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December 16, 2021

VIA ELECTRONIC FILING

Ms. A. Shonta Dunston
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Carolinas, LLC's Application for Approval of Smart
Saver Solar Energy Efficiency Program
Docket No. E-7, Sub 1261**

Dear Ms. Dunston:

Please find enclosed for filing Duke Energy Carolinas, LLC's Application for Approval of Smart Saver Solar Energy Efficiency Program Pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-68 in the above-referenced docket.

If you have any questions, please let me know.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

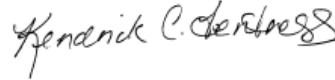
OFFICIAL COPY

Dec 16 2021

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's Application for Approval of Smart Saver Solar Energy Efficiency Program in Docket No. E-7, Sub 1261 has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties pursuant to Commission Rule R8-68(d)(2).

This the 16th day of December, 2021



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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-7, SUB 1261

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

| | | |
|--|---|---------------------------------|
| In the Matter of |) | |
| Application of Duke Energy Carolinas, LLC |) | APPLICATION OF |
| for Approval of Smart Saver Solar Energy |) | DUKE ENERGY CAROLINAS, |
| Efficiency Program Pursuant to N.C. Gen. |) | LLC FOR APPROVAL OF |
| Stat. § 62-133.9 and Commission Rule R8-68 |) | SMART SAVER SOLAR ENERGY |
| |) | EFFICIENCY PROGRAM |
| |) | |

Duke Energy Carolinas, LLC (“DEC,” “Company,” or “Applicant”), pursuant to North Carolina General Statutes (“N.C. Gen. Stat.”) § 62-133.9 and North Carolina Utilities Commission (the “Commission”) Rule R8-68, hereby applies to the Commission for approval of its new energy efficiency (“EE”) program, Smart Saver Solar (the “Program”), effective January 1, 2023.

In support of this Application, DEC respectfully shows the Commission the following:

1. The Applicant’s general offices are located at 550 South Tryon Street, Charlotte, North Carolina, and its mailing address is:

Duke Energy Carolinas, LLC
P. O. Box 1006
Charlotte, North Carolina 28201-1006

2. The names and addresses of Applicant’s attorneys are:

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Duke Energy Corporation
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3. The purpose of the Program is to encourage reductions in energy consumption from the grid and customer demand by strategically combining various program design features, including an incentive for customers to install rooftop solar photovoltaic (“PV”) facilities at residential premises; a long-term commitment to participate in the Company’s winter-focused Power Manager Load Control Service Rider, also known as Bring Your Own Thermostat (“Winter BYOT Program”); an eligibility requirement permitting participation only for certain electric customers; and participation in the post-implementation evaluation, measurement, and verification (“EM&V”) process conducted by an independent third party. These features and requirements work together to maximize demand savings and program cost-effectiveness, and reduce consumption from the grid, in order to maximize savings for all customers. Further, the Program is designed to reduce financial barriers and promote adoption and installation of solar PV facilities for eligible customers through an EE program akin to existing EE measures like high efficiency heat pumps and water heaters, home insulation, and duct sealing. Just as the Company encourages the installation of energy efficient equipment through rebates and incentives, such as the ones given for heat pumps or water heaters, the Program would defray the upfront costs of solar PV by providing a cost-effective incentive reflective of the system benefits that

such installations provide.

4. The Program's residential rooftop solar PV incentive is intended to reduce behind-the-meter customer energy consumption without impacting the function of the household or its level of service. To that end, DEC proposes to offer an incentive for each new watt of solar PV installed by residential customers whose energy for all water heating, clothes drying, and environmental space conditioning is supplied electrically.¹ At this time, the Program's availability is limited to this subset of electric customers to support the Program's cost-effectiveness. To reflect the value of the anticipated savings, the Company proposes an upfront rooftop solar incentive of \$0.36/Watt-DC ("Solar EE Incentive"). The Solar EE Incentive may be assigned to a solar leasing company (if the customer is in a lease arrangement) or to an installer, at the customer's direction. The proposed tariff associated with the Program is attached hereto as Attachment G to Exhibit 1.

5. The Company proposes that a customer receiving a Solar EE Incentive be required to remain in the Program for 25 years and also enroll in the Winter BYOT Program.² In its *Order Approving Program Modifications*, Docket No. E-7, Sub 1032 (Oct. 13, 2020), the Commission approved the establishment of the Winter BYOT Program, which provides for winter-focused demand response. The combination of the

¹ Residential customers who utilize natural gas for cooking purposes but otherwise are all-electric are eligible for the program.

² Pursuant to N.C. Gen. Stat. § 62-155, the Company's Solar Rebate Program comes to a close on December 31, 2022, prior to the effective date of this proposed program. Solar Rebates are offered to the residential, non-residential, and nonprofit customers. N.C. Gen. Stat. § 62-155(f)(3) provides that, as of December 31, 2022, any remaining, unused capacity set aside for use by nonprofits only may be reallocated for use by any customer who otherwise qualifies for the rebate. To the extent any unused capacity set aside for nonprofits after December 31, 2022 is reallocated, participants in the Solar Rebate Program will be ineligible for participation in this Program.

Winter BYOT Program participation requirement and the proposed solar PV incentive provides programmatic synergies and enables the Program to provide both energy and capacity savings. If the customer unenrolls from the Winter BYOT Program or opts out of more demand response events than the Winter BYOT Program allows, the customer must repay a prorated share of the initial Solar EE Incentive for every year the allowance is exceeded. There would be no penalty if a customer moves out of the residence prior to the expiration of the 25-year time period. Consistent with the Company's existing EE/Demand Side Management ("DSM") programs that require installation of more complicated EE/DSM measures (e.g., HVAC, duct insulation and repair, air sealing, etc.), to align this Program with the Residential Smart Saver program, and to support the achievement of higher cost savings and EM&V results, the proposed tariff requires that installations be performed by an approved contractor. As described in more detail below, participating customers must also be subject to EM&V in order to validate savings and inform the Company's cost recovery.

6. N.C. Gen. Stat. § 62-133.9, which governs the cost recovery for DSM and EE measures, states in subsection (a) that "[t]he definitions set out in G.S. 62-133.8 apply to this section." N.C. Gen. Stat. § 62-133.8(a)(4) defines "energy efficiency measure," in relevant part, as "an equipment, physical, or program change implemented after January 1, 2007, that results in less energy used to perform the same function."

