress assumes all wholesale contracts will renew unless there is an indication that the contract will not be renewed.
- For the period that the wholesale load is undesignated, contract volumes are projected using the same methodology as was assumed in the original contract (e.g. econometric modeling, past volumes with weather normalization and growth rates, etc.).

Table 10-B Firm Wholesale Purchased Power Contracts (CONFIDENTIAL)

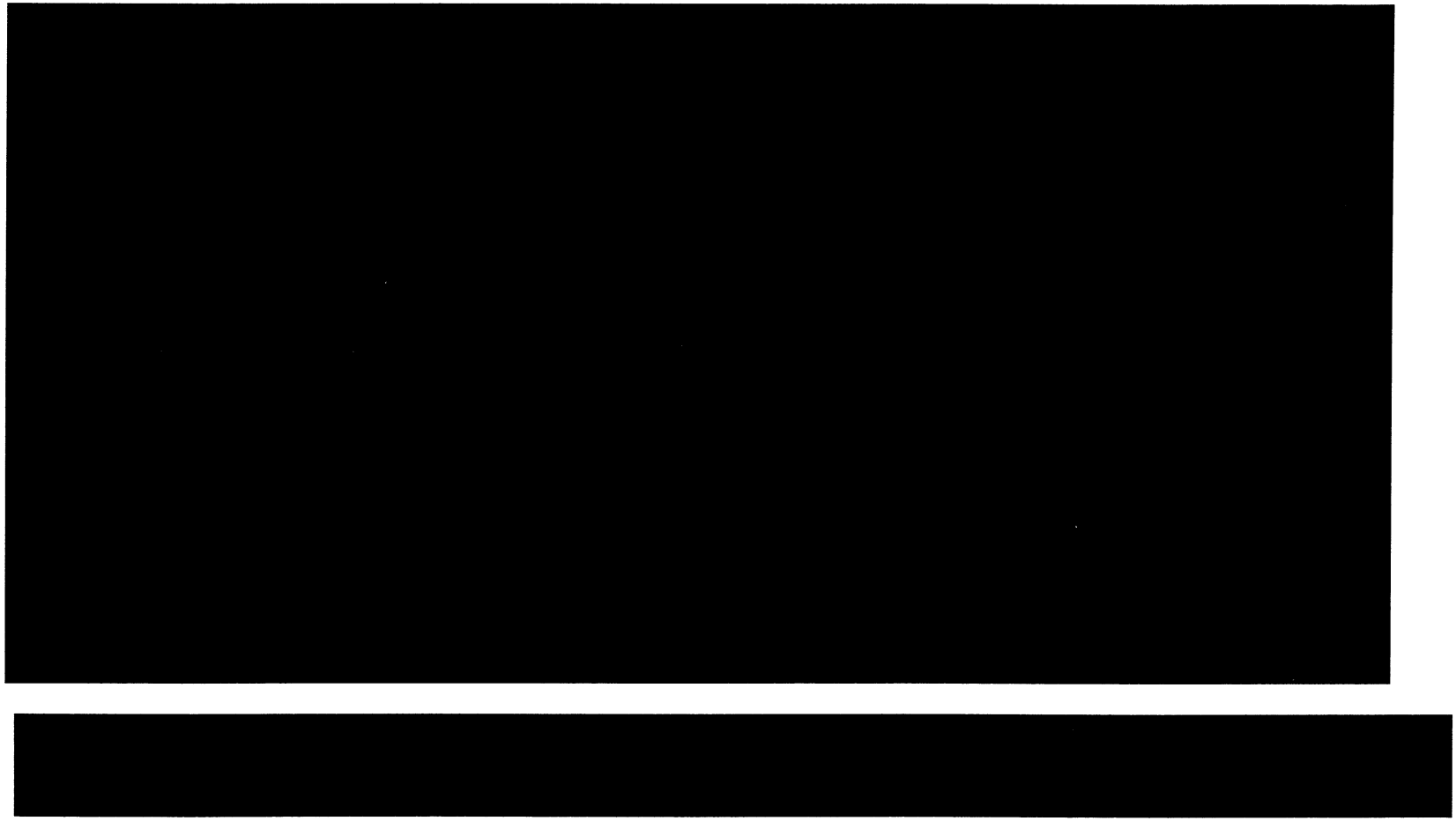


Table 10-C Non-Utility Generation

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
North Carolina Generators:						
Facility 1	Mebane	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 2	Charlotte	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 3	Charlotte	NC	Solar	3.1	Intermediate/Peaking	Yes
Facility 4	Charlotte	NC	Solar	2.7	Intermediate/Peaking	Yes
Facility 5	Durham	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 6	Cornelius	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 7	Chapel Hill	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 8	Reidsville	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 9	Chapel Hill	NC	Solar	4.6	Intermediate/Peaking	Yes
Facility 10	Durham	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 11	Charlotte	NC	Solar	8.0	Intermediate/Peaking	Yes
Facility 12	Greensboro	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 13	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 14	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 15	Winston-Salem	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 16	Lincolnton	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 17	Winston Salem	NC	Solar	6.4	Intermediate/Peaking	Yes
Facility 18	Chapel Hill	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 19	Carrboro	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 20	Davidson	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 21	Taylorsville	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 22	Winston-Salem	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 23	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 24	Denver	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 25	Charlotte	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 26	Clemmons	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 27	Concord	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 28	Lincolnton	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 29	Marion	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 30	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 31	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 32	Charlotte	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 33	Rockwell	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 34	Greensboro	NC	Solar	8.6	Intermediate/Peaking	Yes
Facility 35	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 36	Durham	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 37	Charlotte	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 38	Hillsborough	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 39	Waxhaw	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 40	Durham	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 41	Whittier	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 42	Charlotte	NC	Solar	0.8	Intermediate/Peaking	Yes
Facility 43	Charlotte	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 44	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 45	Salisbury	NC	Solar	112.0	Intermediate/Peaking	Yes
Facility 46	Durham	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 47	Durham	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 48	Charlotte	NC	Solar	1.0	Intermediate/Peaking	Yes
Facility 49	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 50	Sherrills Ford	NC	Solar	9.1	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 51	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 52	Brevard	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 53	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 54	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 55	Mount Airy	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 56	Conover	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 57	Franklin	NC	Solar	8.3	Intermediate/Peaking	Yes
Facility 58	Durham	NC	Solar	4.6	Intermediate/Peaking	Yes
Facility 59	Durham	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 60	Durham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 61	Charlotte	NC	Solar	1.0	Intermediate/Peaking	Yes
Facility 62	Hillsborough	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 63	Winston Salem	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 64	Summerfield	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 65	Chapel Hill	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 66	Carrboro	NC	Solar	1.5	Intermediate/Peaking	Yes
Facility 67	Monroe	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 68	Reidsville	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 69	Lewisville	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 70	Reidsville	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 71	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 72	Charlotte	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 73	Carrboro	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 74	Chapel Hill	NC	Solar	7.5	Intermediate/Peaking	Yes
Facility 75	Carrboro	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 76	Monroe	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 77	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 78	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 79	Monroe	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 80	Carrboro	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 81	Charlotte	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 82	Liberty	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 83	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 84	Lincolnton	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 85	Charlotte	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 86	Stanley	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 87	Reidsville	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 88	Hillsborough	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 89	Tobaccoville	NC	Solar	3.3	Intermediate/Peaking	Yes
Facility 90	Hickory	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 91	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 92	Durham	NC	Solar	15.0	Intermediate/Peaking	Yes
Facility 93	Charlotte	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 94	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 95	Durham	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 96	Charlotte	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 97	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 98	Chapel Hill	NC	Solar	2.8	Intermediate/Peaking	Yes
Facility 99	Carrboro	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 100	Concord	NC	Solar	2.8	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 101	Charlotte	NC	Solar	33.9	Intermediate/Peaking	Yes
Facility 102	Pisgah Forest	NC	Solar	5.4	Intermediate/Peaking	Yes
Facility 103	Durham	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 104	Waxhaw	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 105	Summerfield	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 106	Mooresville	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 107	Charlotte	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 108	Hillsborough	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 109	Summerfield	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 110	Harrisburg	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 111	Chapel Hill	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 112	Chapel Hill	NC	Solar	3.1	Intermediate/Peaking	Yes
Facility 113	Davidson	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 114	Stokesdale	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 115	Durham	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 116	Winston-Salem	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 117	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 118	Elon	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 119	Greensboro	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 120	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 121	Burlington	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 122	Franklin	NC	Solar	1.4	Intermediate/Peaking	Yes
Facility 123	Salisbury	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 124	Winston Salem	NC	Solar	95.2	Intermediate/Peaking	Yes
Facility 125	Mount Holly	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 126	Gibsonville	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 127	Monroe	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 128	Charlotte	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 129	Gold Hill	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 130	Winston Salem	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 131	Mooresville	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 132	Charlotte	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 133	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 134	Reidsville	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 135	Charlotte	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 136	Mocksville	NC	Solar	10.0	Intermediate/Peaking	Yes
Facility 137	Lincolnton	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 138	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 139	Indian Trail	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 140	Valdese	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 141	Salisbury	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 142	Pittsboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 143	Charlotte	NC	Solar	18.1	Intermediate/Peaking	Yes
Facility 144	Charlotte	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 145	Winston Salem	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 146	Chapel Hill	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 147	Connelly Springs	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 148	Belmont	NC	Solar	12.0	Intermediate/Peaking	Yes
Facility 149	Charlotte	NC	Solar	9.6	Intermediate/Peaking	Yes
Facility 150	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 151	Greensboro	NC	Solar	256.0	Intermediate/Peaking	Yes
Facility 152	Durham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 153	Waxhaw	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 154	Browns Summit	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 155	Monroe	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 156	Charlotte	NC	Solar	3.3	Intermediate/Peaking	Yes
Facility 157	Charlotte	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 158	Hillsborough	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 159	Chapel Hill	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 160	Charlotte	NC	Solar	8.8	Intermediate/Peaking	Yes
Facility 161	Greensboro	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 162	Hendersonville	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 163	Westfield	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 164	Greensboro	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 165	Durham	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 166	Salisbury	NC	Solar	28.0	Intermediate/Peaking	Yes
