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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 and Duke Energy Progress, LLC's
Reply Comments
Docket Nos. E-7, Sub 1261 and E-2, Sub 1287**

Dear Ms. Dunston:

Please find enclosed for filing in the above-referenced dockets Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Reply Comments.

If you have any questions, please let me know.

Sincerely,

A handwritten signature in black ink that reads "Kendrick C. Fentress". The signature is written in a cursive, flowing style.

Kendrick C. Fentress

Enclosure

cc: Parties of Record

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1261
DOCKET NO. E-2, SUB 1287

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)	
Application of Duke Energy Carolinas, LLC)	
for Approval of Smart \$aver Solar Energy)	
Efficiency Program Pursuant to N.C. Gen.)	JOINT REPLY COMMENTS OF
Stat. § 62-133.9 and Commission Rule R8-68)	DUKE ENERGY CAROLINAS,
)	LLC AND DUKE ENERGY
In the Matter of)	PROGRESS, LLC
Application of Duke Energy Progress, LLC)	
for Approval of Smart \$aver Solar Energy)	
Efficiency Program Pursuant to N.C. Gen.)	
Stat. § 62-133.9 and Commission Rule R8-68)	

NOW COME Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (collectively, the “Companies”), by and through their legal counsel, and respectfully submit the following Reply Comments in accordance with North Carolina Utilities Commission (“Commission”) Rule R8-68(d)(2) and the Commission’s January 13, 2022 *Order Granting Extension of Time*, February 25, 2022 *Order Granting Second Extension of Time*, and March 25, 2022 *Order Granting Leave to File Reply Comments and Extending Time for Responses to Comments* issued in the above-referenced dockets.

In support of these Reply Comments, the Companies respectfully show the Commission the following:

Introduction

1. Contrary to the Public Staff’s comments, there is no prohibition on solar photovoltaic (“PV”) facilities or renewable generation being treated as energy

efficiency,¹ provided that the proposed program is cost-effective and otherwise meets the definition of EE.² In order to support its misplaced position that the proposed Smart Saver Solar Energy Efficiency Programs (“Smart Saver Solar” or the “Programs”) are not EE, the Public Staff reads into the EE statute and rule language that does not exist – there is simply no requirement that EE programs be limited to measures that reduce consumption *for end-use devices*. If the North Carolina General Assembly had intended to so limit the definition, it could have. It did not. Instead, the legislature enacted, and the Commission adopted, a broad definition of EE that allows for approval of cost-effective programs that result in less energy used to perform the same function. Smart Saver Solar meets this definition.³

2. The ultimate purpose of EE programs is to cost-effectively reduce energy usage from the grid, so that the utility can avoid building new generation, which saves all customers money in the long run. As the Public Staff has explained, “the benefit of a DSM or EE program to electricity customers is the long-term reduction in cost of service achieved by the utility, and passed through to its customers through lower revenue requirements, as a result of the utility acquiring DSM and EE resources to serve load growth at a lower cost than would have been incurred had the utility

¹ Sometimes referred to herein as “EE.”

² It is important to note that the Commission is not being asked to decide an abstract question as to whether solar is EE – the Commission has before it specific applications which meet every requirement of an energy efficiency program under N.C. Gen. Stat. § 62-133.8 and Commission Rule R8-68.

³ While the Public Staff points to a directive from the South Carolina Public Service Commission denying approval for the Smart Saver Solar programs and correctly notes that an order explaining the basis for the denial has not yet been issued, several of the disputed issues in those proceedings are not applicable here, and the pertinent South Carolina statutes and, in particular, the definition of EE, differ from the relevant law in North Carolina in important respects.

instead been required to serve that load growth through acquisition of supply-side resources.”⁴

3. Principally, the statutory framework for demand-side management (“DSM”) and EE is intended to reduce customer reliance on utility-generated power, and to incentivize utilities to pursue programs that achieve that purpose. In other words, the DSM/EE statute motivates utilities to take actions to reduce customer usage and demand, that, absent the statute would be counter to utilities’ interests. The thrust of the statute is cost-effectively reducing consumption from the utility’s system, and this is exactly what the Programs proposed in this case accomplish.

