NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

December 18, 2023

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

> Re: Docket Nos. E-2, Sub 931; E-7, Sub 1032; and E-100, Sub 179
> The Public Staff's Presentation Materials for the 2023 Mechanism Review
> Technical Conference

Dear Ms. Dunston:

Attached for filing on behalf of the Public Staff in the above-referenced dockets are the Public Staff's Presentation Materials that were presented at the 2023 Mechanism Review Technical Conference on December 18, 2023. These materials include: (1) a PowerPoint presentation; and (2) a report prepared for the Public Staff by GDS Associates, Inc.

By copy of this letter, we are forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted,
/s/ Anne M. Keyworth
Staff Attorney
anne.keyworth@psncuc.nc.gov

cc: Parties of Record

Executive Director	Accounting	Consumer Services	Economic Research
(919) 733-2435	(919) 733-4279	(919) 733-9277	(919) 733-2267
Energy	Legal	Transportation	Water/Telephone
(919) 733-2267	(919) 733-6110	(919) 733-7766	(919) 733-5610

4326 Mail Service Center • Raleigh, North Carolina 27699-4300 • Fax (919) 733-9565
An Equal Opportunity / Affirmative Action Employer

2023 Duke Energy DSM/EE Mechanism Review

Technical Conference

The Public Staff – North Carolina Utilities Commission

December 18, 2023

OVERVIEW

Achievements to Date

Changing Landscape in North Carolina

Public Staff's Objectives

Public Staff's Review

Stakeholder Involvement

Achievements to Date
(2017-2022)

- **DEC** has 14 approved DSM/EE programs
  - 9 Residential (8 EE and 1 DSM)
  - 5 Non-Residential (3 EE and 2 DSM)

- **DEP** has 17 approved DSM/EE programs
  - 11 Residential (10 EE and 1 DSM)
  - 6 Non-Residential (4 EE and 2 DSM)

- **Residential Programs** are designed to apply to Single-Family Homes, Multi-Family Homes, Low-Income Homes, and New Construction Homes. They influence customers through Assessments, Behavioral Changes, Education, and Rebates.

- **Non-Residential Programs** are designed to apply to Small, Medium, and Large General Service Customers. They influence customers through Assessments, Custom and Prescriptive Rebates, and Load Management Options.

Residential Programs

DEC

- Energy Assessment
- EE Education
- Multi-Family EE
- New Construction
- Smart $aver® EE Appliances and Devices
- Smart $aver® EE (formerly the HVAC EE Program)
- My Home Energy Report (MyHER)
- Neighborhood Energy Saver (formerly Income-Qualified Energy Efficiency and Weatherization Assistance)
- Power Manager (DSM program)

DEP

- Energy Education Program for Schools
- EE Appliances and Devices
- EE Lighting
- Low Income Weatherization Pilot
- Multi-Family EE
- My Home Energy Report (MyHER)
- Neighborhood Energy Saver
- Energy Assessment
- New Construction
- Smart Saver
- EnergyWise Home (DSM program)

Non-Residential Programs

DEC

- Smart $aver® EE Products and Assessments Program:
- EE Food Service Products
- EE HVAC Products
- EE IT Products
- EE Lighting Products
- EE Process Equipment Products
- EE Pumps and Drives
- Custom Incentive and Energy Assessments
- Smart $aver® Performance Incentive
- Small Business Energy Saver
- PowerShare® (DSM program)
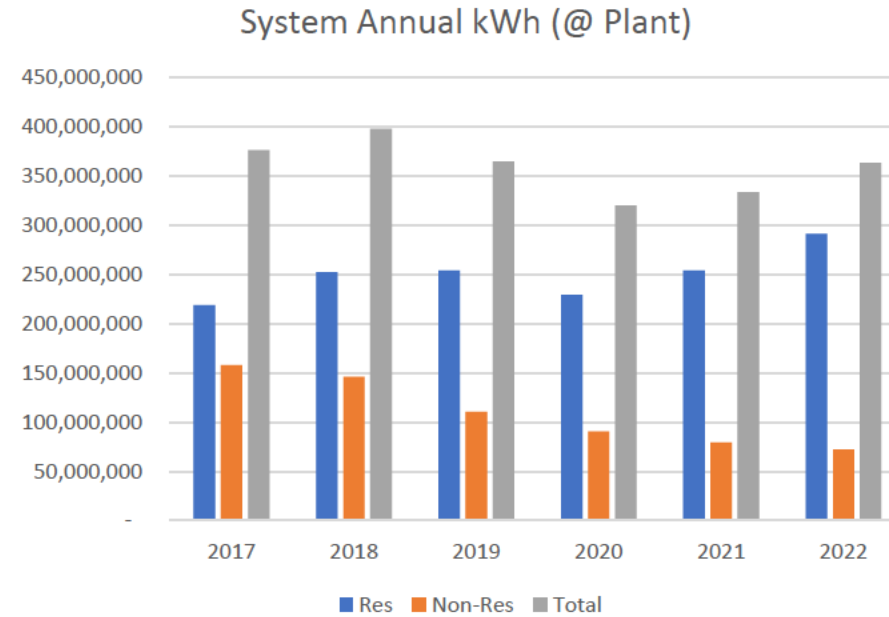- EnergyWise for Business (DSM program)

DEP

- Business Energy Saver
- Smart Saver - Custom
- Smart Saver - Performance Incentive
- Smart Saver - Prescriptive
- Commercial, Industrial & Government Demand Response (DSM program)
- EnergyWise for Business (DSM program)
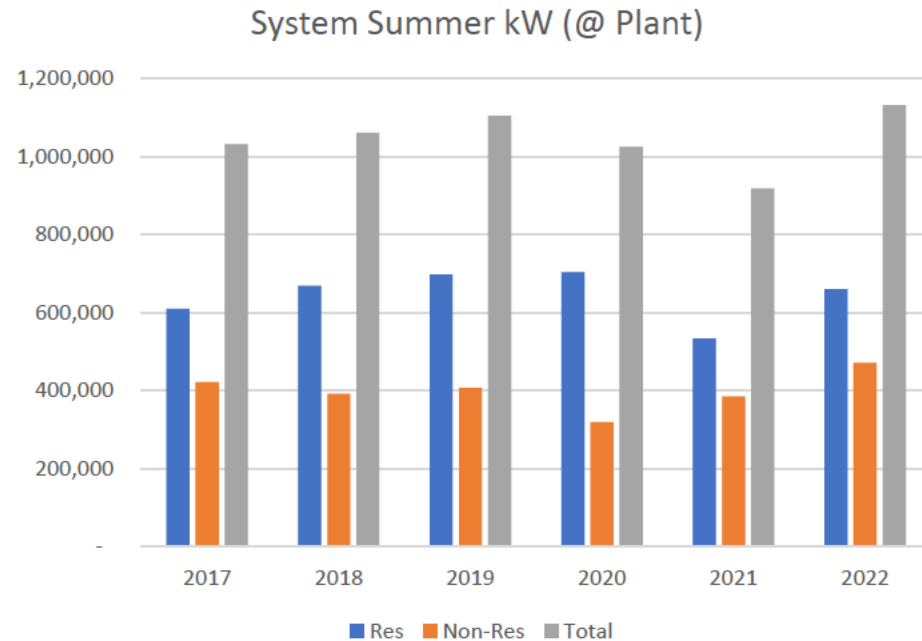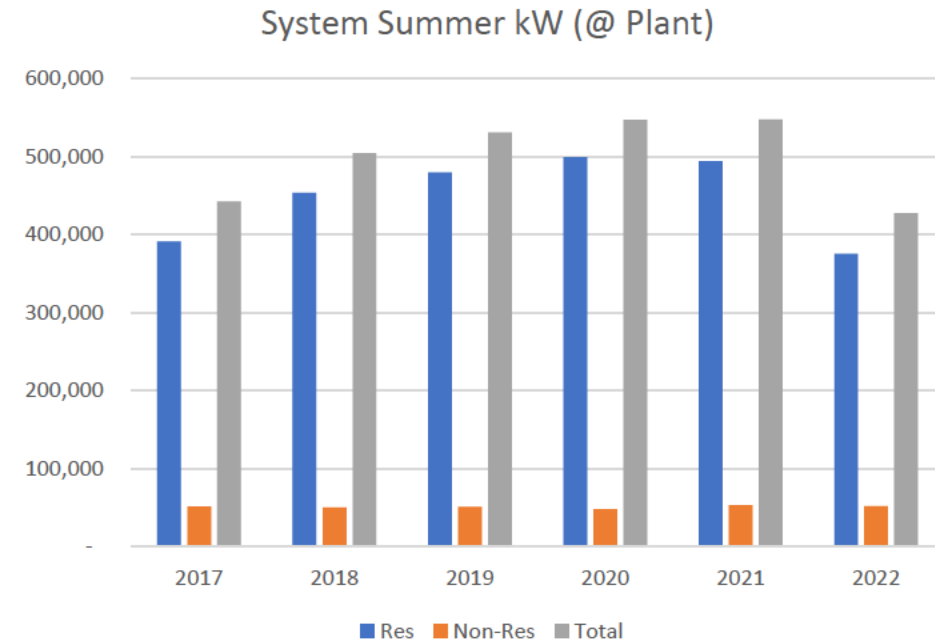
System Annual kWh Reductions (2017-2022)