Facility 167	Salisbury	NC	Solar	16.5	Intermediate/Peaking	Yes
Facility 168	Waxhaw	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 169	Chapel Hill	NC	Solar	5.9	Intermediate/Peaking	Yes
Facility 170	Belmont	NC	Solar	8.3	Intermediate/Peaking	Yes
Facility 171	Durham	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 172	Salisbury	NC	Solar	56.0	Intermediate/Peaking	Yes
Facility 173	Salisbury	NC	Solar	22.0	Intermediate/Peaking	Yes
Facility 174	Hendersonville	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 175	Hillsborough	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 176	Salisbury	NC	Solar	30.0	Intermediate/Peaking	Yes
Facility 177	Durham	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 178	Charlotte	NC	Solar	8.6	Intermediate/Peaking	Yes
Facility 179	Charlotte	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 180	Greensboro	NC	Solar	5.5	Intermediate/Peaking	Yes
Facility 181	Winston Salem	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 182	Pfafftown	NC	Solar	9.5	Intermediate/Peaking	Yes
Facility 183	Tryon	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 184	Robbinsville	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 185	Durham	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 186	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 187	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 188	Advance	NC	Solar	5.4	Intermediate/Peaking	Yes
Facility 189	Efland	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 190	Burlington	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 191	Charlotte	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 192	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 193	Greensboro	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 194	Germantown	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 195	Ronda	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 196	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 197	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 198	Charlotte	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 199	Hillsborough	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 200	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 201	Salisbury	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 202	Graham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 203	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 204	Salisbury	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 205	Clemmons	NC	Solar	13.6	Intermediate/Peaking	Yes
Facility 206	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 207	Charlotte	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 208	Winston Salem	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 209	Pfafftown	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 210	Chapel Hill	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 211	Greensboro	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 212	Concord	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 213	China Grove	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 214	Stanley	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 215	Lewisville	NC	Solar	3.2	Intermediate/Peaking	Yes
Facility 216	Durham	NC	Solar	6.8	Intermediate/Peaking	Yes
Facility 217	Charlotte	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 218	Matthews	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 219	Greensboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 220	Pisgah Forest	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 221	Monroe	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 222	Huntersville	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 223	Charlotte	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 224	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 225	Stanley	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 226	Kannapolis	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 227	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 228	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 229	Hillsborough	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 230	Greensboro	NC	Solar	5.6	Intermediate/Peaking	Yes
Facility 231	Troutman	NC	Solar	13.0	Intermediate/Peaking	Yes
Facility 232	Charlotte	NC	Solar	1.4	Intermediate/Peaking	Yes
Facility 233	Charlotte	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 234	Durham	NC	Solar	2.3	Intermediate/Peaking	Yes
Facility 235	Gold Hill	NC	Solar	9.3	Intermediate/Peaking	Yes
Facility 236	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 237	Reidsville	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 238	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 239	Ararat	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 240	Germanton	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 241	Salisbury	NC	Solar	9.5	Intermediate/Peaking	Yes
Facility 242	Hendersonville	NC	Solar	14.0	Intermediate/Peaking	Yes
Facility 243	Hillsborough	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 244	Stem	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 245	Lincolnton	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 246	Durham	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 247	Kannapolis	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 248	Spindale	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 249	Huntersville	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 250	Nebo	NC	Solar	3.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 251	Indian Trail	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 252	Bryson City	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 253	Charlotte	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 254	Charlotte	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 255	Harrisburg	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 256	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 257	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 258	Winston Salem	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 259	Chapel Hill	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 260	Carrboro	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 261	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 262	Durham	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 263	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 264	Durham	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 265	Winston Salem	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 266	Salisbury	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 267	Durham	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 268	Mount Ulla	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 269	Charlotte	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 270	Graham	NC	Solar	5.5	Intermediate/Peaking	Yes
Facility 271	Durham	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 272	Durham	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 273	Mebane	NC	Solar	3.1	Intermediate/Peaking	Yes
Facility 274	Hiddenite	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 275	Durham	NC	Solar	1.4	Intermediate/Peaking	Yes
Facility 276	Hillsborough	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 277	Charlotte	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 278	Statesville	NC	Solar	1.5	Intermediate/Peaking	Yes
Facility 279	Chapel Hill	NC	Solar	6.1	Intermediate/Peaking	Yes
Facility 280	Mayodan	NC	Solar	1.2	Intermediate/Peaking	Yes
Facility 281	Matthews	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 282	Mount Ulla	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 283	Lincolton	NC	Solar	4.4	Intermediate/Peaking	Yes
Facility 284	Ruffin	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 285	Mooresville	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 286	Burlington	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 287	Carrboro	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 288	Chapel Hill	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 289	Charlotte	NC	Solar	9.7	Intermediate/Peaking	Yes
Facility 290	Dallas	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 291	Concord	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 292	Charlotte	NC	Solar	3.7	Intermediate/Peaking	Yes
Facility 293	Carrboro	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 294	Greensboro	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 295	Carrboro	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 296	Charlotte	NC	Solar	7.9	Intermediate/Peaking	Yes
Facility 297	Durham	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 298	Charlotte	NC	Solar	8.5	Intermediate/Peaking	Yes
Facility 299	Charlotte	NC	Solar	9.5	Intermediate/Peaking	Yes
Facility 300	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 301	Walnut Cove	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 302	Durham	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 303	Moorrisville	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 304	Carrboro	NC	Solar	4.4	Intermediate/Peaking	Yes
Facility 305	Salisbury	NC	Solar	90.8	Intermediate/Peaking	Yes
Facility 306	Durham	NC	Solar	6.6	Intermediate/Peaking	Yes
Facility 307	Charlotte	NC	Solar	8.4	Intermediate/Peaking	Yes
Facility 308	Thomasville	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 309	Kannapolis	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 310	Greensboro	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 311	Salisbury	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 312	Chapel Hill	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 313	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 314	Mooresville	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 315	Mills River	NC	Solar	1.5	Intermediate/Peaking	Yes
Facility 316	Salisbury	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 317	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 318	Winston Salem	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 319	McLeansville	NC	Solar	8.0	Intermediate/Peaking	Yes
Facility 320	Clemmons	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 321	Carrboro	NC	Solar	26.8	Intermediate/Peaking	Yes
Facility 322	Charlotte	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 323	Charlotte	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 324	High Point	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 325	Durham	NC	Solar	13.5	Intermediate/Peaking	Yes
Facility 326	Claremont	NC	Solar	3,500.0	Intermediate/Peaking	Yes
Facility 327	Carrboro	NC	Solar	9.7	Intermediate/Peaking	Yes
Facility 328	Miller Creek	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 329	Conover	NC	Solar	6.1	Intermediate/Peaking	Yes
Facility 330	Kernersville	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 331	Carrboro	NC	Solar	5.2	Intermediate/Peaking	Yes
Facility 332	Burlington	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 333	Burlington	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 334	Charlotte	NC	Solar	8.4	Intermediate/Peaking	Yes
Facility 335	Millers Creek	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 336	Indian Trail	NC	Solar	6.8	Intermediate/Peaking	Yes
