



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

Duke Energy Carolinas, LLC
Duke Energy Progress, LLC

April 22, 2024



Agenda and Introductions



Agenda:

- **Path to consensus**
- **Impact Analysis Panel**
 - measure life adjustment factor
 - program return incentive
 - system benefits input
 - As-found baseline
 - transparent recovery of Net Loss Revenues
- **Remaining issues**
 - Active Load Management
 - Performance Portfolio Incentive

Presenters:

- **Lon Huber**
 - Senior Vice President, Pricing and Customer Solutions
- **Tim Duff**
 - General Manager, Customer Solutions Regulatory Enablement
- **Michael Quinto**
 - Director, IRP Advanced Analytics
- **Carolyn Miller**
 - Manager, Rates and Regulatory Strategy



9

months of
collaboration



> 40

stakeholder
meetings



~ 100

hours of
stakeholder
collaboration



more than
30

paragraphs with
substantive
revisions

Mechanism Revisions	DEC	DEP
Paragraphs substantively revised	31	35
Paragraphs supported or unopposed by all parties	90%	91%
Paragraphs with revisions objected by 2 parties	10%	9%

Mechanism Topics

✓	Allocation methodology of DSM program costs	✓	Timing of proposed consolidation of DEC and DEP Mechanisms
✓	Non-Energy Benefits	✓	Mechanism to recover NLR
✓	Measure Life Adjustment Factor	✓	Portfolio Performance Incentive Tier Structure
✓	Program Return Incentive	✓	Other Incentives - Income Qualified Programs
✓	System Capacity and Energy Benefits	✓	ES-1 Reports
✓	As-Found Baseline	✓	Low Income Program Definition
✓	Carolinas EE Collaborative	✗	Active Load Management – Opposed by Public Staff Only
✓	DSM/EE Innovation Program	✗	Portfolio Performance Incentive Percentage – PPI Percentages associated with performance tiers opposed by NC AGO only.
✓	Limitation of true-up timing		

✓ *Consensus or not contested* ✗ *Contested*

Proposed Four Enablers



Update system inputs for cost benefit test

Use an as-found baseline for EE measures

Broaden the definition of low-income customer

Develop guidelines for expedited regulatory approval of DSM/EE programs



Measure Life Adjustment Factor



- **“Measure Life”** is the number of years an EE measure will deliver energy savings to the participant and utility system.
- The **Measure Life Adjustment Factor** (“MLAF”) incentivizes the Companies to deploy longer lived measures.
- Broadly supported and responsive to stakeholder feedback.

EE/DSM Rider Impact - MLAF

DEC Vintage 2024 Docket E-7 Sub 1285 As-Filed	
Residential EE	
Program Costs	\$ 38,670,751
PPI	4,162,619
PRI	461,626
Net Lost Revenue	23,509,587
Revenue Requirement	\$ 66,804,583
Non Residential EE	
Program Costs	\$ 47,830,402
PPI	11,638,110
Net Lost Revenue	8,761,484
Revenue Requirement	\$ 68,229,996
Total EE	
Program Costs	\$ 86,501,153
PPI	15,800,729
PRI	461,626
Net Lost Revenue	32,271,071
Revenue Requirement	\$ 135,034,579



DEC Vintage 2024 Modified for 97.5% MLAF	
Residential EE	
Program Costs	\$ 38,670,751
PPI	4,058,554
PRI	461,626
Net Lost Revenue	23,509,587
Revenue Requirement	\$ 66,700,518
Non Residential EE	
Program Costs	\$ 47,830,402
PPI	11,347,157
Net Lost Revenue	8,761,484
Revenue Requirement	\$ 67,939,043
Total EE	
Program Costs	\$ 86,501,153
PPI	15,405,711
PRI	461,626
Net Lost Revenue	32,271,071
Revenue Requirement	\$ 134,639,561



DEC Vintage 2024 Modified for 95% MLAF	
Residential EE	
Program Costs	\$ 38,670,751
PPI	3,954,488
PRI	461,626
Net Lost Revenue	23,509,587
Revenue Requirement	\$ 66,596,452
Non Residential EE	
Program Costs	\$ 47,830,402
PPI	11,056,204
Net Lost Revenue	8,761,484
Revenue Requirement	\$ 67,648,090
Total EE	
Program Costs	\$ 86,501,153
PPI	15,010,693
PRI	461,626
Net Lost Revenue	32,271,071
Revenue Requirement	\$ 134,244,543

EE Rider Impacts	
Residential	Non-Residential EE
(0.000) Cents/kWh	(0.002) Cents/kWh