DEC
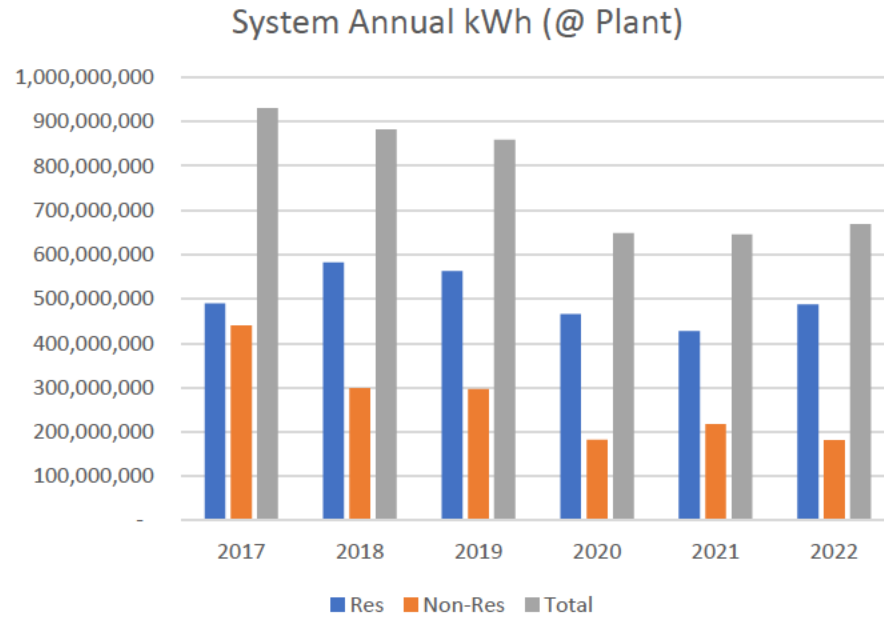
DEP*

*Cumulative Capability

System Summer kW Reductions
(2017-2022)

*Cumulative Capability

System Winter kW Reductions
(2017-2022)

DEC*

System Winter kW (@ Plant)

DEP**
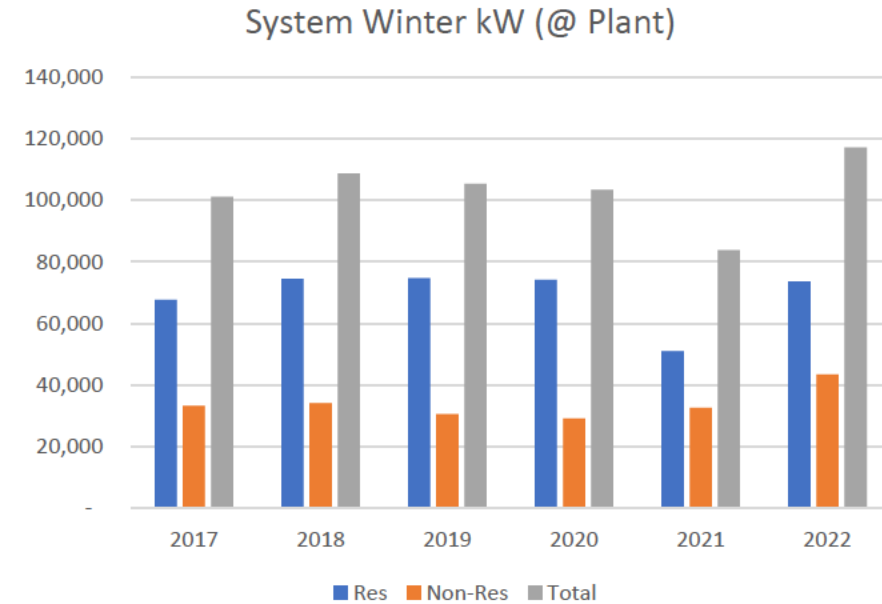

System Winter kW (@ Plant)
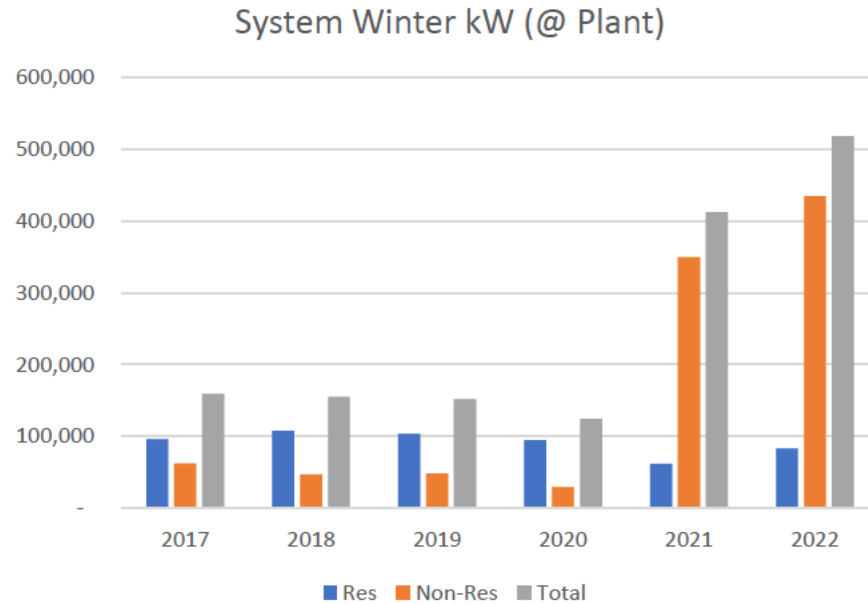
*Winter DSM was not recorded prior to 2021

**Cumulative Capability

NC Net Lost Revenue Contributions
(2017-2022)

DEC

NC NLR ($)

DEP

NC NLR ($)