Facility 337	Salisbury	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 338	Walkertown	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 339	Mooresville	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 340	Durham	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 341	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 342	Hillsborough	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 343	Charlotte	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 344	Pfafftown	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 345	Hildebran	NC	Solar	5,000.0	Intermediate/Peaking	Yes
Facility 346	Rural Hall	NC	Solar	5,000.0	Intermediate/Peaking	Yes
Facility 347	Greensboro	NC	Solar	6.8	Intermediate/Peaking	Yes
Facility 348	Durham	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 349	Concord	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 350	Salisbury	NC	Solar	84.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 351	Stoneville	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 352	Charlotte	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 353	Carrboro	NC	Solar	6.8	Intermediate/Peaking	Yes
Facility 354	Stanley	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 355	Browns Summit	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 356	Kernersville	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 357	Salisbury	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 358	Sylva	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 359	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 360	Browns Summit	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 361	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 362	China Grove	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 363	Harrisburg	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 364	Waxhaw	NC	Solar	3.7	Intermediate/Peaking	Yes
Facility 365	Mocksville	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 366	Winston Salem	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 367	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 368	Brevard	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 369	Randleman	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 370	High Point	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 371	Winston Salem	NC	Solar	3.3	Intermediate/Peaking	Yes
Facility 372	Brevard	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 373	Chapel Hill	NC	Solar	5.9	Intermediate/Peaking	Yes
Facility 374	Snow Camp	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 375	Carrboro	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 376	Durham	NC	Solar	3,200.0	Intermediate/Peaking	Yes
Facility 377	Tobaccoville	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 378	Durham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 379	Horse Shoe	NC	Solar	10.5	Intermediate/Peaking	Yes
Facility 380	Chapel Hill	NC	Solar	4.6	Intermediate/Peaking	Yes
Facility 381	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 382	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 383	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 384	Durham	NC	Solar	7.9	Intermediate/Peaking	Yes
Facility 385	Charlotte	NC	Solar	480.0	Intermediate/Peaking	Yes
Facility 386	Chapel Hill	NC	Solar	4.9	Intermediate/Peaking	Yes
Facility 387	Carrboro	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 388	Charlotte	NC	Solar	6.5	Intermediate/Peaking	Yes
Facility 389	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 390	Charlotte	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 391	Charlotte	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 392	Penrose	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 393	China Grove	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 394	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 395	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 396	Tobaccoville	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 397	Hillsborough	NC	Solar	6.3	Intermediate/Peaking	Yes
Facility 398	Franklin	NC	Solar	2.8	Intermediate/Peaking	Yes
Facility 399	Charlotte	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 400	Greensboro	NC	Solar	3.8	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 401	Greensboro	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 402	Carrboro	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 403	Charlotte	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 404	Oak Ridge	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 405	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 406	Durham	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 407	Charlotte	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 408	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 409	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 410	King	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 411	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 412	Durham	NC	Solar	2.7	Intermediate/Peaking	Yes
Facility 413	Durham	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 414	Charlotte	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 415	Chapel Hill	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 416	Greensboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 417	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 418	Morrisville	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 419	Charlotte	NC	Solar	1.6	Intermediate/Peaking	Yes
Facility 420	Carrboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 421	Winston-Salem	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 422	Durham	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 423	Salisbury	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 424	Clemmons	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 425	Charlotte	NC	Solar	5.2	Intermediate/Peaking	Yes
Facility 426	Hillsborough	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 427	Winston Salem	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 428	Chapel Hill	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 429	Concord	NC	Solar	9.1	Intermediate/Peaking	Yes
Facility 430	Charlotte	NC	Solar	9.7	Intermediate/Peaking	Yes
Facility 431	Chapel Hill	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 432	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 433	Charlotte	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 434	Sylva	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 435	Charlotte	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 436	Charlotte	NC	Solar	1.5	Intermediate/Peaking	Yes
Facility 437	Charlotte	NC	Solar	3.1	Intermediate/Peaking	Yes
Facility 438	Brevard	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 439	Mount Holly	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 440	Salisbury	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 441	Columbus	NC	Solar	5.7	Intermediate/Peaking	Yes
Facility 442	Carrboro	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 443	Durham	NC	Solar	6.4	Intermediate/Peaking	Yes
Facility 444	Charlotte	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 445	Franklin	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 446	Tobaccoville	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 447	Jamestown	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 448	Hillsborough	NC	Solar	5.7	Intermediate/Peaking	Yes
Facility 449	Carrboro	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 450	Cherryville	NC	Solar	3.4	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 451	Denver	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 452	Charlotte	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 453	Charlotte	NC	Solar	4.5	Intermediate/Peaking	Yes
Facility 454	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 455	Winston Salem	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 456	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 457	Charlotte	NC	Solar	1.5	Intermediate/Peaking	Yes
Facility 458	Saxapahaw	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 459	Kannapolis	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 460	Kannapolis	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 461	Harmony	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 462	Ellenboro	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 463	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 464	Salem	NC	Solar	1.0	Intermediate/Peaking	Yes
Facility 465	Mooresville	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 466	Greensboro	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 467	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 468	Ellenboro	NC	Solar	2.7	Intermediate/Peaking	Yes
Facility 469	Chapel Hill	NC	Solar	5.2	Intermediate/Peaking	Yes
Facility 470	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 471	Carrboro	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 472	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 473	Durham	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 474	Durham	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 475	Durham	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 476	Burlington	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 477	Summerfield	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 478	Charlotte	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 479	Charlotte	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 480	Carrboro	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 481	Charlotte	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 482	Charlotte	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 483	Stanley	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 484	Salisbury	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 485	Charlotte	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 486	Charlotte	NC	Solar	0.2	Intermediate/Peaking	Yes
Facility 487	Salisbury	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 488	Forest City	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 489	Chapel Hill	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 490	Belmont	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 491	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 492	Charlotte	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 493	Winston Salem	NC	Solar	2.8	Intermediate/Peaking	Yes
Facility 494	Charlotte	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 495	Hillsborough	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 496	Charlotte	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 497	Durham	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 498	Salisbury	NC	Solar	2.7	Intermediate/Peaking	Yes
Facility 499	Salisbury	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 500	Oak Ridge	NC	Solar	6.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 501	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 502	Chapel Hill	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 503	Harrisburg	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 504	High Point	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 505	Chapel Hill	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 506	Charlotte	NC	Solar	1.0	Intermediate/Peaking	Yes
Facility 507	Mooresville	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 508	Cullowhee	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 509	Greensboro	NC	Solar	9.6	Intermediate/Peaking	Yes
Facility 510	Marion	NC	Solar	3.9	Intermediate/Peaking	Yes
Facility 511	Pineville	NC	Solar	20.0	Intermediate/Peaking	Yes
