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December 2, 2015

VIA ELECTRONIC FILING

Ms. Gail Mount
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, North Carolina 27606-5926

Re: **Duke Energy Progress, LLC, Proposed Modifications to Home
Energy Improvement Program (Docket No. E-2, Sub 936)**

Dear Ms. Mount:

On behalf of the Natural Resources Defense Council ("NRDC") and Southern Alliance for Clean Energy ("SACE"), I write to express support for Duke Energy Progress, LLC's ("DEP" or "the Company") proposed modifications to the Home Energy Improvement Program ("Program" or "HEIP") filed in the above-referenced docket.

The HEIP encourages residential customers in existing homes to install high-efficiency heating, ventilation and air conditioning ("HVAC") equipment, which represents the largest source of energy consumption in the home, and also provides incentives for other related measures. Since the HEIP was initially approved in 2009, increased HVAC equipment efficiency standards have resulted in a corresponding increase in participant costs. As a result, the cost-effectiveness of the program as measured by the Total Resource Cost ("TRC") test has declined. In an order issued in Docket No. E-2, Sub 1070, the Commission required that the Program be canceled effective March 31, 2016, unless DEP can demonstrate how the program can be made cost-effective in the long term or files a statement by March 31, 2016, that the Company expects to submit modifications on or before July 1, 2016, that would bring the cost-effectiveness above 1.0 on the TRC test.

The proposed modifications to the HEIP would help to increase the cost-effectiveness of the Program and preserve DEP's only residential HVAC incentive program, a large source of portfolio energy savings. Further, the enhancements proposed by DEP would provide additional opportunities for residential customers to save energy and money on their electric bills. DEP is requesting the following modifications to improve the Program's cost-effectiveness:

1. Replace the current HVAC incentive with a three-tiered incentive structure that is based on the efficiency of the HVAC system;
2. Add Wi-Fi-enabled smart thermostats that are programmed at the time of installation as a new measure;
3. Provide a quality installation incentive to encourage the proper installation of high-efficiency air conditioning systems and electric heat pumps based on manufacturer guidelines; and
4. Create a paid referral marketing channel for eligible trade allies with all referral fee proceeds used to offset the Program's cost.

NRDC and SACE support the HEIP and applaud the Company's efforts to improve the Program's overall cost-effectiveness. Although we support most of the proposed modifications, we have concerns regarding the proposed referral marketing program and the Company's overall strategy to improve the Program's long-term cost-effectiveness.

High-efficiency HVAC equipment, when properly installed and maintained, can yield one of the greatest reductions in home energy use. On January 1, 2015, updated federal standards set a new baseline efficiency rating of SEER 14 for split-system air conditioners and heat pump systems in Southern states.¹ As a result of the increased baseline and the higher cost of equipment to meet this baseline, the Company is proposing to provide a tiered incentive program for HVAC equipment, offering a greater incentive to customers choosing to install a system that exceeds the new federal requirement. The improved SEER rating, coupled with quality installation to encourage proper installation, can result in higher incremental energy savings and increase the comfort of the home.

NRDC and SACE support the Company's proposal to pay a higher incentive for higher efficiency, professionally installed HVAC equipment as a means to improve the Program's cost-effectiveness. HVAC units that exceed the federal SEER requirement will save more energy, although at a higher cost to the customer, and therefore a tiered customer incentive is warranted. Further, research indicates that higher-SEER-rated units combined with a quality installation program result in total savings about 40% higher overall than equipment only.² In addition to the quality installation program, we recommend that the Company bundle air- and duct-sealing measures with high-SEER unit upgrades. This will ensure maximum energy savings and improved comfort for the entire home.

¹ For these standards, the Department of Energy defines "Southern states" as Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and the District of Columbia.. https://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/75.

² "New Horizons for Energy Efficiency: Major Opportunities to Reach Higher Electricity Savings by 2030," American Council for an Energy Efficiency Economy, September 2015, p. 72. <http://aceee.org/sites/default/files/publications/researchreports/u1507.pdf>.

