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December 19, 2023

**VIA ELECTRONIC FILING**

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

**RE: Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's  
Submission of Jointly-Prepared Pre-Filed Materials for Technical  
Conference  
Docket Nos. E-100, Sub 179; E-7, Sub 1032; and E-2, Sub 931**

Dear Ms. Dunston:

I am writing on behalf of Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, the "Companies") with respect to the technical conference held on December 18, 2023, in the above-referenced dockets. In compliance with Commissioner Hughes' request, enclosed for filing in the above-referenced dockets is a copy of the Companies' PowerPoint presentation made during the technical conference.

Please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,

Jack E. Jirak

Enclosure

c: Parties of Record

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Dec 19 2023



# North Carolina Utilities Commission Technical Conference Energy Efficiency (EE) / Demand-Side Management (DSM) Cost Recovery Mechanism

Duke Energy Carolinas, LLC  
Duke Energy Progress, LLC

December 18, 2023



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Dec 19 2023

# Agenda and Introductions



## Agenda:

- **Increasing EE and DSM Savings**
  - Industry Driving Forces
  - Track Record of Success
  - Constructive Regulatory Framework
- **Purpose of the Mechanism**
- **History and Background**
- **Components of the Mechanism**
- **Stakeholder Engagement**

## Presenters:

- **Lon Huber**
  - Senior Vice President, Pricing and Customer Solutions
- **Tim Duff**
  - General Manager, Customer Solutions Regulatory Enablement

# Meeting the needs of our customers by increasing EE and DSM savings



# Duke Energy Track Record of Success

### Energy Savings (2017 - 2022)

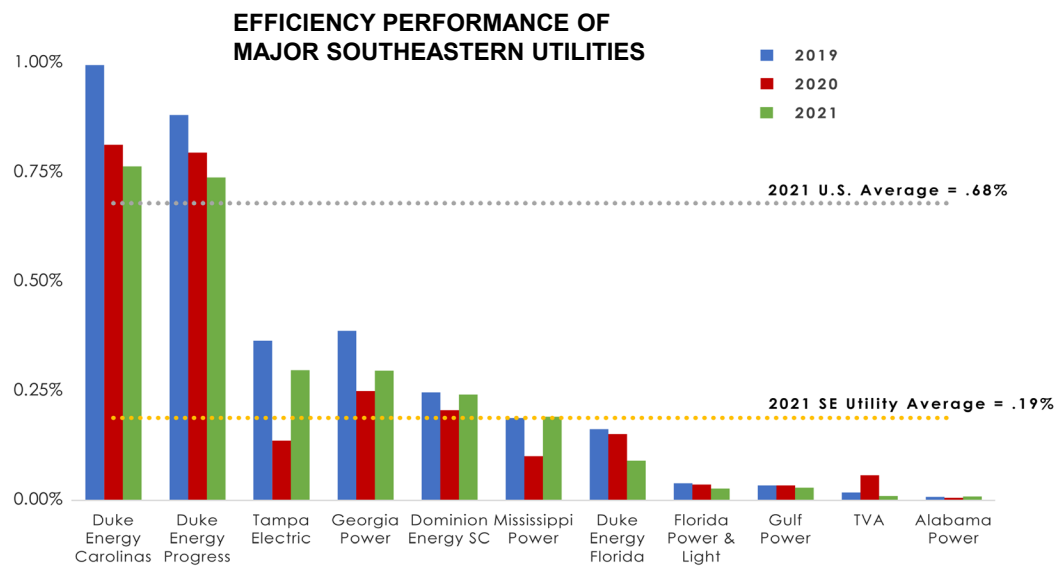
- 3.37M MWh** Energy Saved\*
- 225k Homes** Electricity Use for One Year
- 7,000 Acres** Solar Farms

### Customer Savings (2017 - 2022)

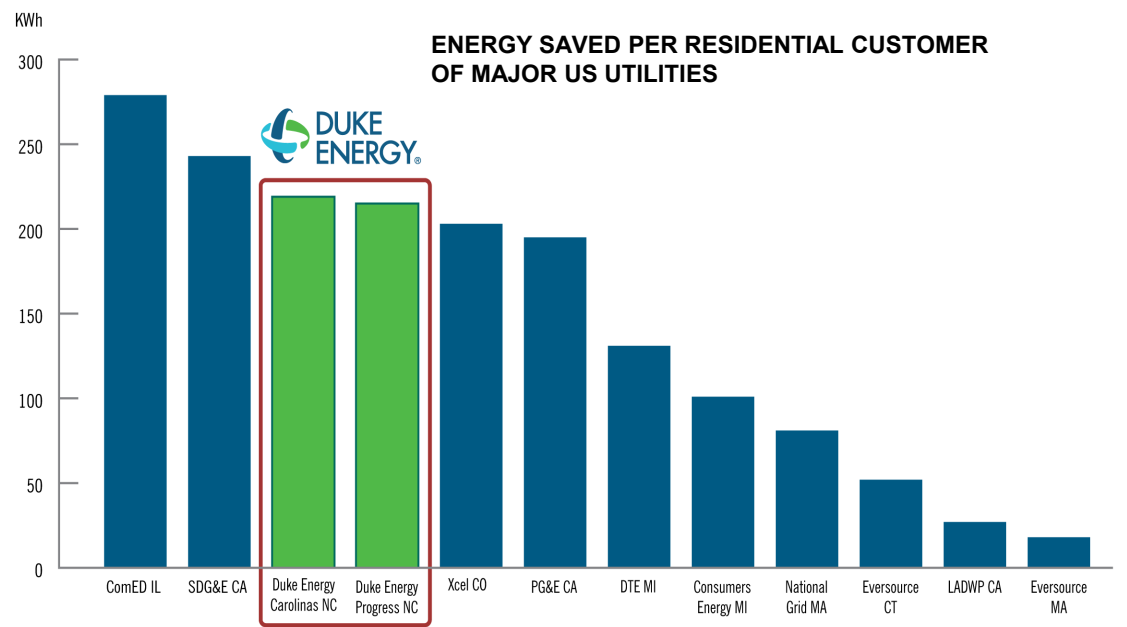
- \$685M** Customer Rebates and Incentives
- \$2.8B** NPV of System Benefits
- \$2.69** Savings for every \$1 invested