9
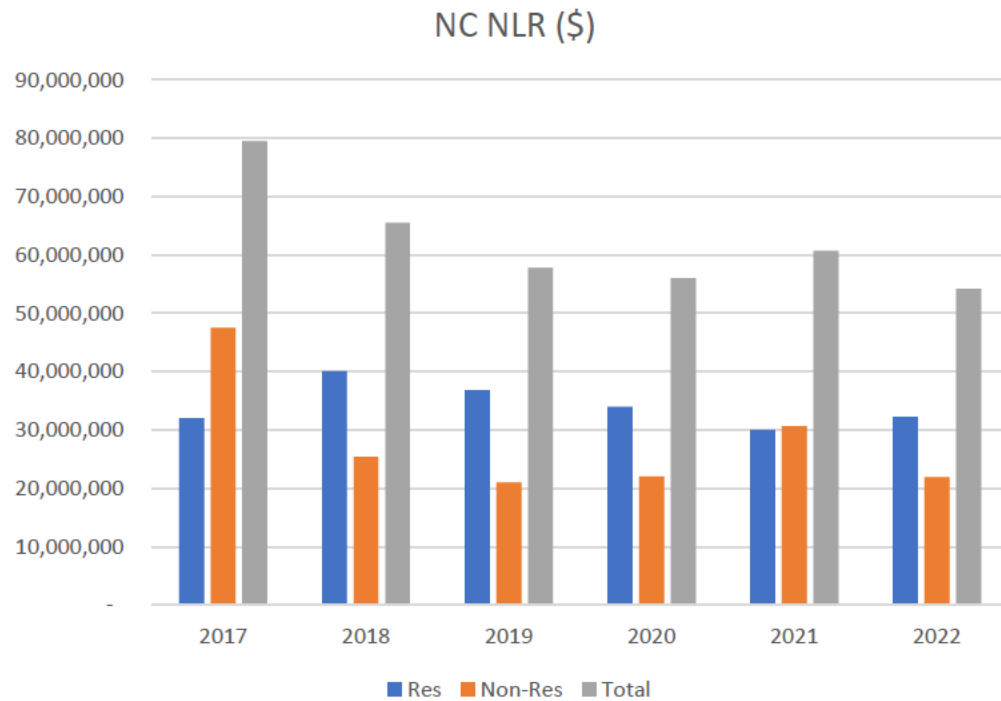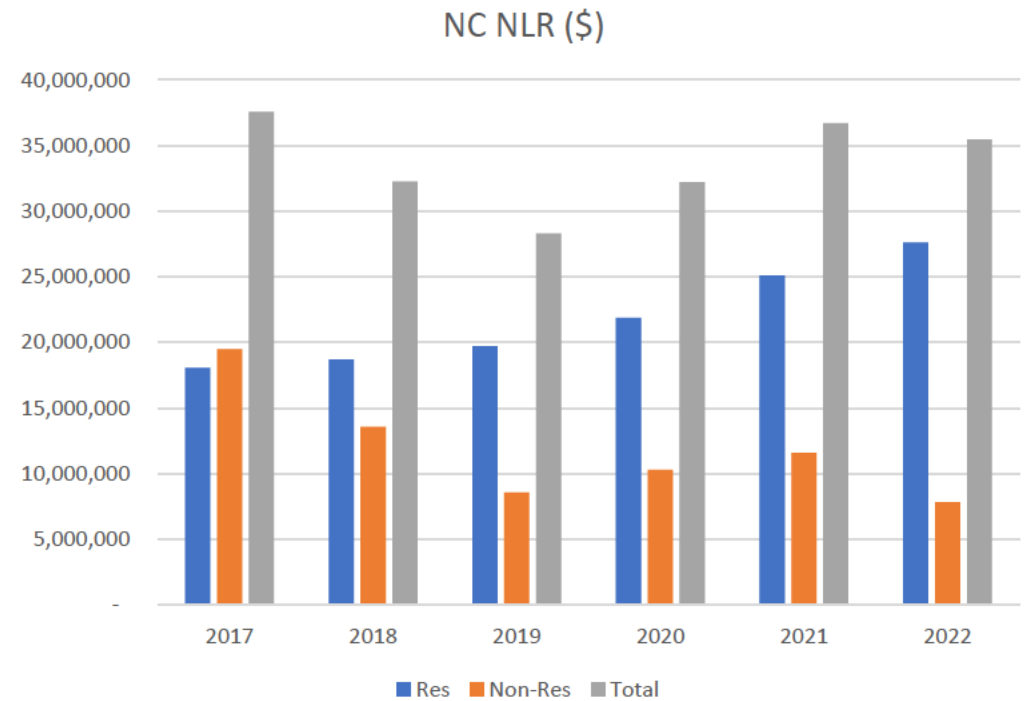
NC PPI/PRI Contributions
(2017-2022)
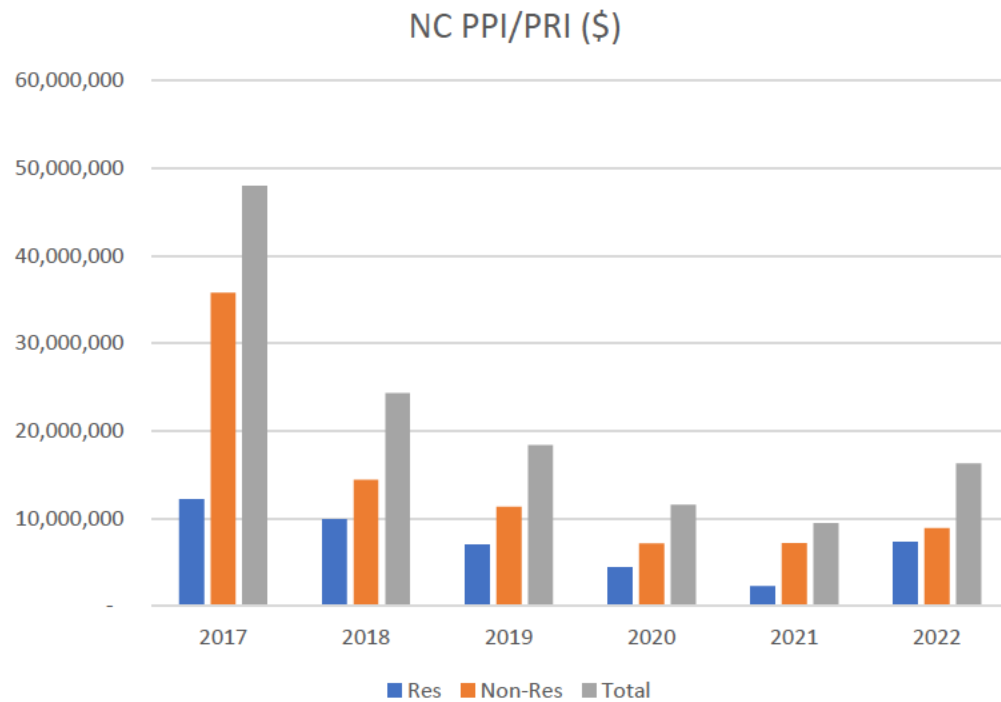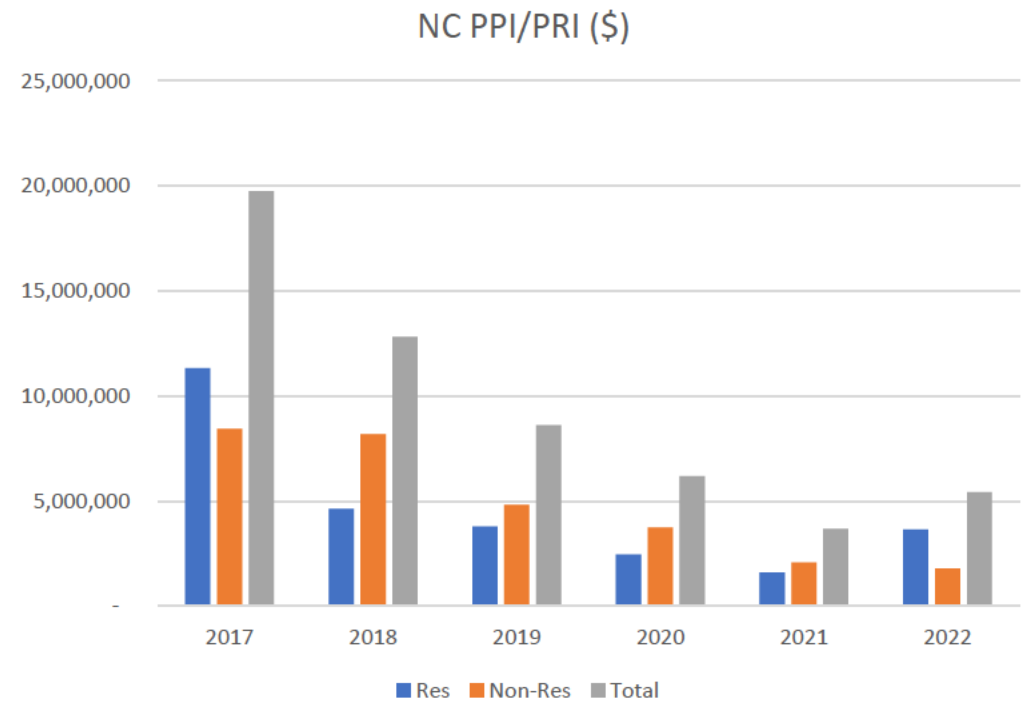
DEC — NC PPI/PRI ($)