7. Further, Commission Rule R8-68, which governs approval of EE incentive programs, states that all terms used in that rule shall be defined as they are in Rule R8-67(a). Pursuant to Commission Rule R8-67(a)(3), an "energy efficiency measure" means an equipment, physical, or program change that when implemented

results in less use of energy to perform the same function or provide the same level of service.”

8. Solar PV is an EE measure that fits squarely within these parameters set forth by the General Assembly in the DSM/EE statute and the Commission in its Rules. The Company’s EE measures come in all different shapes and sizes – the key shared attribute is that they all reduce energy usage from the utility system without impacting the function of the household or its level of service. If approved, the Program would be a part of the Company’s Smart Saver suite of home improvement rebate programs, which offer incentives for customers to install energy efficient equipment, such as HVAC, water heaters, and pool pumps, all of which qualify as equipment changes that result in less energy used to perform the same function. Indeed, installing solar PV will reduce grid energy consumption associated with various tasks and functions throughout an entire residential household. Similarly, implementation of solar PV will mean that the household will use less energy from the grid while enjoying the same level of electricity service.

9. The Company notes that Duke Energy Progress, LLC previously offered a solar water heating pilot program in North Carolina under its suite of DSM/EE programs. The solar water heating pilot was based on using the sun’s thermal energy to heat water and reduce consumption from the grid, just as the proposed Program would convert the sun’s energy into electricity to reduce consumption from the utility system. Both EE programs reduce customers’ energy usage from the grid by using energy from the sun.

10. Approval of this EE Program would also be consistent with the policies

expressed in Senate Bill 3,³ as well as the recently-enacted House Bill 951, which requires the Commission to take all reasonable steps to achieve a 70% reduction in emissions of carbon dioxide emitted in the State from electric generating facilities owned or operated by electric public utilities from 2005 levels by the year 2030 and carbon neutrality by the year 2050. As demonstrated by its Utility Cost Test (“UCT”) score, discussed below, the Program will reduce customers’ grid energy usage more cost-effectively than the Company building new supply-side resources, which is a win for all customers and consistent with North Carolina’s long-standing policy objectives, outlined in Senate Bill 3.

11. Section 18 of the Company’s Cost Recovery and Incentive Mechanism for DSM and EE Programs (the “DSM/EE Mechanism”), appended to the Commission’s *Order Approving Revisions to Demand-Side Management and Energy Efficiency Cost Recovery Mechanisms*, Docket Nos. E-2, Sub 931 and E-7, Sub 1032 (Oct. 20, 2020), requires that the Company “perform a qualitative measure screening to ensure Measures are: (a) commercially available and sufficiently mature, (b) applicable to the DEC service area demographics and climate, and (c) feasible for a utility DSM/EE Program.” Solar PV is commercially available and sufficiently mature,

³ See, e.g., N.C. Gen. Stat. § 62-2(a)(10), which provides that it is the policy of the State of North Carolina:

To promote the development of renewable energy and energy efficiency through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) that will do all of the following: a. Diversify the resources used to reliably meet the energy needs of consumers in the State. b. Provide greater energy security through the use of indigenous energy resources available within the State. c. Encourage private investment in renewable energy and energy efficiency. d. Provide improved air quality and other benefits to energy consumers and citizens of the State.

applicable to the Company's service area demographics and climate, and feasible for a DSM/EE program inasmuch as the proposed Program passes the applicable cost-effectiveness screen as discussed below.

12. Consistent with the DSM/EE Mechanism, the Program was introduced to and discussed with stakeholders in the DSM/EE Collaborative. In fact, the conceptual framework for the Program is the result of extensive collaboration with the Southern Environmental Law Center (on behalf of Southern Alliance for Clean Energy and Vote Solar), the North Carolina Sustainable Energy Association, Sunrun Inc., and Solar Energy Industries Association.

13. The Company has modeled the Program's cost effectiveness, and the UCT score is 2.72. The Program exceeds the 1.0 UCT score required by the DSM/EE Mechanism, indicating that the benefits to the utility system exceed the costs. In addition to demonstrating that the utility system benefits outweigh the cost of the Program, the accepted EE cost-effectiveness screens also indicate that there will be little to no subsidization of participants in the program from non-participants.

14. The projected savings will be confirmed through EM&V by a third party, consistent with the guidelines outlined in the DSM/EE Mechanism, once adequate participation allows for a statistically valid sample. EM&V studies will use industry-accepted methods to collect and analyze data; measure and analyze Program participation; and evaluate, measure, verify, and validate the energy and peak demand savings. Methodologies such as site metering and smart meter consumption analysis may be utilized. As a component of the EM&V process evaluation, the Company will direct the evaluator to conduct a broad survey of both participating and non-

participating residential customers to assess their acceptance of the Smart Saver Solar Program. While an EM&V schedule cannot be determined until adequate participation is achieved, tentative participation targets indicate that an EM&V evaluation could be possible approximately a year after initial Program implementation. DEC has not yet identified the independent third party it plans to use for purposes of EM&V; however, EM&V costs are estimated not to exceed 5% of total Program costs. More specific EM&V costs will be included in the next annual rider filing.

15. In light of the customer and system benefits of the Program, and its accord with the Commission-approved EE/DSM Mechanism, the Company requests Commission approval of the Program for an effective date of January 1, 2023, and proposes to recover all costs incurred by the Company associated with the Program through the Company's DSM/EE rider in accordance with the DSM/EE Mechanism. Upon approval of the Program by this Commission and the South Carolina Public Service Commission, the Company will complete its implementation plans and make the Program available to customers on January 1, 2023.

16. The Company has attached hereto as Exhibit 1 the information required by Rule R8-68(c)(2) in support of the proposed Smart Saver Solar Program.

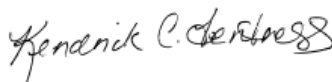
WHEREFORE, the Company respectfully requests that the Commission:

1. Approve the Smart Saver Solar Energy Efficiency Program and tariff attached hereto as Exhibit 1 and Attachment G thereto, effective January 1, 2023;
2. Find that the Smart Saver Solar Energy Efficiency Program meets the requirements of a new EE program consistent with

N.C. Gen. Stat. §§ 62-133.8 and 62-133.9 and Rules R8-67 and R8-68;

3. Find that all reasonable and prudent costs incurred by DEC associated with the Smart Saver Solar Energy Efficiency Program will be eligible for cost recovery through the Company's annual DSM/EE rider in accordance with Rule R8-69(b); and
4. Find that the Company is eligible to recover utility incentives and net lost revenues associated with the Smart Saver Solar Energy Efficiency Program pursuant to its DSM/EE Mechanism through its annual DSM/EE rider in accordance with Rule R8-69.

