

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 1219

In the Matter of:)
Application by Duke Energy Progress, LLC,) NC WARN's
for Adjustment of Rates and Charges) POST-HEARING BRIEF
Applicable to Electric Utility Services in)
North Carolina.)

I. INTRODUCTION

In the above-captioned docket, Duke Energy Progress, LLC (DEP or the Company) seeks deferral accounting treatment of expenses to be incurred pursuant to its Grid Improvement Plan (GIP). Because DEP has not carried its heavy burden of establishing that the GIP expenses are unique or extraordinary, the North Carolina Utilities Commission (the NCUC or the Commission) should reject DEP's request for deferral accounting treatment of these expenses.

DEP also seeks approval of expenses incurred during the test year in furtherance of its GIP. However, the said GIP expenses were neither reasonably nor prudently incurred, and therefore, cost recovery should be disallowed for those GIP expenses.

Finally, DEP seeks cost recovery for the construction of two 280 MW combined-cycle natural gas plants having dual-fuel capability at the Asheville Combined Cycle Power Plant. The expenses were neither reasonably nor prudently incurred, and do not represent the least-cost mix of generation. Therefore, cost recovery should be disallowed.

I. **THE GIP**

Pursuant to its Second Agreement and Stipulation of Partial Settlement with the Public Staff-North Carolina Utilities Commission (the Public Staff), DEP seeks deferral accounting treatment for the following GIP programs: Self-Optimizing Grid (SOG), Conversion to CVR, Integrated System and Operations Planning (ISOP), Transmission System Intelligence, Distribution Automation, Power Electronics, DER Dispatch Tool, and Cyber Security.

Additionally, DEP is seeking cost recovery for expenses incurred in the test year for several GIP programs, including SOG and Targeted Undergrounding.

For the following reasons, the request for deferral accounting treatment and cost recovery should be denied.

A. The GIP Should Not Receive Deferral Accounting Treatment.

i. The Standard

This Commission has "historically treated deferral accounting as a tool to be allowed only as an exception to the general rule, and its use has been allowed sparingly." Order Approving Deferral Accounting with Conditions, Docket No. E-7, Sub 874, p. 24 (March 31, 2009). The Commission has explained that deferral accounting is disfavored for the following reasons:

[The Commission] has also been reluctant to allow deferral accounting because it, typically, equates to single-issue ratemaking for the period of deferral, contrary to the well-established, general ratemaking principle that all items of revenue and costs germane to the ratemaking and cost-recovery process should be examined in their totality in determining the appropriateness of the utility's existing rates and charges.

Id.

Given these compelling reasons against deferral accounting, the Commission has articulated the following exacting test for deferral accounting treatment:

In order for the Commission to grant a request for deferral accounting treatment, the utility first must show that the cost items at issue are adequately extraordinary, in both type of expenditure and in magnitude, to be considered for deferral. Second, the utility has to show that the effect of not deferring such cost items would significantly affect the utility's earned returns on common equity.

Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 148 (June 22, 2018).

ii. DEP's Reasons for Deferral Accounting Treatment Are Not Unique to the Company or North Carolina.

In Duke Energy Carolinas LLC's (DEC) immediately prior rate-increase case, *In re Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Utility Service in North Carolina*, Docket No. E-7, Sub 1146 (2017), DEC requested deferral accounting treatment for its Power Forward program. However, this Commission rejected DEC's deferral accounting request because, among other reasons:

[T]he Commission finds and concludes that the reasons DEC says underlie the need for Power Forward are not unique or extraordinary to DEC, nor are they unique or extraordinary to North Carolina.

Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 146 (June 22, 2018). Similarly, the reasons cited by DEP in the present docket for the GIP are not unique to the Company or North Carolina.

DEP witness Jay W. Oliver (Oliver) testified that there are seven reasons—or "megatrends"—justifying the GIP. (Tr. vol. 16, pp. 127-28; see also Tr. vol. 4, p. 157.) None of those seven megatrends are unique to DEP or North Carolina.

For example, Oliver testified that the GIP is necessary because "[t]he number, severity and impact of weather events on [DEP's] customers has been increasing significantly." (Tr. vol. 11, p. 128.) However, in response to cross-examination, Oliver acknowledged that this megatrend is commonplace among the country:

Q Mr. Oliver, is it fair to say that an increase in the severity and frequency of weather events-of significant weather events is not unique to North Carolina?

