BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-2, SUB 931
DOCKET NO. E-7, SUB 1032
DOCKET NO. E-100, SUB 179

DOCKET NO. E-2, SUB 931 In the Matter of: Application of Duke Energy Progress, LLC, for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69 DOCKET NO. E-7, SUB 1032 In the Matter of: Application of Duke Energy Carolinas, LLC, for Approval of New Cost Recovery Mechanism and Portfolio of Demand-Side Management and Energy Efficiency Programs DOCKET NO. E-100, SUB 179 In the Matter of: Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Biennial Integrated Resource Plans and Carbon Plan	**JOINT COMMENTS ON BEHALF OF SOUTHERN ALLIANCE FOR CLEAN ENERGY, NATURAL RESOURCES DEFENSE COUNCIL, SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, SIERRA CLUB, NORTH CAROLINA JUSTICE CENTER, NORTH CAROLINA HOUSING COALITION, AND NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION ON DUKE ENERGY'S PROPOSED CHANGES TO THE DEMAND-SIDE MANAGEMENT/ENERGY EFFICIENCY MECHANISM**

Pursuant to the Commission's October 30, 2023 Order Granting Public Staff's Motion for Procedural Relief and Scheduling Technical Conference, the Southern Alliance for Clean Energy (SACE), Natural Resources Defense Council (NRDC), South Carolina Coastal Conservation League (CCL), Sierra Club, North Carolina Justice Center (NC Justice Center), and North Carolina Housing Coalition (NCHC), jointly with the North Carolina Sustainable Energy Association (NCSEA) (collectively, Efficiency Advocates), respectfully submit these comments in support of the specific proposed changes to the Demand-side Management/Energy

Efficiency Mechanism (Mechanism) that Duke Energy has identified and to propose (1) changes to the utility incentive structure to promote an increase in persistent, cost-effective DSM/EE savings; (2) changes to the bonus incentive to promote increased savings from income-qualified EE programs; (3) a new Active Load Management program; (4) new tracking metrics; and (5) consideration establishing an Energy Efficiency Resource Standard for Duke Energy.

I. Introduction

"All regulation is incentive regulation."[1] Long before the creation of the performance-based regulation (PBR) framework in HB 951,[2] the Commission-approved Mechanism has provided incentives tied to utility performance (utility sharing of net benefits) and for counteracting the throughput incentive (recovery of net lost revenues) to help facilitate the adoption and implementation of new, effective DSM/EE programs. These Mechanism incentives have helped Duke Energy to overcome structural barriers that otherwise deter utility investments in efficiency and demand response:

> Energy efficiency (EE) investments frequently cost several times less than supply-side investments and thus can yield significant value to customers and society when used as an alternative to those supply-side resources. However, these investments provide little to no value for utility investors.[3]

[1] Former New York Public Service Commission Chair Alfred Kahn.
[2] N.C. Sess. L. 2021-165 (Oct. 13, 2021).
[3] Steve Kihm, Ron Lehr, Sonia Aggarwal, & Edward Burgess, *You Get What You Pay For: Moving Toward Value in Utility Compensation, Part 1 – Revenue and Profit*, America's Power Plan, at 18 (June, 2015) (https://energyinnovation.org/wp-content/uploads/2014/12/CostValue-Part1-Revenue.pdf) (hereinafter, Kihm, *et al*.).

The structural, financial disincentives to utility investment in energy efficiency are not unique to Duke Energy but are instead endemic to cost-of-service regulation.[4] This cost-of-service paradigm persists in North Carolina even after the enactment of PBR elements in HB 951.[5]

The peak load reduction and efficiency savings that have been achieved under the Mechanism have proven extremely beneficial to customers. As summarized by Duke Energy witnesses at the December Technical Conference in these dockets, from 2017 to 2022, Duke Energy's efficiency programs saved 3.37 million MWh of energy, the equivalent to the energy used by 225,000 homes in one year, resulting in substantial savings for customers when compared with the supply side resources and other infrastructure that Duke otherwise would have needed to build to meet that equivalent amount of load. Duke Presentation, Slide 4. Indeed, between 2017 and 2022, Duke Energy's DSM/EE programs delivered $2.8 billion of system benefits. *Id.* Additional savings and benefits can be unlocked

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[4] Seth Nowak, Brndom Baatz, Annie Gilleo, Martin Kushler, Maggie Molina, and Dan York, *Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency,* Report U1504, American Council for Energy Efficiency Economy, at 2-3 (May 2015) ("The traditional regulatory approach involves a number of disincentives to utility investment in energy efficiency.... these programs drive down energy use and so reduce utility revenues without lowering the short-term fixed costs of providing service. This goes counter to utilities' incentive to sell more energy and earn more profits—often called the throughput incentive. Third, utilities normally realize a return on their investment when they fund capital assets like power plants. Although efficiency programs reduce the need for this capital spending, they do not provide a comparable return"). These structural incentives that encourage regulated utilities to build capital infrastructure that can earn their shareholders a return is another reason why it is imperative that the Commission set the allowed return on equity as close as possible to the actual cost of equity, which itself helps to shrink the delta between the returns the utility can earn from its DSM/EE investments and its rate-based infrastructure. *See* Kihm, *et al.,* at 4 ("Currently [in 2015], utilities are typically assigned returns on equity around ten percent, while market evidence and investment analysts suggest that the cost of equity for electric utilities today is closer to seven or eight percent. Standard stock valuation models, the ones used by Wall Street investment analysts, demonstrate that today's typical electric utility stock market-to-book ratio of 1.7 is consistent with a cost of equity of 7.5 percent.").