4. The focus of EE programs on reducing consumption from the grid is further supported by the Utility Cost Test (“UCT”), which is the primary test used to determine the cost-effectiveness of the Companies’ DSM and EE programs. The UCT evaluates cost-effectiveness based on a comparison between the production, capacity, and transmission and distribution (“T&D”) costs avoided as a result of the program with the costs of the program. This analysis focuses exclusively on reductions in grid energy usage, and Smart \$aver Solar passes the UCT with flying colors.

5. The Public Staff also raises a number of arguments relating to fuel-switching, free ridership, and the commitment period required for Smart \$aver Solar and recommends that the Commission adopt certain conditions to mitigate these perceived issues – including denying the recovery of net lost revenues and utility incentives and limiting the program to a 3-year pilot – if the Commission ultimately decides to approve Smart \$aver Solar as an EE program. As demonstrated below, these

⁴ Testimony of Michael C. Maness, Docket No. E-7, Sub 1032, at 30 (August 7, 2013).

concerns are unfounded, and denial of net lost revenues and utility incentives would be punitive and contrary to North Carolina law and policy, which is designed to remove the financial disincentive for utilities to pursue EE programs that benefit the environment, the State, and utility customers.

6. The Attorney General’s Office (“AGO”) indicates that it is supportive of incentives for installing residential rooftop solar, but requests that the Commission postpone issuing an order on the proposed Solar EE Programs until related issues – in particular, the fate of the Companies’ proposed Net Energy Metering (“NEM”) tariffs currently pending in Docket No. E-100, Sub 180 – are decided. The AGO also suggests that the Commission wait until the Carbon Plan process prescribed by House Bill 951⁵ is farther along before making a decision on whether to approve Smart Saver Solar, but urges the Commission to act in sufficient time to ensure that a replacement solar incentive is implemented before the expiration of the Companies’ existing Solar Rebate Program on December 31, 2022.

7. The Companies agree with the AGO that Smart Saver Solar is intended to operate in tandem with the Companies’ proposed NEM tariffs and that the two offerings are intended to be part of a “package deal” as memorialized in the Memorandum of Understanding that was filed in the NEM docket.⁶ Nevertheless, procedurally, the dockets are on essentially parallel tracks, so the Companies do not believe a formal postponement in the Smart Saver Solar proceeding is necessary.

⁵ Session Law 2021-165, eff. Oct. 13, 2021.

⁶ See Memorandum of Understanding entered into by the Companies; the North Carolina Sustainable Energy Association (“NCSEA”); the Southern Environmental Law Center on behalf of Southern Alliance for Clean Energy (“SACE”) and Vote Solar; Sunrun, Inc.; and Solar Energy Industries Association (“SEIA”), Docket No. E-100, Sub 180 (Nov. 29, 2021) (the “MOU”).

8. Likewise, the Companies disagree that the Commission should wait to rule on Smart Saver Solar until there is more clarity on the role residential rooftop solar will play in meeting the State's carbon reduction goals under House Bill 951. Energy efficiency programs most certainly will play a critical role in advancing the goals of House Bill 951, but the Commission should not refrain from approving cost-effective EE in the meantime.

9. As more fully set forth below, the Commission should approve the proposed EE Programs as filed in the above-referenced dockets on December 16, 2021, should not impose the conditions requested by the Public Staff, and should not delay the proceeding as recommended by the AGO.

Smart Saver Solar Qualifies as an Energy Efficiency Program Under North Carolina Law

10. N.C. Gen. Stat. § 62-133.8(a)(4) defines “energy efficiency measure,” as:

an equipment, physical, or program change implemented after January 1, 2007, that results in less energy used to perform the same function. “Energy efficiency measure” includes, but is not limited to energy produced from a combined heat and power system that uses nonrenewable resources.

11. Similarly, under 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.”

12. The Smart Saver Solar program fits squarely within the definition of “energy efficiency” articulated by the North Carolina legislature and this Commission

– a rooftop solar array is “equipment...that when implemented results in less use of energy to perform the same function or provide the same level of service.”

13. Neither the statute nor the rule limits EE programs based on where the energy savings occur – *i.e.*, the definition does not depend upon whether less energy is being used from the grid versus whether less energy is being used by a particular end-use device. Here, the energy savings result from the reduction in consumption by the customer as a result of installing the solar array.