### Equity (2017 - 2022)

- 41k** Low-income households served under LI programs



Energy Efficiency in the Southeast Fifth Annual Report, SACE, March 2023.



Customer count and energy savings performance obtained from the 2023 US EIA – Form 861.

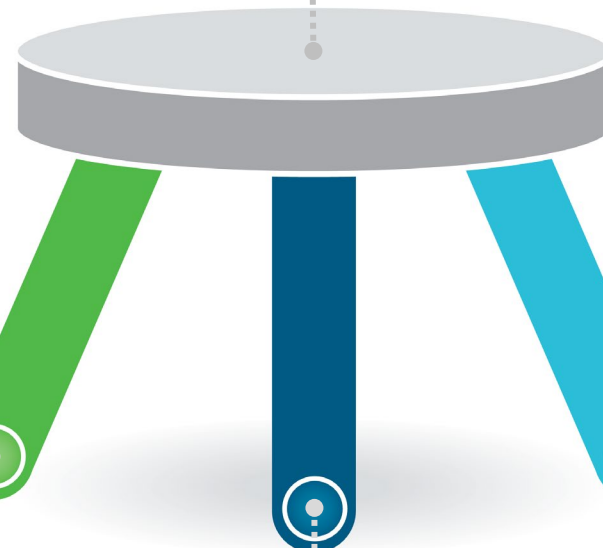
# The Three Legs of a Constructive Regulatory Mechanism around EE/DSM



Removes the financial disincentive associated with under recovery of fixed costs from reducing volumetric sales

**Net Lost Revenue Recovery / Decoupling**

EE/DSM Recovery Mechanism



**Program Cost Recovery**



Investing in EE/DSM reduces the need for traditional utility capital investment and the associated earnings opportunity.

**Utility Financial Incentive**

# Purpose of the Mechanism

The overall purpose of the Mechanism is to:

1

Allow DEC or DEP to **recover all reasonable and prudent costs** incurred for adopting and implementing new DSM and EE measures;

2

**Establish certain requirements**, in addition to those of Commission Rule R8-68, for requests by DEC or DEP for **approval, monitoring, and management of DSM and EE programs**;

3

**Establish the terms and conditions for the recovery of net lost revenues (NLR) and a Portfolio Performance Incentive (PPI)** to reward DEC or DEP for adopting and implementing new DSM and EE measures and programs; and

4

Provide an **additional incentive** to further encourage kilowatt-hour (kWh) savings achievements.

*Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice, Docket No. E-7, Sub 1285, at 6.*



# History and Background of The Mechanism





# General Statutes and Development of EE/DSM Mechanism



## Senate Bill 3

An Act to Promote the Development of Renewable Energy and Energy Efficiency in the State through a Renewable Energy and Energy Efficiency Portfolio Standard.



## Commission Rules R8-68 and R8-69

“Commission Rules R8-68 and R8-69 implementing Senate Bill 3 expressly provide that the Commission will review and evaluate, as a package, proposed DSM and EE programs, cost recovery, lost revenue, and management incentive mechanisms.” Order, 2/9/10, E-7, Sub 831, p.45.