[5] *See* N.C. Gen. Stat. § 62-133.16(c)(1)(a) (setting first year rates under a multiyear rate plan based on the cost-of-service principles as outlined in G.S. § 62-133 and basing subsequent rate years based largely on projected capital investments).

from changes to the Mechanism that more appropriately value energy savings and peak load reduction and more effectively tie Duke's performance incentive to specific savings and performance metrics.

Given the carbon pollution reduction requirements under HB 951, the long-standing policy of the state to take advantage of the full-spectrum of demand-side options such as DSM/EE, and Duke's anticipated increasing load growth, it is appropriate for the Commission to revisit the Mechanism and approve adjustments that will encourage Duke Energy to achieve more cost-effective and income-qualified efficiency savings. *See* N.C.G.S. § 62-2(a)(3a). Both the Commission and Duke Energy have recognized the importance of investing in DSM/EE programs as a cornerstone of shrinking the challenge of rapidly decarbonizing, with the Commission requiring Duke Energy to seek an aspirational goal of 1.5% of eligible retail sales,[6] and in recent supplemental direct testimony, Duke Energy emphasized the importance of DSM/EE in meeting new load growth.[7]

SACE, NRDC, CCL, and Sierra Club have engaged in the Duke Energy Mechanism from the outset of these dockets and have been parties to prior negotiated settlements that have made incremental improvements to the Mechanism over the years. Likewise, NCSEA, has been a party to these dockets since they were initiated and have a long history of advocating for effective efficiency policy before the Commission. These clean-energy and environmental advocates are joined by the NC Justice Center and NCHC, two organizations that

[6] Order Adopting Initial Carbon Plan and Providing Direction for Future Planning, Docket No. E-100, Sub 179, at 106 (Dec. 30, 2022).
[7] Supplemental Direct Testimony of Glen A. Snider on Behalf of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, Docket No. E-100, Sub 190, 9 (Nov. 30, 2023).

have long advocated for more reliance on cost-effective energy efficiency and the expansion of programs that reach low-income households as key components of equitably serving the energy needs of those customers.

Together, these Efficiency Advocates support the recommended changes Duke Energy detailed in their initial comments. In particular, these proposed updates to the Mechanism should drive more efficiency savings and peak load reduction by: (1) more appropriately valuing efficiency savings and peak-load reductions in light of Carbon Plan requirements; (2) allowing for innovation in the form of rapid prototyping of new DSM/EE measures; (3) appropriately enabling the quantification of non-energy benefits through the Total Resource Cost test, with careful attention to benefits to low-income customers; (4) flexibly defining "low-income" to facilitate the leveraging of federal programs; (5) improving the function of the Collaborative; and (6) harmonizing the Mechanism with the multiyear rate plans the Commission recently authorized.

The Efficiency Advocates submit these comments to highlight areas that require additional work and discussion before the Mechanism revisions are complete. We recommend:

- Removing the flat portfolio performance incentive (PPI) of 10.6% of shared savings and replacing it with a scaled utility incentive that rewards higher performance with a higher earnings potential for Duke Energy (and conversely, rewards lower performance with a lower share of net benefits) and weighting that incentive to encourage achievement of longer-lived efficiency savings.

- Replacing the existing bonus incentive that would have allowed Duke Energy to earn $500,000 for achieving 1% savings of total retail sales with a new bonus incentive that rewards increased savings from income qualified programs.
- Adding a new Active Load Management component to the Mechanism that would recognize the potential customer benefits that can be unlocked from enrolling customers in a program that will allow for broader utility control of devices at the grid edge.
- Including new tracking metrics relating to carbon emissions reductions attributable to utility DSM/EE programs, low-income participation in non-behavioral DSM/EE programs, and Duke customer uptake of efficiency and beneficial electrification programs under the Inflation Reduction Act (IRA) or other federal programs.
- Opening a Commission investigation regarding the possibility of establishing an Energy Efficiency Resource Standard.

These issues have been either discussed during the stakeholder process or otherwise shared with Duke Energy and the stakeholder group. Efficiency Advocates will continue to work towards achieving broader consensus on these issues before reply comments are submitted.