Facility 512	Winston Salem	NC	Solar	4.7	Intermediate/Peaking	Yes
Facility 513	Greensboro	NC	Solar	5.1	Intermediate/Peaking	Yes
Facility 514	Carrboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 515	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 516	Marion	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 517	Salisbury	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 518	Charlotte	NC	Solar	2.8	Intermediate/Peaking	Yes
Facility 519	Chapel Hill	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 520	Penrose	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 521	Gastonia	NC	Solar	8.0	Intermediate/Peaking	Yes
Facility 522	Durham	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 523	Winston Salem	NC	Solar	5.3	Intermediate/Peaking	Yes
Facility 524	Burlington	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 525	Durham	NC	Solar	2.2	Intermediate/Peaking	Yes
Facility 526	Monroe	NC	Solar	1.4	Intermediate/Peaking	Yes
Facility 527	Elkin	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 528	Greensboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 529	Stokesdale	NC	Solar	5.2	Intermediate/Peaking	Yes
Facility 530	Hillsborough	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 531	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 532	Greensboro	NC	Solar	7.3	Intermediate/Peaking	Yes
Facility 533	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 534	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 535	Oak Ridge	NC	Solar	15.0	Intermediate/Peaking	Yes
Facility 536	Charlotte	NC	Solar	3.5	Intermediate/Peaking	Yes
Facility 537	Greensboro	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 538	Hillsborough	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 539	Salisbury	NC	Solar	7.8	Intermediate/Peaking	Yes
Facility 540	Charlotte	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 541	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 542	Durham	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 543	Charlotte	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 544	Salisbury	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 545	Greensboro	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 546	Stanfield	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 547	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 548	Greensboro	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 549	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 550	Charlotte	NC	Solar	5.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 551	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 552	RTP	NC	Solar	15.0	Intermediate/Peaking	Yes
Facility 553	Bryson City	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 554	Charlotte	NC	Solar	1.7	Intermediate/Peaking	Yes
Facility 555	Carrboro	NC	Solar	6.2	Intermediate/Peaking	Yes
Facility 556	Creedmoor	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 557	Carrboro	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 558	Hillsborough	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 559	Gibsonville	NC	Solar	3.3	Intermediate/Peaking	Yes
Facility 560	Mount Ulla	NC	Solar	10.0	Intermediate/Peaking	Yes
Facility 561	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 562	Charlotte	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 563	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 564	Charlotte	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 565	Charlotte	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 566	Salisbury	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 567	CHAPEL HILL	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 568	Charlotte	NC	Solar	1.4	Intermediate/Peaking	Yes
Facility 569	Durham	NC	Solar	4.3	Intermediate/Peaking	Yes
Facility 570	Mooresville	NC	Solar	11.0	Intermediate/Peaking	Yes
Facility 571	HILLSBOROUGH	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 572	Lawndale	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 573	Carrboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 574	Salisbury	NC	Solar	7.7	Intermediate/Peaking	Yes
Facility 575	Chapel Hill	NC	Solar	9.0	Intermediate/Peaking	Yes
Facility 576	Sylva	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 577	Chapel Hill	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 578	Charlotte	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 579	Penrose	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 580	Charlotte	NC	Solar	4.1	Intermediate/Peaking	Yes
Facility 581	Carrboro	NC	Solar	3.6	Intermediate/Peaking	Yes
Facility 582	Charlotte	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 583	MT Pleasant	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 584	King	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 585	Matthews	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 586	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 587	Carrboro	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 588	Chapel Hill	NC	Solar	3.8	Intermediate/Peaking	Yes
Facility 589	Durham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 590	Matthews	NC	Solar	1.1	Intermediate/Peaking	Yes
Facility 591	Hendersonville	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 592	Connellys Springs	NC	Solar	6.9	Intermediate/Peaking	Yes
Facility 593	Durham	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 594	Durham	NC	Solar	7.0	Intermediate/Peaking	Yes
Facility 595	Chapel Hill	NC	Solar	5.5	Intermediate/Peaking	Yes
Facility 596	Harrisburg	NC	Solar	1.9	Intermediate/Peaking	Yes
Facility 597	Troutman	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 598	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 599	Burlington	NC	Solar	3.1	Intermediate/Peaking	Yes
Facility 600	Durham	NC	Solar	1.9	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 601	Clemmons	NC	Solar	3.4	Intermediate/Peaking	Yes
Facility 602	Hickory	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 603	Charlotte	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 604	Mooresville	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 605	Chapel Hill	NC	Solar	2.0	Intermediate/Peaking	Yes
Facility 606	Mills River	NC	Solar	5.8	Intermediate/Peaking	Yes
Facility 607	Catawba	NC	Solar	4.8	Intermediate/Peaking	Yes
Facility 608	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 609	Durham	NC	Solar	2.5	Intermediate/Peaking	Yes
Facility 610	Belews Creek	NC	Solar	7.6	Intermediate/Peaking	Yes
Facility 611	HILLSBOROUGH	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 612	Carrboro	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 613	Burlington	NC	Solar	5.0	Intermediate/Peaking	Yes
Facility 614	Maiden	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 615	Charlotte	NC	Solar	0.9	Intermediate/Peaking	Yes
Facility 616	Chapel Hill	NC	Solar	4.0	Intermediate/Peaking	Yes
Facility 617	McLeansville	NC	Solar	2.9	Intermediate/Peaking	Yes
Facility 618	Gastonia	NC	Solar	1.3	Intermediate/Peaking	Yes
Facility 619	Snow Camp	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 620	Mooresville	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 621	Charlotte	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 622	Charlotte	NC	Solar	3.2	Intermediate/Peaking	Yes
Facility 623	China Grove	NC	Solar	2.4	Intermediate/Peaking	Yes
Facility 624	Chapel Hill	NC	Solar	6.0	Intermediate/Peaking	Yes
Facility 625	Winston Salem	NC	Solar	8.0	Intermediate/Peaking	Yes
Facility 626	Thomasville	NC	Solar	2.8	Intermediate/Peaking	Yes
Facility 627	Oak Ridge	NC	Solar	6.5	Intermediate/Peaking	Yes
Facility 628	Monroe	NC	Solar	4.2	Intermediate/Peaking	Yes
Facility 629	Brevard	NC	Solar	2.6	Intermediate/Peaking	Yes
Facility 630	Charlotte	NC	Solar	3.0	Intermediate/Peaking	Yes
Facility 631	Charlotte	NC	Solar	255.0	Intermediate/Peaking	Yes
Facility 632	Durham	NC	Solar	391.3	Intermediate/Peaking	Yes
Facility 633	Chapel Hill	NC	Solar	25.0	Intermediate/Peaking	Yes
Facility 634	Hickory	NC	Solar	440.0	Intermediate/Peaking	Yes
Facility 635	Charlotte	NC	Solar	9.3	Intermediate/Peaking	Yes
Facility 636	Charlotte	NC	Solar	72.0	Intermediate/Peaking	Yes
Facility 637	Greensboro	NC	Solar	11.0	Intermediate/Peaking	Yes
Facility 638	Ronda	NC	Solar	14.5	Intermediate/Peaking	Yes
Facility 639	Salisbury	NC	Solar	14.0	Intermediate/Peaking	Yes
Facility 640	Salisbury	NC	Solar	12.4	Intermediate/Peaking	Yes
Facility 641	Yadkinville	NC	Solar	750.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
South Carolina Generators:						
Facility 1	Simpsonville	SC	Solar	12.1	Intermediate/Peaking	Yes
Facility 2	Hodges	SC	Solar	12.0	Intermediate/Peaking	Yes
Facility 3	Simpsonville	SC	Solar	12.9	Intermediate/Peaking	Yes
Facility 4	Spartanburg	SC	Solar	4.3	Intermediate/Peaking	Yes
Facility 5	Greenwood	SC	Solar	1.5	Intermediate/Peaking	Yes
Facility 6	Woodruff	SC	Solar	13.6	Intermediate/Peaking	Yes
Facility 7	Fountain Inn	SC	Solar	6.0	Intermediate/Peaking	Yes
Facility 8	Chesnee	SC	Solar	2.6	Intermediate/Peaking	Yes
Facility 9	Williamston	SC	Solar	6.9	Intermediate/Peaking	Yes
Facility 10	Taylors	SC	Solar	5.5	Intermediate/Peaking	Yes
Facility 11	Inman	SC	Solar	2.9	Intermediate/Peaking	Yes
Facility 12	Moore	SC	Solar	1.4	Intermediate/Peaking	Yes
Facility 13	Walhalla	SC	Solar	5.0	Intermediate/Peaking	Yes
Facility 14	Greenville	SC	Solar	1.7	Intermediate/Peaking	Yes
Facility 15	Spartanburg	SC	Solar	0.9	Intermediate/Peaking	Yes
Facility 16	Greenville	SC	Solar	24.0	Intermediate/Peaking	Yes
Facility 17	Greenville	SC	Solar	8.0	Intermediate/Peaking	Yes
Facility 18	Moore	SC	Solar	3.4	Intermediate/Peaking	Yes
Facility 19	Campobello	SC	Solar	5.6	Intermediate/Peaking	Yes
Facility 20	Anderson	SC	Solar	5.0	Intermediate/Peaking	Yes
Facility 21	Clover	SC	Solar	27.0	Intermediate/Peaking	Yes
Facility 22	Greenville	SC	Solar	10.0	Intermediate/Peaking	Yes
Facility 23	Pacolet	SC	Solar	1.1	Intermediate/Peaking	Yes
Facility 24	Inman	SC	Solar	0.8	Intermediate/Peaking	Yes
Facility 25	Greer	SC	Solar	3.0	Intermediate/Peaking	Yes
Facility 26	Anderson	SC	Solar	2.8	Intermediate/Peaking	Yes
Facility 27	Boling Spgs	SC	Solar	3.3	Intermediate/Peaking	Yes
Facility 28	Moore	SC	Solar	2.4	Intermediate/Peaking	Yes
Facility 29	Greer	SC	Solar	1.0	Intermediate/Peaking	Yes
Facility 30	Spartanburg	SC	Solar	36.0	Intermediate/Peaking	Yes
Facility 31	Gaffney	SC	Solar	1.7	Intermediate/Peaking	Yes
Facility 32	Ridgeway	SC	Solar	2.5	Intermediate/Peaking	Yes
Facility 33	Ninety Six	SC	Solar	6.0	Intermediate/Peaking	Yes
Facility 34	Greenville	SC	Solar	9.0	Intermediate/Peaking	Yes
Facility 35	Roebuck	SC	Solar	2.5	Intermediate/Peaking	Yes
Facility 36	Gaffney	SC	Solar	4.0	Intermediate/Peaking	Yes
Facility 37	Spartanburg	SC	Solar	3.8	Intermediate/Peaking	Yes
Facility 38	Anderson	SC	Solar	1.0	Intermediate/Peaking	Yes
Facility 39	Greenville	SC	Solar	0.8	Intermediate/Peaking	Yes
Facility 40	Tega Cay	SC	Solar	3.7	Intermediate/Peaking	Yes
Facility 41	Greenville	SC	Solar	4.5	Intermediate/Peaking	Yes
Facility 42	Spartanburg	SC	Solar	5.2	Intermediate/Peaking	Yes
Facility 43	Gaffney	SC	Solar	3.0	Intermediate/Peaking	Yes
Facility 44	Belton	SC	Solar	2.0	Intermediate/Peaking	Yes
Facility 45	Greer	SC	Solar	8.5	Intermediate/Peaking	Yes
Facility 46	Williamston	SC	Solar	1.7	Intermediate/Peaking	Yes
Facility 47	Greer	SC	Solar	6.0	Intermediate/Peaking	Yes
Facility 48	Landrum	SC	Solar	7.0	Intermediate/Peaking	Yes
Facility 49	Greer	SC	Solar	2.2	Intermediate/Peaking	Yes
Facility 50	Greenville	SC	Solar	5.0	Intermediate/Peaking	Yes