DEP — NC PPI/PRI ($)

DEC Residential DSM/EE Rider Rates

	1	2	3	4	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DEC Residential	0.1206	0.1702	0.2329	0.1638	0.2779	0.5989	0.3621	0.4291	0.5529	0.5320	0.4835	0.5185	0.4771	0.3389	0.3775

DEC Residential

11

DEP Residential DSM/EE Rider Rates

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024(P)
DEP Residential	0.198	0.306	0.365	0.297	0.426	0.621	0.776	0.610	0.644	0.554	0.655	0.721	0.640	0.629
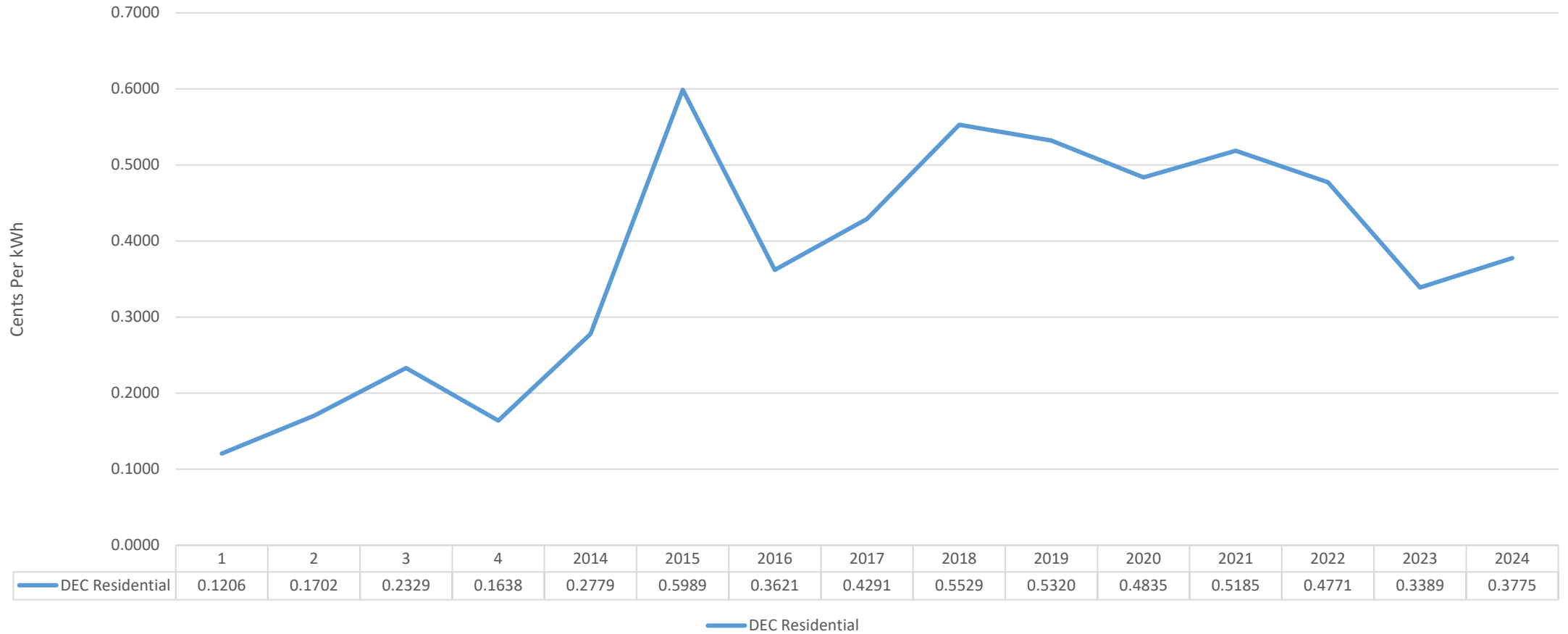
DEP Residential
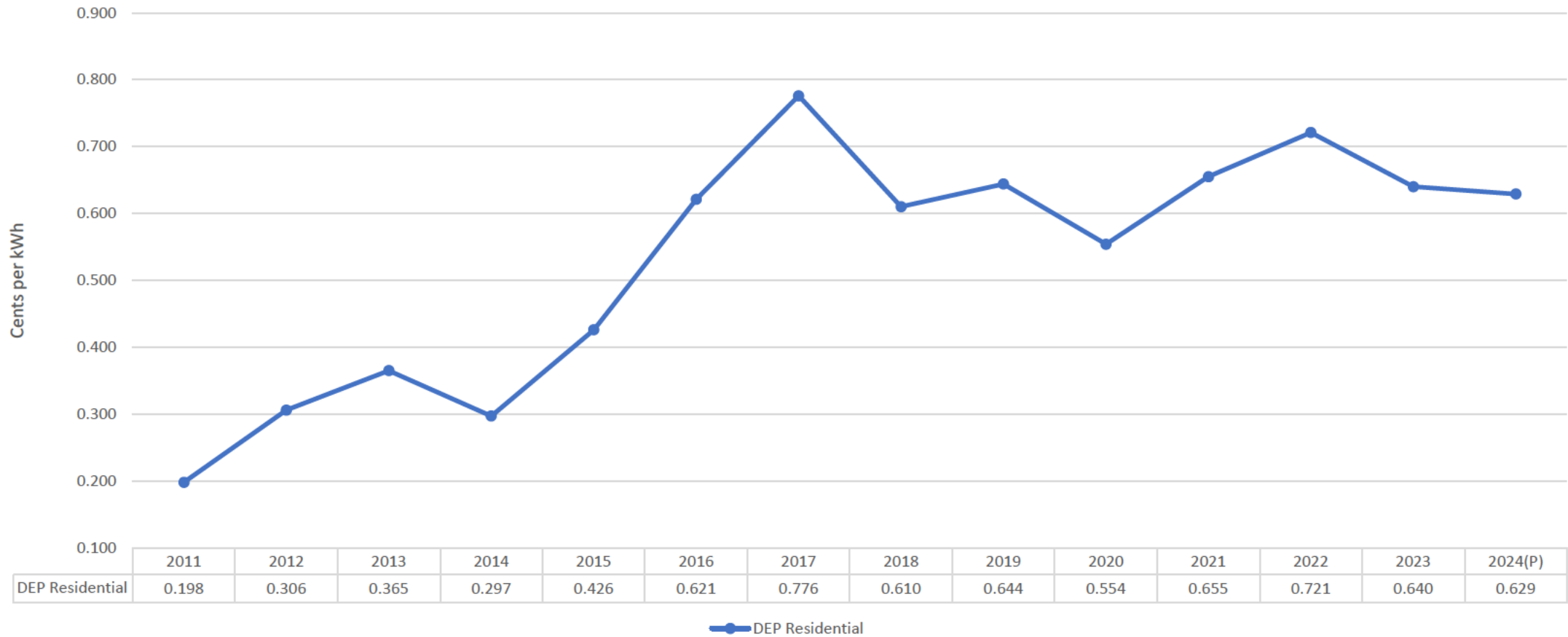
Changing Landscape in North Carolina