14. The Public Staff relies heavily upon the definition of “energy efficiency” set forth by the Energy Information Administration (“EIA”),⁷ which goes far beyond North Carolina’s definition of EE. While the Public Staff claims that North Carolina’s definition of EE is “consistent” with the EIA definition, they are completely different – the North Carolina definition of energy efficiency is broader and, aside from the carve-out for CHP, makes no mention of “specific end-use devices,” types of technology and equipment, or specific examples of energy efficiency programs.

15. Notably, elsewhere on its website, EIA recently updated its explanation of energy efficiency and energy conservation as follows: “Energy efficiency generally pertains to the technical performance of energy conversion and consuming devices and building materials. Energy conservation generally includes actions to reduce the amount of energy end use.”⁸ Under this explanation, while Smart Saver Solar may not be considered “energy conservation,” it certainly would meet the definition of “energy

⁷ Public Staff Comments, at 5; *see also*, <https://www.eia.gov/tools/glossary/>.

⁸ *See* “Energy efficiency and conservation - U.S. Energy Information Administration (EIA),” available at <https://www.eia.gov/energyexplained/use-of-energy/efficiency-and-conservation.php#:~:text=Energy%20efficiency%20generally%20pertains%20to,amount%20of%20energy%20end%20use> (last visited on March 24, 2022).

efficiency” in that it incents the installation of a device that enables “energy conversion” – solar technologies convert sunlight into electrical energy through PV panels. In any event, the Public Staff cites no reason the Commission should look beyond the actual language in the North Carolina statute.⁹

16. Based upon its inappropriate reliance upon the EIA definition, the Public Staff then reads into the statute and rule that energy efficiency must be confined to enhancements that reduce the energy consumed by “end-use” devices. Nothing in North Carolina law or policy supports this interpretation.

17. To the contrary, the Renewable Energy and Energy Efficiency Standards (“REPS”) for Electric Public Utilities provide that an “*electric public utility* may meet the requirements of this section by...reduc[ing] energy consumption through the implementation of an energy efficiency measure.” N.C. Gen. Stat. § 62-133.8(b)(2)c (emphasis added). This language reinforces the fact that, under North Carolina law, energy efficiency is focused on reduction in consumption *from the utility system* and is not limited to reducing consumption by a particular end-use. In fact, the rulemaking order cited by the Public Staff in its comments interpreting this language states that “as an EE measure for REPS compliance, **the electric public utility must ‘reduce energy consumption.’ ... The only benefit that can be claimed in the EE part of REPS is the energy actually saved.**” See Public Staff Comments, at 7, citing *Order Adopting Final Rules*, Docket No. E-100, Sub 113 (N.C.U.C. Feb. 29, 2008)

⁹ The Commission is bound to apply the plain language of a statute to accomplish the intent of the General Assembly; if the language is clear and unambiguous, the court will not look to results of statutory construction or to legislative history. See *In re Banks*, 295 N.C. 236, 239, 244 S.E.2d 386, 388-89 (1978) (citing *State v. Camp*, 286 N.C. 148, 152, 209 S.E.2d 754, 756 (1974)); see also *State ex rel. Utils Comm’n v. Env’t Def. Fund*, 214 N.C.App. 364, 366, 716 S.E.2d 370, 372 (2011).

(emphasis supplied by Public Staff). The statute is framed from the utility's perspective – *i.e.*, the *utility* must reduce energy consumption and can only get credit for the energy actually saved. Smart Saver Solar is completely consistent with this framework – here, the Companies seek to reduce energy consumption by incentivizing customers to use energy from the sun instead of purchasing energy from the Companies. Switching the focus to reducing the energy used by a specific end-use device, as the Public Staff encourages by citing to the EIA definition, is exceedingly narrow and quite simply not what the statute says.