Table 10-C (cont'd)

Facility Name	City/County	State	Primary Fuel Type	Capacity (AC KW)	Designation	Inclusion in Utility's Resources
Facility 51	Greenville	SC	Solar	2.5	Intermediate/Peaking	Yes
Facility 52	Greenville	SC	Solar	1.5	Intermediate/Peaking	Yes
Facility 53	Greenville	SC	Solar	5.7	Intermediate/Peaking	Yes
Facility 54	Pendleton	SC	Solar	6.0	Intermediate/Peaking	Yes
Facility 55	Lancaster	SC	Solar	3.6	Intermediate/Peaking	Yes
Facility 56	Seneca	SC	Solar	2.0	Intermediate/Peaking	Yes
Facility 57	Taylors	SC	Solar	3.8	Intermediate/Peaking	Yes
Facility 58	Piedmont	SC	Solar	1.5	Intermediate/Peaking	Yes
Facility 59	Seneca	SC	Solar	10.0	Intermediate/Peaking	Yes
Facility 60	Greer	SC	Solar	4.0	Intermediate/Peaking	Yes
Facility 61	Greenville	SC	Solar	3.4	Intermediate/Peaking	Yes
Facility 62	Williamston	SC	Solar	3.4	Intermediate/Peaking	Yes
Facility 63	Greenville	SC	Solar	17.5	Intermediate/Peaking	Yes
Facility 64	Chesnee	SC	Solar	1.4	Intermediate/Peaking	Yes
Facility 65	Anderson	SC	Solar	1.0	Intermediate/Peaking	Yes
Facility 66	Gaffney	SC	Solar	6.5	Intermediate/Peaking	Yes
Facility 67	Lancaster	SC	Solar	1.6	Intermediate/Peaking	Yes
Facility 68	Pendelton	SC	Solar	20.7	Intermediate/Peaking	Yes
Facility 69	Greenville	SC	Solar	4.3	Intermediate/Peaking	Yes

11. CROSS-REFERENCE TABLE

	Requirement:	Location:
1.	Summary of significant amendments or revisions to most recently filed biennial report (including amendments to type and size of resources identified	Chapter 4
2.	Short-term action plan	Chapter 7
3.	REPS Compliance Plan	Attachment: NC REPS Compliance Plan
4.	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
5.	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	Chapter 5
6.	Description of future supply-side resources including type of capacity / resource (MW rating, fuel source, base, intermediate, or peaking)	Chapter 6
7.	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 8
8.	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	Chapter 6
9.	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 10
10.	Cumulative resource additions necessary to meet load obligation & reserve margins	Chapter 6

The Duke Energy Carolinas

NC Renewable Energy & Energy Efficiency Portfolio Standard (NC REPS) Compliance Plan

September 1, 2015

NC REPS COMPLIANCE PLAN
TABLE OF CONTENTS

I. INTRODUCTION:

Duke Energy Carolinas, LLC (DEC 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 2015 to 2017 (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 Carolinas 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 Carolinas' 2015 Compliance Plan include: (1) energy efficiency programs that will generate savings that can be counted towards the Company's REPS obligation; (2) purchases of renewable energy certificates (RECs); (3) operations of company-owned renewable facilities; and (4) research studies to enhance the Company's ability to comply with its REPS obligations in the future. 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 Carolinas calculates its NC REPS Compliance Obligations[2] for 2015, 2016, and 2017 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, as well as the actual and forecasted retail sales of those wholesale customers for whom the Company is supplying REPS compliance services. The Company's wholesale customers for which it supplies REPS compliance services are Rutherford Electric Membership Corporation, Blue Ridge Electric Membership Corporation, Town of Dallas, Town of Forest City, City of Concord, Town of Highlands, and the City of Kings Mountain (collectively referred to as Wholesale or Wholesale Customers)[3]. Table 1 below shows the Company's retail and Wholesale customers' REPS Compliance Obligation.

[2] For the purposes of this Compliance Plan, Compliance Obligation is more specifically defined as the sum of Duke Energy Carolinas' native load obligations for both the Company's retail sales and for wholesale native load priority customers' retail sales for whom the Company is supplying REPS compliance. All references to the respective Set-Aside requirements, the General Requirements, and REPS Compliance Obligation of the Company include the aggregate obligations of both Duke Energy Carolinas and the Wholesale Customers. Also, for purposes of this Compliance Plan, all references to the compliance activities and plans of the Company shall encompass such activities and plans being undertaken by Duke Energy Carolinas on behalf of the Wholesale Customers.

[3] For purposes of this Compliance Plan, Retail Sales is defined as the sum of Duke Energy Carolinas retail sales and the retail sales of the wholesale customers for whom the company is supplying REPS compliance.

Table 1: Duke Energy Carolinas' NC REPS Compliance Obligation

Compliance Year	Previous Year DEC Retail Sales (MWhs)	Previous Year Wholesale Retail Sales (MWhs)	Total Retail sales for REPS Compliance (MWhs)	Solar Set-Aside (RECs)	Swine Set-Aside (RECs)	Poultry Set-Aside (RECs)	REPS Requirement (%)	Total REPS Compliance Obligation (RECs)
2015	57,065,352	3,534,873	60,600,225	84,840	42,420	325,537	6%	3,636,013
2016	56,845,715	3,556,730	60,402,445	84,563	42,282	415,490	6%	3,624,147
2017	57,625,269	3,567,986	61,193,255	85,671	85,671	419,223	6%	3,671,595

Note: Obligation is determined by prior-year MWh sales. Thus, retail sales figures for compliance years 2015 and 2016 are estimates.

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 Set-Aside), and poultry waste resource requirement (Poultry 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 6% of its prior-year retail sales in compliance years 2015, 2016 and 2017. The Company refers to this as its Total Obligation. For clarification, the Company refers to its Total Obligation, net of the Solar, Swine, and Poultry 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, and Poultry 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 0.14% of the prior year's total electric energy in megawatt-hours (MWh) sold to retail customers in North Carolina in 2015, 2016 and 2017.

Based on the Company's actual retail sales in 2014, the Solar Set-Aside is 84,840 RECs in 2015. Based on forecasted retail sales, the Solar Set-Aside is projected to be approximately 84,563 RECs and 85,671 RECs in 2016 and 2017, respectively.

The Company's plan for meeting the Solar Set-Aside in the Planning Period is described in further detail below.

1. Company-Owned Solar Facilities

The Company currently owns installations across multiple sites totaling approximately 8MW-AC of installed capacity. The Company continues to operate these facilities in support of our REPS compliance obligations, and the facilities remain an integral part of the Company's renewable portfolio. The Company plans to pursue ownership of additional generation, as appropriate.

2. Solar PPAs and Solar REC Purchase Agreements

DEC has executed multiple solar REC purchase agreements with third parties. These agreements include contracts with multiple counterparties to procure solar RECs from both solar photovoltaic (PV) and solar water heating installations. Additional details with respect to the REC purchase agreements are set forth in Exhibit A.

3. Review of Company's Solar Set-Aside Plan

The Company has made and continues to make reasonable efforts to meet the Solar Set-Aside requirement in the Planning Period, and remains confident that it will be able to comply with this requirement. Therefore, the Company sees minimal risk in meeting the Solar Set-Aside and will continue to monitor the development and progress of solar initiatives and take appropriate actions as necessary.

B. SWINE WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(e), as amended by the NCUC *Final Order Modifying the Swine Waste Set-Aside Requirement and Providing Other Relief*, Docket No. E-100, Sub 113 (November 2014), for calendar years 2015 and 2016, at least 0.07%, and in 2017, 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 Set-Aside is estimated to be 42,420 RECs in 2015, 42,282 RECs in 2016, and 85,671 RECs in 2017.

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. The Company is exploring ways to overcome such risks.

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.

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. Injected/Directed biogas

In theory, injected biogas reduces costs by using large, efficient centralized generation in the place of smaller, less-efficient reciprocating engines typical of other projects. However, practically, the Company has found such solutions in North Carolina to be economically challenged, in part due to additional gas clean-up requirements prior to injection and the general lack of physical proximity between clusters of farms and pipeline infrastructure.

The Company continues to explore directed biogas opportunities, including promising opportunities outside of North Carolina where the gas would be transported on interstate pipelines used for fuel in one of the Company's combined cycles.

In spite of Duke Energy Carolinas' active and diligent efforts to secure resources to comply with its Swine Waste Set-Aside requirements, the Company will not be able to procure sufficient volumes of RECs to meet its pro-rata share of the swine waste set-aside requirements in 2015. 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.

The Company's ability to comply in 2016 and 2017 remains highly uncertain and subject to multiple variables, particularly relating 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 tri-annual progress reports, filed confidentially in Docket E-100 Sub113A.

Due to its expected non-compliance in 2015, the Company has submitted a motion to the Commission for approval of a request to relieve the Company from compliance with the swine-waste requirements until calendar year 2016 by delaying the compliance obligation for a one year period.