Respectfully submitted, this the 16th day of December 2021.



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ATTORNEYS FOR DUKE ENERGY CAROLINAS, LLC

| R8-68 Filing Requirements | |
|--|---|
| Smart \$aver® Solar Energy Efficiency Program | |
| Filing Requirements | |
| (c)(2)(i)(a) | <p>Measure / Program Name</p> <p>Smart \$aver® Solar Program (“Program”)</p> |
| (c)(2)(i)(b) | <p>Consideration to be Offered</p> <p>Program participants will receive incentives for installation of rooftop solar photovoltaic (“PV”) facilities. The amount of the incentive will be posted on the Duke Energy Carolinas, LLC (“DEC” or the “Company”) website. The amount of the incentive will not exceed \$0.36/Watt-DC.</p> |
| (c)(2)(i)(c) | <p>Anticipated Total Cost of the Measure / Program</p> <p>See Attachment B, line 15.</p> |
| (c)(2)(i)(d) | <p>Source and Amount of Funding Proposed to be Used</p> <p>The source of funding will come from DEC’s general fund, consisting of all sources and capital. Costs associated with the Program will also be subject to cost recovery through the Demand-Side Management (“DSM”)/Energy Efficiency (“EE”) annual cost recovery rider consistent with Commission Rule R8-68(b). See attachment B, line 15.</p> |
| (c)(2)(i)(e) | <p>Proposed Classes of Persons to Whom This Will be Offered</p> <p>This Program is available to residential customers whose energy needs for all water heating, clothes drying, and environmental space conditioning are supplied electrically.</p> |
| (c)(2)(ii)(a) | <p>Describe the Measure / Program’s Objective</p> <p>The objective of this Program is to provide residential customers with opportunities to lower their homes’ electric use through an installation of a rooftop solar PV facility at the residential premise. By incentivizing the installation of the solar PV facilities, the Program allows customers to reduce their energy consumption from the grid.</p> |
| (c)(2)(ii)(b) | <p>Describe the Measure / Program Duration</p> <p>Duration - see Attachment A, line 1.</p> |
| (c)(2)(ii)(c) | <p>Describe the Measure / Program Sector and Eligibility Requirements</p> <p>The Program is available to homeowners for their individually metered single family residences. Individually metered duplexes, mobile homes and condominiums will be handled on a case-by-case basis which will depend upon the structure, maintenance responsibility and dwelling characteristics.</p> <ul style="list-style-type: none"> • All energy required for all water heating, clothes drying, and environmental space conditioning are supplied electrically; • The Customer must become a new net metering customer on or after January 1, 2023 or upon Commission approval of this Program if the Commission approves the Program after January 1, 2023; • The Customer must be eligible for and participate in the Winter-Focused option of the Power Manager Load Control program (“Rider PM”) with a Customer-provided eligible Thermostat; • The Customer must comply with all installation and interconnection requirements of the proposed Residential Solar Choice rider (“Rider RSC”); and • The Customer must not be a participant in the Company’s Solar Rebate program. |
| (c)(2)(ii)(d) | <p>Examples of Communication Materials and Related Cost</p> <p>Cost associated with communications materials for this Program through various communication channels is approximately \$97,440 annually and is embedded in the cost displayed in Attachment B, line 11.</p> <p>This Program may be promoted through various marketing channels that may include but are not limited to:</p> <ul style="list-style-type: none"> • Trade Allies • Direct Mail • TV/Radio • Community Events |
| (c)(2)(ii)(d) (continued) | |

| | <ul style="list-style-type: none"> • Bill Inserts • Point-of-Sale | | | | | | | | | | | | |
|---|--|------------------------|---------------------------|----------------------------------|---|---|---|--|---|---|---|---|---|
| (c)(2)(ii)(e) | Estimated Number of Participants | | | | | | | | | | | | |
| | Estimated DEC Participation - see Attachment A, lines 3 - 12. | | | | | | | | | | | | |
| (c)(2)(ii)(f) | Impact that each measure or program is expected to have on the electric public utility or electric membership corporation, its customer body as a whole, and its participating North Carolina customers; | | | | | | | | | | | | |
| | Estimated DEC Program Impact - see Attachment A, lines 13 - 49. | | | | | | | | | | | | |
| (c)(2)(ii)(g) | Any other information the electric public utility or electric membership corporation believes is relevant to the application, including information on competition known by the electric public utility or the electric membership corporation. | | | | | | | | | | | | |
| | Not applicable. | | | | | | | | | | | | |
| (c)(2)(iii)(a) | Proposed Marketing Plan Including Market Barriers and how the Electric Public Utility Plans to Address Them. | | | | | | | | | | | | |
| | The Company will market the Program through various marketing channels that may include, but are not limited to: <ul style="list-style-type: none"> • Trade Allies • Direct Mail • TV/Radio • Community Events • Bill Inserts • Point-of-Sale • The Company may not be aware of all market barriers or understands the methods that can be used to address these market barriers. Potential market barriers include: | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>MARKET BARRIERS</th> <th>ACTIONS TO ADDRESS</th> </tr> </thead> <tbody> <tr> <td>Out of pocket participant costs.</td> <td>Encourage potential participants to gain education on the potential economics associated with Program participation including paybacks.</td> </tr> <tr> <td>Ability or desire to participate in Winter-Focused BYOT program (Rider PM).</td> <td>Provide more information to customers regarding Rider PM's Winter-Focused option.</td> </tr> <tr> <td>Concern that comfort will be degraded by DR activations.</td> <td>Utilize pre-cooling/heating to minimize potential discomfort.</td> </tr> <tr> <td>Fear on the part of the customer that the utility may be eavesdropping on them, controlling their thermostat against their will, damaging the thermostat device, causing discomfort to the customer, or some other unwanted intrusive action.</td> <td>These concerns should be anticipated when third parties such as utilities request remote access to appliances within customers' homes. All messaging and customer support must proactively provide assurance and education about each issue, including the customers' right to opt-out or exit the Program at any time.</td> </tr> <tr> <td>Lack of awareness/understanding on the part of the customer regarding DR programs in general, how they work, and what the benefits are (for the customer, the utility and the community).</td> <td>Ensure that messaging includes clear, easy to understand information regarding the Program, and DR as a whole. Provide clear channels to customer support via phone, email or direct online chat.</td> </tr> </tbody> </table> | MARKET BARRIERS | ACTIONS TO ADDRESS | Out of pocket participant costs. | Encourage potential participants to gain education on the potential economics associated with Program participation including paybacks. | Ability or desire to participate in Winter-Focused BYOT program (Rider PM). | Provide more information to customers regarding Rider PM's Winter-Focused option. | Concern that comfort will be degraded by DR activations. | Utilize pre-cooling/heating to minimize potential discomfort. | Fear on the part of the customer that the utility may be eavesdropping on them, controlling their thermostat against their will, damaging the thermostat device, causing discomfort to the customer, or some other unwanted intrusive action. | These concerns should be anticipated when third parties such as utilities request remote access to appliances within customers' homes. All messaging and customer support must proactively provide assurance and education about each issue, including the customers' right to opt-out or exit the Program at any time. | Lack of awareness/understanding on the part of the customer regarding DR programs in general, how they work, and what the benefits are (for the customer, the utility and the community). | Ensure that messaging includes clear, easy to understand information regarding the Program, and DR as a whole. Provide clear channels to customer support via phone, email or direct online chat. |
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| (c)(2)(iii)(b) | Total Market Potential and Estimated Market Growth throughout the Duration of the Program; | | | | | | | | | | | | |
| | Market potential represents the number of eligible customers based on eligibility requirements defined in the Program tariff. There are approximately 769,108 residential customers that meet the criteria for this Program. | | | | | | | | | | | | |