## EE/DSM Mechanism

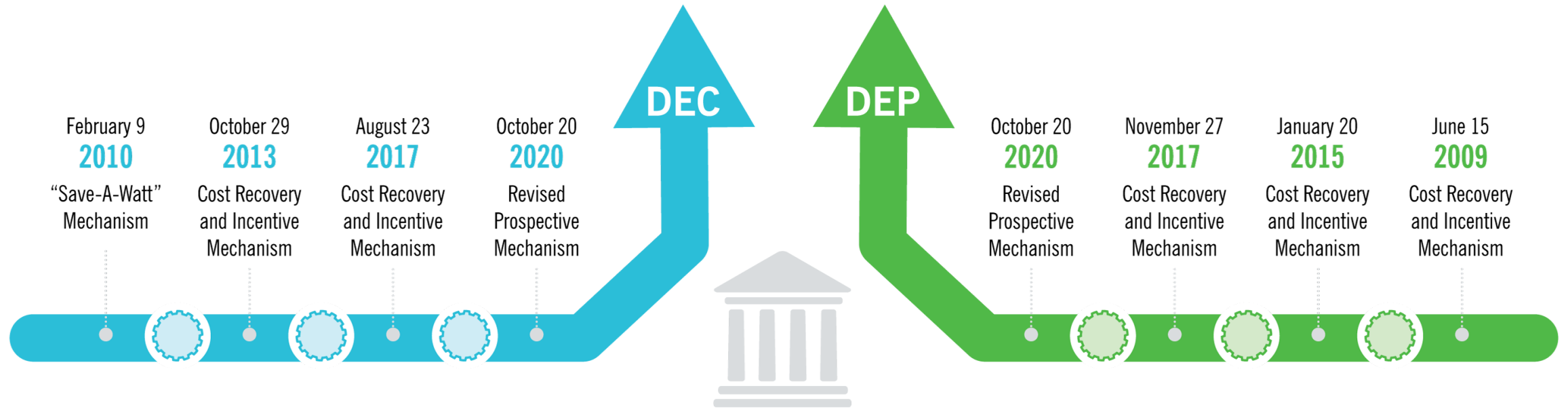


## HB 951 (2021)

In establishing that the Commission shall take all reasonable steps to reduce carbon emissions, the General Assembly directed that:

***Existing law shall apply with respect to energy efficiency measures and demand-side management.***

# Development of the Mechanisms for EE/DSM Cost Recovery



## Duke Energy Carolinas

Stipulations between Duke Energy Carolinas, LLC, Progress Energy Carolinas, Inc. (“PEC”), the Public Staff and other parties on the first DSM/EE cost recovery rider applications under Senate Bill 3 and Commission Rules R8-68 and R-69 were first Cost Recovery Mechanisms.

Duke Energy Carolina’s (“DEC”) Save a Watt Mechanism (Settlement Agreement between Duke Energy Carolinas, the Public Staff, and Environmental Intervenors in Docket No. E-7, Sub 831)

## Duke Energy Progress

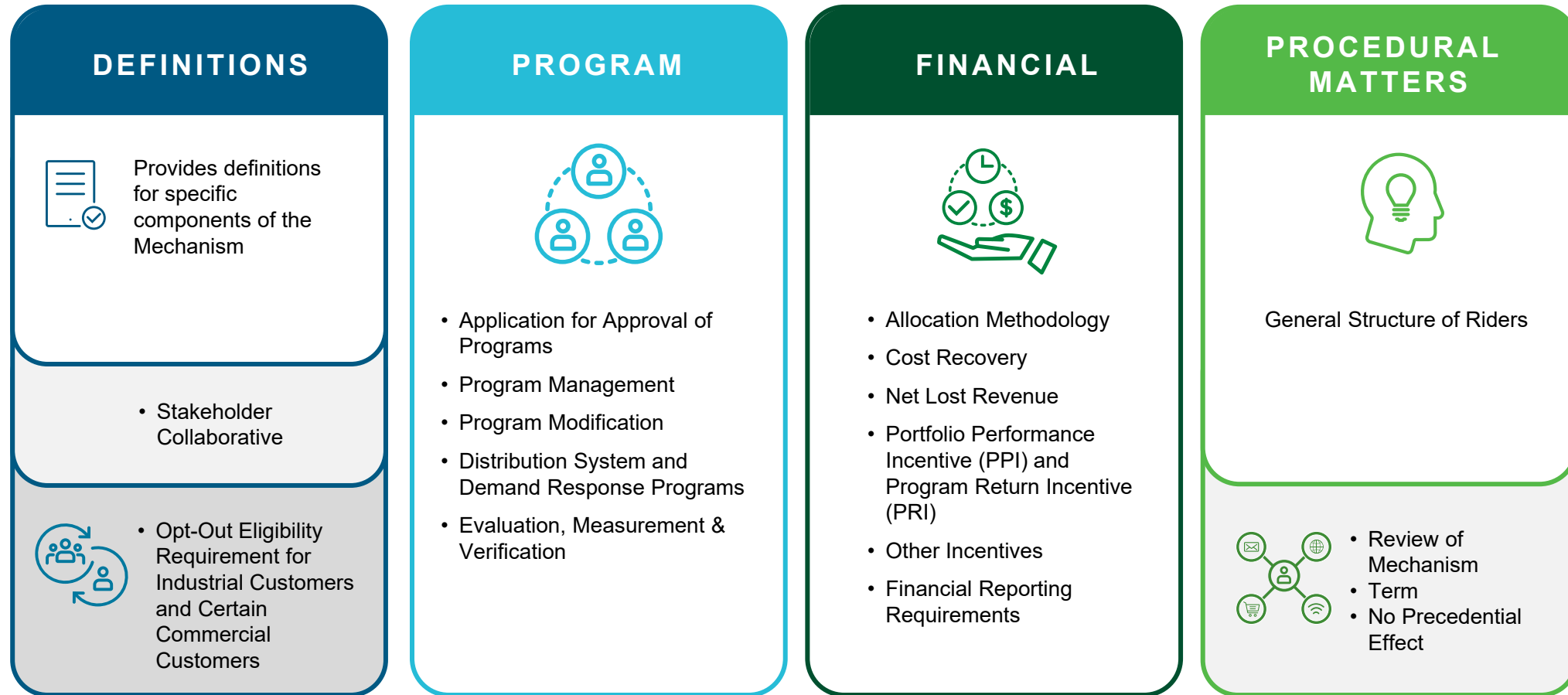
PEC Cost Recovery Mechanism (Settlement Agreement between PEC, the Public Staff, and Wal-Mart in Docket No. E-2, Sub 931)