EE Rider Impacts	
Residential	Non-Residential EE
(0.001) Cents/kWh	(0.003) Cents/kWh



EE/DSM Rider Impact - MLAF

DEC Vintage 2024 Docket E-7 Sub 1285 As-Filed		
<u>Residential EE</u>		
Program Costs	\$	38,670,751
PPI		4,162,619
PRI		461,626
Net Lost Revenue		23,509,587
Revenue Requirement	\$	66,804,583
<u>Non Residential EE</u>		
Program Costs	\$	47,830,402
PPI		11,638,110
Net Lost Revenue		8,761,484
Revenue Requirement	\$	68,229,996
<u>Total EE</u>		
Program Costs	\$	86,501,153
PPI		15,800,729
PRI		461,626
Net Lost Revenue		32,271,071
Revenue Requirement	\$	135,034,579



DEC Vintage 2024 Modified for 102.5% MLAF		
<u>Residential EE</u>		
Program Costs		\$ 38,670,751
PPI		4,266,685
PRI		461,626
Net Lost Revenue		<u>23,509,587</u>
Revenue Requirement		\$ 66,908,649
<u>Non Residential EE</u>		
Program Costs		\$ 47,830,402
PPI		11,929,062
Net Lost Revenue		<u>8,761,484</u>
Revenue Requirement		\$ 68,520,948
<u>Total EE</u>		
Program Costs		\$ 86,501,153
PPI		16,195,747
PRI		461,626
Net Lost Revenue		<u>32,271,071</u>
Revenue Requirement		\$ 135,429,597



DEC Vintage 2024 Modified for 105% MLAF		
<u>Residential EE</u>		
Program Costs		\$ 38,670,751
PPI		4,370,750
PRI		461,626
Net Lost Revenue		<u>23,509,587</u>
Revenue Requirement		\$ 67,012,714
<u>Non Residential EE</u>		
Program Costs		\$ 47,830,402
PPI		12,220,015
Net Lost Revenue		<u>8,761,484</u>
Revenue Requirement		\$ 68,811,901
<u>Total EE</u>		
Program Costs		\$ 86,501,153
PPI		16,590,765
PRI		461,626
Net Lost Revenue		<u>32,271,071</u>
Revenue Requirement		\$135,824,616

EE Rider Impacts	
Residential	Non-Residential EE
0.000 Cents/kWh	0.002 Cents/kWh

EE Rider Impacts	
Residential	Non-Residential EE
0.001 Cents/kWh	0.003 Cents/kWh

EE/DSM Rider Impacts - PRI

DEC Vintage 2024 Docket E-7 Sub 1285 As-Filed		
Residential EE		
Program Costs	\$	38,670,751
PPI		4,162,619
PRI		461,626
Net Lost Revenue		23,509,587
Revenue Requirement	\$	66,804,583
Non Residential EE		
Program Costs	\$	47,830,402
PPI		11,638,110
Net Lost Revenue		8,761,484
Revenue Requirement	\$	68,229,996
Total EE		
Program Costs	\$	86,501,153
PPI		15,800,729
PRI		461,626
Net Lost Revenue		32,271,071
Revenue Requirement	\$	135,034,579



DEC Vintage 2024 Modified for Reduced PRI		
Residential EE		
Program Costs	\$	38,670,751
PPI		4,162,619
PRI		413,722
Net Lost Revenue		23,509,587
Revenue Requirement	\$	66,756,679
Non Residential EE		
Program Costs	\$	47,830,402
PPI		11,638,110
Net Lost Revenue		8,761,484
Revenue Requirement	\$	68,229,996
Total EE		
Program Costs	\$	86,501,153
PPI		15,800,729
PRI		413,722
Net Lost Revenue		32,271,071
Revenue Requirement	\$	134,986,674



EE Rider Impacts	
Residential	Non-Residential EE
(0.000) Cents/kWh	N/A

Potential Impact of As-Found Baseline Impact of Vintage 2024 Based on Smart \$aver Early Replacement and Retrofit

DEC Vintage 2024 Docket E-7 Sub 1285 As-Filed

Residential EE	
Annual kWh Savings	473,495,398
Annual Winter KW Savings	74,677
Annual Summer KW Savings	82,174
Program Costs	\$ 38,670,751
PPI	4,162,619
PRI	461,626
Net Lost Revenue	23,509,587
Revenue Requirement	\$ 66,804,583

Upgrading functioning equipment with higher efficiency equipment creates higher savings and customer Incentives

