

August 16, 2019

Via Electronic Filing

Acting Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, North Carolina 27606-5926

**Re: Duke Energy Carolinas, LLC's Motion to Withdraw Program
Docket No. E-7, Sub 1155**

Dear Acting Chief Clerk:

North Carolina Building Performance Association (NCBPA) requests that the Commission reject Duke Energy Carolinas, LLC's (DEC) motion to withdraw its application in the above referenced docket for the Residential New Construction (RNC) program. Instead, we request that the Commission consider approving the program or holding an informational hearing to evaluate issues that lead to DEC's request to withdraw the program.

The RNC program was first proposed by DEC in September 2017 and encourages energy savings in new residential construction by providing incentives for the use of energy efficiency building practices and the installation of energy-efficient appliances. Public Staff noted in supportive comments that the total net present value of benefits over life of the program would be over \$56 million, 57% of which would come from energy savings.

NCBPA and its member companies support the RNC program strongly. Our member architects, builders, contractors and many others have seen this program contribute vast energy savings and performance improvements in the Duke Energy Progress (DEP) territory for several years. The program provides an excellent incentive for builders to prioritize long-term cost-effective energy savings for future homeowners and renters that last for more than thirty years in many cases. As energy efficiency professionals, we know that the best and most cost-effective time to implement energy saving measures is during new construction. This program incentivizes builders to do so.

Below, we have provided an independent analysis using actual Home Energy Rating System scores (HERS ratings) over the past four and a half years in the DEC territory that estimate the vast energy, workforce, economic and environmental benefits that program expansion would offer.

In summary, our analysis finds that expanding the RNC program to the DEC territory would:

- Reduce ratepayer utility bills by up to \$287.50 per year on average, totaling nearly \$2.3 Million in annual energy savings.
- Incentivize 15% or more energy savings in up to 8,000 new DEC homes annually.
- Create 76 new local permanent jobs.
- Contribute \$7.2 Million of new annual tax revenue to local economies.
- Reduce local code enforcement jurisdiction labor costs by \$1.4 Million annually.
- Reduce carbon emissions by up to 16,239 metric tons annually.

In addition, the new 2018 North Carolina Energy Conservation Code (2018 NCECC) includes an option for residential builders to pass required energy code requirements by achieving a HERS rating that is comparable to what the RNC program would require in the DEC territory. By incentivizing more HERS ratings in the region, more local code jurisdictions will be able to take advantage of this Energy Rating Index (ERI) option, saving them time and money.

The RNC expansion affords DEC the opportunity to improve its compliance to NC's Renewable Energy and Energy Efficiency Portfolio Standard (REPS) requirements by increasing energy efficiency savings as a percentage of annual electricity usage. Additionally, the program has proven to be cost-effective in the DEP territory and would support improvement in the cost effectiveness of DEC's energy efficiency programs, which impact many more individuals and companies across both North Carolina and South Carolina.

We understand concerns of the natural gas utilities regarding possible implications to their businesses through potential fuel switching that may be incentivized (indirectly) through this program. However, the program is allowable by commission rule R8-68 Rule 8 Appendix and North Carolina law N.C. Gen. Stat. § 62-140(c).


Additionally, the program does not encourage consumers to choose a particular energy source. Builders use whole-house building practices to identify the best options available for long-term energy savings, no matter the source of fuel. The RNC incentives are fuel-agnostic as noted in its application that “[t]he Program does not provided [sic] any inducement or incentive affecting participant’s decision to install or adopt natural gas or electric service.”

No matter the source of energy being used, we support using less of it. Expanding the RNC program into the DEC territory will save energy and offer vast benefits to many parties.

Please hold a public hearing with Duke Energy and the natural gas utilities so that a resolution may be reached that results in the program being expanded to the DEC territory.

Thank you for considering these comments.

Sincerely,



D. Ryan Miller

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Enclosed: RNC Program Expansion Analysis