II. Scaled PPI

Under the current Mechanism, Duke receives a 10.6% PPI as a financial reward for adopting new DSM/EE measures regardless of the total amount of efficiency savings achieved. As a result, whether Duke achieves 0.02% savings or 1.5% savings, its PPI remains 10.6% of the net present value of the net benefits

of portfolio (as determined by the Utility Cost Test). This structure does not sufficiently align Duke Energy's DSM/EE performance with DSM/EE savings and carbon emission reduction goals. As noted in Jim Grevatt's presentation on behalf of the Efficiency Advocates during the December Technical Conference, utilities in Colorado, Michigan, and Illinois have had success moving away from a flat incentive, as exists in the current Mechanism, towards a scaled or tiered incentive structure that rewards higher levels of performance with a higher percentage of shared savings to the utility. Technical Conference Tr. at 116-21. Conversely, these incentive structures provide a lower portion of shared benefits for lower savings performance. This scaled approach to setting the incentive level provides increased potential for Duke to earn more money for improved performance, which should help to drive increased savings as a cornerstone of Duke's carbon emissions reductions plans, and as consistent with least cost planning requirements.[8] The basic structure of the incentive mechanism, which allocates to Duke Energy a percentage of the net present value of system benefits from the whole portfolio, should remain in place.

The proposal that the Efficiency Advocates have shared at the Mechanism Stakeholder meetings is designed to closely match what Duke currently earns under the existing Mechanism for business-as-usual savings (as a percentage of eligible retail sales, or retail sales net of opt outs), as indicated in the gray-shaded boxes in Figure 1:

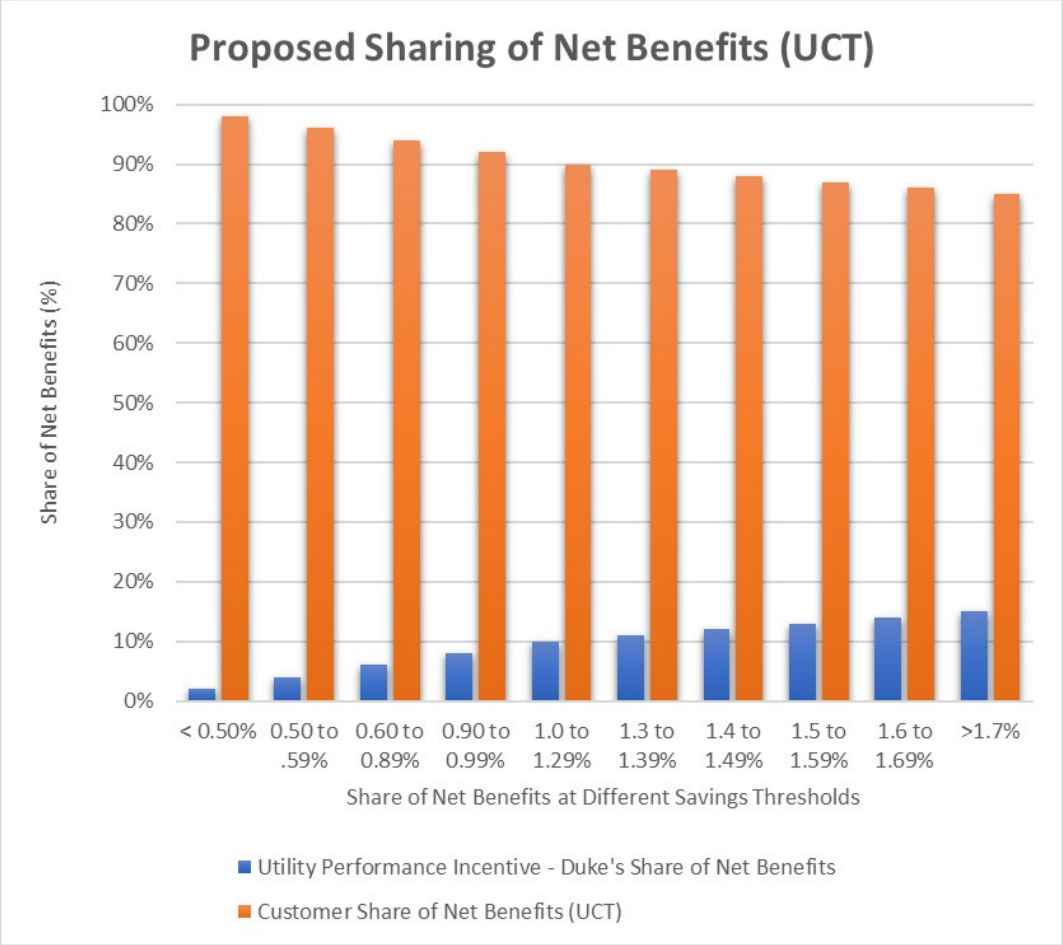
[8] N.C. Sess. L. 2021-165, Part 1, § 1(1)-(2).