A I think that is fair to say. Again, we also serve South Carolina, we also serve Florida, and we've seen increase in severe weather there as well.

(Tr. vol. 4, p. 159.)

In fact, in the immediately prior rate case for DEP's sister company, DEC, the Commission explicitly determined that increasingly severe weather is not a unique issue sufficient to justify deferral accounting. Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 146 (June 22, 2018) ("Weather, customer disruption, physical and cyber security, DER, and aging assets are all issues the Company (and all utilities) have to confront in the normal course of providing electric service.").

Similarly, Oliver testified that the GIP is justified because "[T]he threat of physical and cyber-attacks on grid infrastructure is more sophisticated and is on the rise." (Tr. vol. 16, p. 128.) Oliver, however, was unable to offer any evidence whatsoever that the threat of physical and cyberattacks is unique to DEP or North Carolina:

Q Mr. Oliver, do you have any evidence that the volume, complexity, or scale of the physical or cyberattacks being experienced by the companies is unique or worse than other public utilities throughout the nation?

A I can't address what other utilities see. I can address what Duke sees.

(Tr. vol. 5, p. 15.)

Furthermore, as with the weather megatrend discussed above, this Commission has explicitly determined that physical and cyber security are not issues unique to North Carolina. Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 146 (June 22, 2018) ("Weather, ...

[and] physical and cyber security ... are all issues the Company (and all utilities) have to confront in the normal course of providing electric service.").

Oliver also testified that the GIP is justified because "[T]here has been an increase in environmental commitments from the international to local level in [DEP's] service territory." (Tr. vol. 16, p. 128.) Self-evidently, changes in "international" environmental regulations are not unique to DEP. Indeed, Oliver testified that adapting to changing environmental regulations is part of the normal business operations for any public utility:

Q Mr. Oliver, I'm sure that you would agree that environmental regulations change regularly; is that fair to say?

A I'm not an expert in environmental regulation, but I would guess that's fair to say.

Q Would you agree that complying with changing environmental regulations is a customary part of any public utility's standard business operation?

A I would generally agree with that.¹

(Tr. vol. 5, p. 16.)

Hence, the reasons proffered for DEP's GIP are unique to neither the Company nor North Carolina. As a result, DEPs deferral accounting request should be rejected. Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 146 (June 22, 2018) (rejecting deferral accounting treatment of the Power Forward program because, among other reasons, "the reasons DEC says underlie the need for Power Forward are not unique or extraordinary to DEC, nor are they unique or extraordinary to North Carolina.").

¹ In fairness, Oliver followed this answer with an explanation which purported to identify the uniqueness of DEP's environmental-regulation megatrend. (Tr. vol. 5, pp. 16-17.) However, Oliver's explanation did not contradict the notion that adapting to shifting environmental regulations is a commonplace business practice for DEP and all other public utilities.

iii. DEP's Grid Is Presently Reliable Despite Not Having Been Subject to Past Deferral Accounting Treatment.

During his direct testimony, Oliver admitted that DEP's grid is reliable: "Our system has performed well, and we have continued to provide safe, reliable, and affordable electric service to our customers." (Tr. vol. 16, p. 122.) Obviously, DEP has achieved this reliable grid without the assistance of deferral accounting treatment:

Q And would you agree that the achievement of this reliable and well-maintained grid, that that was achieved without deferral accounting treatment—without the deferral accounting treatment sought by the companies in this docket or in these dockets?

A I would agree with that.

(Tr. vol. 5, p. 17.)

Given that DEP contends that its grid is already reliable, and that DEP admittedly achieved that reliable grid without the assistance of deferral accounting, it is quite doubtful that deferral accounting is necessary now.

iv. The GIP Is Substantially Similar to Power Forward, and this Commission Should Reject Deferral Accounting Treatment of GIP Expenses for the Same Reasons that it Rejected Deferral Accounting Treatment of Power Forward Expenses.

In the immediately prior rate-increase case of DEP's sister company, DEC sought deferral accounting treatment of Power Forward expenses. This Commission, of course, rejected DEC's request for deferral accounting treatment. Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, pp. 146-49 (June 22, 2018). The two programs—the GIP and Power Forward—are substantially similar and should receive the same treatment.

For example, DEP in the present case seeks deferral accounting treatment of its Cyber Security program within the GIP. Similarly, Power Forward involved expenses related to "physical and cyber security." *Id.* at 146; *see also* (Tr. vol. 5, pp. 20-21.) Moreover, DEC sought deferral accounting treatment for an SOG program in Power Forward, just as DEP seeks deferral accounting treatment for a SOG program in the present docket. (Tr. vol. 5, p. 20.)

