

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-7, SUB 1146

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	ORDER DECLINING TO ACCEPT
Application of Duke Energy Carolinas,	)	RATE DESIGN PLAN, REQUIRING
LLC for Adjustment of Rates and	)	COMPLIANCE FILING,
Charges Applicable to Electric Utility	)	SCHEDULING HEARING, AND
Service in North Carolina	)	REQUIRING COORDINATION
	)	WITH PUBLIC STAFF

BY THE COMMISSION: On June 22, 2018, the Commission issued an Order Accepting Stipulation, Deciding Contested Issues and Requiring Revenue Reduction (Rate Order) in the above-captioned docket. In Finding of Fact No. 39 of the Rate Order, the Commission found:

DEC should be required to design and propose new rate structures to capture the full benefits of AMI [advanced metering infrastructure].

Rate Order, at 19.

In the Evidence and Conclusions section for Finding of Fact No. 39, the Commission discussed, among other things, the testimony of Public Staff witness Floyd that DEC's customers will not be able to use AMI data to save energy and money unless DEC provides new rate designs, such as time-of-use (TOU) rates, and new payment options, including prepay. Id. at 89-90. In addition, the Commission noted that the North Carolina League of Municipalities (NCLM), in its post-hearing brief, stated that full deployment of AMI is not necessary prior to DEC's initiation of customer discussions on new rate designs, and that DEC should be required to develop proposals for TOU and critical peak pricing rate designs and prepayment options before its next rate case. Id. at 121.

The Commission made the following statement in the Rate Order section on AMI entitled Discussions and Conclusions.

The Commission gives substantial weight to the above evidence. The AMI benefits, current and future, identified by DEC are substantial. It was reasonable and prudent for DEC to rely on these AMI benefits in deciding to deploy AMI on a full scale.

However, the Commission also agrees with NCLM, EDF and others that DEC should be required to follow through on designing and proposing new rate structures that will capture the full benefits of AMI. Therefore, the

Commission finds and concludes that DEC should within six months of the date of this Order file in this docket the details of proposed new time-of-use, peak pricing, and other dynamic rate structures that will, among other things, allow ratepayers in all customer classes to use the information provided by AMI to reduce their peak time usage and to save energy. The Commission's goal is to require DEC to develop rate structures now that will enable DEC to deliver on its promise that there are "additional customer products and services that this solution [AMI] can enable" no later than DEC's next general rate case. Further, the Commission hereby gives DEC notice that DEC's success, or lack thereof, in developing new rate structures that enable AMI energy usage benefits will be one of the factors used by the Commission in determining the prudence and reasonableness of DEC's costs incurred in deploying AMI following the present rate case.

Id. at 124.

In Ordering Paragraph No. 29, the Commission directed:

That within six months of the date of this Order, DEC shall file in this docket the details of proposed new time-of-use, peak pricing, and other dynamic rate structures that will, among other things, allow ratepayers in all customer classes to use the information provided by AMI to reduce their peak-time usage and to save energy.

Id. at 331.

On Dec. 21, 2018, DEC filed its Report on Plans for AMI and Customer Connect Enabled Rate Design. The report includes a background section that cites testimony of DEC's witnesses about AMI and Customer Connect. For example:

Company witness Pirro responded that the Company will consider new rate designs after full AMI deployment, which is expected by mid-2019. Tr. Vol. 19, p. 87. As the Company continues deployment of AMI and begins implementation of new billing infrastructures, the Company will evaluate all potential future rate designs, including dynamic rate designs, and will assess the approach or combination of approaches that cost-effectively meets customer interests and demand response objectives.

Rate Order, at 88.

DEC further stated in its report that it anticipates full deployment of Customer Connect by September 2022, and that Customer Connect is more than a billing system. DEC stated that Customer Connect will provide a website that allows customers to access their meter data, make bill comparisons, and select a rate schedule most suited to their needs. DEC also cited the following segment of the Commission's Rate Order discussion on rate design:

The Commission agrees that it is premature to offer specific AMI-enabled rate designs in this proceeding since the infrastructure underlying such rate design is not yet available. The Commission concludes, however, that it is appropriate for DEC to evaluate new rate designs that will, among other things, allow ratepayers in all customer classes to use the information provided by AMI to reduce their peak time usage and to save energy.

Id. at 90.

Moreover, DEC stated that load research data is available for all customer classes. DEC noted that this data has been used for developing cost allocations among customer classes, and it could be used to create new rate designs, but that it is preferable to also have two years of AMI data.

DEC provided a summary of its existing TOU and demand response offerings, including:

- Residential Rate RT – On and off-peak rates for distinct summer and winter periods.
- Residential Power Manager - Bill credits in return for allowing DEC to manage the customer's air conditioning load.
- Industrial OPT Rates - On and off-peak rates for distinct summer and winter periods.
- Industrial Power Share - Demand response option that allows DEC to reduce the customer's usage during peak periods.
- Schedule HP – Offers larger customers variable hourly rates that reflect DEC's cost based on a day-ahead forecast. DEC noted that this program "is complex and difficult to administer with less sophisticated small load customers."

In addition, DEC stated that it will focus on several factors in developing new rate designs, including customer choices, appropriate pricing signals, support of customer technology options, and preparation for the future. In addition, DEC noted that it is working with EPRI to study rate design features through a multi-utility research project. DEC stated that in nine months, or in its next general rate case, whichever comes first, DEC will propose "at least two new pilot rate designs – one applicable to residential service and the other to small general service." In addition, DEC provided a time line for its rate design work plan. The time line shows the following components of DEC's rate design work and the date that each step will be finalized.