Figure 1 – Scaled PPI

Savings Percentage (eligible retail sales)	Utility Performance PPI - Duke's Share of Net Benefits	Customer Share of Net Benefits (UCT)
< 0.50%	2%	98%
0.50 to .59%	4%	96%
0.60 to 0.89%	6%	94%
0.9 to .99%	8%	92%
1.0 to 1.29%	10%	90%
1.3 to 1.39%	11%	89%
1.4 to 1.49%	12%	88%
1.5 to 1.59%	13%	87%
1.6 to 1.69%	14%	86%
> 1.7%	15%	85%

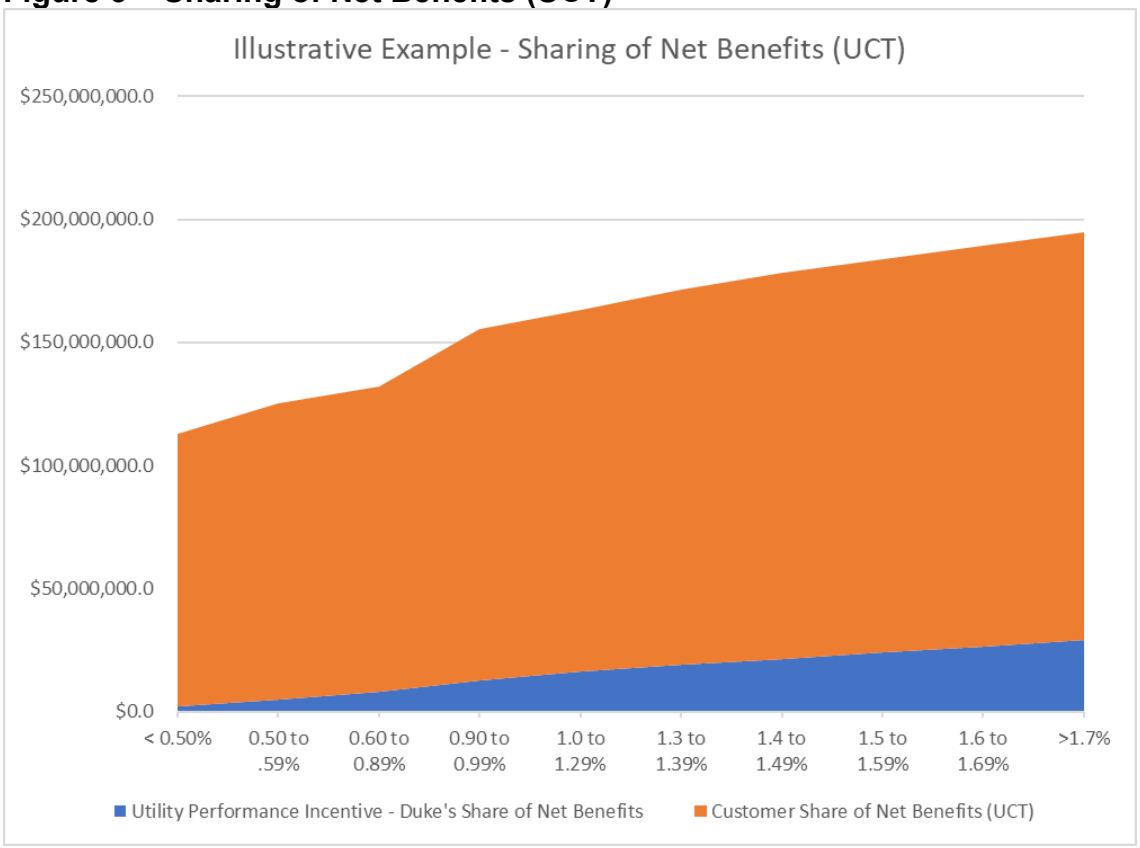
Figure 2 provides another way to visualize this same proposed split between the utility and customers under this scaled shared savings approach.

Figure 2 – Proposed Sharing of Net Benefits



It is important to remember that the total amount of customer benefits increases under this approach even as the orange bars—showing the customer share of net benefits—go down. In other words, as Duke achieves higher levels of cost-effective savings, the overall pie of net benefits gets bigger, so even as Duke's slice of that pie increases, the total share being retained by customers also increases compared to lower savings tiers (where customers receive a relatively larger piece of an overall smaller pie). Tr. Vol. 1 at 117 (*see also* SACE *et al.* Presentation, slide 13). Figure 3 illustrates how increased savings could correspond to increasing net benefits to customers even as the percentage increase to the utility goes up with performance.

Figure 3 – Sharing of Net Benefits (UCT)



Efficiency Advocates are also seeking stakeholder feedback on weighting inputs to this scaled PPI calculation, so that the savings percentage in Figure 1 above would determine a certain fraction of the total incentive (for example, 60%) and a performance metric based on another performance goal, such as persistence of savings, would account for the rest (40%). This structure could allow for an additional policy goal to be incorporated into the incentive structure.

The goal of this element of the Portfolio Performance Incentive would be to motivate Duke Energy to achieve a smaller portion of its overall efficiency savings from short-lived measures (principally, My Home Energy Report) and a greater portion of its savings from longer-lived measures that deliver more persistent savings over time (for example. building envelope improvements and HVAC measures). Because it will take time to shift program design and delivery to achieve a higher measure life average, the incentive could be tied to a target that increases each year. For instance, to achieve the minimum performance incentive, the average measure life for the portfolio might have to increase by 0.5 each year. Incentive payments in any given year would be higher the closer the utility comes to the ultimate target average measure life. If successful, this element of the PPI would lead to an increase in cumulative energy savings for the portfolio over time, thereby achieving greater total carbon reduction.