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| | Estimated Market Growth (Participation) - see Attachment A, lines 3 - 12. |
| (c)(2)(iii)(c) | Estimated Summer and Winter Peak Demand Reduction by Unit Metric and in the Aggregate by Year Estimated Summer and Winter Peak Demand Reduction – see Attachment A, lines 13 - 17 and 23 - 24 and Attachment E, lines 1 - 10. |
| (c)(2)(iii)(d) | Estimated Energy Reduction per Appropriate Unit Metric and in the Aggregate by Year Estimated Energy Reduction - see Attachment A, lines 18 - 22 and lines 25 - 29. |
| (c)(2)(iii)(e) | Estimated Lost Energy Sales per Appropriate Unit metric and in the Aggregate by Year Lost Energy Sales - see Attachment A, lines 30 - 39. |
| (c)(2)(iii)(f) | Estimated Load Shape Impacts See responses to (c)(2)(iii)(c) and (c)(c)(iii)(d). |
| (c)(2)(iv)(a) | Estimated Total and Per Unit Cost and Benefit of the Measure / Program and the Planned Accounting Treatment for Those Costs and Benefits Costs associated with this Program will be subject to deferral and amortization as incurred. DEC is also eligible to recover a return on any outstanding deferred balance pursuant to Commission Rule R8-68(b)(6). Total estimated cost by category – see Attachment B lines 8 - 11. Total estimated benefit – see Attachment B line 14. Total estimated per unit cost by category – see Attachment D lines 1 - 25. Data shown on Attachment B represents present value of cost and benefits over the life of the measure. The cost shown in Attachment B reflects the reduction of Program cost offset by projected referrals fees. |
| (c)(2)(iv)(b) | Type, Amount, and Reason for Any Participation Incentives and Other Consideration and to Whom They Will be Offered, Including Schedules Listing Participation Incentives and Other Consideration to be Offered Incentives will be awarded on a consistent and nondiscriminatory basis to eligible customers who have successfully implemented a qualifying measure and submitted a completed application in compliance with Program requirements. The incentive may be assigned to a solar installer or leasing company if the customer is in a lease arrangement. Initial incentive for solar PV will be \$0.36/Watt-DC and is based upon the direct current (DC) nameplate rating of the Customer’s solar PV system. The capacity rating of the system shall be no greater than 20 kilowatts AC. |
| (c)(2)(iv)(c) | Service Limitations or Conditions Planned to be Imposed on Customers Who do not Participate in the Measure / Program None |
| (c)(2)(v) | Cost-Effectiveness Evaluation (including the results of all cost-effectiveness tests and should include, at a minimum, an analysis of the Total Resource Cost Test, the Participant Test, the Utility Cost Test, and the Ratepayer Impact Measure Test) Description of the Methodology Used to Produce the Impact Estimates, as well as, if Appropriate, |

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| | <p>Methodologies Considered and Rejected in the Interim Leading to the Final Model Specification “Program Manager to update Analytics to review can confirm source documentation is available to support assumptions”</p> <p>kWh savings were developed based on solar generation and customer loads from a sample of actual solar rooftop installation within the DEC system. Seasonal peak kW savings were based on solar self-service loads during the dates and times of the projected winter and summer system peaks.</p> <p>See Attachment B, line 16 for cost-effectiveness test scores.</p> |
| (c)(2)(vi) | <p>Commission Guidelines Regarding Incentive Programs (provide the information necessary to comply with the Commission’s Revised Guidelines for Resolution of Issues Regarding Incentive Programs, issued by Commission Order on March 27, 1996, in Docket No. M-100, Sub 124, set out as an Appendix to Chapter 8 of these rules)</p> <p>The Program does not provide any inducement or incentive affecting a residential customer’s decision to install or adopt natural gas or electric service.</p> |
| (c)(2)(vii) | <p>Integrated Resource Plan (explain in detail how the measure is consistent with the electric public utility’s or electric membership corporation’s integrated resource plan filings pursuant to Rule R8-60)</p> <p>Energy and capacity reductions from this Program will be included for planning purposes in future integrated resource plans.</p> |
| (c)(2)(viii) | <p>Other (any other information the electric public utility or electric membership corporation believes relevant to the application, including information on competition known by the electric public utility or the electric membership corporation)</p> <p>Not applicable.</p> |
| Additional Filing Requirements | |
| (c)(3)(i)(a) | <p>Costs and Benefits- Any Costs Incurred or Expected to be Incurred in Adopting and Implementing a Measure / Program to be Considered for Recovery Through the Annual Rider Under G.S. 62-133.9</p> <p>See Attachment C, lines 11 - 35.</p> |
| (c)(3)(i)(b) | <p>Estimated total costs to be avoided by the measure by appropriate capacity, energy and measure unit metric and in the aggregate by year</p> <p>See Attachment A, lines 40 - 49.</p> |
| (c)(3)(i)(c) | <p>Estimated participation incentives by appropriate capacity, energy, and measure unit metric and in the aggregate by year.</p> <p>Incentive per cumulative kW - see Attachment E, lines 21 - 25. Incentive per cumulative kWh - see Attachment F, lines 16 - 20. Incentive per participant - see Attachment D, lines 11 - 15.</p> |

