STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 931
DOCKET NO. E-7, SUB 1032

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 931	)	
	)	
In the Matter of	)	
Application of Duke Energy Progress, LLC, for	)	
Approval of Demand-Side Management and	)	ATTORNEY GENERAL'S OFFICE
Energy Efficiency Cost Recovery Rider	)	INITIAL COMMENTS ON THE DUKE
Pursuant to N.C.G.S. § 62-133.9 and	)	ENERGY PROGRESS AND DUKE
Commission Rule R8-69	)	ENERGY CAROLINAS DEMAND-
	)	SIDE MANAGEMENT AND ENERGY
DOCKET NO. E-7, SUB 1032	)	EFFICIENCY MECHANISMS
	)	
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	)	

The North Carolina Attorney General's Office ("AGO") respectfully submits these initial comments regarding the cost recovery rider mechanisms for demand-side management and energy efficiency ("DSM/EE") measures established for Duke Energy Progress and Duke Energy Carolinas (referenced together as "Duke"). This proceeding considers whether modifications to the mechanisms would be beneficial.[1]

The AGO, with the assistance of its expert,[2] Strategen Consulting, LLC,

[1] Order Requesting Comments issued 6 February 2019 in these Dockets.

[2] Strategen Consulting, LLC, a California firm, is comprised of a team with technical, regulatory, product and organizational expertise in energy markets. Strategen has decades of experience working closely with governments, utilities, research institutions, technology providers, project developers, and large energy users.

(hereafter "Strategen"), has reviewed the mechanisms. The attached memorandum prepared by Strategen sets out its analysis that is incorporated into these comments by reference and summarized below. Based on that review, the AGO respectfully recommends that the Commission make the following modifications to the DSM/EE mechanisms:

1) Adopt savings targets;
2) Change the performance incentives so that rewards paid to Duke for undertaking DSM/EE measures are better aligned with Duke's achievements;
3) Improve the cost-effectiveness tests that are used when evaluating proposed DSM/EE measures to better account for the time value of energy efficiency; and
4) Add a test for informational purposes that accounts for the costs associated with fossil-fuel emissions.

BACKGROUND AND LEGAL STANDARD

Duke is statutorily required to "establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers."[3] Accordingly, least cost demand-side management and energy efficiency measures are part of the mix. In turn, the Commission is required to approve "an annual rider . . . to rates to recover all reasonable and prudent costs" for demand-side management and energy efficiency ("DSM/EE") measures, and to allow the capitalization of all or part of the costs where such costs are intended to produce future benefits.[4] The Commission may also approve other incentives to reward utilities for adopting new

[3] N.C. Gen. Stat. § 62-133.9(b).
[4] N.C. Gen. Stat. § 62-133.9(d).

DSM/EE measures.[5] Allowable incentives include 1) "appropriate rewards based on the sharing of savings achieved by the demand-side management and energy efficiency measures," 2) "appropriate rewards based on capitalization of a percentage of avoided costs achieved by demand-side management and energy efficiency measures," and 3) any other incentives the Commission determines to be appropriate."[6]

Commission Rule R8-68(b)(3) defines recoverable "costs" to include, without limitation, capital costs (including cost of capital and depreciation expenses), operating, administrative and implementation costs, and customer participation incentives. R8-68(b)(8) defines "incentives" by reference to the statute (i.e., shared savings, capitalization of a percentage of avoided costs, or other incentives found appropriate by the Commission.) Commission Rule R8-68(c)(3)(v) allows the utility to seek to recover "net lost revenues" ("NLR") as defined in Rule R8-68(b)(3) as an incentive. Allowing the recovery of net lost revenues is intended to keep the utility whole by providing an offset based on the revenues lost due to the savings achieved in utility measures. The costs and incentives authorized under the mechanisms are reviewed and trued up annually.[7]

The cost recovery mechanism for Duke Progress was last modified in 2015[8], and the mechanism for Duke Carolinas was modified in 2013 and revised in 2017.[9]

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[5] Id.
[6] N.C. Gen. Stat. § 62-133.9(d).
[7] Rule R8-69(b).
[8] See Order Approving Revised Cost Recovery and Incentive Mechanism and Granting Waivers issued 20 January 2015 in Docket No. E-2, Sub 931 ("2015 DEP Order").
[9] See Order Approving DSM/EE Programs and Stipulation of Settlement issued 29 October 2013 in Docket No. E-7, Sub 1032; Stipulation and Agreement filed 19 August 2013 in Docket No. E-7, Sub 1032 ("2013 DEC Stipulation"); Order Approving DSM/EE Rider, Revising

The mechanisms are similar but not identical.