18. The Public Staff criticizes the Companies' use of the phrase "reduced energy consumption from the grid" in their applications and accuses the Companies of attempting to "insert words into the statute." The Companies use this phrase simply to describe the nature of the energy savings resulting from the Programs. As discussed throughout these Reply Comments, the plain language definition of EE is already broad enough to unambiguously encompass all reductions in consumption ("less energy used to perform the same function") resulting from the utility's actions, regardless of whether they fit into the smaller subset of energy reductions resulting from end-use enhancements. To the contrary, it is the Public Staff who is attempting to read words into the EE statute,¹⁰ by adding "end-use" to the definition.¹¹ In essence, the Public

¹⁰ *State ex rel. Utils. Comm'n v. N. Carolina Sustainable Energy Ass'n*, 254 N.C. App. 761, 764, 803 S.E.2d 430, 433 (2017) (the court "cannot delete words used or insert words not used" in the statute); *Lunsford v. Mills*, 367 N.C. 618, 623, 766 S.E.2d 297, 301 (2014) (in effectuating legislative intent, it is our duty to give effect to the words actually used in a statute and not to delete words used or to insert words not used).

¹¹ Again, the Public Staff's argument is undermined by the very source it relies upon – according to EIA, while end-use may be a defining characteristic of energy conservation, it is not necessarily for energy efficiency, which "pertains to the technical performance of energy conversion and consuming devices and building materials." *See supra* fn. 8.

Staff is arguing that the statute should be read to define EE as “less energy used by an end-use device to perform the same function.”

19. To limit EE to end-use for residential efficiency creates an arbitrary distinction which fails to account for the opportunities that exist with newer technology and market evolution. As Commissioner Clodfelter observed in his concurring opinion in the Commission’s Order approving the Companies’ revised DSM/EE cost recovery mechanisms (the “Mechanisms”):

Several commenters have noted that the success of the energy efficiency and demand side management programs proposed and approved to date does not necessarily portend to the equivalent future success. Put differently, they say the “low-hanging fruit” has by now substantially all be harvested. I am concerned they will prove to be correct.

Order Approving Revisions to Demand-Side Management and Energy Efficiency Cost Recovery Mechanisms, Docket Nos. E-7, Sub 1032 and E-2, Sub 931 (N.C.U.C. Oct. 20, 2020) (“*Order Approving Revised Mechanisms*”).

20. Certainly, several of the Companies’ existing EE programs accomplish the goal of reducing consumption from the grid by reducing energy consumed by end-use devices (*e.g.*, rebates for LED lighting products and higher SEER HVAC units); however, that is not the only means available to reduce grid consumption. Instead, the statute and rule are worded broadly to encompass all measures that result in less energy used to perform the same function. Moreover, the reference to “the same function” can apply to the function of a household as well as to the function of a single appliance or measure. To read the statute and rule as narrowly as the Public Staff urges, unduly constrains the Companies’ ability to implement new measures that will effectuate the

goals of Senate Bill 3¹² and carbon reduction. Moreover, handcuffing the Commission in this way will virtually guarantee that the utilities in North Carolina will be confined to the “low-hanging fruit” that has already been harvested and unable to provide new and innovative cost-effective EE programs.

21. Perhaps the Public Staff’s most puzzling argument is its insistence that, like combined heat and power (“CHP”) systems that use nonrenewable resources, customer-sited solar would have to be specifically referenced in the EE definition in order to qualify as EE. Topping Cycle CHP is actually a combustion turbine, yet it is recognized as EE solely due to the fact that the legislature saw fit to include a carve-out to specifically address this measure. Clearly, a carve-out for CHP that uses nonrenewable energy resources is necessary – as the Public Staff points out, CHP would not otherwise meet the definition of EE.

22. By contrast, a specific carve-out for solar PV is *not* necessary because energy reductions from a program like Smart Saver Solar – which, of course, utilizes a renewable resource, not a non-renewable resource like CHP – would fall within the definition. More generally (and as a matter of common sense), if an energy efficiency measure clearly meets the definition, it does not need a carve-out or to be specifically listed. Indeed, aside from CHP, no other examples of EE measures are provided in the definition. As such, the fact that the EE statute does not specifically mention customer-

¹² Session Law 2007-397, eff. Aug. 20, 2007.

sited solar generation as an EE program does not indicate that the legislature must not have intended it to be EE as the Public Staff urges.¹³