Using these illustrative weighting percentages, if the utility achieved 1.5% savings of prior year eligible retail sales, that portion of the weighted PPI would be 13% of net benefits (per Figure 1), and if in that same year, the average measure life performance (or portion of savings from building envelope and HVAC

measures) entitled Duke Energy to earn a PPI of 15% in line with new Mechanism performance thresholds, Duke's ultimate total PPI would be the weighted average of the two, or 13.8% of net system benefits.[9] This kind of calculation would not be difficult; it is akin to calculating the utility's weighted average cost of capital (combining the authorized return on equity with the return on debt under the designated capital structure).

III. Bonus Incentive for Increased Savings from Income-Qualified Programs

The current Mechanism allows Duke to potentially earn a bonus incentive of $500,000 if it achieves 1% savings of total prior year retail sales. It would also reduce Duke's EE revenue requirement by the same dollar amount if Duke failed to achieve at least 0.5% savings of eligible retail sales.[10] Duke has never attempted to claim this bonus. In other words, there is no indication that this bonus incentive has motivated the utility to increase overall utility efficiency savings. In its place, we recommend instituting a new bonus incentive that would be designed to reward increased savings from Duke's income-qualified programs.

In addition, the bonus incentive's "all-or-nothing" structure is flawed. Performance incentive structures should not include such arbitrary or sharp cut-off points. Efficiency Advocates recommend instead that the Commission incorporate the same kind of scaled structure for a bonus incentive as we have suggested for the PPI, thus providing Duke with an added incentive to surpass the bonus threshold.

[9] (60% x 13%) + (40% x 15%) = 13.8%.
[10] DEP Mechanism, para. 93.

For context, about 3% of the total kWh savings Duke has reported from its residential, nonbehavioral programs in 2022 come from its income-qualified programs. For DEP 2.95% of total kWh system energy reductions from nonbehavioral residential utility EE programs in 2022 came from income-qualified programs.[11] For DEC, the figure in 2022 was 2.83%.[12]

Under this new bonus incentive structure, Efficiency Advocates propose that Duke would be eligible to earn a bonus incentive starting in 2026 based on each increment of increased kWh savings that it achieves above the baseline kWh savings from income-qualified EE programs (determined after 2025 reporting), as follows:

- 6% increase over baseline: $200,000
- 8% increase over baseline: $300,000
- 10% increase over baseline: $400,000
- 15% increase over baseline: $600,000

This bonus incentive would not replace the Program Return Incentive (PRI) in the current Mechanism, which is designed to compensate Duke for achieving savings from income-qualified programs that provide societal and energy benefits, but do not pass the Utility Cost Test.

IV. Active Load Management

Under the current mechanism, the benefits of Duke's demand side management programs are limited to their contribution to reducing system peak demand. While this remains a critically important function, there are increasing

[11] DEP Application for Approval of DSM/EE Cost-Recovery Rider, Docket No. E-2, Sub 1322, Fields Ex. 1, p. 7, Vintage 2022, Load Impacts and Revenue Requirements by Program.
[12] DEC Application for Approval of DSM/EE Cost-Recovery Rider, Docket No. E-7, Sub 1285, Fields Ex. 1, p. 7, Vintage 2022 True-Up, Load Impacts and Revenue Requirements by Program.

opportunities for Duke to actively manage load at the grid edge to achieve a variety of localized and systemwide benefits and save customer costs.[13] To do so, Duke will need to invest in new technologies or work with third parties to aggregate devices at the grid edge at a sufficient scale.

Aggregating a variety of different behind-the-meter distributed energy resources and internet-connected appliances could allow the utility to use those devices like a virtual power plant.[14] The Brattle Group defines a virtual power plant (VPP) as "a portfolio of actively controlled distributed energy resources (DERs)" that are "optimized to provide benefits to the power system, consumers, and the environment." *Id*. at 4. This aggregation and active management can allow a utility to manage a certain amount of otherwise variable loads to avoid the need for carbon-intensive generation, provide resource adequacy, avoid the need for more costly grid investments, or otherwise more efficiently match variable renewable energy output to load. In a recent study, the Brattle Group found enormous savings potential from deployment of VPPs at scale:

> Excluding societal benefits (i.e., emissions and resilience), the net cost to the utility of providing resource adequacy from the VPP is only roughly 40% to 60% of the cost of the alternative options. Extrapolating from this observation, a 60 GW VPP

[13] Duke Energy defines "grid edge" in its August 2023 CPIRP filing: "Grid Edge refers to technologies, programs and investments that advance a decentralized, distributed and two-way grid. The 'edge' refers to the edge of the electricity network, or grid, where the Companies' electricity reaches customers' homes and businesses. Grid Edge programs include [EE/DSM] programs, certain rate designs, voltage control efforts, renewable energy programs, electric transportation programs and behind-the-meter generation and storage. These customer-owned energy-related technologies continue to develop and mature, providing customers the opportunity to leverage the value that adopting these technologies adds to the utility system." Duke Energy, Carolinas Carbon Plan, Appendix H - Grid Edge and Customer Programs, at 2, Docket E-100, Sub 190 (Aug. 17, 2023).