DEC Vintage 2024 Modified for As-Found Baseline

Residential EE	
Annual kWh Savings	481,642,430
Annual Winter KW Savings	80,787
Annual Summer KW Savings	83,684
Program Costs	\$ 40,180,872
PPI	4,656,130
PRI	461,626
Net Lost Revenue	24,570,664
Revenue Requirement	\$ 69,869,293

Over 1.7% increase
in kWh savings

Over 8.0% increase
in Winter kW savings

3.9% increase
in Program Costs

EE Rider Impacts

Residential	Non-Residential EE
0.013 Cents/kWh	N/A

System Energy Benefit



System Energy Benefit =

System Production Cost Value

+

Clean Energy Proxy Value for DSM/EE

System Production Cost Value

$$\text{System Production Cost Value} \left[\frac{\$}{\text{MWh}} \right] =$$

$$\frac{\text{System Production Cost (without EE)} - \text{System Production Cost (with EE)}}{\text{MWh of EE}}$$

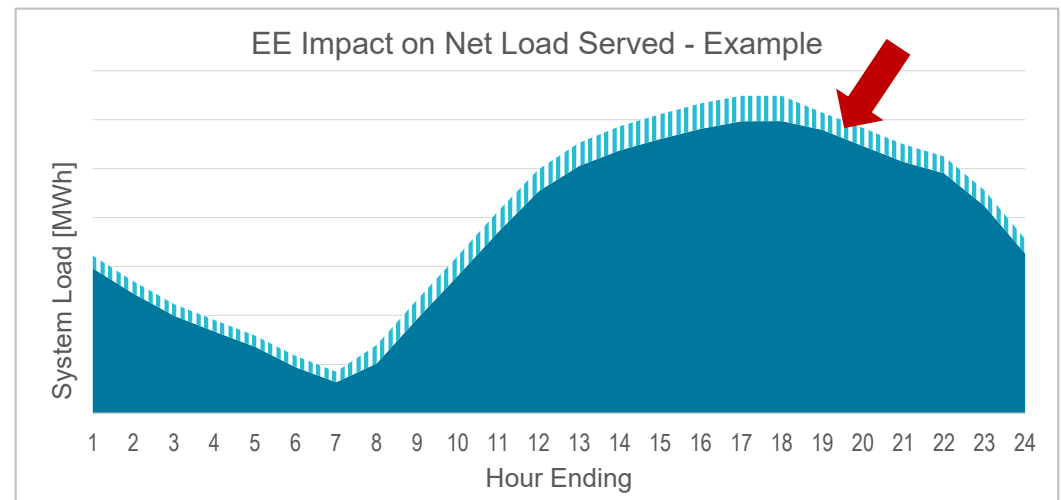
Accounts for
marginal
saving from



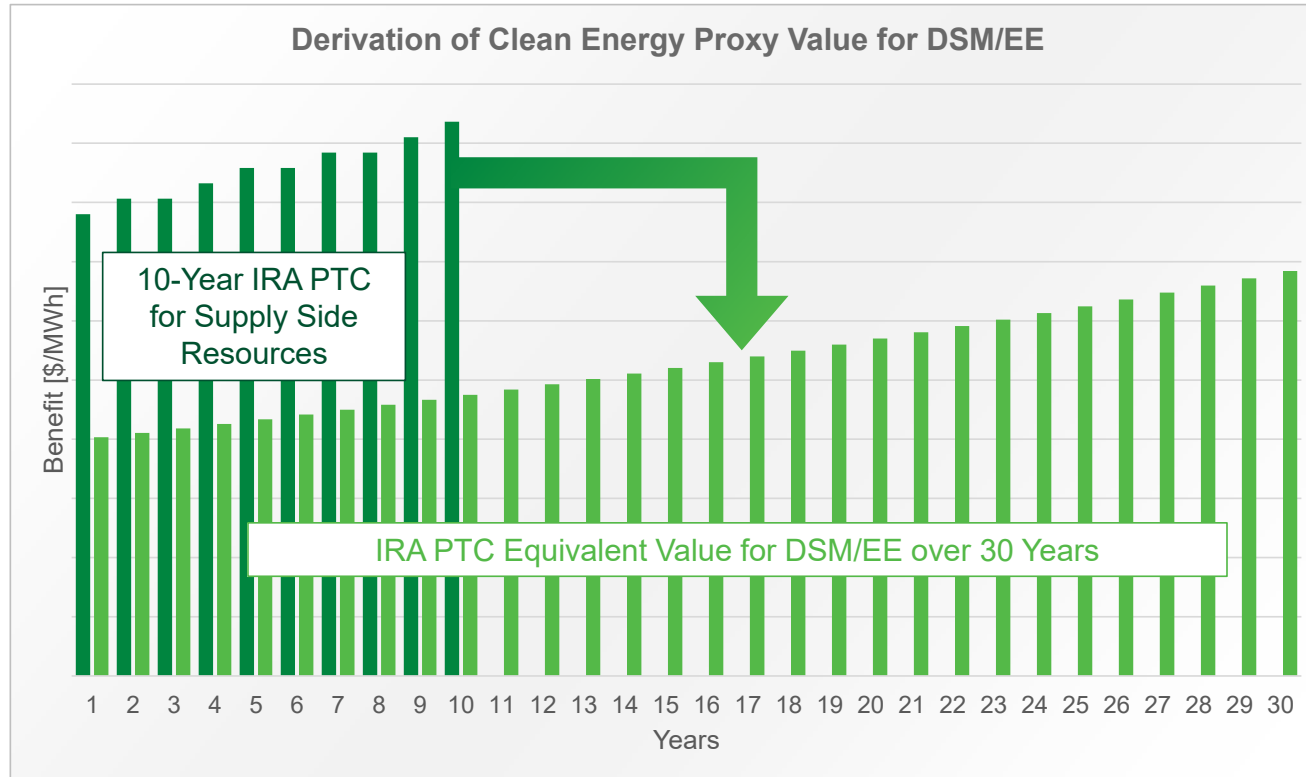
- Fuel
- Variable O&M Cost



Contribution of clean energy
to the system not captured

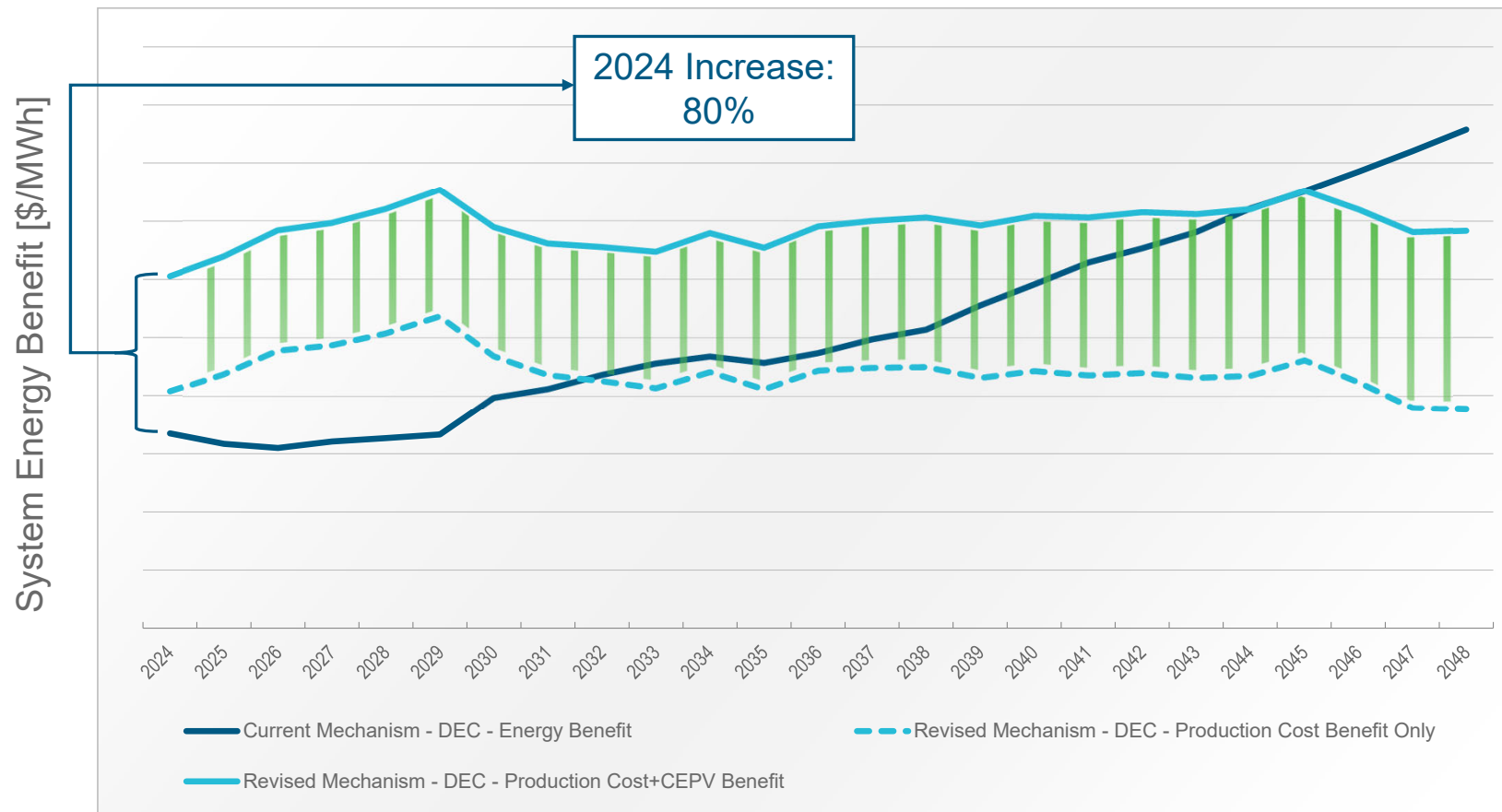


Clean Energy Proxy Value for DSM/EE (CEPV)

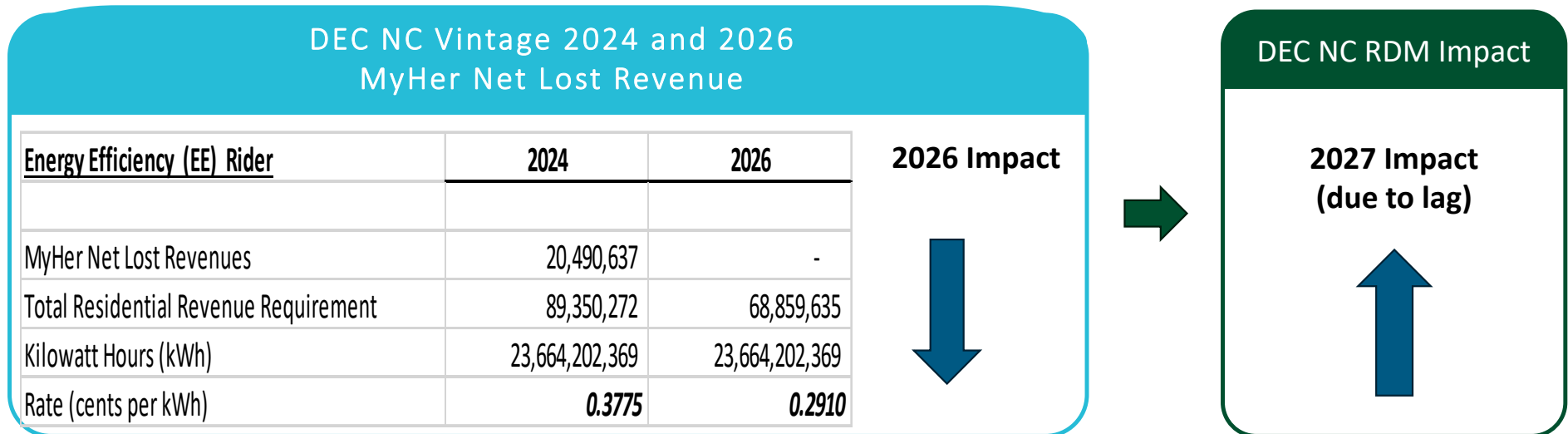


- Enabler: Evaluate DSM/EE on par with non-carbon emitting supply-side alternatives and appropriately valued in the context of other clean supply-side resources
- Production tax credits (PTC) available to supply-side clean energy resources through the Inflation Reduction Act (IRA)
- CEPV credits DSM/EE with same tax credit value available to supply-side resources – Spread 10-years of PTC value over 30-years

System Energy Benefits Comparison



Net Lost Revenue Treatment



- Current State (2024) - All residential net lost revenues are recovered in the EE rider and removed from the Residential Decoupling Mechanism (RDM) Rider.
- Future State (2026) - All residential net lost revenues will be implicitly recovered through RDM rider. Because of the lag in the RDM Rider, 2026 net lost revenues will be recovered starting in 2027.
- End Result – The Residential EE Rider will decrease, RDM Rider will increase. To ensure transparency of the calculation of net lost revenues implicitly collected through the RDM, the Company will continue to calculate and report net loss revenues in the same manner in the Company's Annual DSM/EE Rider filings for informational purposes only.



BUILDING A SMARTER ENERGY FUTURE®