Senate Bill 3

- Enacted on August 20, 2007
- Utilities can meet REPS requirements in part through DSM/EE
- Encourages DSM/EE
- Recognizes that DSM/EE adds value to the system and to customers, and that utilities will not be motivated to enhance DSM/EE without appropriate incentives
- N.C.G.S. 62-133.9(d) provides that the utility has the opportunity to receive an incentive, at the Commission's discretion

13

Changing Landscape in North Carolina

House Bill 951

- Enacted on October 13, 2021
- Required the Commission to develop a plan for Duke Energy to reduce carbon emissions through "the least cost path"
- Required consideration of DSM/EE as a method to achieve the "least cost path" to carbon neutrality by 2050
- Introduced Performance Based Ratemaking
- Introduced a Residential Revenue Decoupling Mechanism Rider

14

Changing Landscape in North Carolina

Duke Energy's 2022 Carbon Plan Filing

- Filed on May 16, 2022
- Company's direct testimony of its Grid Edge panel stated that:
  - "The first pillar of energy transition and the Carbon Plan process is to 'shrink the challenge' by reducing energy requirements and modifying load patterns through Grid Edge customer programs." Page 5.
  - "The Companies' adoption of an annual energy efficiency forecast of 1% reduction of eligible load strikes the appropriate balance between reaching beyond the reasonable assumptions in the approved 2020 IRP to ensure the Companies are aggressively pursuing energy efficiency and demand-side measures to benefit customers and assuming an unattainable target." Page 30.
- Grid Edge activities include DSM/EE

Commission's Carbon Plan Order

Changing Landscape in North Carolina

- Issued December 30, 2022
- "The Commission is persuaded that Duke's assumption that it can achieve a 1% reduction in eligible retail load through UEE programs is an 'obtainable modeling assumption' as Duke characterizes the goal." Page 104.
- "[T]he Commission directs Duke to seek an aspirational goal of 1.5% and further directs Duke to provide an alternative modeling scenario in its initial CPIRP filing that uses a UEE forecast of 1.5% of eligible retail sales in addition to its proposed UEE forecast of 1% of eligible retail sales." Page 106.

16

Public Staff's Objectives

- To better align the current DSM/EE framework with state policy and other emerging regulatory frameworks
    - Carbon Plan/IRP
    - Performance-Based Ratemaking
        - Performance Incentive Mechanisms
        - Residential Decoupling Mechanism
    - Review of other states' cost recovery mechanisms

- To streamline the rider calculation

- To update and clarify terminology

- To provide uniformity between DEC and DEP

- To determine impacts of Proposed Enablers on rates

- To ensure compliance with Commission directives from prior mechanism reviews

Public Staff's Review

2020 Mechanism Order Commission Directives

- <u>Ordering Para. 3</u>: Evaluate ways to implement a step approach to the incentive/penalty structure to achieve greater energy savings

- <u>Ordering Para. 4</u>: Evaluate the concept of a low-risk discount rate in assessing the cost effectiveness of DSM/EE

- <u>Ordering Para. 6</u>: Whether the incentives in the Mechanism are producing significant DSM/EE results, whether the customer rate impacts from the rider are reasonable and appropriate, and whether overall performance targets should be adopted or revised

- <u>DEP Mechanism Para. 56</u>: Whether to allow the minimum three-year amortization period for DEP to be further reduced, taking into account the impact on rates and other factors

18

Public Staff's Review

The determination of avoided costs for DSM/EE performance

- From what proceeding should the avoided costs used to calculate DSM/EE savings be derived?
  - CPIRP?
  - Avoided Costs?
- How do we appropriately characterize and value the avoided capacity and avoided energy for the evaluation of DSM/EE programs?

19

Public Staff's Review

The PPI structure

- PPI is currently set at 10.6%
  - (NPV Avoided Cost – Total Cost)*PPI%
- What, if any, is an appropriate utility incentive going forward?
- If an incentive is deemed appropriate:
  - Determination as to the appropriate level of incentive for the Companies' efforts to meet their 1% and 1.5% of prior-year eligible retail sales targets
  - Determination as to whether it is appropriate to have varying levels of incentives to encourage particular types of programs

Public Staff's Review

Net Lost Revenues (NLRs)

- How are NLRs impacted by the creation of a Residential Revenue Decoupling Mechanism (RDM)?
  - At what point should NLRs in the DSM/EE Rider be applied to the RDM?
  - Is it appropriate for those NLRs to be projected, given that the RDM does not have a true-up mechanism that aligns with the DSM/EE Rider?
- How long should Residential NLRs last now that there is an RDM?

Definitions

- Is there a need for more defined terms? Are there any terms that need updating?

21

Public Staff's Review

Efforts to streamline rider calculations and to create uniformity between the DEC and DEP mechanisms

- Is there potential to have one mechanism that applies to both DEC and DEP?
- Is there a way to streamline the calculations within the rider?

Cost recovery and incentive structures in other jurisdictions

- What regulatory requirements are there for DSM/EE in other states?
  - 3-year plans?
  - Penalties?

Stakeholder Involvement

Carolinas EE Collaborative

- Created in 2009

- Includes representation from a wide array of stakeholders in NC and SC to discuss current achievements, challenges, and recent EM&V of current programs, as well as future proposals for DSM/EE programs.

- Members of the Collaborative can provide insight on what's working in other states and discuss how those successes might be achieved in North Carolina.

Stakeholder Involvement

Affordability Stakeholder Group

- Continuation of the efforts of the Low-Income and Affordability Collaborative (LIAC) created in the 2019 Duke Energy General Rate Cases.
- Tasked with discussing affordability challenges from a broad point of view, including how to better involve Low-Income customers in DSM and EE programs.

Questions?

Thank you!

Cost Recovery Mechanism Review

A Survey of Current Performance Incentive Mechanism Structures in the U.S.

Public Staff – North Carolina Utilities Commission

December 7, 2023

GDS Associates, Inc.
ENGINEERS & CONSULTANTS

TABLE OF CONTENTS

1 Overview

To help facilitate the Public Staff's review of Duke's cost recovery mechanisms[1], GDS conducted a survey of current performance incentive mechanisms throughout the United States and other topics related to demand-side management ("DSM") programs cost recovery. This report provides an overview of the research focus areas and findings. This report discusses findings related to the following elements of cost recovery and other considerations related to DSM programs:

- Performance Incentive Mechanaisms (PIM or PIMs). This section will provide a brief desciption of the types of performance incentives currently in place in the U.S. as well as a discussion of the level of savings achieved by mechanism type.

  The Public Staff expressed interest in updating the current Company cost recovery mechanisms to include elements such as a savings target (or goal), a penalty for failure to meet a minumum threshold, an incentive only for achieving savings that exceed the savings target, and a bonus for achieving a stretch goal. The discussion will address which states utilize these elements. The concluding section of the report offers some options for consideration.