[14] Ryan Hledik & Kate Peters, "Real Reliability: the Value of Virtual Power," Brattle (May 2023) (https://www.brattle.com/wp-content/uploads/2023/04/Real-Reliability-The-Value-of-VirtualPower_5.3.2023.pdf).

> deployment could meet future resource adequacy needs at a net cost that is $15 billion to $35 billion lower than the cost of the alternative options over the ensuing decade (undiscounted 2022 dollars).

Id. at 5. Through the aggregation, control, and management of behind the meter supply side and demand resources, VPP operators can, among other things, meet system or localized peaks or help shift loads away from later system or localized peaks or times that would require running a combustion turbine. But in order to begin unlocking that potential, Duke Energy will need modifications to the Mechanism that value Active Load Management and provide assurance that it will be compensated.

Benefits from this kind of active management could come from a variety of forms. Aggregating behind-the-meter devices at the grid edge could avoid the need for localized upgrades to transformers or substations. For example, from actively coordinating the charging of electric vehicles (EV) to avoid the need to install a new transformer serving a neighborhood block where multiple customers have bought EVs. As commercial vehicle fleets switch to electric vehicles, targeted investments in EE and demand response could play a significant role in easing potential localized strain on the grid (in addition to the use of actively managed vehicle charging). This use of active load management with multiple distributed energy resources is a non-wires alternative tool that has worked in other jurisdictions. For example, the New York Public Service Commission approved a

non-wires alternatives program for ConEdison that allows the utility to retain 30% of the net system benefits for meeting grid needs with less costly alternatives.[15]

In addition, active load management is an innovative pathway for utilities to effectively take advantage of low-cost, variable renewable generation. With robust active load management tools, Duke could time the charging of EVs or operation of water heaters during cool, sunny afternoons when there is plenty of solar generation that might otherwise be at risk of curtailment.

Cohort B of the recently approved PowerPair solar plus battery storage pilot is an example of the kind of program that could be developed under the umbrella of Active Load Management. *See* Docket Nos. E-2, Sub 1287 and E-7, Sub 1261. As explained above, Active Load Management would not, however, be limited to batteries, but could extend to other controllable devices:

> The term "VPP" often is associated with aggregations of behind-the-meter (BTM) solar and storage. However, a VPP can be composed of a much broader range of technologies. In fact, a VPP does not even need to generate power. Dispatchable demand response (DR), enabled by technologies such as smart thermostats and electric vehicles (EVs), can provide many of the same benefits as distributed generation resources by reducing or shifting load.

Brattle Report, at 12.

Below is the proposed definition and utility incentive for Active Load Management:

> **Definitions**
> **Active Load Management** is the process by which Duke Energy utilizes any combination of voluntary

[15] Cross-Call, Dan, Rachel Gold, Cara Goldenberg, Leia Guccione, and Michael O'Boyle. *Navigating Utility Business Model Reform: A Practical Guide to Regulatory* Design, at 42. Rocky Mountain Institute (2018) (www.rmi.org/insight/navigating-utility-business-model-reform).

> demand side management programs or measures that allow for the aggregated control or management of distributed energy resources or controllable electrical devices at the grid edge, whether directly by the utility or by a third party under contract with the utility, to enhance or maintain resource adequacy, reduce grid congestion, efficiently manage variable renewable energy output, and shape utility loads at a locational or aggregate level to benefit the utility system. Active Load Management shall be eligible for recovery of prudently incurred program costs and Utility incentive earned.
>
> **Other Incentive- Active Load Management**
> Beginning in 2025, Duke Energy will begin to identify and implement up to 20 MW of capacity under Active Load Management. The cost effectiveness and PPI of the initial 20 MW of Active Load Management will be evaluated consistent with the system benefits valuation of EE/DSM programs. The Company will utilize the EM&V results associated with the initial 20 MW of Active Load Management to determine the actual system benefits associated with reducing carbon emissions, reducing the need for system balancing resources, and integrating variable renewable resources while reliably and cost-effectively managing the grid. After the Commission determines the actual benefits and the appropriate valuation for Active Load Management, the Company will earn a utility incentive of 30% of the net system benefits as determined under the new valuation for all future Active Load Management, with 70% of the net system benefits retained by customers. Any energy and demand savings attributed to a measure incentivized under an energy efficiency or demand side-management program will not also be counted in the system benefits attributed to the same measure leveraged in Active Load Management to avoid the potential for double counting.