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| <p>(c)(3)(i)(d)</p> | <p>How the electric public utility proposes to allocate the costs and benefits of the measure among the customer classes and jurisdictions it serves.</p> <p>The program costs for EE programs targeted at North Carolina and South Carolina retail residential customers are allocated to North Carolina retail jurisdiction based on the ratio of North Carolina retail kWh sales to total retail kWh sales, then recovered only from North Carolina residential customers.</p> |
| <p>(c)(3)(i)(e)</p> | <p>The capitalization period to allow the utility to recover all costs or those portions of the costs associated with a new program or measure to the extent that those costs are intended to produce future benefits as provided in G.S. 62-133.9(d)(1).</p> <p>No costs from this Program will be capitalized.</p> |
| <p>(c)(3)(i)(f)</p> | <p>The electric public utility shall also include the estimated and known costs of measurement and verification activities pursuant to the Measurement and Verification Reporting Plan described in paragraph (ii).</p> <p>Total portfolio evaluation costs are estimated to be 5 percent of total Program costs.</p> |
| <p>(c)(3)(ii)(a)</p> | <p>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Describe the industry-accepted methods to be used to evaluate, measure, verify, and validate the energy and peak demand savings estimated in (2)(iii)c and d above.</p> <p>EM&V actions will provide an independent, third-party report of energy savings attributable to the Program including an impact analysis and process evaluation.</p> <p>The impact analysis will review deemed savings assumptions and verify equipment installations. Depending upon the measure, selective monitoring and site visits will be performed at a sample of participant homes to estimate hours of operation and associated amperage. In addition, the evaluator will conduct a consumption analysis to determine the home's net reduction in energy and demand due to the installation of the solar panels. A statistically representative sample of participants will be selected for the analysis.</p> <p>The process evaluation will include participant surveys, along with vendor satisfaction surveys or interviews, to estimate net-to-gross and uncover issues that might impact customer satisfaction or Program effectiveness. A statistically representative sample of participants will be selected for the process analysis.</p> <p>The Company intends to follow industry-accepted methodologies for all measurement and verification activities. This evaluation plan is consistent with IPMVP Options A, C, and D.</p> |
| <p>(c)(3)(ii)(b)</p> | <p>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Provide a schedule for reporting the savings to the Commission;</p> <p>The Company will report savings associated with this Program in its annual DSM/EE cost recovery proceedings.</p> |
| <p>(c)(3)(ii)(c)</p> | <p>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: describe the methodologies used to produce the impact estimates, as well as, if appropriate, the methodologies it considered and rejected in the interim leading to final model specification; and</p> <p>See (c)(2)(v)</p> |
| <p>(c)(3)(ii)(d)</p> | <p>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Identify any third party and include all of the costs of that third party, if the electric public utility plans to utilize an independent third party for purposes of measurement and verification</p> <p>The Company intends to use a third-party evaluator. See section (c)(3)(i)(f) for cost.</p> |
| <p>(c)(3)(iii)</p> | <p>Cost Recovery Mechanism- Describe the Proposed Method of Cost Recovery From its Customers</p> <p>The Company seeks to recover Program costs, net lost revenues and a utility incentive pursuant to DEC's Commission-approved DSM/EE cost recovery mechanism.</p> |

| | |
|-------------------|--|
| (c)(3)(iv) | <p>Tariffs or Rates- Provide Proposed Tariffs or Modifications to Existing Tariffs That Will be Required to Implement Each Measure / Program</p> <p>The tariff for the Residential Smart \$aver® Solar Energy Efficiency Program is included as Attachment G.</p> |
| (c)(3)(v) | <p>Utility Incentives- Indicate Whether it Will Seek to Recover Any Utility Incentives, Including, if Appropriate, Net Lost Revenues, in Addition to its Costs</p> <p>The Company seeks to recover Program costs, net lost revenues and a utility incentive pursuant to DEC's Commission-approved DSM/EE cost recovery mechanism.</p> |