RNC Program Expansion Analysis

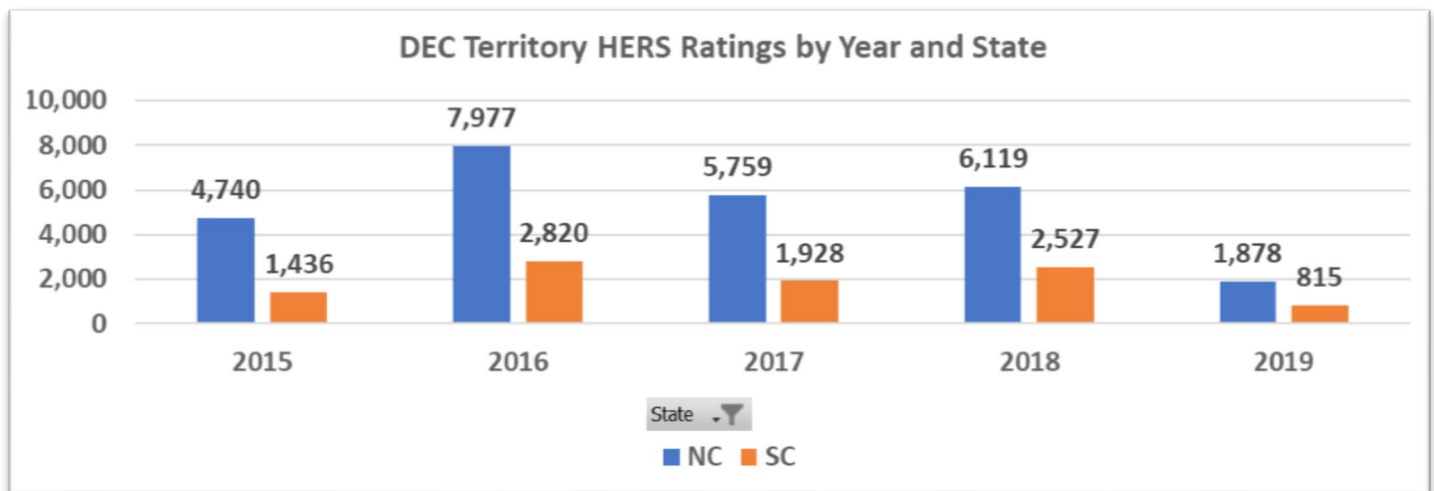
North Carolina Building Performance Association (NCBPA), the state’s not-for-profit trade association for residential and commercial energy efficiency, green building and high performance construction companies and professionals, has prepared this analysis in support of expanding Duke Energy Progress’ (DEP) Residential New Construction (RNC) program into the Duke Energy Carolinas’ (DEC) territory for both North and South Carolina. This analysis was initially completed in August of 2018 and has been updated in August of 2019.

The DEP program has been incredibly successful in incentivizing residential builders to increase the energy efficiency offerings of their homes in the DEP territory. Doing so has resulted in energy savings, workforce development, economic development, environmental benefits to the state. NCBPA and its member companies support expanding the program into the DEC territory strongly.

Home Energy Rating System ratings (HERS ratings) are the industry standard for measuring a new home’s energy efficiency and are performed on every single home incentivized through the DEP RNC program. In order to estimate the number of homes that could be made more energy efficient via an RNC incentive in the DEC territory, using these scores is a straightforward approach.

Summary Findings

Using data purchased from RESNET, the national certification body for HERS ratings, NCBPA found that nearly 36,000 HERS ratings were performed in the DEC territory in North Carolina and South Carolina between January 2015 – July 2019. None of these homes received an RNC rebate due to the lack of program availability in the area.



The number of homes that could have been incentivized to meet the DEP RNC program’s standard of 15% increased energy efficiency (compared to minimum energy code in the DEC territory in both states) can be estimated using HERS rating ranges. To perform this analysis, NCBPA estimated the scores needed to meet the minimum threshold relative to each state’s minimum energy code.

- Note that the ranges are different in NC and SC because the new 2018 North Carolina Energy Conservation Code (2018 NCECC), which started in January of 2019 and is roughly equivalent

to the 2012 International Energy Conservation Code (2012 IECC), is roughly 15% more energy efficient than South Carolina’s current energy code (roughly 2009 IECC equivalent).

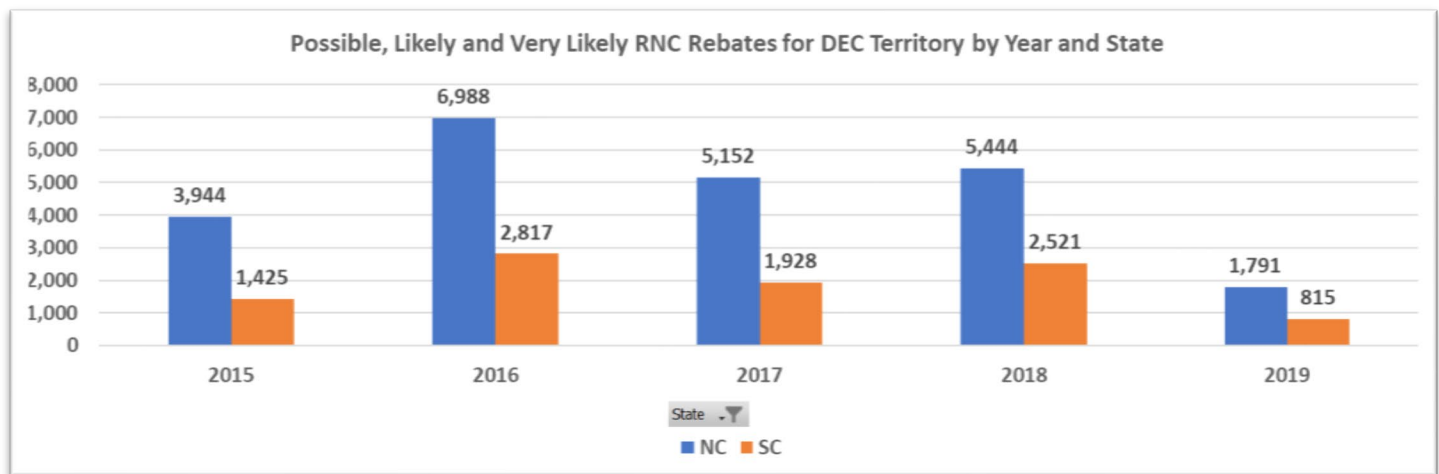
Likelihood of Rebate at <u>100%</u> Conversion Rate	North Carolina DEC <i>Roughly Equivalent to 2012 IECC</i>	South Carolina DEC <i>Roughly Equivalent to 2009 IECC</i>
Very Likely Less than 5% EE improvement or no EE improvement needed	HERS 60 or Less 5,157 homes	HERS 70 or Less 7,171 homes
Likely ~ 5 – 15% EE improvement needed	HERS 61 – 70 12,649 homes	HERS 71 – 80 2,051 homes
Possible ~15 - 20% EE improvement needed	HERS 71 – 75 5,513 homes	HERS 81 – 85 284 homes
Not Likely More than 20% EE improvement needed	HERS 76 or Above 3,154 homes	HERS 86 or Above 20 homes