# Components of The Mechanism



# Components of the Existing EE/DSM Mechanism



# Program Possibilities | Ongoing Process

The ongoing process of program development, improvement, and evaluation ensures that Duke Energy's programs stay relevant and effective.

The regulatory framework in NC aligns customer benefits with Company interests, resulting in dynamic, high-performing programs that accrue benefits to the entire utility system.



# Comprehensive Regulatory Filing Requirements (Commission Rule R8-68)

## **R8-68 INCENTIVE PROGRAMS FOR ELECTRIC PUBLIC UTILITIES AND ELECTRIC MEMBERSHIP CORPORATIONS, INCLUDING ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT PROGRAMS**

(a) Purpose. — The purpose of this rule is to establish guidelines for the application of G.S. 62-140(c) to electric public utilities and electric membership corporations and G.S. 62-133.9 to electric public utilities that are consistent with the directives of those statutes and consistent with the public policy of this State as set forth in G.S. 62-2.

(b) Definitions.

- (1) Unless listed below, the definitions of all terms used in this rule shall be as set forth in Rule R8-67(a), or if not defined therein, then as set forth in G.S. 62-3, G.S. 62-133.8(a) and G.S. 62-133.9(a).
- (2) "Consideration" means anything of economic value paid, given, or offered to any person by an electric public utility or electric membership corporation (regardless of the source of the "consideration") including, but not limited to: payments to manufacturers, builders, equipment dealers, contractors including HVAC contractors, electricians, plumbers, engineers, architects, and/or homeowners or owners of multiple housing units or commercial establishments; cash rebates or discounts on equipment/appliance sales, leases, or service installation; equipment/appliances sold below fair market value or below their cost to the electric public utility or electric membership corporation; low interest loans, defined as loans at an interest rate lower than that available to the person to whom the proceeds of the loan are made available; studies on energy usage; model homes; and payment of trade show or advertising costs. Excepted from the definition of "consideration" are favors and promotional activities that are de minimis and nominal in value and that are not directed at influencing fuel choice decisions for specific applications or locations.
- (3) "Costs" include, but are not limited to, all capital costs (including cost of capital and depreciation expenses), administrative costs, implementation costs, participation incentives, and operating costs. "Costs" does not include utility incentives.
- (4) "Electric public utility" means a person, whether organized under the laws of this State or under the laws of any other state or country, now or hereafter owning or operating in this State equipment or facilities for producing, transporting, distributing, or furnishing electric service to or for the public for consumption. For purposes of this rule, "electric public utility" does not include electric membership corporations.
- (5) "Net lost revenues" means the revenue losses, net of marginal costs avoided at the time of the lost kilowatt-hour sale(s), or in the case of purchased power, in the applicable billing period, incurred by the electric public utility as the result of a new demand-side management or energy efficiency measure. Net lost revenues shall also be net of any increases in revenues resulting from any activity by the electric public utility that causes a customer to increase demand or energy consumption, whether or not that activity has been approved pursuant to this Rule R8-68.
- (6) "New demand-side management or energy efficiency measure" means a demand-side management or energy efficiency measure that is adopted and implemented on or after January 1, 2007, including subsequent changes and modifications to any such measure. Cost recovery for "new demand-side management measures" and "new energy efficiency measures" is subject to G.S. 62-133.9.
- (7) "Participation incentive" means any consideration associated with a new demand-side management or energy efficiency measure.
- (8) "Program" or "measure" means any electric public utility action or planned action that involves the offering of consideration.
- (9) "Utility incentives" means incentives as described in G.S. 62-133.9(d)(2)a-c.

(c) Filing for Approval.

(1) Application of Rule.

- (i) Prior to an electric public utility or electric membership corporation implementing any measure or program, the purpose or effect of which is to directly or indirectly alter or influence the decision to use the electric public utility's or electric membership corporation's service for a particular end use or to directly or indirectly encourage the installation of equipment that uses the electric public utility's or electric membership corporation's service, and prior to any electric power supplier to which Rule R8-60 applies implementing any new or modified demand-side management or energy efficiency measure, the electric public utility or the electric membership corporation, as applicable, shall obtain Commission approval.