Allowing Duke to retain 30% of the net system benefits is consistent with the shared savings ratio approved for Con Edison for the Non-Wires Alternative program. Brattle identified the lack of financial incentives to a utility for VPP deployment as a key barrier to success. Brattle Report at 29-30. Likewise, Brattle

identified "[p]erformance incentive mechanisms," including "shared savings models" as possible solution to that barrier. *Id*.

V. Tracking Metrics

The DSM/EE Mechanism should also be updated to require tracking of additional performance metrics, which in turn could inform new performance incentive mechanisms in the future.

A. Tracking Low-Income Customer Participation in Utility EE Programs

We recommend tying Duke's opportunity to earn the bonus incentive to increased kWh savings from programs that specifically deliver savings to low-income households. However, following the Commission's Order in the most recent Mechanism review, Duke evaluated the broader market penetration of EE programs to low-income customers.[16] As that reporting continues to be refined, we recommend that Duke provide regular reports on low-income customers' participation in its non-behavioral EE programs and kWh savings from that participation as annual tracking metrics. This metric will be particularly informative as more inclusive programs that are not targeted to low-income customers, like the Tariff On-Bill program, pick up steam.

B. Tracking Carbon Reduction Achieved from DSM/EE Programs

Given the carbon emissions reduction requirements in North Carolina law, Efficiency Advocates also ask that Duke be required to track and report the carbon

[16] Order Approving Revisions to DSM/EE Cost Recovery Mechanisms, Docket Nos. E-2 Sub 931 and E-7, Sub 1032, at 14 (Oct. 20, 2020).

emission reductions attributed to their DSM/EE programs. This tracking metric should include actual tons of carbon emissions avoided from DSM/EE programs as well as the percentage of carbon emissions reduced and be reported annually in the DSM/EE rider docket. This would allow the Commission to directly follow the carbon reductions attributable to Duke's DSM/EE programs. Directly tracking carbon emissions reductions aligns with the state's policy goals and could allow for a potential future incentive mechanism based on utility performance achieving those reductions at least cost.

C. Track kWh Savings from Participation in IRA and other Federal Programs

Duke is uniquely situated to help connect its customers to federally funded efficiency and beneficial electrification programs under the federal Inflation Reduction Act. To the extent that it can connect customers to those opportunities or use its home energy audit program to help qualify customers for those programs, it will be appropriate to attribute some of the resulting energy savings to Duke. The current Mechanism allows for such attribution. But there may be other opportunities to further leverage utility programs to the benefit of all ratepayers. For example, any customer referred to an IRA-funded comprehensive efficiency retrofit opportunity could also be enrolled in the winter peak demand smart thermostat program, providing demand benefits as well as energy savings. Similarly, expanded weatherization funding offers the opportunity for expanded reductions in customer energy usage that may be amplified when paired with existing utility-run programs.

At a minimum, it will be important to track customer participation in IRA programs and Duke's successful efforts to connect customers to those programs.

VI. Energy Efficiency Resource Standard

During the 2019 Mechanism review in these dockets, NRDC, SACE, Sierra Club, and CCL, jointly with NCSEA, recommended that the Commission initiate an investigation into whether an overall DSM/EE program portfolio performance target, in the form of an energy efficiency resource standard (EERS) should be adopted.[17] It remains the case that an EERS is the single most effective policy to promote energy efficiency savings. Experience in other states has shown that policies that include both targets and incentives for efficiency promote much higher levels of energy savings than policies that do not tie incentives to achievement of a target.[18] On the other hand, where targets have been established, utilities consistently meet or exceed their targets.[19]

Like the proposed revised PPI described above, an EERS can be based on achievement of savings as a percentage of eligible retail sales, and thus, commercial and industrial opt outs would not have an effect on Duke's ability to meet its savings target. Limiting the EERS requirements to eligible retail sales

[17] Joint Initial Comments of NRDC, SACE, Sierra Club, CCL, and NCSEA, Docket Nos. E-2, Sub 931 and E-7, Sub 1032 (July 10, 2019).

[18] Seth Nowak et al., Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency, at 26 (2015) (https://aceee.org/research-report/u1504) ("Of those states with shared net benefits performance incentives in place, seven of them have EERS and five do not. Those with EERS have twice the energy savings relative to sales, and more than double the electric energy efficiency budgets as a percentage of utility revenue than the states with no EERS or similar policy.").

[19] *Id.* at 19-20, 22-23; Martin Kushler, IRP vs. EERS: There's one clear winner among state energy efficiency policies, American Council for an Energy-Efficient Economy, https://aceee.org/blog/2014/12/irp-vs-eers-there%E2%80%99s-one-clear-winner- (noting that state with an energy efficiency resource standard showed over three and a half times more utility spending on energy efficiency programs and electricity savings achieved.).

should address any concerns about equitable coverage of compliance costs. Nevertheless, we anticipate that an EERS would benefit industrial and commercial customers (even those that opt out) by reducing overall system costs. It is also worth stressing that the EERS contemplated here would apply only to DEC and DEP and would not be a broader mandate to other utilities.