Attachment A
Participation

| Smart \$aver® Solar Energy Efficiency | | |
|--|---|-------------|
| 1 | Measure Life (Average) | 25 |
| 2 | Free Rider % (Average) | 10.0% |
| 3 | Incremental Participants Year 1 | 1,587 |
| 4 | Incremental Participants Year 2 | 1,714 |
| 5 | Incremental Participants Year 3 | 1,851 |
| 6 | Incremental Participants Year 4 | 1,999 |
| 7 | Incremental Participants Year 5 | 2,159 |
| 8 | Cumulative Participation Year 1 | 1,587 |
| 9 | Cumulative Participation Year 2 | 3,301 |
| 10 | Cumulative Participation Year 3 | 5,153 |
| 11 | Cumulative Participation Year 4 | 7,152 |
| 12 | Cumulative Participation Year 5 | 9,311 |
| 13 | Cumulative Summer Coincident kW w/ losses (net free) Year 1 | 3,626 |
| 14 | Cumulative Summer Coincident kW w/ losses (net free) Year 2 | 7,523 |
| 15 | Cumulative Summer Coincident kW w/ losses (net free) Year 3 | 11,714 |
| 16 | Cumulative Summer Coincident kW w/ losses (net free) Year 4 | 16,222 |
| 17 | Cumulative Summer Coincident kW w/ losses (net free) Year 5 | 21,073 |
| 18 | Cumulative kWh w/ losses (net free) Year 1 | 15,634,350 |
| 19 | Cumulative kWh w/ losses (net free) Year 2 | 32,441,275 |
| 20 | Cumulative kWh w/ losses (net free) Year 3 | 50,514,583 |
| 21 | Cumulative kWh w/ losses (net free) Year 4 | 69,955,584 |
| 22 | Cumulative kWh w/ losses (net free) Year 5 | 90,873,694 |
| 23 | Per Participant Weighted Average Coincident Saved Winter kW w/ losses | 0.0186 |
| 24 | Per Participant Weighted Average Coincident Saved Summer kW w/ losses | 2.5381 |
| 25 | Per Participant Average Annual kWh w/ losses (net free) Year 1 | 9,850 |
| 26 | Per Participant Average Annual kWh w/ losses (net free) Year 2 | 9,827 |
| 27 | Per Participant Average Annual kWh w/ losses (net free) Year 3 | 9,804 |
| 28 | Per Participant Average Annual kWh w/ losses (net free) Year 4 | 9,781 |
| 29 | Per Participant Average Annual kWh w/ losses (net free) Year 5 | 9,760 |
| 30 | Cumulative Lost Revenue (net free) Year 1 | \$791,396 |
| 31 | Cumulative Lost Revenue (net free) Year 2 | \$1,673,215 |
| 32 | Cumulative Lost Revenue (net free) Year 3 | \$2,653,751 |
| 33 | Cumulative Lost Revenue (net free) Year 4 | \$3,742,064 |
| 34 | Cumulative Lost Revenue (net free) Year 5 | \$4,948,039 |
| 35 | Average Lost Revenue per Participant (net free) Year 1 | \$498.62 |
| 36 | Average Lost Revenue per Participant (net free) Year 2 | \$506.83 |
| 37 | Average Lost Revenue per Participant (net free) Year 3 | \$515.03 |
| 38 | Average Lost Revenue per Participant (net free) Year 4 | \$523.22 |
| 39 | Average Lost Revenue per Participant (net free) Year 5 | \$531.40 |
| 40 | Total Avoided Costs/MW saved Year 1 | \$151,505 |
| 41 | Total Avoided Costs/MW saved Year 2 | \$154,189 |
| 42 | Total Avoided Costs/MW saved Year 3 | \$156,879 |
| 43 | Total Avoided Costs/MW saved Year 4 | \$159,671 |
| 44 | Total Avoided Costs/MW saved Year 5 | \$162,608 |
| 45 | Total Avoided Costs/MWh saved Year 1 | \$28 |
| 46 | Total Avoided Costs/MWh saved Year 2 | \$29 |
| 47 | Total Avoided Costs/MWh saved Year 3 | \$30 |
| 48 | Total Avoided Costs/MWh saved Year 4 | \$32 |
| 49 | Total Avoided Costs/MWh saved Year 5 | \$36 |

Attachment B
Cost-Effectiveness Evaluation

| Smart \$aver® Solar Energy Efficiency | | | | | |
|--|---------------------------------------|--------------|---------------|--------------|--------------------|
| | | UCT | TRC | RIM | Participant |
| 1 | Avoided T&D Electric | \$20,268,745 | \$20,268,745 | \$20,268,745 | \$0 |
| 2 | Cost-Based Avoided Elec Production | \$52,062,480 | \$52,062,480 | \$52,062,480 | \$0 |
| 3 | Cost-Based Avoided Elec Capacity | \$2,221,338 | \$2,221,338 | \$2,221,338 | \$0 |
| 4 | Participant Elec Bill Savings (gross) | \$0 | \$0 | \$0 | \$65,147,268 |
| 5 | Participant Tax Credits (gross) | \$0 | \$0 | \$0 | \$42,067,551 |
| 6 | Participant Tax Credits (net) | \$0 | \$37,860,796 | \$0 | \$0 |
| 7 | Net Lost Revenue Net Fuel | \$0 | \$0 | \$39,457,165 | \$0 |
| 8 | Administration (EM&V) Costs | \$1,298,965 | \$1,298,965 | \$1,298,965 | \$0 |
| 9 | Implementation Costs | \$142,038 | \$142,038 | \$142,038 | \$0 |
| 10 | Incentives | \$25,125,423 | \$0 | \$25,125,423 | \$25,125,423 |
| 11 | Other Utility Costs | \$814,718 | \$814,718 | \$814,718 | \$0 |
| 12 | Participant Costs (gross) | \$0 | \$0 | \$0 | \$151,170,409 |
| 13 | Participant Costs (net) | \$0 | \$136,053,369 | \$0 | \$0 |
| 14 | Total Benefits | \$74,552,564 | \$112,413,359 | \$74,552,564 | \$132,340,241 |
| 15 | Total Costs | \$27,381,144 | \$138,309,090 | \$66,838,309 | \$151,170,409 |
| 16 | Benefit/Cost Ratios | 2.72 | 0.81 | 1.12 | 0.88 |

Data represents present value of costs and benefits over the life of the program.

Attachment C
Program Costs by Year

| Smart Saver® Solar Energy Efficiency | | |
|---|------------------------------------|--------------|
| 1 | Incremental Participants Year 1 | 1,587 |
| 2 | Incremental Participants Year 2 | 1,714 |
| 3 | Incremental Participants Year 3 | 1,851 |
| 4 | Incremental Participants Year 4 | 1,999 |
| 5 | Incremental Participants Year 5 | 2,159 |
| 6 | Total Participant Costs Year 1 | \$30,773,046 |
| 7 | Total Participant Costs Year 2 | \$32,639,972 |
| 8 | Total Participant Costs Year 3 | \$34,447,289 |
| 9 | Total Participant Costs Year 4 | \$36,591,776 |
| 10 | Total Participant Costs Year 5 | \$38,639,602 |
| 11 | Administration (EM&V) Costs Year 1 | \$261,964 |
| 12 | Administration (EM&V) Costs Year 2 | \$273,457 |
| 13 | Administration (EM&V) Costs Year 3 | \$294,818 |
| 14 | Administration (EM&V) Costs Year 4 | \$317,887 |
| 15 | Administration (EM&V) Costs Year 5 | \$341,478 |
| 16 | Implementation Costs Year 1 | \$27,807 |
| 17 | Implementation Costs Year 2 | \$30,032 |
| 18 | Implementation Costs Year 3 | \$32,434 |
| 19 | Implementation Costs Year 4 | \$35,029 |
| 20 | Implementation Costs Year 5 | \$37,831 |
| 21 | Total Incentives Year 1 | \$4,916,808 |
| 22 | Total Incentives Year 2 | \$5,310,153 |
| 23 | Total Incentives Year 3 | \$5,734,965 |
| 24 | Total Incentives Year 4 | \$6,193,762 |
| 25 | Total Incentives Year 5 | \$6,689,263 |
| 26 | Other Utility Costs Year 1 | \$294,671 |
| 27 | Other Utility Costs Year 2 | \$128,958 |
| 28 | Other Utility Costs Year 3 | \$128,958 |
| 29 | Other Utility Costs Year 4 | \$128,958 |
| 30 | Other Utility Costs Year 5 | \$102,463 |
| 31 | Total Utility Costs Year 1 | \$5,501,251 |
| 32 | Total Utility Costs Year 2 | \$5,742,600 |
| 33 | Total Utility Costs Year 3 | \$6,191,175 |
| 34 | Total Utility Costs Year 4 | \$6,675,637 |
| 35 | Total Utility Costs Year 5 | \$7,171,036 |