## R8-68 requirements:

- Provide description of program filed for approval
- Provide the cost effectiveness test results
- Show estimated savings
- Include initial EM&V plan
- Focus on achievable customer market

# Cost Effectiveness is Key to Continued Success

Cost effectiveness tests are a ratio of the benefits of DSM/EE programs compared to the costs.

- **Utility Cost Test (UCT): Primary cost-effectiveness test**

- System benefits resulting from EE/DSM for the utility system > Utility Program Costs

- **Total Resource Cost Test (TRC)**

- Cost savings to the utility/customer > Costs to the utility/customer

- **Participant Cost Test (PCT)**

- Bill savings to the customer > Costs to the customer

- **Rate Impact Measure (RIM)**

- System savings of a measure > Costs and reallocation of fixed costs resulting from implementing a measure



System Benefits are the fuel, purchased power, variable expense, and construction costs that the utility does not incur because of the reduced need to generate electricity. These costs would impact the future electric bills of utility customers

# Verifying Savings | EM&V Studies

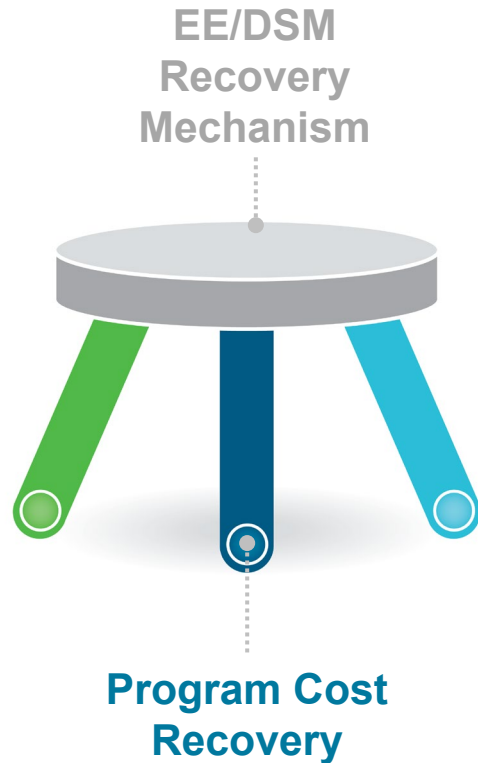


## All program impacts are subject to Evaluation, Measurement & Verification

- Conducted by an independent third party
- Follow Department of Energy Uniform Methods Protocol
- Include primary and secondary research
- Surveys, metering, statistical studies, bill analysis, usage loggers, etc.
- Results are evaluated by Carolinas Collaborative, other Intervenors (including the Public Staff), and their consultants