The GIP is Power Forward, but modestly repackaged. Just as deferral accounting was inappropriate for Power Forward, deferral accounting is inappropriate for the GIP.

B. DEC's GIP Expenses Were Not Reasonably and Prudently Incurred.

i. The Standard

In order to recover costs, DEP must establish the following three essential elements:

The utility must show that the costs it seeks to recover are (1) "known and measurable"; (2) "reasonable and prudent"; and (3) where included in rate base "used and useful" in the provision of service to customers.

Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 258 (June 22, 2018).

As to the second element—the "reasonable and prudent" requirement—the Commission must analyze "whether management decisions were made in a reasonable manner and at an appropriate time on the basis of what was reasonably known or reasonably should have been known at that time." Order Granting Partial Increase in Rates and Charges, Docket No. E-2, Sub 537, p. 14 (Aug. 5, 1988).

ii. The GIP Expenses Incurred in the Test Year Were Not Reasonable and Prudent.

In addition to its deferral accounting request, DEP also seeks cost recovery for certain GIP expenses already incurred. NC WARN's witness, William E. Powers (Powers),

testified in detail that these GIP expenses were unreasonable and imprudent and should not have been incurred. (Tr. vol. 15, pp. 864-80.)

By way of example, Powers explained in detail the unreasonableness of DEP's Targeted Undergrounding expenses, both past and present. (Tr. vol. 15, pp. 869-73.) Oliver testified that Targeted Undergrounding was necessary to prevent outages. However, as noted by Powers, DEP failed to analyze other viable options for reducing outages-such as improvements to its vegetation management program. (Tr. vol. 15, pp. 869-71.) In fact, Powers testified to the practicality of improving DEP's vegetation management and thereby obviating the need for more expensive Targeted Undergrounding expenses within the GIP. (Tr. vol. 15, pp. 871-72.)

Similarly, Powers testified that, rather than incurring extravagant Targeted Undergrounding expenses, "[i]t would be practical and less costly to put battery storage in every home along a proposed distribution line undergrounding route." (Tr. vol. 15, p. 871.) Based on similar projects in other states, Powers estimated that "it would cost about \$300,000 per mile to equip every home in a North Carolina neighborhood with a Tesla Powerwall." (Tr. vol. 15, pp. 871-72.) The advantages of this approach are striking: "\$300,000 per mile to assure reliability during outages in every home along a distribution line pathway is a small fraction of the more than \$2 million per mile for an overhead-to-underground distribution line conversion along the same route." (Tr. vol. 15, p. 872.)

Similarly, Powers testified that SOG expenses are neither reasonable nor prudent. (Tr. vol. 15, pp. 873-74.) Powers correctly noted that, while touting the supposed benefits of the SOG, DEP failed to examine practical alternatives. (Tr. vol. 15, p. 874.)

In fact, practical and more cost-effective alternatives to the SOG are available. According to Powers, "Installing rooftop solar with battery storage in homes and businesses can achieve the same purpose." (Tr. vol. 15, p. 874.) Powers cited and analyzed a 2017 California study which concluded, among other things, that "the addition

of battery storage with the rooftop solar would negate the need for progressively more expensive grid optimization upgrades." (Tr. vol. 15, p. 876.)

However, DEP's SOG program involves "grid optimization measures that will become redundant if battery storage is integrated with rooftop solar." (Tr. vol. 15, p. 876) In summary, battery storage "could prove much more cost-effective in the long run particularly given the other functions that are available from distributed energy storage." (Tr. vol. 15, pp. 876.)

The expenses incurred by DEP pursuant to its GIP were neither reasonable nor prudent. Cost recovery should therefore be denied.

III. THE COMMISSION SHOULD NOT APPROVE COST RECOVERY FOR DEP'S CONSTRUCTION AT ASHEVILLE COMBINED CYCLE POWER PLANT.

DEP has requested recovery of approximately \$770 million for the construction of two 280 MW combined-cycle natural gas plants having dual-fuel capability at the Asheville Combined Cycle Power Plant. (Tr. vol. 15, p. 881.) As noted above, any cost recovery must be "reasonable and prudent." Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 258 (June 22, 2018). Additionally, any cost recovery must constitute the "least cost mix of generation." N.C. Gen. Stat. § 62-2(3a). DEP's construction at Asheville, however, was neither "reasonable and prudent" nor the "least cost mix of generation" and should therefore be disallowed.