Similarly, NRDC and SACE support DEP's proposal to provide an incentive to customers investing in smart thermostats. Programmable Wi-Fi-enabled smart thermostats offer an economical way for customers to optimize energy use for HVAC equipment in an automated way. Furthermore, many smart thermostats can be used for data collection purposes that can assist the Company in targeting other energy efficiency programs to homes with the highest energy use. We recommend that the Company investigate ways to leverage this data to understand better how energy is used in individual homes, and target the EE programs to those homes with the highest energy intensity. However, because energy reductions from smart thermostats are highly dependent upon customer behavior and because improper use (i.e., not operating smart thermostats as designed by the manufacturers) can lead to reduced savings, we recommend that the Company provide all residential customers who participate in the incentive program with educational resources such as online tutorials about how to properly program a thermostat, how to reduce overrides of programmed settings, and about other behavior changes that can increase effectiveness and lower energy usage.

Finally, the Company is proposing a referral-marketing channel for eligible trade allies. Under the proposal, the Company would offer a contractor referral service to a customer requesting information on residential energy efficiency measures. Upon successful completion of the work, the contractor is required to pay the Company a referral fee (up to \$550). Although this program is offered at no cost to the customer, NRDC and SACE are concerned about the following issues:

- (1) The Company's view is that the contractors would be paying a referral fee for new work instead of spending that money on marketing and customer acquisition costs. It is unclear whether the contractors would find \$550 worth of value from the referral and if it is a 1:1 tradeoff;
- (2) If customer acquisition costs are already included in the current cost of the contractor's services, the additional referral fee may become an additional cost that is passed along to the customer;
- (3) Although a contractor is already required to submit paperwork for the DEP HEIP incentives, the referral program may place additional administrative burden on contractors;
- (4) The Company plans to perform quality assurance to ensure contractors' compliance. We support third-party on-site verification of a sample of jobs, which would maintain quality control safeguards while adding fewer costs to the overall cost of the Program;
- (5) We are unsure how the Company would select which contractors to refer to customers. While this could be an opportunity to help customers find contractors that provide quality installation, it seems like any contractor willing to pay the referral fee would be qualified which is not ideal; and
- (6) Finally we are concerned with the potential stigma created for contractors who would not benefit from the program or who are not willing to pay the referral fee.

In order to improve the cost-effectiveness of the HEIP, NRDC and SACE encourage the Company to continue to review the cost-effectiveness of individual energy efficiency measures. We recommend that the Company consider eliminating measures that are not cost-effective on their own or combine individual measures into a bundled portfolio of whole-house measures. This bundled approach can be offered to customers with or without an HVAC upgrade and could become part of an on-bill financing program that has been recommended by SACE and is currently being discussed with the Company. By combining measures and offering a bundled incentive, each home would experience larger energy reductions, further improving the cost-effectiveness of the program.

NRDC and SACE support DEP's proposed modifications to incentives for the Home Energy Improvement Program and respectfully request that they be approved. However, we believe that additional analysis needs to be done on the referral-marketing program and the long-term improvement in the cost-effectiveness of the program. We recommend that the following analyses be conducted prior to DEP's March 31, 2016 deadline to demonstrate how the Program's cost-effectiveness can be improved: (1) a survey of marketing acquisition costs for contractors in DEP's service territory; (2) an assessment of the cost-effectiveness of individual measures that make up the Program; (3) best practices in the development and implementation of educational tools for residents acquiring a programmable thermostat; (4) an updated market potential analysis to determine the true potential of efficiency measures in the Company's service territory; and (5) an analysis of a bundled approach of non-HVAC energy efficiency measures that could be combined with an on-bill financing program to deepen energy savings potential. Furthermore, we recommend that the Company review the referral component after the first year of operation to determine the extent of contractor engagement.

Thank you for the opportunity to provide comments regarding the proposed modifications to this important program. Please feel free to contact me if you have any questions.

Sincerely,

s/ Gudrun Thompson

cc: Parties of Record