Because there is a normal tendency of investors to view "growth" as the benchmark of success, *not* "reduction" in demand and consumption, the DSM/EE cost recovery mechanisms offer multiple tools that are intended to offset investor concerns and encourage Duke to offer robust measures. Designing the mechanisms involves a challenging balance of the need to offer appropriate rewards to encourage Duke, and the need to keep costs reasonable and incentives appropriate to be fair to customers.

The current DSM/EE mechanisms offer Duke the following types of compensation:

First, program costs are recoverable in an annual rider to rates. By using a rider rather than base rates for cost recovery, "regulatory lag" is addressed and the risk of program cost recovery is reduced for Duke's investors.[10]

Second, the program costs may be capitalized for measures that provide longer term benefits, with payment of a rate of return during the amortization period.[11]

Third, net lost revenues may be recoverable as an incentive to keep Duke "whole" by making up for the revenue reduction caused by utility programs.[12] The Duke mechanisms allow net lost revenues to be recovered for 3 years if approved for particular measures.[13]

DSM/EE Mechanism, and Requiring Filing of Proposed Customer Notice issued 23 August 2017 in Docket No. E-7, Sub 1130; and Order Approving Review of Cost Recovery Mechanism issued 18 September 2017 in Docket No. E-7, Sub 1032.

[10] See Strategen Memo at 8.

[11] Id.

[12] See Rule R8 -69 (c)(1).

[13] 2015 DEP Order Appendix A at 13; 2013 DEC Stipulation at 19

Fourth, shared savings are offered as an additional incentive referred to as a Portfolio Performance Incentive or PPI.[14] Duke Progress' mechanism allows it to keep 11.5% of the savings attributed to programs, and Duke Carolinas' mechanism allows it to keep 11.75% of the savings.[15] Although the reward is for performance, the incentive does not set a minimum target before the reward applies.[16]

Instead, as a fifth form of compensation, bonus rewards are also offered. Each company is allowed a bonus of $400,000 each year for meeting a performance target based on energy savings of 1% or more of the prior year's system electricity sales.[17]

The mechanisms are reviewed periodically to determine whether modifications are appropriate.[18] Earlier this year, the Public Staff requested that the Commission initiate a review of both Duke Progress's and Duke Carolinas' mechanisms in a joint proceeding through the solicitation of comments, and this proceeding was initiated to address that request.[19]

In addition to comments on other relevant issues, the Commission has identified the following three topics for consideration:

- Whether the incentives in the current DEP and DEC Mechanisms are producing significant DSM and EE results.
- Whether the customer rate impacts of the DSM/EE riders are reasonable and appropriate.
- Whether overall DSM/EE program portfolio performance targets should be adopted.[20]

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[14] 2015 DEP Order Appendix A at 15-18; 2013 DEC Stipulation at 22-28.
[15] 2015 DEP Order Appendix A at 16; 2013 DEC Stipulation at 24.
[16] Id.; Strategen Memo at 6-7.
[17] 2015 DEP Order Appendix A at 19; 2013 DEC Stipulation at 29; Strategen Memo at 14. Duke Carolinas' opportunity to receive a bonus incentive expired in 2018. Id.
[18] 2015 DEP Order Appendix A at 20; 2013 DEC Stipulation at 30.
[19] See Order Requesting Comments issued 6 February 2019 in these Dockets.
[20] Id.

These comments and attachments respond to the Commission's Order.

DISCUSSION

Duke's demand-side management and energy efficiency measures have produced savings that are average or above average, compared to the achievements of other utilities, but the multiple components that are used to compensate Duke for administering the measures are costly. Establishing targets for performance is an important component of a successful utility DSM/EE program. Designing the performance incentives to align rewards with goals is another important component, and both of these are missing from the current mechanisms. Additionally, revisions to the cost-effectiveness tests will improve the information used for selection of programs.

Duke Progress reports that it achieved incremental energy savings of 0.91% in 2018, and Duke Carolinas reports savings of 1.33% that year.[21] Historical savings from DSM/EE reported for measures are shown below:[22]

	2015	2016	2017	2018
Duke Energy Carolinas	0.87%	1.16%	1.40%	1.33%
Duke Energy Progress	1.08%	1.02%	1.02%	0.91%

Strategen compared the reported savings for Duke's measures to what is reported by other utilities or other States, and found that the Duke Carolinas program appears to be providing above average results, while the Duke Progress program

[21] Strategen Memo at 5
[22] Id.

appears to perform about average.[23]

An essential purpose of conducting this review of the DSM/EE mechanisms is to evaluate whether the incentives that are used to encourage DSM/EE measures appropriately reward Duke's performance.