- Energy Efficiency Resource Standards

- Decoupling and Net Lost Revenues

- Cost-Effectiveness Screening

2 Performance Incentives

There are several good sources of industry literature which offer a primer on performance incentive mechanisms. A 2018 report by the American Council for an Energy Efficient Economy (ACEEE)[2] provides a good reference point for developing an understanding the utility performance incentive landscape. This report places energy efficiency performance incentives into one of the following four categories:

- Shared Net Benefits incentives (utilities earn a share of benefits)

- Energy-Savings-Based incentives (utilities earn a reward for meeting savings goals)

- Multifactor incentives (utilities earn reward for meeting savings goals based on mutliple metrics)

- Rate-of-return incetnives (utilities earn rate of return "ROE" on spending)

GDS leveraged this report as a starting point to begin characterizing the PIMs across the U.S. Other good sources that helped provide useful summaries by state included the 2022 ACEEE Scorecard,[3] and the ACEEE State and Local Policy Database.[4] The ACEEE Policy Database provides information regarding each state's Utility Business Model, which describes if and how decoupling works as well as how the PIMs are designed. However, many of the Utility Business Model sections in the ACEEE Policy Database are

---

[1] Cost recovery mechanisms in Docket No. E-2 Sub 931 for Duke Energy Progress, LLC and in Docket E-7 Sub 1032 for Duke Energy Carolinas, LLC (together Duke of the Companies)

[2] ACEEE, 2018. Snapshot of Energy Efficiency Performance Incentives for Electric Utilities | ACEEE

[3] 2022 State Energy Efficiency Scorecard | ACEEE

[4] ACEEE | Policy Database

outdated or are missing some detail needed to provide a comprehensive and current perspective. Therefore, we supplemented our research by looking up relevant dockets, statutes, and orders to the extent possible, and solicited feedback from state energy offices and public service commissions. This correspondence proved valuable in updating the information available in the ACEEE reports and database.

The categorization of PIMs is not always clear-cut, but for the purposes of this analysis we held true to the 2018 ACEEE categorization unless our research indicated that a state had recently updated its PIM (e.g. Missouri) or if we determined that the complexity of a PIM warranted a Multifactor categorization (e.g. we categorize Connecticut as Multifactor due to the complexity of its goals structure, while ACEEE had previously characterized it as Energy-Savings-Based).

The table below summarizes states PIM by type and shows which states (including the District of Columbia) fall into each category.

TABLE 2-1. PERFORMANCE INCENTIVE MECHANISMS – TYPES BY STATE

PIM Type	# of States	States
Multifactor	13	CO, CT, HI, IL, MA, MI, MO, NM, NY, RI, VT, WI, DC
Share of Net Benefits	9	AZ, AR, GA, KY, MN, NC, OK, SC, TX
Savings-Based	2	IN, NH
Return on equity	2	NJ, UT
Discontinued	3	CA, MD, OH
None	22	SD, AL, FL, ID, IA, KS, LA, MS, MT, NE, NV, ND, OR, PA, TN, VA*, WA, WV, WY, AK, DE, ME

*VA is categorized here as None, though the 2020 Clean Economy Act allows the Commission to award performance incentives for utilities that achieve energy savings goals under § 56-596.2. This could also be considered an ROE or Multifactor PIM, but we were not able to determine if any VA utilities had yet utilized the PIM type allowed under the 2020 Clean Economy Act.

At the time of the 2018 ACEEE report, there were more Share of Net Benefits states than Multifactor states. Since that time, Ohio has discontinued its PIM, Missouri has updated its PIMs to have a variety of goal elements (now categorized as Multifactor), and we recategorized Colorado due to its tiered goal-structure (also now categorized as Multifactor). We also recategorized Connecticut from Savings-Based to Multifactor due to its complex goal-structured PIM and Illinois from Return on Equity to Multifactor for a similar reason. There are still nine states which retain essentially Share of Net Benefits PIMs, two which are essentially Savings-Based and two which are Return-on-Equity based. Again, even these broad categories do not necessarily capture the entire essence of each state's PIM – many of the Multifactor states have either Share of Net Savings, Savings-Based or ROE elements. The categorization we are using recognizes that PIMs are becoming more complex as regulators and stakeholders want utilities to reach goals, address special interests such as serving low-income customers or reducing greenhouse gas emissions, while also being motivated to earn reasonable incentivizes.

The 2022 ACEEE scorecard provides each state's 2021 net incremental annual savings as a percentage of retail sales. This data can serve as a high-level benchmark of how states perform based on their utility incentive type. It's almost important to note that some of the PIMs that have been newly implemented were not in place in 2021 (e.g. Missouri's new PIM structures, which are categorized as Multifactor, which were formerly Savings-Based).

The table below shows the average net savings in 2021, by PIM type. States with Multifactor PIMs have the highest average annual savings at 1.20%, which is more than twice as high as states with Share of Net

Benefits PIMs (0.58%). North Carolina was right in the middle of the pack of states with this type of PIM, coming in at 0.64%.

TABLE 2-2. PERFORMANCE INCENTIVE MECHANISMS – TYPES BY STATE

PIM Type	Average 2021 % Savings	Notes
Multifactor	1.20%	Range of 0.58% (MO) to 1.83% (MA and MI)
Share of Net Benefits	0.58%	NC ranks 4th of 9 at 0.64%; MN highest at 1.43%
Savings-Based	0.83%	Range of 0.43% (IN) to 1.20% (NH)
Return on equity	1.03%	Range of 1.00% (UT) to 1.05% (NJ)
Discontinued	1.35%	Includes CA, which recently discontinued its PIM
None	0.33%	Some states without PIMs still have an EERS

2.1 TIERED INCENTIVE STRUCTURES

The Public Staff expressed interest in understanding how other states have structured their PIMs with respect to the achievement of goals. States which use purely Share of Net Benefits or Return of Equity may not utilize or have the need to establish tiers, though it has not precluded the use of tiers. States with Savings-Based or Multifactor PIMs are more likely to have a tiered incentive structure. We have highlighted a few examples below for each type of PIM.

Multifactor: Connecticut[5]

Connecticut, which uses a complex goal-oriented incentive structure which addresses a variety of carve-outs and special considerations, bases its overall PIM structure on a tiered approach which awards an incentive once 75% of the goal (or sub-goal) is reached, with a base incentive of 5.0% of total program budget for meeting 100% of the goal. The table below demonstrates how this worked for Eversource CT in 2022.

TABLE 2-3. PERFORMANCE INCENTIVE ILLUSTRATION – EVERSOURCE CT

Minimum % Towards Goal	Pretax Incentive %	Pretax Incentive $
75%	2.5%	$3,906,537
85%	3.5%	$5,469,152
95%	4.5%	$7,031,766
100%	5.0%	$7,813,074
105%	5.5%	$8,594,381
115%	6.5%	$10,156,996

Share of Net Benefits: Arkansas and Texas

Arkansas energy efficiency performance incentives are awarded annually for achievement ranging between 80% and 120% of the Commission-established performance goal. The performance incentive is 10% of portfolio total resource cost net benefits, limited to a percentage of program budgets ranging from 4% of program budgets to 8% of program budgets, *based linearly on the degree of achievement.*

---

[5] 2022-2024 (energizect.com)

In Texas, all investor-owned utilities have a shared benefit incentive in place. When a utility exceeds its demand reduction goal within the prescribed cost limit, it is awarded a performance bonus. The performance bonus is based on the utility's energy efficiency achievements for programs implemented in the previous year (PUCT Substantive Rule §25.181). A utility that exceeds 100% of its demand and energy reduction goals shall receive a *bonus equal to 1% of the net benefits for every 2% that the demand reduction goal has been exceeded*, with a maximum of 10% of the utility's total net benefits.