23. Similarly, the Public Staff's reliance upon an earlier version of House Bill 951 that was not ultimately passed¹⁴ is nonsensical. Legislative purpose is first ascertained from the plain words of the statute.¹⁵ Only if, after analyzing the text, structure, and policy of the statute, a court is *still* in doubt as to legislative intent, may it look at the legislative history.¹⁶ Even so, language that was not ultimately included in a bill is not relevant in the determination of the intent of the legislation as derived from the plain language of the statute. As the North Carolina Supreme Court held, "[t]hat a legislature declined to enact a statute with specific language does not indicate the legislature intended the exact opposite."¹⁷ Put another way, "ordinarily the intent of the legislature is indicated by its actions, and not by its failure to act."¹⁸ As such, the proposed amendments to the EE definition that the Public Staff argues would have resulted in the Programs meeting the definition are completely irrelevant and certainly do not mean the opposite – *i.e.*, that the proposed Programs do not meet the current EE definition. In other words, changes to N.C. Gen. Stat. § 62-133.8 cited by Public Staff that were proposed, but not adopted, in 2021 are not indicative of the original intent of

¹³ Following the Public Staff's logic, the EE programs it cites throughout its comments as acceptable because they involve "end-use enhancements" (such as LED lighting technologies and higher SEER HVAC) would also be disqualified because they are not specifically listed.

¹⁴ Public Staff Comments, at 7-8 (arguing that a proposal included in the third edition of House Bill 951 would have amended the statutory definition of EE, but that this amendment was not ultimately included).

¹⁵ *Electric Supply Co.*, 328 N.C. at 656.

¹⁶ *Id.*

¹⁷ *N.C. Dep't of Correction v. N.C. Med. Bd.*, 363 N.C. 189, 202 (2009).

¹⁸ *Id.*

the legislature when N.C. Gen. Stat. § 62-133.8, and the controlling definition of “energy efficiency,” was passed in 2007.¹⁹

24. Finally, even if it were appropriate to attempt to divine the reason the language was not ultimately included in House Bill 951 as the Public Staff urges, the Companies believe it is far more likely that policy-makers decided that the addition of such language to the definition of EE was unnecessary *because the existing definition of EE already embraced such programs*. “[A] party’s argument as to why a bill failed to pass ‘can be nothing more than conjecture’ and ‘many other reasons for legislative inaction readily suggest themselves.’”²⁰ In any event, since the proposed language was not adopted, what this Commission is left to interpret is the words that *are* included in the definition of energy efficiency measure and not the words that are not.

25. The Public Staff also implies that because solar electricity is defined as a “renewable energy resource” under N.C. Gen. Stat. § 62-133.8(a)(8), it cannot be EE. However, solar thermal is also defined as a “renewable energy resource” under the exact same statutory provision, yet the Public Staff has no issue with the Solar Thermal Water Heating Program previously offered by DEP being characterized as EE.

26. Indeed, the Solar Thermal Water Heating Program and Smart Saver Solar are more alike than the Public Staff suggests. Fundamentally, the Solar Thermal

¹⁹ See *id.* at 202-03 (finding that a 1983 decision by the Senate Judiciary Committee not to include a provision carried no weight in the Court’s determination of the intent of the enacting legislature in 1909); see also *Electric Supply Co.*, 328 N.C. at 656-57 (refusing to consider memorandum written by attorney who drafted proposed 1985 amendments as evidence of legislative intent of 1971 statute: “Even if we were willing to consider the attachment to the legislative committee proceedings in question, and we are not, we would be unpersuaded that the memorandum, submitted nearly fourteen years after the passage of the statute under review, would be sufficiently persuasive to overturn what, prior to 1971, was as well-settled right...”).

²⁰ See *Department of Correction*, 363 N.C. at 202 (internal citations omitted).

Water Heating Program and the EE Programs proposed by the Companies in these proceedings both reduce customers' energy usage from the grid by using energy from the sun. While the Public Staff attempts to focus on the distinction between solar PV generating electricity and solar water heaters warming water to use less electricity, both operate by harnessing solar energy for the purpose of reducing grid energy usage. The Public Staff's view that using the sun's thermal energy to heat water and reduce consumption from the grid is somehow different than converting the sun's energy into electricity to reduce consumption from the grid flies in the face of the definition of EE under North Carolina law – both result in less energy being used to perform the same function.