1. A savings target should be established by the Commission to align with performance goals.

Strategen advises that savings targets are possibly the single most influential component of a well-designed DSM/EE mechanism.[24] A target helps define performance expectations and inform how the mechanism should be designed. The purpose of an effective performance incentive is to recognize high achievement by rewarding the utility when goals are met. Thus, by setting goals, a benchmark is established that both clarifies expectations and holds the utility accountable.[25]

Duke is not currently required to meet an explicit savings target by statute, Rule, or under the mechanisms approved by the Commission, although it *may* use savings from DSM/EE measures in combination with renewable energy resources to meet the statutory requirements in the Renewable Energy and Energy Efficiency Resource Standard ("REPS").[26]

Strategen recommends that the Commission set explicit savings targets for

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[23] Id.; see Relf, et al., "The 2017 Utility Energy Efficiency Scorecard," American Council for an Energy-Efficient Economy (June 3, 2017), aceee.org/research-report/u1707. See also Berg et al., "The State Energy Efficiency Scorecard," American Council for an Energy-Efficient Economy (Oct. 4, 2018), aceee.org/research-report/u1808.

[24] Strategen Memo at 6.

[25] Id.

[26] N.C. Gen. Stat. § 62-133.8(b). Duke could be encouraged by the REPS standard to meet as much as 40% of the standard by use of energy efficiency measures beginning in 2021 but is not required to use energy efficiency measures.

Duke Carolinas and Duke Progress.[27] In order to determine where to set appropriate targets, the Commission may order that a study be conducted based on factors including market size as well as technical and economic potentials affecting the feasibility of DSM/EE measures.[28] Another basis for identifying where to set the targets is to review what other states have done and what has been achieved. The targets set elsewhere range from 1% in 'low-bar' states to 1.5% in moderate states, to over 2% in states with more aggressive targets.[29]

Based on the targets established in other comparable states, Strategen identifies the following targets as reasonable for Duke Carolinas and Duke Progress:[30]

	2021	2022	2023
Duke Energy Carolinas	1.40%	1.70%	2.00%
Duke Energy Progress	1.20%	1.60%	2.00%

2. Duke's mechanisms apply multiple layers of incentives that result in overly costly rewards, and would provide more appropriate rewards if the performance incentive were modified so that it aligns the incentive with a savings target.

Duke's DSM/EE cost/incentive mechanisms include multiple incentives that work in conjunction with cost recovery to compensate Duke. Besides providing recovery for program costs, the mechanisms allow a rate of return on capitalized expenses, net lost revenues, performance incentives, and/or bonus performance incentives.[31] The components are intended to facilitate efficient DSM/EE program

[27] Strategen Memo at 7.
[28] Id. at 6.
[29] Id. at 6-7.
[30] Id. at 7.
[31] Id. at 8.

administration and procurement by balancing costs and benefits for ratepayers. But they are frequently layered one on top of another, causing an overly costly impact on ratepayers. One way to address the excessive combined cost is to modify the performance incentives by aligning them with the target for savings and tailoring them so that they reward good performance.

In addition to the program costs for measures, Duke already receives a substantial financial incentive from the provision that allows it to capitalize expenses for measures that are intended to provide future benefits.[32] Allowing a return on such expenses is unusual, and provides a substantial financial incentive to Duke Progress, which has reported $10-$15 million for such carrying costs each year from 2015 to 2018.[33] That amounts to over half the amount that Duke Progress reports for the performance incentive.[34]

Net lost revenues provide another form of incentive compensation that results in a large addition to the cost of DSM/EE measures. Allowing Duke to collect an amount based on the revenues lost from reduced consumption due to utility measures is intended to keep the utility whole.[35]

Duke's performance incentive, called the "Portfolio Performance Incentive" or "PPI," functions by sharing the amount of cost savings achieved.[36] Duke Progress is allowed to keep 11.75% of the costs avoided due to savings achieved starting with the first kWh saved, and Duke Carolinas is allowed to keep 11.5% of such costs.[37] But

[32] Strategen Memo at 9.
[33] Id.
[34] Id.
[35] Id. at 10.
[36] Id. at 11.
[37] Id.

an appropriate performance-based reward should not give a bonus until a goal is met. At a minimum, shared savings should not begin until 75% of the performance target has been achieved. Duke already receives net lost revenues for many programs to keep its revenues whole, and may also recover a rate of return. The performance incentive serves to add another level of cost, and it would be more appropriate if there were a benchmark to demonstrate that good performance justifies the additional compensation.[38]

Strategen gives two examples of shared savings mechanisms that require a threshold be met before savings are shared. One is the savings mechanism used for Duke Energy's subsidiary utility in Ohio, where net benefits are not shared until the required 1% savings target is met, and the percentage shared with the utility increases from 6% to 12% depending on the total savings achieved.[39] Another example is the incentive used in Arkansas, where a threshold of 80% of the identified annual savings goal must be achieved before the utility begins to share and the percentage shared is 10% until a cap is reached.[40] As the examples demonstrate, Duke's performance mechanisms pay out-sized performance incentive payments to Duke due to the high sharing percentage combined with the zero percent threshold.[41]

Strategen recommends that the Commission consider changing the threshold point that establishes where savings begin to be shared with Duke as the performance incentive, by setting the threshold at 75% of the savings target.[42] The AGO supports

[38] Id. at 11-13.
[39] Id. at 12.
[40] Id. at 12-13.
[41] Id. at 12-14.
[42] Id. at 14.

that recommendation for the reasons just discussed and as explained in greater detail in the attached Strategen memorandum.