C. POULTRY WASTE-TO-ENERGY RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8(f), as amended by NCUC *Final Order Modifying the Poultry and Swine Waste Set-Aside Requirements and Providing Other Relief*, Docket No. E-100, Sub 113 (March 2014), for calendar year 2015, at least 700,000 MWhs, and 2016 and 2017, at least 900,000 MWhs of the prior year's total electric energy sold to retail electric customers in the State 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 47%, the Company's Poultry Set-Aside is estimated to be 325,537 RECs in 2015, 415,490 RECs in 2016, and 419,223 in 2017.

In spite of Duke Energy Carolinas' active and diligent efforts to secure resources to comply with its Poultry Waste Set-Aside requirements, the Company will not be able to procure sufficient volumes of RECs to meet its pro-rata share of the poultry set-aside requirements in 2015. 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.

Several near-term challenges remain to the Company's meeting the poultry set-aside targets in the future. To date, only a handful of poultry projects are operating and online in North Carolina. Ramping up to meet the increased compliance targets for 2015 - 2017 has been problematic because other 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.

The Company's ability to comply in 2016 and 2017 remains uncertain and largely subject to counterparty performance. Additional details with respect to the Company's compliance efforts and REC purchase agreements are set forth in Exhibit A and the Company's tri-annual progress reports, filed confidentially in Docket E-100 Sub113A.

Due to its expected non-compliance in 2015, the Company has submitted a motion to the Commission for approval of a request to relieve the Company from compliance with the poultry-waste requirements until calendar year 2016 by delaying the compliance obligation for a one year period.

D. GENERAL REQUIREMENT RESOURCES

Pursuant to NC Gen. Stat. § 62-133.8, Duke Energy Carolinas is required to comply with its Total Obligation in 2015, 2016 and 2017 by submitting for retirement a total volume of RECs equivalent to 6% of retail sales in North Carolina in the prior year: approximately 3,636,013 RECs in 2015, 3,624,147 RECs in 2016, and 3,671,595 RECs in 2017. This requirement, net of the Solar, Swine, and Poultry Set-Aside requirements, is estimated to be 3,183,216 RECs in 2015, 3,081,812 RECs in 2016, and 3,081,031 in 2017. 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.

1. Energy Efficiency

During the Planning Period, the Company plans to meet 25% of the Total Obligation with 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. Pursuant to Commission Rule R8-67b(1)(iii), the Company has attached a list of those EE measures that it plans to use toward REPS compliance, including projected impacts, as Exhibit B.

2. Hydroelectric Power

Duke Energy Carolinas plans to use hydroelectric power from three sources to meet the General Requirement in the Planning Period: (1) Duke-owned hydroelectric stations that are approved as renewable energy facilities; (2) Wholesale Customers' Southeastern Power Administration (SEPA) allocations; and (3) hydroelectric generation suppliers whose facilities have received Qualifying Facility (QF or QF Hydro) status. The Company has received Commission approval for ten of its hydroelectric stations as renewable energy facilities. The Company continues to evaluate the use of the RECs generated by these facilities to meet the General Requirements of Duke Energy Carolinas' Wholesale Customers, pursuant to NC Gen. Stat. § 62-133.8(c)(2)c and 62-33.8(c)(2)d. Wholesale Customers may also bank and utilize hydroelectric resources arising from their full allocations of SEPA. When supplying compliance for the Wholesale Customers, the Company will ensure that hydroelectric resources do not comprise more than 30% of each Wholesale Customers' respective compliance portfolio, pursuant to NC Gen. Stat. § 62-133.8(c)(2)c. In 2012, the Company also received Commission approval for a new, incremental capacity addition at another of its hydro facilities, Bridgewater. The Company intends to apply RECs generated by this facility toward the General Requirements of Duke Energy Carolinas' retail

customers. In addition, the Company is purchasing RECs from multiple QF Hydro facilities in the Carolinas and will use RECs from these facilities toward General Requirements of Duke Energy Carolinas' retail customers. Please see Exhibit A for more information on each of these contracts.

3. Biomass Resources

Duke Energy Carolinas 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 Carolinas 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 other forms of renewable resources to offset the need for biomass.

4. Wind

Duke Energy Carolinas plans to meet a portion of the General Requirement with RECs from wind facilities. While the Company expects to rely upon wind resources for REPS compliance, the extent and timing of that reliance will likely vary commensurately with changes to supporting policies and prevailing market prices. The Company recognizes that some land-based wind developers are presently pursuing projects of significant size in North Carolina. While successful projects have to navigate a litany of obstacles, these obstacles are not insurmountable. The Company also has observed that opportunities may exist to transmit land-based wind energy resources into the Carolinas from other regions, which could supplement the amount of wind that could be developed within the Carolinas.

5. Use of Solar Resources for General Requirement

Duke Energy Carolinas plans to meet a portion of the General Requirement with RECs from solar facilities. The Company views the downward trend in solar equipment and installation costs over the past several years as a positive development. Additionally, new solar facilities benefit from generous supportive Federal and State policies that are expected to be in place beyond 2015. While uncertainty remains around possible alterations or extensions of policy support, as well as the pace of future cost declines, the Company fully expects solar resources to contribute to our compliance efforts beyond the solar set-aside minimum threshold for NC REPS during the Planning Period.

6. Review of Company's General Requirement Plan

The Company has contracted for or otherwise procured sufficient resources to meet its General Requirement in the Planning Period. Based on the known information available at the time of this filing, the Company is confident that it will meet this General Requirement during the Planning Period and submits that the actions and plans described herein represent a reasonable and prudent plan for meeting the General Requirement.

E. SUMMARY OF RENEWABLE RESOURCES

The Company has evaluated, procured, and/or developed a variety of types of renewable 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 Carolinas 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 cost rates represent the annualized avoided cost rates in Schedule PP-N (NC), Distribution Interconnection, approved in the Commission's *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, issued in Docket No. E-100, Sub 127 (July 27, 2011). The projected avoided cost rates represent the annualized avoided cost rates proposed by the Company in Docket No. E-100, Sub 140.

The projected avoided costs rates contained herein are subject to change, particularly as the underlying assumptions change and as the methodology for determining the avoided cost is addressed by the North Carolina Utilities Commission in pending Docket No. E-100, Sub 140. Primary assumptions that impact avoided cost rates are turbine costs, fuel price projections, and the expansion plans. Changes to these assumptions are addressed in greater detail in the current Integrated Resource Plan.

Table 2: Current and Projected Avoided Cost Rates Table

[BEGIN CONFIDENTIAL]

CURRENT AVOIDED ENERGY AND CAPACITY COST (from E-100 Sub 136)			
	On-Peak Energy[1] ($/MWh)	**Off-Peak Energy[1] ($/MWh)**	[redacted]
2016	50.82	41.22	
2017	51.67	42.89	
2018	54.56	43.93	
PROJECTED AVOIDED ENERGY AND CAPACITY COST[4]			
	On-Peak Energy[5] ($/MWh)	**Off-Peak Energy[5] ($/MWh)**	[redacted]
2016	36.60	32.94	
2017	39.20	33.24	
2018	38.89	32.88	

Notes: (1) On-peak and off-peak energy rates based on Option B hours and information and assumptions available concurrent with the 2014 IRP and derived using methodology approved in Docket No. E-100, Sub 136
(2) Capacity Cost column provides the installed CT cost with AFUDC
(3) Turbine cost agreed upon in E-100 Sub 136 settlement
(4) Turbine cost proposed in E-100, Sub 140 divided by summer capacity rating
(5) On-peak and off-peak energy rates based on Option B hours and information and assumptions available concurrent with the methodology proposed in Docket No. E-100, Sub 140
(6) Does not incorporate additional considerations used in rate calculation and is subject to change

[END CONFIDENTIAL]

B. PROJECTED TOTAL NORTH CAROLINA RETAIL AND WHOLESALE SALES AND YEAR-END NUMBER OF CUSTOMER ACCOUNTS BY CLASS

The tables below reflect the inclusion of the Wholesale Customers in the Compliance Plan.

Table 3: Retail Sales for Retail and Wholesale Customers

	2014 Actual	2015 Forecast	2016 Forcast	2017 Forcast
Retail MWh Sales	57,065,352	56,845,715	57,625,269	58,218,022
Whoesale MWh Sales	3,534,873	3,556,730	3,567,986	3,578,692
Total MWh Sales	60,600,225	60,402,445	61,193,255	61,796,714

Note: The MWh sales reported above are those applicable to REPS compliance years 2015 – 2017, and represent actual MWh sales for 2014, and projected MWh sales for 2015 and 2016.

Table 4: Retail and Wholesale Year-end Number of Customer Accounts

	2014 (Actual)	2015 (Projected)	2016 (Projected)	2017 (Projected)
Residential Accts	1,875,152	1,898,480	1,920,259	1,941,201
General Accts	256,751	259,230	262,125	265,083
Industrial Accts	5,224	5,240	5,256	5,255

Note: The number of accounts reported above are those applicable to the cost caps for compliance years 2015 – 2017, and represent the actual number of accounts for year-end 2013, and the projected number of accounts for year-end 2015 through 2017.

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.