Savings-Based: Indiana

Indiana's savings-based PIM can be illustrated by the example below, currently in place for the Northern Indiana Public Service Company (NIPSCO)[6]. The tiered incentive structure here provides a 5% share of net benefits once 80% of the energy savings target is achieved, with a cap of 9% share of net benefits at 110% savings achievement.

FIGURE 2-1. NIPSCO PIM – 2024-2026 PLAN

Achievement (% of Gross Energy Savings Target (MWh)- Program)	Incentive Level (NPV of net benefits ofUCT)
110%	9%
100 - 109.99%	7%
90- 99.99%	6%
80- 89.99%	5%
0 - 79.99%	0%

Return-on-Equity: New Jersey

In New Jersey, utilities are able to earn incentives based on performance towards their utility-specific targets. The NJBPU as a state agency does not receive performance incentives for achieving energy savings targets. Performance incentives and penalties take the form of a return on equity (ROE) adjustment applied to EE and PDR program investment. An incentive is awarded if a utility achieves between 110% and 150% of its target. Achievement of between 90% and 110% of the target represents compliance. A penalty is assessed if performance of the target is between 50% and 90%, and a utility is deemed non-compliant if achieving 50% or less of its target.

We did not find any states that used a goals-oriented PIM, at least in part, which did not include a tiered or sliding-scale incentive structure. As long a minimum threshold is met, utilities begin earning an incentive, with the possibility of increasing the incentive as goals were approached, met, or exceeded.

2.2 PENALTIES, BONUSES AND CAPS

The Public Staff also expressed interest in other elements of PIMs, which would be up for consideration in updating the PIMs in North Carolina. This includes penalties for failing to meet goals, bonuses for

---

[6] Cause No. 45849 https://iurc.portal.in.gov/docketed-case-details/?id=5f10f3e9-74ad-ed11-aad1-001dd80726a4

exceeding targets, as well as an overall cap on an incentive. We were able to identify nine states with a penalty related to failure to meet goals. This does not include some states like Florida, which have given its Commission statutory authority to implement penalties but have not yet included them in regulations or PIMs. The levying of penalties is rare, as historically utilities are able to meet reasonable goals. There have been exceptions, including a $1.3 million fine for West Penn Power,[7] and most notably a $20 million fine for Southern California Edison for mismanagement of one of its programs.[8]

States with PIMs also typically have a Bonus and/or a Cap on the amount of incentive that is available. Caps can take the form of maxing out a share of net savings (as a percentage of net benefits) or more commonly as a percentage of program costs (typically between 10% and 15% of program costs). The table below provides a summary of these PIM elements by state.

TABLE 2-4. PERFORMANCE INCENTIVE MECHANISMS – TYPES BY STATE

PIM element	Number of States	States
Penalty	9	CA, IL, MI, MO, NJ, WI, DC, PA, WA
Bonus	18	CO, CT, GA, HI, IL, MA, MI, MN, MO, NH, NJ, NM. NY, RI, SD, TX, WI, VA
Cap	24	CO, CT, GA, HI, IL, MA, MI, MN, MO, NH, NJ, NM. NY, RI, SD, TX, WI, VA, AR, AZ, IN, KY, OK, VT, DC

2.3 CLIMATE FORWARD PIMS

The Public Staff also expressed interest in understanding how PIMs are addressing carbon emissions. The best resource we were able to identify addressing climate forward PIMs, which address GHG emissions, was an ACEEE whitepaper from 2022.[9] The report found that PIMs which incentive GHG reductions are still in their infancy. Only a few states have begun to implement these elements and its states like VT and DC, which implement third-party programs, and perhaps have the flexibility to implement evolve its PIMs.

The ACEEE whitepaper describes how PIMs can either explicitly address GHG or address climate considerations through policy intent. The figure below, reproduced from the ACEEE paper provides an illustration.

---

[7] [PUC Directs West Penn Power to Pay $1.3 Million Settlement for Act 129 Violation | PA PUC](#)
[8] [Microsoft Word - R1311005 Fitch POD Edison 2017-2019 Energy Efficiency Upstream Lighting Program 9-6-22 (ca.gov)](#)
[9] [Microsoft Word - 6-0613_0868_000363-GOLD_WILSON_BERG_Final.docx (aceee.org)](#)

FIGURE 2-2. TYPOLOGY OF CLIMATE-FORWARD PIMS
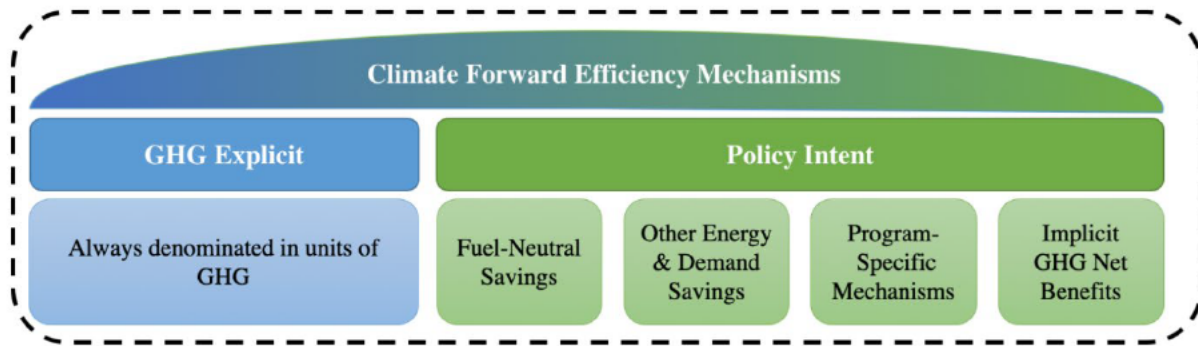
Examples of elements of both an explicit GHG PIM and a policy intent PIM are provided in the table below. The Vermont example explicitly targets GHG, whereas the D.C. example indirectly addresses GHG through a reduction in energy consumption goal.

TABLE 2-5. EXAMPLES OF ELEMENTS OF CLIMATE FORWARD PIMS

State/ Utility	PIM Name	Threshold Value	Period of Performance	Maximum Reward/Penalty
Vermont	GHG Reduction (explicit)	120,500- 160,600 MTCO₂e	2021-2023	$292,600 (fixed reward)
D.C	Reduce Energy Consumption (policy intent)	1,136,800- 7,578,600 Btu	2022-2026	$2 million (fixed reward/penalty)

3 Energy Efficiency Resource Standards

In the course of reviewing the literature regarding performance incentive mechanisms, GDS also reviewed the latest available information regarding state Energy Efficiency Resource Standards (EERS). Savings goals embedded in performance incentive mechanisms can be based on EERS targets, though there is not necessarily a one-to-one connection between the two. However, it is clear that states with an EERS realize much greater savings than states without an EERS. The figure below plots the 2021 savings for states with and without an EERS (lowest to highest, as well as the average). States with an EERS averaged 1.07% savings, whereas states without an EERS averaged 0.25% savings.

FIGURE 2-1. COMPARISON OF EERS VS NO EERS SAVINGS

Most states with an EERS have a binding EERS requirement, though some are voluntary. North Carolina and Utah are the only two states with an EERS which uses a combined EERS/RPS requirement. The figure below developed by the National Conference of State Legislatures (NSCL) illustrates states with an EERS, and the types employed.[10] States with an electric-specific EERS correlate with significantly greater savings than those without an EERS, or with a voluntary or combined EERS/RPS requirement.