27. It is unclear why the Public Staff cites the denial of Dominion Energy North Carolina's ("Dominion") proposed Customer Distributed Generation Program ("CDG") – which would have provided an incentive for constructing diesel standby generators as a DSM program – as "instructive."²¹ The Public Staff's acknowledges the Smart Saver Solar programs "differ in that they are incenting customers install emission-free, renewable solar PV generation instead of fossil fuel generation"²² – this distinction is critical and the very reason that Smart Saver Solar qualifies as EE and Dominion's proposed program does not.

28. NCSEA, SACE, and Vote Solar (collectively, the "Joint Intervenors") convincingly distinguish Dominion's CDG program from Smart Saver Solar in their initial comments.²³ The Joint Intervenors point out that CDG was designed to be a DSM

²¹ See Public Staff Comments, at 14.

²² *Id.* at 15.

²³ Joint Intervenor Comments, at 7-8.

program for commercial and industrial customers, not a residential EE program like Smart Saver Solar. The Joint Intervenors also note that CDG involved construction of new diesel-burning generators. Under N.C. Gen. Stat. § 62-133.8(a), CHP is the only form of nonrenewable energy that is recognized as qualifying as EE. Smart Saver Solar is designed to reduce energy consumption from the grid through the use of renewable energy.

29. Based on these important distinctions, the Joint Intervenors conclude that the more appropriate comparison for precedential purposes is with the Solar Thermal Water Heating Pilot Program – like Smart Saver Solar it was offered to residential customers, it used emission-free solar energy as the source to reduce energy consumption from the grid, and it was an energy efficiency program rather than DSM.²⁴

30. The Public Staff also contends that solar PV without storage is an intermittent resource and should not be considered energy efficiency because the utility would be required to serve the total potential energy requirements of the home when the customer-owned solar PV system is not producing energy.²⁵ It is odd that the Public Staff would point to the intermittency of the energy savings from solar PV, as all energy efficiency measures are intermittent in that they only generate energy savings from the grid when the customer is using the efficiency measure (*e.g.*, an LED only reduces consumption when it is turned on). This position demonstrates that the Public Staff may not understand how the proposed Programs were evaluated. The reality is that the Company modeled Smart Saver Solar by evaluating the expected output of the rooftop

²⁴ *Id.* at 8.

²⁵ *See* Public Staff Comments, at 15.

PV compared to the average load shape of an eligible customer (one utilizing electricity as its primary source for space and water heating). By looking at the Programs in this manner, the Companies are appropriately only considering the intermittent nature of solar PV and only recognizing a reduction in consumption from the grid when the customer is using electricity from the grid that can be reduced. Essentially, the reduction in consumption from the grid is only recognized when the solar PV is producing a reduction in consumption from the grid when the customer's home is turned on (*i.e.*, using electricity).

31. In addition, the Public Staff argues that the distinction between a Renewable Energy Credit ("REC") and an Energy Efficiency Credit ("EEC") utilized by a utility to comply with REPS somehow justifies its argument that Smart Saver Solar should not be considered energy efficiency. This argument is baseless. As the Public Staff correctly points out, as is the case with all of the Companies' EE programs, the proposed Smart Saver Solar tariffs provide that the Companies "will be entitled to any and all environmental attributes, including but not limited to 'renewable energy certificates' (RECs), 'renewables energy credits' or 'green tags,' associated with the solar PV..." The Companies believe this is appropriate to ensure that the REPS compliance obligation is appropriately accounted for and that there is no "double-counting." The Companies plan to utilize the EEC credits associated with the Smart Saver Solar energy savings for REPS compliance – this is appropriate because these savings would be achieved through a Commission-approved energy efficiency program. The customer is required to convey the RECs to the Companies associated with the reduction in consumption from the grid that occurs as a result of participating

in the Programs in order to ensure that there is no double counting of savings. The Companies will retain and track the number of RECs obtained through Smart Saver Solar, but will not use them towards REPS compliance. Again, just as the case with any reduction in consumption from the grid that is achieved through a Commission-approved EE program, only the EECs associated with Smart Saver Solar will be used to comply with the Companies' REPS obligation. The accounting will be no different than how the reduction in consumption from the grid was utilized in compliance associated with the DEP Solar Thermal Water Heating Pilot Program.²⁶