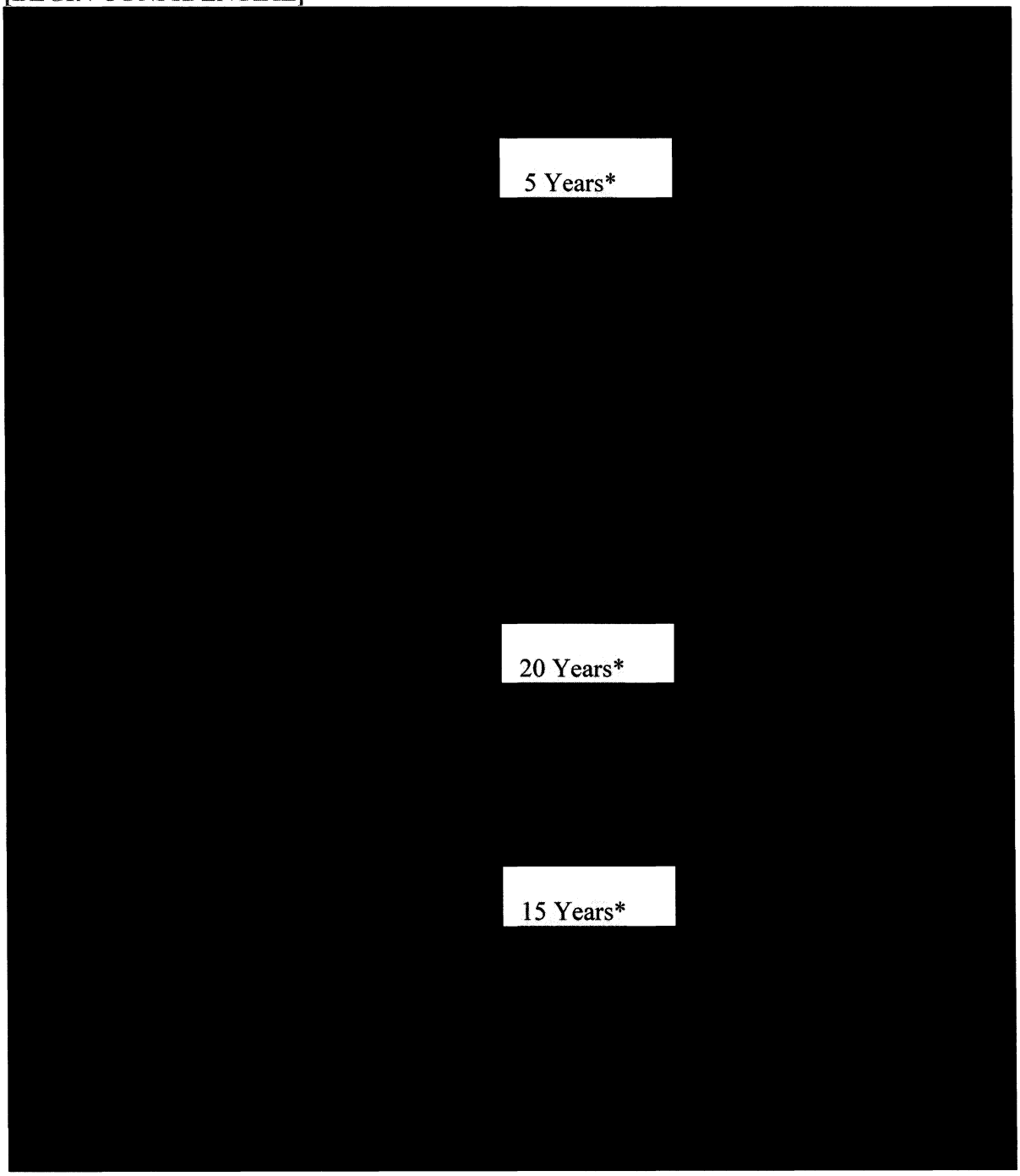
Table 5: Projected Annual Cost Caps and Fuel Related Cost Impact

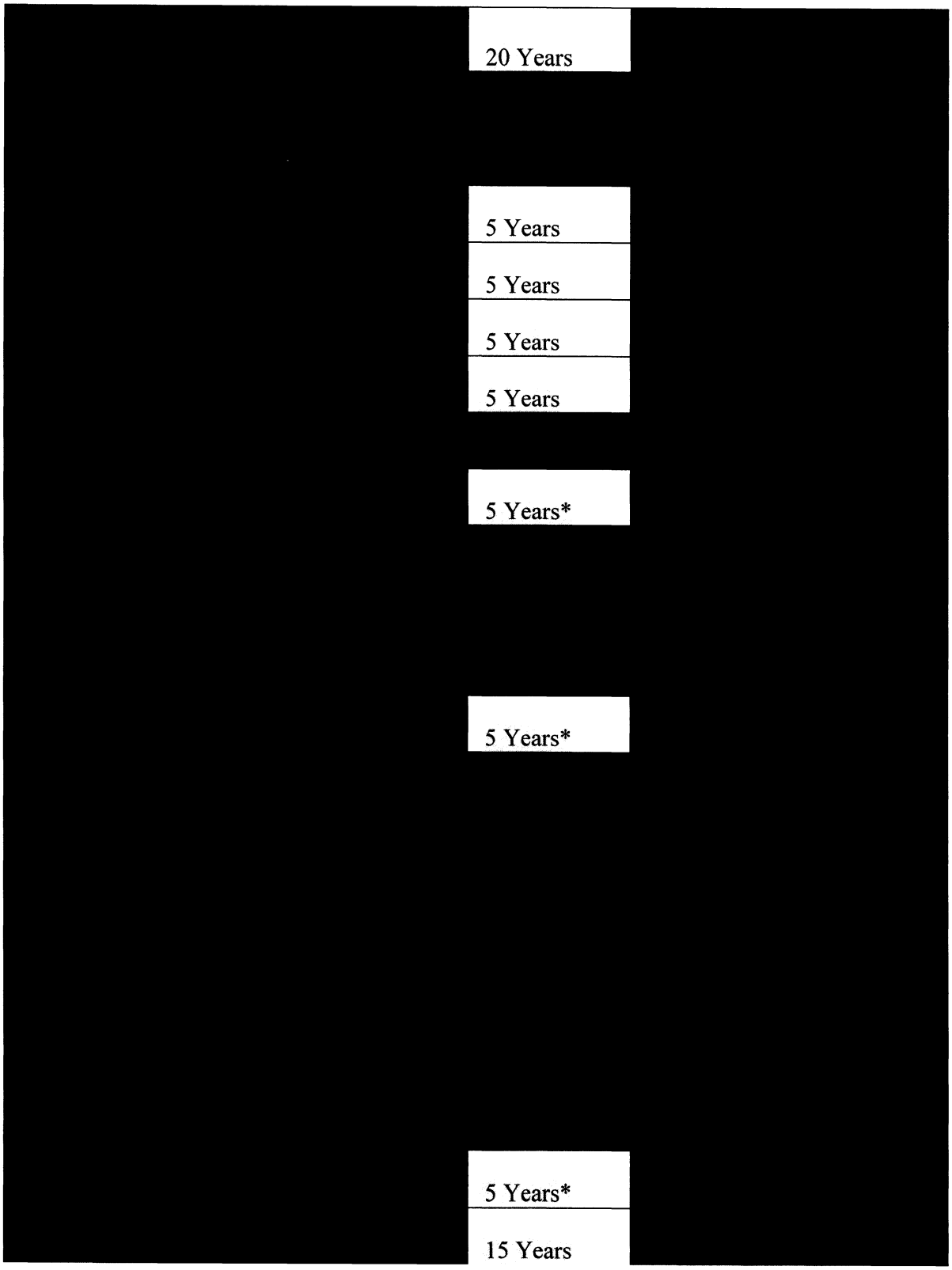
	2015	2016	2017
Total projected REPS compliance costs	$ 59,745,665	$ 80,801,899	$ 85,404,600
Recovered through the Fuel Rider	$ 37,980,683	$ 48,644,555	$ 48,624,196
Total incremental costs (REPS Rider)	$ 21,764,982	$ 32,157,345	$ 36,780,403
Total including Regulatory Fee	$ 21,793,357	$ 32,199,268	$ 36,828,354
Projected Annual Cost Caps (REPS Rider)	$ 66,238,474	$ 108,673,012	$109,863,438

EXHIBIT A

Duke Energy Carolinas, LLC's 2014 REPS Compliance Plan
Duke Energy Carolinas' Renewable Resource Procurement from 3rd Parties
(signed contracts as of July 1, 2015)

[BEGIN CONFIDENTIAL]