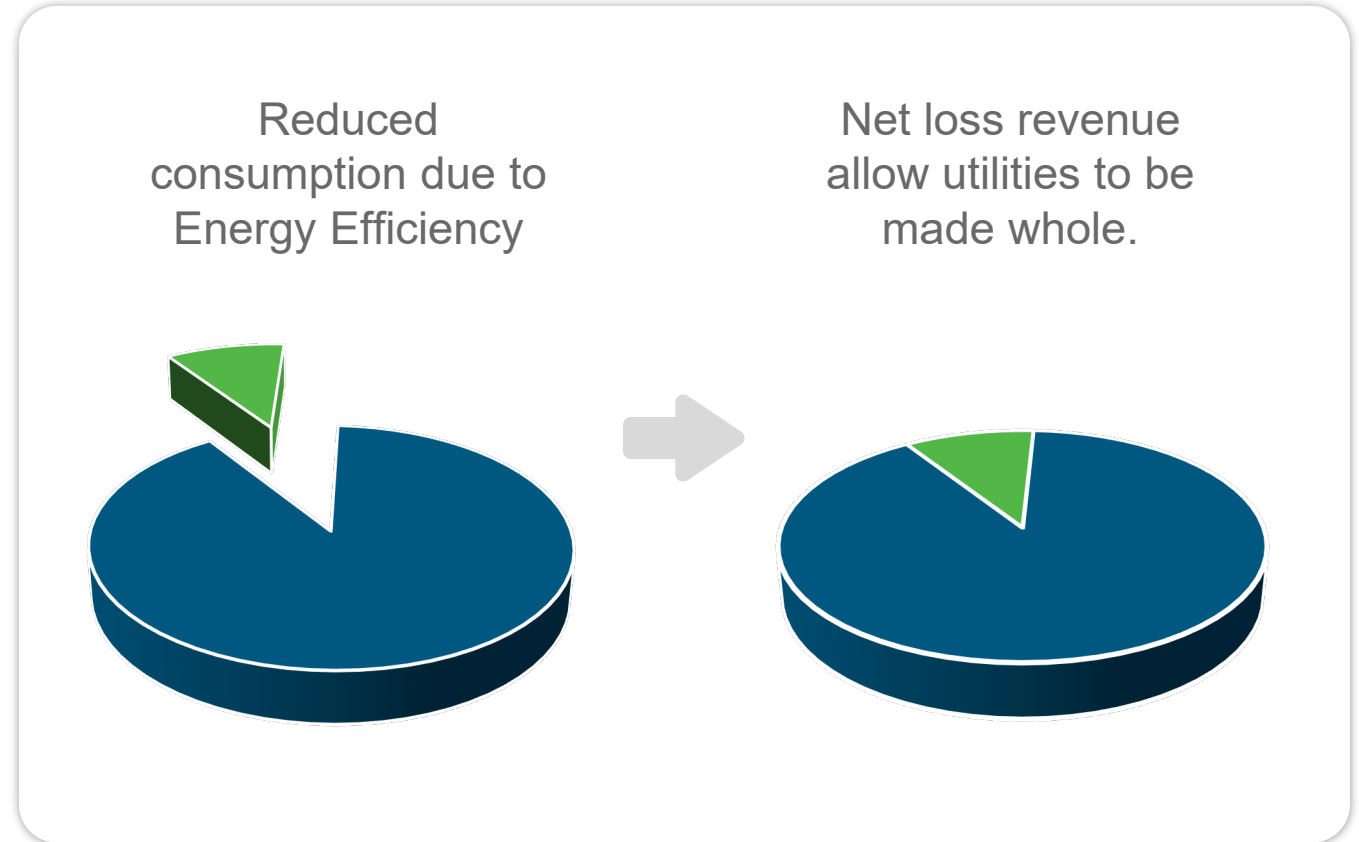
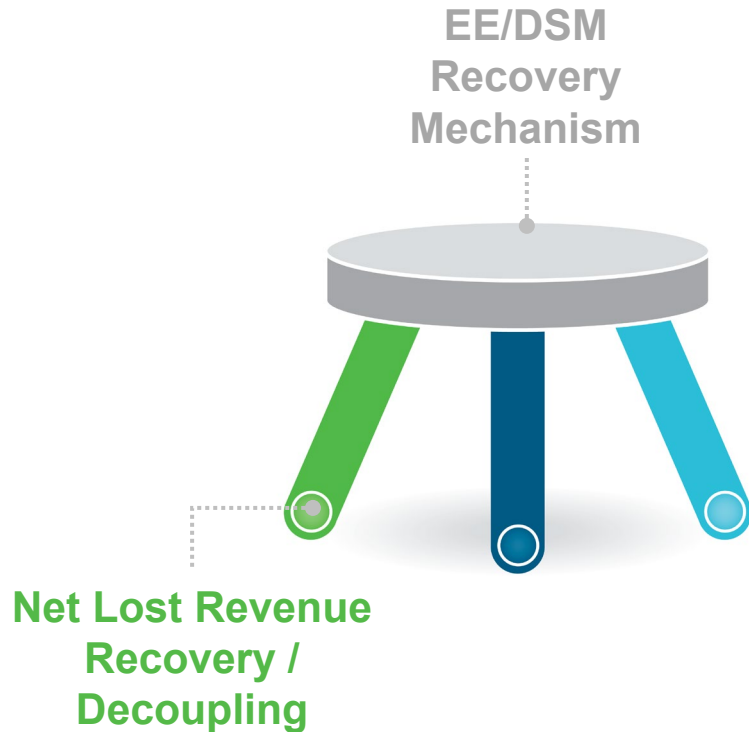
# Costs of Running the Program



- Capital costs (including cost of capital and depreciation expenses)
- Administrative payments and other implementation costs
- Customer incentive payments and rebates
- EM&V costs
- Costs net of any grants, tax credits, or other reductions in cost received by the utility from outside parties

# Net Loss Revenues (NLR)

Removes the financial disincentive associated with under-recovery of fixed costs due to reduction in volumetric sales.