Installation of meters	-	July 2, 2019
Review and update of TOU	-	July 2, 2019
Preparation of analytical tools	-	Dec. 29, 2019
Data collection and analysis	-	June 21, 2021
Initial rate designs	-	Sept. 19, 2021
Collaborative discussions	-	Dec. 18, 2021
Final designs for deployment	-	Mar. 18, 2022
Approval by NCUC	-	July 16, 2022

### Discussion and Conclusions

In the Rate Order, the Commission ordered DEC to file “the details of proposed new time-of-use, peak pricing, and other dynamic rate structures” within six months. Instead of complying with the Commission's Rate Order, DEC filed a report outlining its proposed plan for compliance with the Rate Order. In essence, DEC attempted in its report to persuade the Commission that the Rate Order's directive to file new rate designs in six months was premature, and that DEC needs more time to accomplish that task. The Commission is not persuaded. In addition, if that was the situation, DEC should not have waited six months to inform the Commission that it needed an additional nine months to comply with the Commission's Rate Order.

DEC's report and plan do not comply with the Commission's Rate Order and, therefore, are not accepted by the Commission. Rather, the Commission finds and concludes that DEC should be required to comply with the Commission's Rate Order within sixty days of the date of this Order. On a preliminary basis, subject to the Commission's review of DEC's proposed pilot programs, the Commission will accept as compliance with the present order a filing by DEC containing its proposed two new AMI pilot rate designs – one applicable to residential service and the other to small general service.

Further, the Commission is not persuaded that it is reasonable for DEC to take until March 2022 to propose final AMI rate designs. That would be almost three years after DEC completes its deployment of AMI. As the Commission detailed in the Rate Order:

[D]EC has followed a studied and deliberate plan for installing AMI, including the AMI Phase 1 and Phase 2 projects, and the AMI Expansion 2015 project...As of September 2016 DEC had cumulatively installed about 527,391 AMI meters. After gaining substantial knowledge about AMI provided by the installation of more than 500,000 AMI meters, DEC made a decision in late 2016 to begin full scale deployment of AMI in North Carolina, and began implementing that decision in early 2017.

The Commission gives substantial weight to the above evidence. AMI is a new technology. Maintaining adequate and reliable electric service includes staying abreast of the latest developments in equipment and technology. Indeed, advances in technology can provide efficiencies and other benefits that justify retiring present equipment. After having deployed

AMI on a project-by-project basis for several years, it was reasonable and prudent for DEC to use that experience to decide to deploy AMI on a full scale.

Rate Order, at 123.

DEC having deployed AMI for several years, it should currently possess a large amount of information about AMI's capabilities and its customers' usage profiles. As a result, it is reasonable for the Commission to require DEC to use that information now to design new AMI rate structures on a faster schedule than the time line proposed by DEC in its report.

In particular, the Commission does not accept DEC's proposal to take until June 2021 to complete its data collection and analysis, until December 2021 to complete its collaborative discussions, and until March 2022 to complete its final rate designs. Rather, the Commission concludes that DEC should be required to significantly accelerate its rate design plan. To assist DEC in doing so, the Commission concludes that DEC should be required to work with the Public Staff to develop a revised work plan that accelerates the deployment of new rate structures, and to file its revised work plan within 60 days of the date of this order. The plan shall include a proposal for informing customers about the potential energy and cost savings that can be achieved by making changes in their energy usage.

In addition, the Commission finds good cause to schedule a hearing in this docket to review DEC's progress in complying with the present order. At that hearing, DEC shall have available a witness or witnesses who can provide information and answer in detail the Commission's questions about innovative AMI rate structures, including questions on the following subjects.

1. DEC's present TOU, peak and non-peak, and real time pricing rate structures, and how these rate structures can be made available to other customers and customer classes.
2. AMI data collection, information processing, understanding of capabilities, time constraints or other challenges that DEC must address in designing AMI rate structures.
3. AMI data collection, information processing, and understanding of capabilities that DEC has accomplished since beginning its AMI deployment in 2013.
4. New lessons on AMI data collection, information processing, and understanding of capabilities that DEC expects to learn from the EPRI study.
5. The start date, anticipated completion date, objectives and cost of the EPRI study.

6. The reason(s) that DEC maintains that it is preferable to have two years of AMI data in addition to DEC's presently available load research data for all customer classes.
7. The relationship of Customer Connect to DEC's design of AMI rate structures.
8. The details of the TOU, peak and non-peak, and real time pricing rate structures available to the customers of Duke Energy's electric operating subsidiaries in Florida, Kentucky, Indiana and Ohio.

Finally, the Commission is not requesting that the Public Staff or intervenors provide witnesses or testimony at the hearing. The Commission will, however, provide the Public Staff and intervenors a reasonable opportunity to ask questions on the Commission's questions.

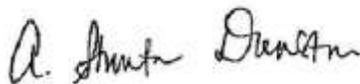
IT IS, THEREFORE, ORDERED as follows:

1. That DEC's Report on Plans for AMI and Customer Connect Enabled Rate Design is not accepted.
2. That DEC shall file its two proposed AMI rate design pilot programs within sixty (60) days of the date of this Order.
3. That DEC shall work with the Public Staff to develop a revised AMI rate design work plan that accelerates the deployment of new AMI rate structures, and shall file its revised work plan within sixty (60) days of the date of this Order.
4. That DEC shall provide a witness or witnesses at a hearing before the Commission on February 26, 2019, at 9:30 a.m., in Commission Hearing Room 2115, Dobbs Building, 430 N Salisbury Street, Raleigh, North Carolina, to answer the Commission's questions and provide additional details on DEC's AMI rate design plan.

ISSUED BY ORDER OF THE COMMISSION.

This the 30<sup>th</sup> day of January, 2019.

NORTH CAROLINA UTILITIES COMMISSION



A. Shonta Dunston, Deputy Clerk