Analysis at Varying Conversion Rates

The above analysis relies on a 100% conversion rate for all possible homes that may meet the criteria. This conversion rate is not likely as some builders will not participate for a variety of reasons. To provide more realistic conversion possibilities, the above table is segmented below based on differing levels of conversion rates.

Likelihood of Rebate at <u>Varying</u> Conversion Rate	North Carolina DEC <i>Roughly Equivalent to 2012 IECC</i>	South Carolina DEC <i>Roughly Equivalent to 2009 IECC</i>
Very Likely Less than 5% EE improvement or no EE improvement needed	HERS 60 or Less 5,157	HERS 70 or Less 7,171
<i>75% Conversion Rate</i>	3,868	5,378
<i>50% Conversion Rate</i>	2,579	3,586
<i>25% Conversion Rate</i>	1,289	1,793
Likely ~ 5 – 15% EE improvement needed	HERS 61 – 70 12,649	HERS 71 – 80 2,051
<i>75% Conversion Rate</i>	9,487	1,538
<i>50% Conversion Rate</i>	6,325	1,026

<i>25% Conversion Rate</i>	3,162	513
Possible ~15 - 20% EE improvement needed	HERS 71 – 75 5,513	HERS 81 – 85 284
<i>75% Conversion Rate</i>	4,135	213
<i>50% Conversion Rate</i>	2,757	142
<i>25% Conversion Rate</i>	1,378	71
Total Possible, Likely and Very Likely	HERS 71 – 75 23,919	HERS 81 – 85 9,506
<i>75% Conversion Rate</i>	17,939	7,130
<i>50% Conversion Rate</i>	11,960	4,753
<i>25% Conversion Rate</i>	5,980	2,377



Benefits of RNC Expansion to DEC Territory

Provided below are estimates of the energy, workforce, economic and environmental benefits of program expansion to the DEC territory. The savings are based on projected HERS rating data from 2018 using the Possible, Likely and Very Likely scenarios with a 100% conversion rate (to show full potential impact) with a 20% growth factor applied (due to market growth and slowly improving annual energy efficiency).

In these cases, the estimated energy savings and environmental benefits are formulated from the projected energy costs that are provided by HERS ratings. The workforce and economic benefits are estimated from the impact of the increase in HERS ratings and resulting energy savings.

Annualized Market Impacts of Rebate Expansion			
(Note: Calendar year 2018 actual data + 20% growth factor used for analysis)			
	DEC North Carolina	DEC South Carolina	DEC Combined
Electricity Savings <i>Annual consumer electricity savings resulting for likely homes at 15% improvement</i>	15% decrease in modeled electricity usage = \$1,524,430 annual savings	15% decrease in modeled electricity usage = \$771,974 annual savings	15% decrease in modeled electricity usage = \$2,296,403 annual savings
Workforce Benefits <i>Local rating company jobs created</i>	6,533 homes 125 homes per job = 52 new jobs	3,025 homes 125 homes per job = 24 new jobs	9,558 homes 125 homes per job = 76 new jobs
Economic Impact <i>Local taxable revenue created for rating companies and builder subs</i>	6,533 homes \$500 avg. rating fee + \$250 new sub fees = \$4,899,750 revenue	3,025 homes \$500 avg. rating fee + \$250 new sub fees = \$2,268,750 revenue	9,558 homes \$500 avg. rating fee + \$250 new sub fees = \$7,166,250 revenue
<i>Municipal code official savings through use of Energy Rating Index for code compliance</i>	2 hours per home @ \$75 per hour total cost = \$979,950 savings	Not currently available in SC, but if it were: = \$453,750 savings	2 hours per home @ \$75 per hour total cost = \$1,433,700 savings
Environmental Benefits <i>Annual carbon offsets created through electricity savings</i>	10,780 metric tons of CO ₂ offset annually	5,459 metric tons of CO ₂ offset annually	16,239 metric tons of CO ₂ offset annually