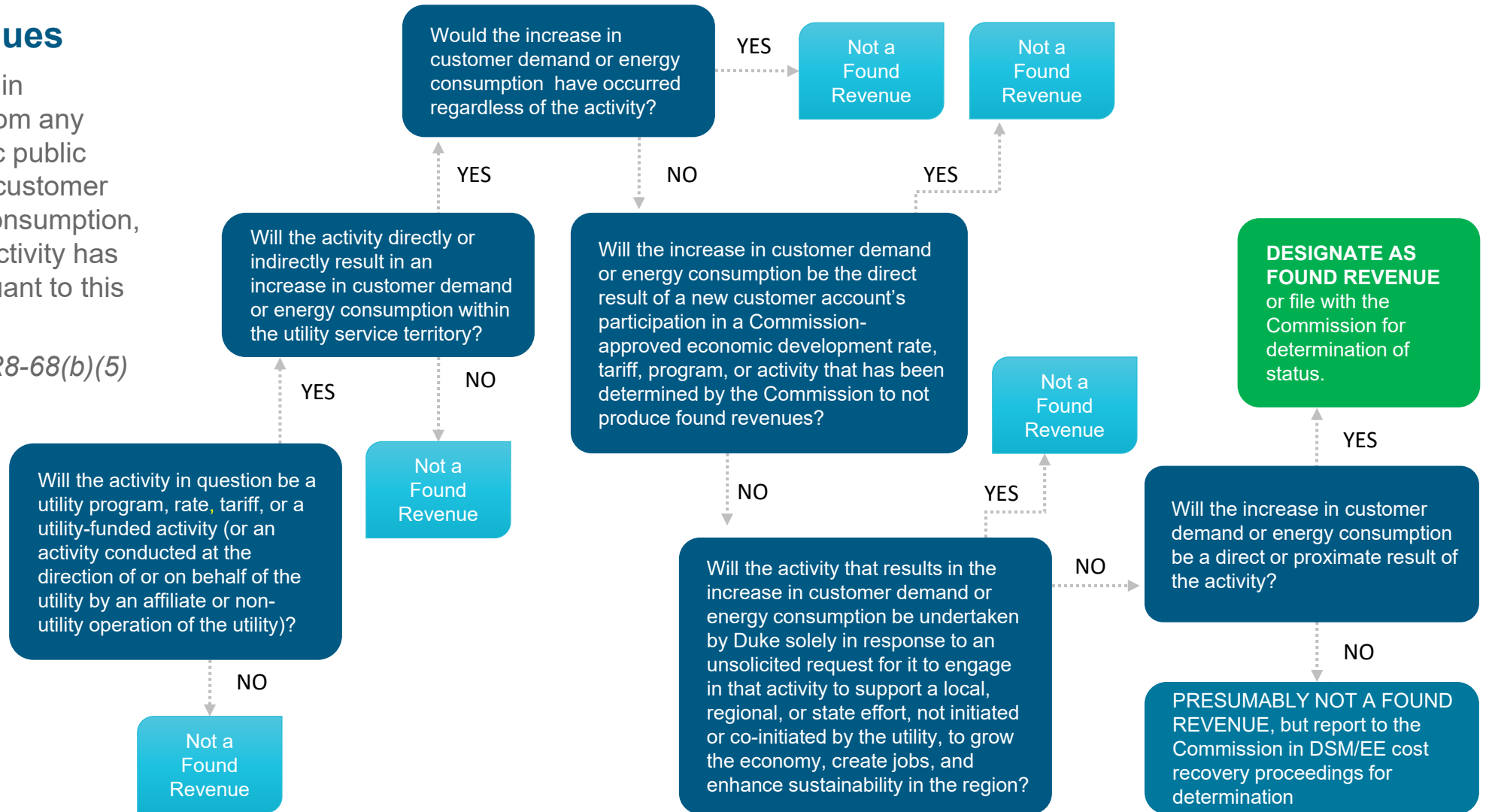


# Found Revenue Decision Tree

## Net Lost Revenues

Net of any increases in revenues resulting from any activity by the electric public utility that increases customer demand or energy consumption, whether or not that activity has been approved pursuant to this Rule R8-68.”

- Commission Rule R8-68(b)(5)



# Annual EE/DSM Rider versus Decoupling

(Illustrative Example)

## 2025 DEC Annual EE/DSM Rider

- Vintage Year 2024 Actual Results

Residential Net Lost Revenue \$15  
 Non-Residential Net Lost Revenue \$13



## 2025 DEC Annual Residential Decoupling Rider

### Decoupling (Over)/Under Collection Calculation

Approved Base Rate Revenue per customer	\$1
x Actual Customer Count	<u>x 150</u>
= Target (Expected) Base Rate Revenue	\$150
– Actual Base Rate Revenue*	<u>– \$100</u>
<b>= Total Undercollection</b>	<b>\$ 50</b>
<b>– EE/DSM Residential Net Lost Revenue</b>	<b><u>– \$ 15</u></b>
<b>= Net Decoupling Undercollection</b>	<b>\$ 35</b>

*\*Actual revenue may exceed target revenue and create an over collection, which would be given back to customers.*

# System Benefits

Fuel purchased power, variable expense, and construction costs that the utility does not incur because of the reduced need to generate electricity. These costs would typically be passed on to the customers.



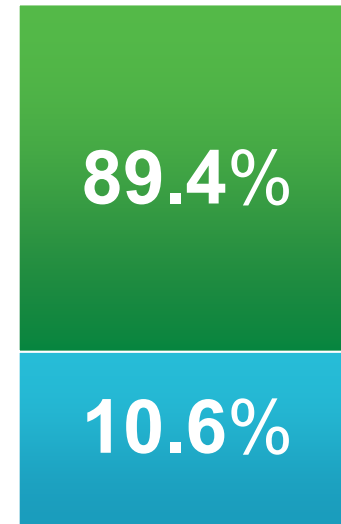
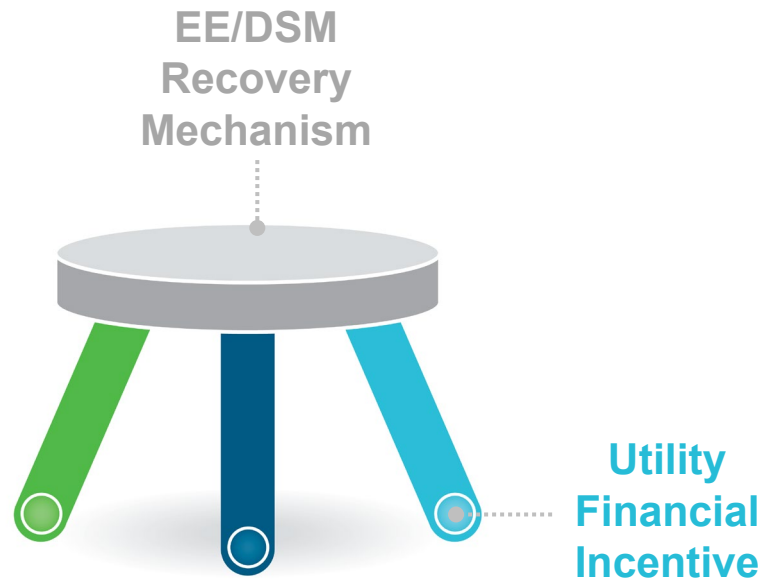
# Program Costs

