

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1115
DOCKET NO. E-100, SUB 147

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1115

In the Matter of)
Application of Duke Energy Carolinas, LLC,)
for Approval of Advanced Metering)
Infrastructure Opt-Out Tariff)

DOCKET NO. E-100, SUB 147)

ORDER REQUIRING
ADDITIONAL INFORMATION

In the Matter of)
2016 Biennial Integrated Resource Plans)
and Related 2016 REPS Compliance Plans)

BY THE COMMISSION: On July 29, 2016, Duke Energy Carolinas, LLC (DEC), filed for approval an Advanced Metering Infrastructure (AMI) Opt-Out Rider. That request remains pending before the Commission.

On October 10, 2017, DEC personnel appeared before the Commission to make a presentation regarding DEC's AMI deployment plans. Among other things, one of DEC's representatives stated during that presentation:

We do have another type of meter so in any solution, or any situations where we have a customer that may be rural to the point that it's not economical to install range extenders to get out there to that RF mesh, we have what we call a cellular direct connect meter which basically is, instead of a RF radio in it, it has a cell modem in it and it can send its data directly back to our back office systems via cellular.

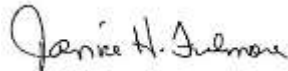
The Commission would like to more fully understand how cellular direct connect meter installations were factored into DEC's cost-benefit analysis for its AMI deployment that was filed in Docket No. E-100 Sub 147, and the Commission would like to understand whether the cellular direct connect meter technology is a viable alternative for customers who want to opt-out of receiving an AMI meter. In addition, the Commission has additional questions regarding DEC's AMI cost-benefit analysis. Therefore, the Commission finds good cause to require DEC to provide a verified response to the questions in Appendix A by December 15, 2017.

IT IS, THEREFORE, SO ORDERED.

ISSUED BY ORDER OF THE COMMISSION.

This the 20th day of November, 2017.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in dark ink, appearing to read "Janice H. Fulmore". The signature is cursive and somewhat stylized.

Janice H. Fulmore, Deputy Clerk

APPENDIX A

1. Please confirm whether there are any radio frequency (RF) emissions from a cellular direct connect meter. If there are, how do those emissions compare in terms of intensity and duration to the emissions from the AMI meters that DEC is installing? How do they compare to the emissions from the AMR meters that DEC is retiring?
2. How many cellular direct connect meters has DEC installed in North Carolina to date? How many does DEC estimate will have been installed when DEC's North Carolina AMI deployment is completed?
3. Was the cost of that estimated number of cellular direct connect meters factored into the Company's cost/benefit analysis?
4. What is the cost of a cellular direct connect installation? How does that compare to the cost of an AMI meter? An AMI meter with its communications disabled?
5. How does DEC propose to recover the costs of the cellular direct connect meters? Will DEC propose that the rural customers whose locations require this technology be charged for the incremental cost over and above the cost of an AMI meter?
6. Please describe and discuss fully an option wherein DEC uses the cellular direct connect meter, with the meter read only once a month, for those customers who want to opt-out of having an AMI meter (instead of offering those customers AMI meters with their communications disabled).
7. What would be the advantages and disadvantages of having only one (cellular direct connect meters), rather than two (cellular direct connect meters and disabled AMI meters), non-standard metering configurations?
8. Using the actual historical kilowatt-hour and lost revenue data for energy theft that DEC has experienced and is discovering in North Carolina, including during its AMI deployment, develop an independent estimate of the percent of additional revenues DEC will collect via that deployment that would otherwise be lost due to theft and other non-technical losses.
9. Provide a revised 20-year AMI cost-benefit analysis that includes: (a) the costs of replacing AMI meters at the end of their 15-year lives, (b) the most recent estimate of the costs of cellular direct connect meters, (c) the cost of replacing other components and software at reasonable intervals, and (d) the non-technical revenue loss estimate (rather than the EPRI 2% estimate) developed pursuant to question 8.
10. Do DEC's contracts with Itron and all other AMI component and software suppliers obligate those suppliers to disclose to DEC if and when other users experience meter hacking or any data breach related to the AMI meters and infrastructure?
11. Did DEC consider using power line carrier (PLC) technology, instead of radio or cellular, for its AMI deployment? If not, why not? If it was considered, why was it not pursued?