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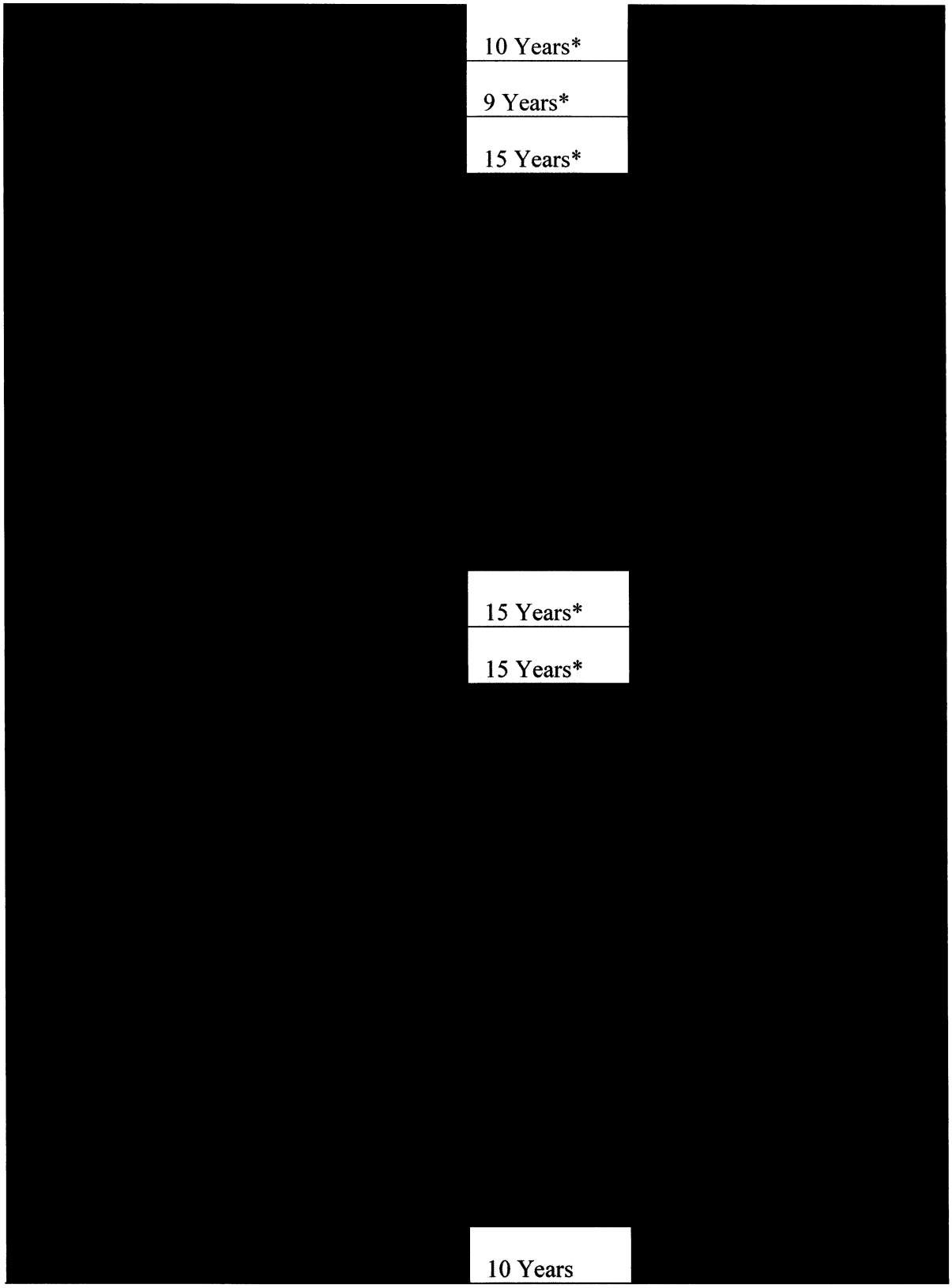

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10 Years

7 Years
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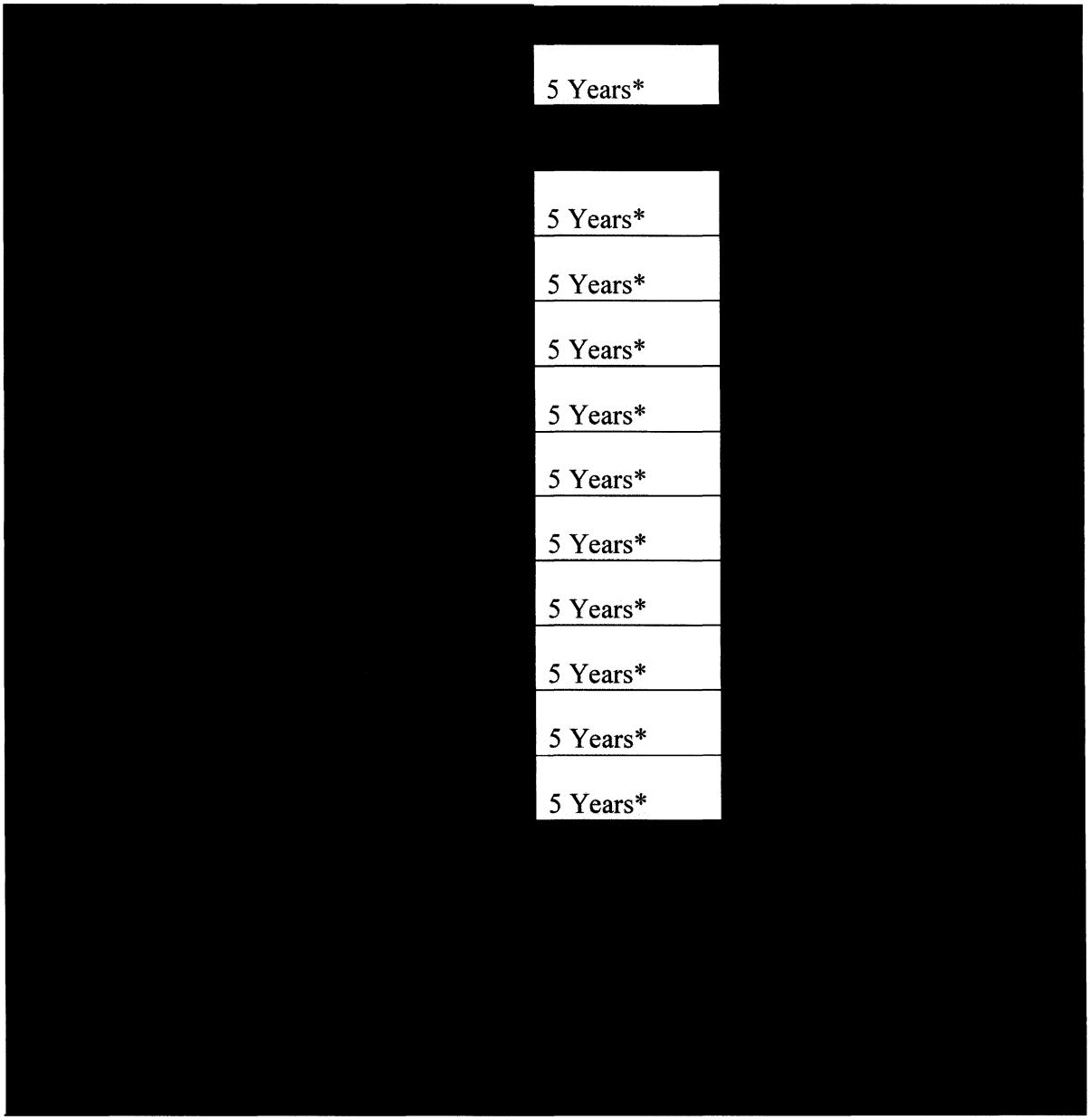

*Indicates bundle purchase of RECs and energy, as opposed to REC-only purchase.

[END CONFIDENTIAL]

EXHIBIT B

Duke Energy Carolinas, LLC's 2014 REPS Compliance Plan
Duke Energy Carolinas, LLC's EE Programs and Projected REPS Impacts

Forecast Annual Energy Efficiency Impacts for the REPS Compliance Planning Period 2015-2017 (MWhs)			
Residential Programs	2015	2016	2017
Appliance Recycling Program	7,800	7,800	5,556
Energy Education Program for Schools	4,389	4,801	4,801
Energy Efficient Appliances and Devices	41,051	32,060	23,304
HVAC EE Products & Services	4,924	3,119	3,407
Income Qualified EE Products & Services	7,448	3,705	7,448
Multi-Family EE Products & Services	8,093	9,517	10,779
My Home Energy Report	45,211	-	-
Residential Energy Assessments	5,243	5,506	5,781
New Products*			
Sub Total	**124,159**	**66,507**	**61,075**
Non Residential Programs	2015	2016	2017
Custom Assessments	11,624	18,270	19,183
Custom Incentives	77,860	81,754	85,842
Energy Star Food Service Products	1,345	1,727	1,719
HVAC	7,161	7,540	7,940
Lighting	73,830	78,455	82,458
Non-Res Information Technology	3,752	5,809	8,352
Process Equipment	97	101	106
Pumps and Motors	7,186	7,545	7,923
Small Business Direct Install	46,610	55,854	56,422
Smart Energy in Offices	12,612	5,945	3,013
New Products*			
Sub Total	**242,078**	**263,000**	**272,958**
Total	**366,238**	**329,507**	**334,033**