FIGURE 2-2. COMPARISON OF EERS VS NO EERS SAVINGS

---

[10] Energy Efficiency Resource Standards (EERS) (ncsl.org)

4 Decoupling and Net Lost Revenues

Similar to its review of states with and without an EERS, GDS also reviewed the latest available information states with decoupling. Revenue decoupling, which is the dissociation of a utility's revenues from its sales "aims to make the utility indifferent to decreases or increases in sales, removing the throughput incentive."[11] Lost revenue adjustment mechanisms (LRAMs) account for lost revenues associate with energy efficiency programs, but do not address the throughput incentive.

It is clear that states with full decoupling realize greater savings than states with either just an LRAM or neither mechanism. The figure below plots the 2021 savings for states based on whether there is full decoupling, just an LRAM, or neither of these elements. States with decoupling averaged 1.32% savings. States with an LRAM averaged 0.65% savings. States with neither averaged 0.25% savings.[12]

FIGURE 4-1. COMPARISON OF DECOUPLING VS NO DECOUPLING
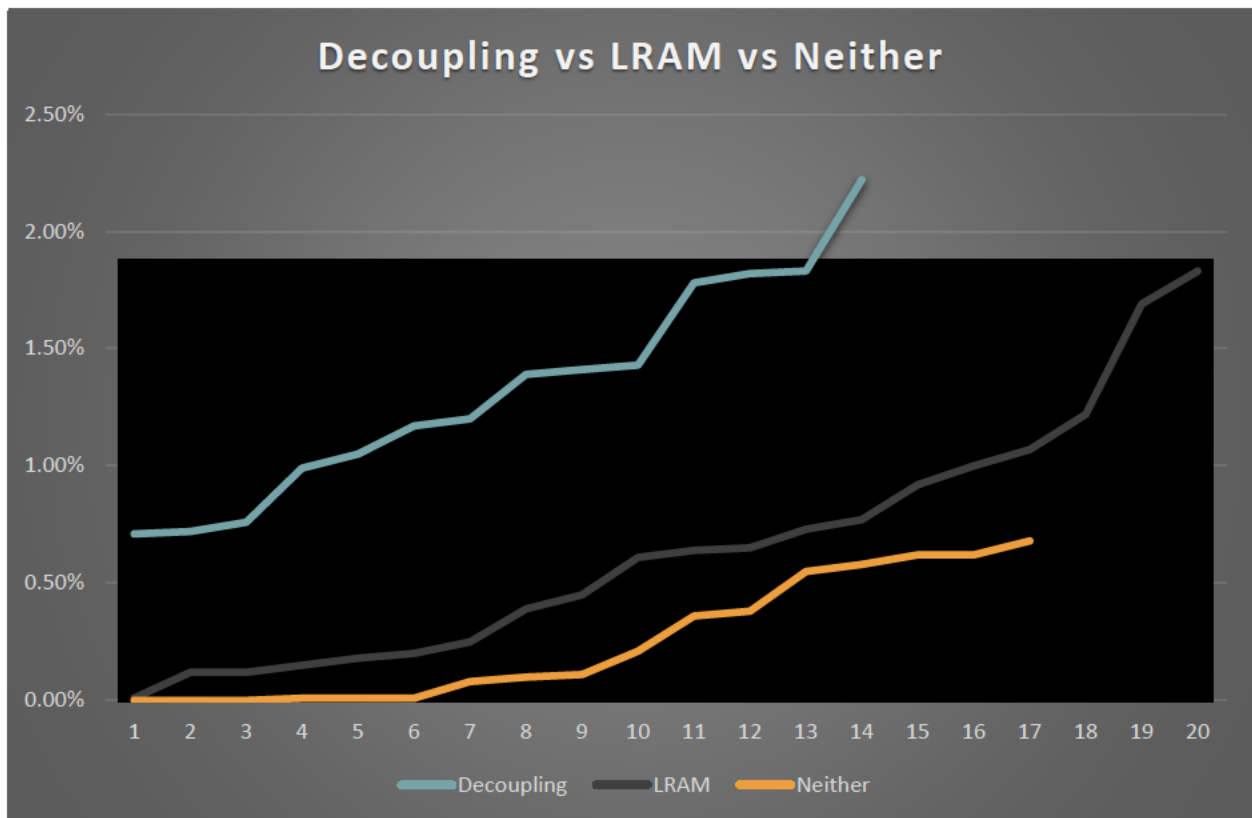
Historically, North Carolina has been an LRAM state. If NC becomes a fully decoupling state, it will be able to address the throughput incentive and thereby possibly see an increase in savings. This also has the potential to simplify the cost recovery mechanism, by removing the LRAM component of cost recovery.

---

[11] 2022 ACEEE Scorecard

[12] Note that the ACEEE Scorecard scoring (Table 15) was used to develop proxies to categorize each state. States with a score of 1 point are classified as "decoupling;" states with 0.5 points are classified as "LRAM;" states with 0 points are classified as "neither."

5 Cost Effectiveness Screening

The Public Staff expressed interest in the role of cost-effectiveness in PIMs. GDS performed a review of current cost-effectiveness tests by state, and looked to identify any emerging trends. Overall, about half of the states continue to use the TRC Test as the primary benefit-cost test. An emerging trend appears to be the continued development of state-specific benefit-cost tests, as Connecticut, New Hampshire, New Jersey, Rhode Island, Maryland, Michigan, and Maine (at a minimum) have already developed their own tests. Most of these tests are rooted one of the standard tests (Michigan uses a modified UCT for example). States with their own test (averge of 1.41%) and those which use SCT (averge of 1.05%) saw the highest savings in 2021.

TABLE 5-1. SUMMARY OF BENEFIT-COST TESTS BY STATE – AND CORRESPONDING 2021 SAVINGS

Primary Test[13]	Number of States	Savings %
TRC	25	0.62%
UCT	5	0.61%
SCT	6	1.05%
State-specific	7	1.41%
RIM	1	0.08%
None	6	0.08%

6 Cost Recovery Mechanism Updates – Options for Consideration

Based on the types of performance incentive mechanisms and elements that the Public Staff has expressed interest in, as well as the information GDS reviewed in terms of the types of PIMs currently implemented and current trends, we offer several options for conideration below.

1. **Adopt a Multifactor incentive PIM** to address savings goals as well as other focus areas (e.g. low-income program funding, limiting behavior-based program savings – like Michigan has done, including one or more carbon-focused PIM elements that either directly address GHG or address them through a poiicy intent element, etc.).
   - Example state(s): Connecticut (North Carolina utility PIMs could develop a much simpler overall goals-based structure but leverages the model used in Connecticut; Vermont (for the GHG element)

2. **Adopt a tiered incentive PIM** with a bonus, cap, and penalty to provide motivation for utilities to achieve stretch goals and meet minum targets.
   - Example state(s): Connecticut, Michigan, New Jersey, Indiana

3. **Electric-only Energy Efficiency Resource Standard**. This is outside of the realm of the cost recovery mechanism review, and perhaps not appropriate or relevant in North Carolina in its current

---

[13] Database of State Efficiency Screening Practices - NESP (nationalenergyscreeningproject.org)

legislative and regulatory environment, but could be a way for North Carolina to see increased savings.

4. **Revenue Decoupling**. If full revenue decoupling can be established in North Carolina, then lost revenues can be addressed outside of the purview of a utility cost recovery mechanism.

5. **State-Specific Benefit-Cost Test**. Benefit-cost tests that are tailored to a state's unique characteristics appear to be helpful in state's realizing savings. The Database of State Efficinecy Screening Practices provides a snapshot of how each state treats the various benefit and cost elements of each standard test. If Duke continues to seek an updated treatment of benefit-cost ratios are calculated as part of the cost recovery review, the Public Staff can use the opportunity to make sure that the benefit-cost calculations and inputs and methods used to perform those calculatiosn are in in the best interests of the ratepayers.