Attachment D
Program Costs per Participant

| Smart Saver® Solar Energy Efficiency | | |
|---|--|------------|
| 1 | Average Per Participant Administration (EM&V) Costs Year 1 | \$165.05 |
| 2 | Average Per Participant Administration (EM&V) Costs Year 2 | \$159.53 |
| 3 | Average Per Participant Administration (EM&V) Costs Year 3 | \$159.25 |
| 4 | Average Per Participant Administration (EM&V) Costs Year 4 | \$158.99 |
| 5 | Average Per Participant Administration (EM&V) Costs Year 5 | \$158.14 |
| 6 | Average Per Participant Implementation Costs Year 1 | \$17.52 |
| 7 | Average Per Participant Implementation Costs Year 2 | \$17.52 |
| 8 | Average Per Participant Implementation Costs Year 3 | \$17.52 |
| 9 | Average Per Participant Implementation Costs Year 4 | \$17.52 |
| 10 | Average Per Participant Implementation Costs Year 5 | \$17.52 |
| 11 | Average Per Participant Incentives Year 1 | \$3,097.85 |
| 12 | Average Per Participant Incentives Year 2 | \$3,097.85 |
| 13 | Average Per Participant Incentives Year 3 | \$3,097.85 |
| 14 | Average Per Participant Incentives Year 4 | \$3,097.85 |
| 15 | Average Per Participant Incentives Year 5 | \$3,097.85 |
| 16 | Average Per Participant Other Utility Costs Year 1 | \$185.66 |
| 17 | Average Per Participant Other Utility Costs Year 2 | \$75.23 |
| 18 | Average Per Participant Other Utility Costs Year 3 | \$69.66 |
| 19 | Average Per Participant Other Utility Costs Year 4 | \$64.50 |
| 20 | Average Per Participant Other Utility Costs Year 5 | \$47.45 |
| 21 | Average Per Participant Total Utility Costs Year 1 | \$3,466.08 |
| 22 | Average Per Participant Total Utility Costs Year 2 | \$3,350.13 |
| 23 | Average Per Participant Total Utility Costs Year 3 | \$3,344.28 |
| 24 | Average Per Participant Total Utility Costs Year 4 | \$3,338.86 |
| 25 | Average Per Participant Total Utility Costs Year 5 | \$3,320.96 |

Attachment E
Program Costs per kW

| Smart \$aver® Solar Energy Efficiency | | |
|--|---|---------|
| 1 | Cumulative Winter Coincident kW w/ losses (net free) Year 1 | 27 |
| 2 | Cumulative Winter Coincident kW w/ losses (net free) Year 2 | 55 |
| 3 | Cumulative Winter Coincident kW w/ losses (net free) Year 3 | 86 |
| 4 | Cumulative Winter Coincident kW w/ losses (net free) Year 4 | 119 |
| 5 | Cumulative Winter Coincident kW w/ losses (net free) Year 5 | 155 |
| 6 | Cumulative Summer Coincident kW w/ losses (net free) Year 1 | 3,626 |
| 7 | Cumulative Summer Coincident kW w/ losses (net free) Year 2 | 7,523 |
| 8 | Cumulative Summer Coincident kW w/ losses (net free) Year 3 | 11,714 |
| 9 | Cumulative Summer Coincident kW w/ losses (net free) Year 4 | 16,222 |
| 10 | Cumulative Summer Coincident kW w/ losses (net free) Year 5 | 21,073 |
| 11 | Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1 | \$72 |
| 12 | Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2 | \$36 |
| 13 | Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3 | \$25 |
| 14 | Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4 | \$20 |
| 15 | Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5 | \$16 |
| 16 | Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1 | \$8 |
| 17 | Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2 | \$4 |
| 18 | Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3 | \$3 |
| 19 | Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4 | \$2 |
| 20 | Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5 | \$2 |
| 21 | Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 1 | \$1,356 |
| 22 | Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 2 | \$706 |
| 23 | Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 3 | \$490 |
| 24 | Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 4 | \$382 |
| 25 | Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 5 | \$317 |
| 26 | Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1 | \$81 |
| 27 | Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2 | \$17 |
| 28 | Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3 | \$11 |
| 29 | Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4 | \$8 |
| 30 | Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5 | \$5 |
| 31 | Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1 | \$1,517 |
| 32 | Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2 | \$763 |
| 33 | Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3 | \$529 |
| 34 | Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4 | \$412 |
| 35 | Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5 | \$340 |