Finally, the additional bonus incentive allows another incentive to be added once a savings target of 1% is achieved, but the $400,000 bonus amount is insignificant compared to other incentives and relies on a specific bonus amount rather than one that increases as savings increase.[43] The bonus incentive has already expired for Duke Carolinas and should be discontinued when the modification to the performance incentive becomes effective.

3. The cost effectiveness tests that are used when evaluating proposed EE/DSM measures should be improved to better account for the time value of energy.

Strategen recommends two revisions to the cost-effectiveness tests that are used by Duke. The first concerns the way that benefits are calculated.

Two types of cost-effectiveness tests are used to estimate the savings potential of proposed DSM/EE measures in order to determine whether the measures are cost-effective: the Utility Cost Test ("UCT") and the Total Resource Cost ("TRC") test. Both are acceptable tests that play an important role in determining the eligibility of particular measures, taking into consideration cost-effectiveness and other state public policy goals.[44]

However, Strategen cautions that the assumptions for the UCT and TRC tests should be examined carefully.[45] For both types of tests, benefits are measured based on the avoided supply costs.[46] It appears that Duke only factors summer peaks when

[43] Strategen Memo at 14.
[44] Id.
[45] Id. at 15.
[46] This is the reduction in generation capacity costs, transmission and distribution capacity

it determines avoided costs, but that is not consistent with the focus in Duke's Integrated Resource Plans on increased winter demand peaks.[47] Accordingly, Strategen recommends that Duke be required to revise the avoided cost calculations used for the cost-effectiveness tests to more accurately reflect the time value of energy efficiency.[48] The AGO supports that recommendation.

4. A cost-effectiveness test should be added for information purposes that accounts for the costs associated with fossil fuel emissions.

Strategen notes that Duke performs the Ratepayer Impact Measure ("RIM") test for information purposes,[49] and advises that the RIM test should be considered with caution.[50] Another cost-effectiveness test that would be useful to provide for information purposes when proposed DSM/EE measures are evaluated is one that is created to include the cost of emissions, for instance, a societal cost test.[51] Duke addresses emissions costs in its Integrated Resource Plans; providing emissions costs as an additional information item could be useful in considering state policy goals. Strategen has recommended that the Commission add, for informational purposes, a cost-effectiveness test that incorporates the cost of emissions,[52] and the AGO supports that recommendation.

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costs, and energy costs, valued at marginal cost, for the periods when there is a load reduction. Id.

[47] See references to winter resource peak requirements on page 8 and throughout the Integrated Resource Plans filed in Docket No. E-100, Sub 157, for Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, found at these links: starw1.ncuc.net/NCUC/ViewFile.aspx?Id=25fb3634-54b6-464b-9704-b6fe99cda1a8, and starw1.ncuc.net/NCUC/ViewFile.aspx?Id=aa9862b5-5e31-4b3f-bb26-c8a12c85c658.

[48] Id.

[49] Id. at 16.

[50] Id.

[51] Id.

[52] Id.

CONCLUSION AND RECOMMENDATIONS

For the reasons discussed in these comments, the AGO respectfully recommends that the Commission do the following:

1. Set an explicit savings target to better align rewards of the cost and incentive mechanisms with performance.

2. Change the threshold point for performance incentives such that shared savings are rewarded only after the utility meets 75% of the savings target.

3. Improve the cost-effectiveness tests (i.e., the Utilities Cost Test and the Total Resource Cost test) so that the avoided cost calculation more accurately reflects the time value of energy efficiency.

4. Require that a cost-effectiveness test be calculated and provided for information purposes that takes into account the cost of environmental emissions.

Respectfully submitted this the 10th day of July, 2019.

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CERTIFICATE OF SERVICE

The undersigned certifies that she has served a copy of the foregoing ATTORNEY GENERAL'S OFFICE INITIAL COMMENTS ON THE DUKE ENERGY PROGRESS AND DUKE ENERGY CAROLINAS DEMAND-SIDE MANAGEMENT AND ENERGY EFFICIENCY MECHANISMS upon the parties of record in this proceeding by email or by depositing a copy of the same in the United States Mail, postage prepaid, this the 10th day of July, 2019.

/s/_____
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