NC WARN witness Powers offered substantial testimony concerning the unreasonableness of the expenses incurred at Asheville. (Tr. vol. 15, pp. 881-86.) First, the production costs for the work at Asheville were unnecessarily high in light of viable alternatives. While no actual production costs has been reported for Asheville yet, a recently constructed combined cycle plant in DEP's system, H. F. Lee, had a production cost of about \$36/MWh in 2018. (Tr. vol. 15, pp. 881-82.) It is reasonable to assume a

similar figure for Asheville. (Tr. vol. 15, p. 882.) However, the production costs of a hydroelectric unit is a fraction of the cost of Asheville—about \$13/MWh. (Tr. vol. 15, p. 882.)

In fact, there are existing regional merchant combined cycle and hydroelectric plants available to supply DEP with lower-cost power relative to the new units at Asheville.

Witness Powers testified,

DEP West has available off-the-shelf hydropower and combined cycle gas turbine options in the region to supply capacity if additional capacity is needed . . . Four Smoky Mountain Hydro units near the North Carolina-Tennessee border have a capacity of 378 MW and product 1.4 million MWh annually. These units are in the TVA system, which is connected to DEP West by a single 161 KV line from TVA to the substation at the Walters Hydro Plant in DEP West. The power produced by these units is not currently contracted for purchase.

(Tr. vol. 15, p. 883.)

This is just one example of the lower-cost regional power supply that could have been contracted as an alternative to an expensive buildout at Asheville. Witness Powers described additional alternatives. (Tr. vol. 15, pp. 883-84.)

However, contracted power supply is not the only alternative to DEP's expensive buildout at Asheville. In fact, the evidence shows that battery storage is capable of producing power for less than a \$20/MWh production cost. (Tr. vol. 15, p. 884.) As an illustrative example, witness Powers testified that the Los Angeles Department of Water and Power executed a 25-year contract for the 300 MW Eland solar and battery storage project in September 2019. (Tr. vol. 15, p. 884.) The production costs of the battery storage component of that project was approximately \$0.02/kWh. (Tr. vol. 15, p. 884.) Indeed, the cost of battery storage capacity continues to decline. (Tr. vol. 15, p. 884.)

The evidence also shows that the addition of battery storage to the nearly 6,000 MW of utility-scale solar in North Carolina could achieve the same purpose as the buildout

at Asheville by DEP. (Tr. vol. 15, pp. 884-85.) According to Powers, “This approach could be used on the nearly 6,000 MW of solar farms in North Carolina to smooth-out solar generation and provide dispatchable peaking power.” (Tr. vol. 15, p. 885.) This approach has the added, and substantial, benefit of avoiding the substantial burdens upon ratepayers that, should cost recovery be approved, the buildout at Asheville will impose. This is because the cost of battery storage additions “would be borne by third-party owners of the solar facilities.” (Tr. vol. 15, p. 885.)

Unfortunately, DEP undertook an expensive capital project at the Asheville plant without meaningfully considering or implementing viable and more cost-effective alternatives. Witness Powers summarized this fact well:

Duke Energy has spent approximately \$820 million building the Asheville combined cycle power plant – resulting in the DEP request in this general rate case to recover approximately \$770 million – that could have been avoided by simply allowing existing solar facilities in North Carolina to add battery storage at their own expense in return for reasonable payment for the added value of the storage capacity.

(Tr. vol. 15, p. 885.)

Given the viable and significantly more cost-effective alternatives to the expensive capital expenditures at Asheville, the cost recovery request for Asheville should be denied as being neither “reasonable and prudent,” Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, Docket No. E-7, Sub 1146, p. 258 (June 22, 2018), nor the “least cost mix of generation,” N.C. Gen. Stat. § 62-2(3a).

IV. CONCLUSION

For all of the above-described reasons, among others, the Commission should reject DEP's deferral accounting request concerning GIP expenses, and the Commission should disallow cost recovery of GIP expenses already incurred, and the Commission should disallow cost recovery of expenses affiliated with DEP's construction of two 280

MW combined-cycle natural gas plants having dual-fuel capability at the Asheville Combined Cycle Power Plant.

This the 4th day of December, 2020.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on today's date a copy of the foregoing document was served by electronic mail on all parties to this docket.

This the 4th day of December, 2020.

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