Experience from other jurisdictions shows that an EERS can also lead to greater transparency and accountability towards meeting specific policy goals.[20] While energy efficiency savings count toward utilities' Renewable Energy and Energy Efficiency Portfolio Standards (REPS) obligation under N.C.G.S. § 62-133.8, the use of those savings to comply with the REPS are capped. Energy efficiency provides independent benefits that should be recognized, including lower risk, promotion of local economic development, and other non-energy benefits, as well increased reliability.[21]

As noted in our Joint Initial Comments in 2019 and highlighted here, an EERS would have numerous benefits for consumers in North Carolina and would assist the State in accomplishing its policy goals. N.C.G.S. § 62-2(a)(3a). The implementation of an EERS is soundly within the Commission's authority to "compel any public utility to provide . . . reasonable service[.]" N.C.G.S. § 62-32. In North Carolina, it is the policy of the State that "energy planning and fixing of rates in a manner to result in the least cost mix of generation and demand reduction

[20] David Littell, *et al.*, Next-Generation Performance-Based Regulation, 21st Century Power Partnership at 14 (2017) (https://www.nrel.gov/docs/fy17osti/68512.pdf).
[21] Maggie Molina and Marty Kushler, Policies Matter: Creating a Foundation for an Energy-Efficiency Utility of the Future, American Council for an Energy-Efficient Economy 3-4 (2015) (https://aceee.org/sites/default/files/policies-matter.pdf).

measures which is achievable, including consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills." N.C.G.S. § 62-2(a)(3a); see also N.C.G.S. § 62-2(a)(4). Finally, the directives to achieve carbon emissions reductions under least cost resource planning principles, with explicit consideration of EE and DSM, provides additional support for establishing an EERS that did not exist when Efficiency Advocates raised this idea in 2019. N.C.G.S. § 62-110.9(1).

The methods the Commission is authorized to take to achieve reasonable service are similarly broad. N.C.G.S. § 133.9(d) authorizes the Commission to "approve other incentives to electric public utilities for adopting and implementing new demand-side management and energy efficiency measures." Commission Rules R8-69(a)(2), R8-69(c)(1), and Rule R8-69(e)(1) each recognize the need to allow utilities to recover certain costs associated with implementing energy efficiency measures.

Efficiency Advocates are mindful that the Commission declined to take up this invitation during the last Mechanism Review. However, the Commission's express concern with an EERS was related to large-load commercial and industrial opt outs, which could limit the ability of Duke to equitably spread the costs of complying with an EERS.[22] But, as noted above, an EERS, much like the proposed revision to the PPI above, can be structured net-of opt outs, so that the compliance obligation is only spread over the universe of ratepayers that are participating in DSM/EE programs. Given the changed circumstances since the last Mechanism

[22] Order Approving Revisions of DSM/EE Cost Recovery Mechanism at 13 (Oct. 20, 2020).

review, particularly the carbon emissions reductions requirements under state law and significantly increased load growth, which Duke Energy has recognized might warrant additional DSM/EE measures, Efficiency Advocates respectfully ask the Commission to reconsider this issue and commence an investigation into the establishment of an EERS.

VII. Conclusion

Efficiency Advocates make the following recommendations with regard to the Mechanism discussed in these comments.

1. Adopt Duke's recommended changes to the Mechanism, in particular the changes that would:

- more appropriately value efficiency savings and peak-load reductions in light of Carbon Plan requirements;
- allow for innovation in the form of rapid prototyping of new DSM/EE measures;
- appropriately enable the quantification of non-energy benefits through the Total Resource Cost test, with careful attention to benefits to low-income customers;
- flexibly define "low-income" to facilitate the leveraging of federal programs;
- Improve the function of the Collaborative; and
- Harmonize the Mechanism with the multiyear rate plans the Commission recently authorized.

2. Convert the current PPI structure into a scaled incentive structure that would reward improved savings performance with increased financial rewards and thereby promote an increase in persistent, cost-effective DSM/EE savings.

3. Change the bonus incentive to promote increased savings from income-qualified EE programs.

4. Adopt a new Active Load Management program that would reward Duke Energy for aggregating, managing and controlling behind the meter distributed energy resources and customer load to provide system benefits on an ongoing basis.

5. Require new tracking metrics, specifically:

   - Assessing low-income customer participation in non-behavioral EE programs;
   - Assessing carbon emission reductions associated with Duke Energy DSM/EE programs; and
   - Assessing kWh savings from Duke customer participation in IRA and other federal programs.

6. Initiate an investigation into establishing an EERS.

Respectfully submitted this the 26th day of January, 2024.

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CERTIFICATE OF SERVICE

I certify that all parties of record have been served with the foregoing Joint Comments on behalf of Southern Alliance for Clean Energy, Natural Resources Defense Council, Southern Alliance for Clean Energy, Sierra Club, North Carolina Justice Center, North Carolina Housing Coalition, and North Carolina Sustainable Energy Association either by electronic mail or by deposit in the U.S. Mail, postage prepaid.

This the 26th day of January, 2024.

/s/ David L. Neal

David L. Neal