Cost of running the program including utility administration costs, implementation costs, EM&V costs and customer rebates.



# Net Benefits

Total Benefits less the costs of running the program.



## Net Benefits

89.4% of the benefit is passed on to the customers.

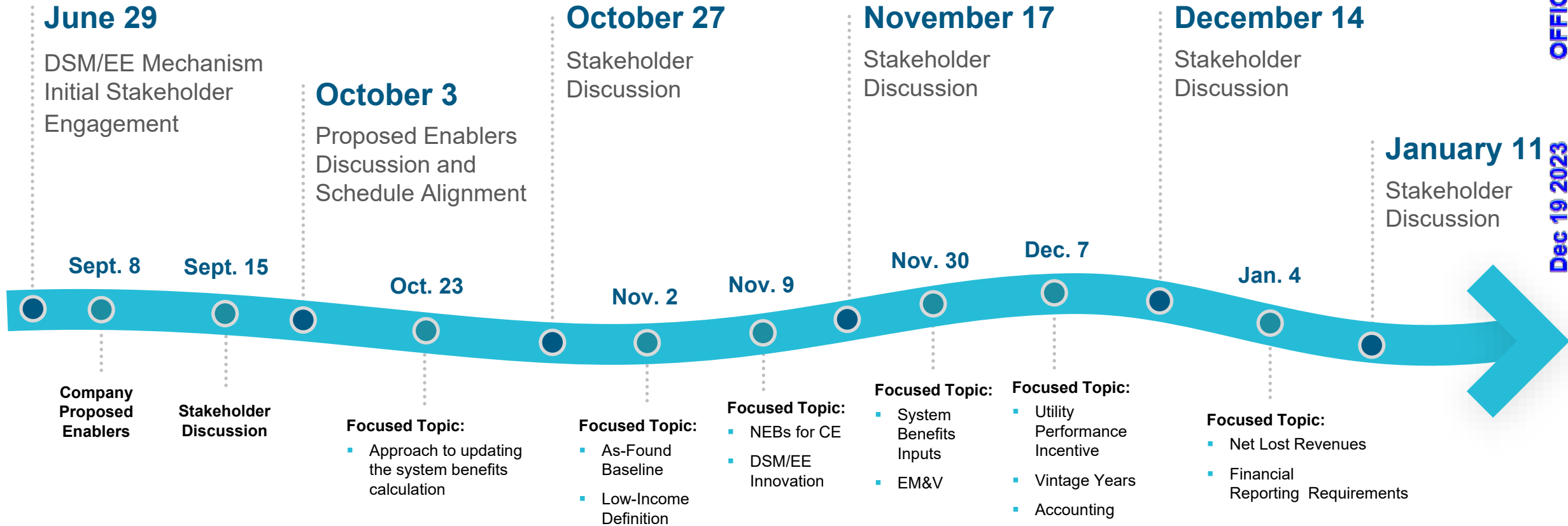
Utility Portfolio Performance Incentive (PPI) represents 10.6% of the net benefits for the utility.

# Key Takeaways

- All Customers served by the utility system benefit from more **Innovative, Cost-effective Programs**.
  - Updating system benefits enables Duke Energy to do more for our customers and to benefit the system during energy transition.
- **HB 951 preserves SB 3 Statutory Authority regarding EE/DSM** initially established by the General Assembly to promote EE and DSM.
- **Constructive Regulatory Framework** aligns company and customer interest by creating more innovative, cost-effective programs to offer to customers and to benefit the system during energy transition.
- Duke Energy is a **Regional and Industry Leader**.



# Formal Stakeholder Engagement





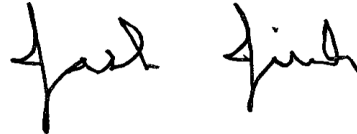
*BUILDING A SMARTER ENERGY FUTURE*®



**CERTIFICATE OF SERVICE**

I certify that a copy of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Submission of Jointly-Prepared Pre-Filed Materials for Technical Conference, in Docket Nos. E-100, Sub 179; E-7, Sub 1032 & E-2, Sub 931, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid, to parties of record.

This the 19<sup>th</sup> day of December, 2023.



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