Attachment F
Program Costs per kWh

| Smart \$aver® Solar Energy Efficiency | | |
|--|--|------------|
| 1 | Cumulative kWh w/ losses (net free) Year 1 | 15,634,350 |
| 2 | Cumulative kWh w/ losses (net free) Year 2 | 32,441,275 |
| 3 | Cumulative kWh w/ losses (net free) Year 3 | 50,514,583 |
| 4 | Cumulative kWh w/ losses (net free) Year 4 | 69,955,584 |
| 5 | Cumulative kWh w/ losses (net free) Year 5 | 90,873,694 |
| 6 | Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 1 | \$0.017 |
| 7 | Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 2 | \$0.008 |
| 8 | Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 3 | \$0.006 |
| 9 | Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 4 | \$0.005 |
| 10 | Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 5 | \$0.004 |
| 11 | Implementation Costs / Cumulative kWh w/ losses (net free) Year 1 | \$0.002 |
| 12 | Implementation Costs / Cumulative kWh w/ losses (net free) Year 2 | \$0.001 |
| 13 | Implementation Costs / Cumulative kWh w/ losses (net free) Year 3 | \$0.001 |
| 14 | Implementation Costs / Cumulative kWh w/ losses (net free) Year 4 | \$0.0005 |
| 15 | Implementation Costs / Cumulative kWh w/ losses (net free) Year 5 | \$0.0004 |
| 16 | Incentives / Cumulative kWh w/ losses (net free) Year 1 | \$0.314 |
| 17 | Incentives / Cumulative kWh w/ losses (net free) Year 2 | \$0.164 |
| 18 | Incentives / Cumulative kWh w/ losses (net free) Year 3 | \$0.114 |
| 19 | Incentives / Cumulative kWh w/ losses (net free) Year 4 | \$0.089 |
| 20 | Incentives / Cumulative kWh w/ losses (net free) Year 5 | \$0.074 |
| 21 | Other Utility Costs / Cumulative kWh w/ losses (net free) Year 1 | \$0.019 |
| 22 | Other Utility Costs / Cumulative kWh w/ losses (net free) Year 2 | \$0.004 |
| 23 | Other Utility Costs / Cumulative kWh w/ losses (net free) Year 3 | \$0.003 |
| 24 | Other Utility Costs / Cumulative kWh w/ losses (net free) Year 4 | \$0.002 |
| 25 | Other Utility Costs / Cumulative kWh w/ losses (net free) Year 5 | \$0.001 |
| 26 | Total Utility Costs / Cumulative kWh w/ losses (net free) Year 1 | \$0.352 |
| 27 | Total Utility Costs / Cumulative kWh w/ losses (net free) Year 2 | \$0.177 |
| 28 | Total Utility Costs / Cumulative kWh w/ losses (net free) Year 3 | \$0.123 |
| 29 | Total Utility Costs / Cumulative kWh w/ losses (net free) Year 4 | \$0.095 |
| 30 | Total Utility Costs / Cumulative kWh w/ losses (net free) Year 5 | \$0.079 |

SMART SAVER SOLAR ENERGY EFFICIENCY PROGRAM (NC)

ELIGIBILITY

This Program is available to residential customers who install and operate a rooftop solar photovoltaic (PV) electric generating system and who meet all eligibility requirements listed below. The solar PV system may either be owned by the Customer or owned by a lessor and leased to the Customer. The capacity rating of the system shall be no greater than 20 kilowatts AC.

To be eligible to participate in the Program and receive the incentive ("Rooftop Incentive"), the Customer must comply with all of the following:

- The Customer must become a new net metering customer on or after January 1, 2023,
- All energy required for all water heating, clothes drying, and environmental space conditioning must be supplied electrically, and all electric energy used in such dwelling must be recorded through a single meter,
- The Customer must be eligible for and participate in the Winter-focused option of the Power Manager Load Control Service program ("Rider PM") with a Customer-provided eligible Thermostat,
- The Customer must comply with all installation and interconnection requirements of the proposed Residential Solar Choice rider ("Rider RSC"), and
- The Customer must not be a participant in the Company's Solar Rebate Program.

Customers who are not willing or able to install a qualified smart thermostat and enroll in the Winter-focused option of Rider PM, or who are not willing or able to take service under Rider RSC, are not eligible for the Rooftop Incentive.

Participation under the Program is available, at the Company's sole discretion, on a "first come, first served" basis for systems installed on and after January 1, 2023.

APPLICATION REQUIREMENTS

The Customer must complete and submit an application for the Rooftop Incentive as instructed on the Company's website at www.duke-energy.com. The rooftop solar PV system shall be installed by a certified installer and subject to inspection by the Company for the purposes of program evaluation, measurement, and verification.

ROOFTOP INCENTIVE PAYMENT

Upon confirmation of compliance with all eligibility requirements, the Company will provide to the Customer a one-time Rooftop Incentive payment based upon the direct current (DC) nameplate rating of the Customer's solar PV system.

- The Rooftop Incentive may be assigned to a solar installer or leasing company if the customer is in a lease arrangement.
- The Company reserves the right to adjust the incentive prospectively on a periodic basis, as appropriate, to reflect changes to efficiency standards and market conditions.
- The Company reserves the right to limit the availability of incentives by the type and location of residential structures required to ensure achievement of energy savings.
- The current amount of the incentive payment will be posted to the Company's website at www.duke-energy.com. The amount of the incentive will not exceed \$0.36/Watt-DC.
- Incentives may be limited to one of any product, per residence, under all Company Energy Efficiency Programs.

CONTRACT PERIOD

Customers receiving the Rooftop Incentive must contract to remain on Rider RSC (or future applicable net metering rider) and remain enrolled in the Winter-focused option of Rider PM for a period of twenty-five (25) years.

If a customer opts out of more events than Rider PM allows in any year, the customer will be charged a \$200 fee representing an annual prorated share of the Rooftop Incentive (average customer incentive divided by 25 years). If a customer unenrolls in the Winter-focused option of Rider PM, the customer must pay back \$200 for each year of the 25-year contract period that the customer is not enrolled, not to exceed the customer's initial incentive payment amount. The penalties for early termination will not be assessed if the termination is due to Force Majeure or the Customer's sale of the residence.

Attachment G

Exhibit 1

Duke Energy Carolinas, LLC

Electricity No. 4
North Carolina (Proposed) Original Leaf No. 180

SMART SAVER SOLAR ENERGY EFFICIENCY PROGRAM (NC)

The Company reserves the right to terminate service and request payment of the above termination charge any time upon written notice to the Customer in the event that the Customer violates any of the terms or conditions of this Program, or operates the solar PV system in a manner which is detrimental to the Company and/or its customers. The Company may also terminate service under this Program and request repayment of the Rooftop Incentive if the Customer intentionally misstates or misrepresents the operating capacity or operating characteristics of the solar PV system.

ENVIRONMENTAL ATTRIBUTES

Incentives and other considerations offered under the terms of this Program are understood to be an essential element in the recipient's decision to participate in the Program. Upon payment of these considerations, Company will be entitled to any and all environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags," associated with the solar PV generation system and any and all environmental, energy efficiency, and demand reduction benefits and attributes, including all reporting and compliance rights, associated with participation in the Program.

GENERAL

Duke Energy will establish performance requirements deemed necessary to ensure achievement of minimum energy savings for equipment, products, and services offered for incentives, including but not limited to direction, orientation, shade, and any other factor affecting output. Parameters related to these performance requirements may include, but are not limited to, diagnostic testing, size of conditioned area, building/structure type, energy reduction achievement, installer/installation, and product selection.