The Companies Are Not Simply Repackaging Existing Solar Rebate Programs as EE

32. As noted by the Joint Intervenors, the Programs fall under different statutory authority (N.C. Gen. Stat. § 62-133.9 for energy efficiency) than the Solar Rebate (N.C. Gen. Stat. § 62- 155).²⁷ The Programs are not intended as a replacement for the Solar Rebate program, because the Programs as energy efficiency measures can

²⁶ See *Order Approving Programs*, Docket No. E-2, Sub 928, at (Oct. 14, 2008):

All parties agree that solar hot water heaters... may in other circumstances instead be considered a renewable energy facility pursuant to G.S. 62-133.8(a)(7) and earn RECs that may be counted toward REPS compliance under G.S. 62-133.8(b)(2)(e) or (c)(2)(d). However, it would be inappropriate, and would amount to double-counting, if PEC were allowed to take credit as an energy efficiency measure for a solar hot water heater financed as part of the RHA Program and, in addition, an electric power supplier was allowed to acquire RECs derived from that solar thermal facility and use them to comply with the REPS requirement. Therefore, a solar hot water heater financed and installed as part of the RHA Program may not be counted as both an energy efficiency measure and a renewable energy facility. Solar hot water heaters for which PEC earns RECs due to the implementation of the RHA Program are not renewable energy facilities and may not, and should not, be registered as such pursuant to Commission Rule R8-66 by the owner of the solar hot water heater.

²⁷ Joint Intervenor Comments, at 2.

only be approved if cost effective, whereas no such requirement exists for the Solar Rebate program. Nevertheless, the Public Staff is correct that the “timing is not coincidental.”²⁸ As demonstrated below, customers clearly require financial incentives to install solar PV in meaningful numbers, and the EE Programs, with a proposed effective date of January 1, 2023, are intended to fill the gap when the Solar Rebate expires on December 31, 2022.

33. While it is true that the Companies have not yet proposed an incentive for residential solar as part of an EE program in North Carolina before, the fact is that the economics and market conditions associated with the technology did not previously support rooftop solar being considered for inclusion in the Companies’ EE portfolios in the past. The residential solar component of the Programs would reduce grid energy usage, and the requirement to participate in the Companies’ winter-focused Bring Your Own Thermostat Program (“Winter BYOT”) would reduce these customers’ demand.²⁹ Additionally, when coupled with new time-of-use rates and the pending NEM tariffs,

²⁸ Public Staff Comments, at 18.

²⁹ The Public Staff argues that “tying [Smart Saver Solar] to the Winter BYOT program does not transform the Programs from solar rebate programs into DSM/EE programs, nor does it alter the statutory definition of EE.” *See* Public Staff Comments, at 19. As discussed at length above, Smart Saver Solar is an energy efficiency program in its own right, and the Companies propose pairing the two programs not to bolster their argument, but rather to achieve a synergistic reduction in demand and consumption from the grid on a year-round basis. More specifically, Smart Saver Solar provides substantial amounts of kWh energy and summer peak kW savings, but very little winter kW savings. In contrast, the Winter BYOT program provides substantial amounts of winter peak kW savings, no kWh energy savings, and little summer peak kW savings. When combined, these two programs maximize all three savings variables (kWh, summer kW, and winter kW). The strategic bundling of complementary DSM/EE measures is expressly permitted by the Companies’ Mechanisms. *See Order Approving Revised Mechanisms*, Attachment A, at 5; *id.*, Attachment B, at 5.

It is important to note, however, that the EE savings impacts used to calculate the cost-effectiveness of Smart Saver Solar do not include any impacts from Winter BYOT. As the Public Staff notes, “the Companies seem to have made great effort in their analyses and modeling to ensure that the savings attributable to the Winter BYOT programs are not counted in savings attributable to the Programs and vice versa.” Public Staff Comments, at 19.

customers are further incentivized to reduce their consumption and modify usage patterns, resulting in EE.³⁰

34. The Public Staff states, with no evidentiary basis, that “customers with the economic means to install solar PV on their homes have installed many MWs of solar PV capacity. Much of the solar PV has been installed without utility incentives.”³¹ The Companies completely disagree.

35. Given the large upfront capital investment required for solar PV, absent the proposed EE incentive, most customers would choose not to participate. This is especially true given the potential void of financial incentives for residential rooftop solar once the North Carolina Solar Rebate expires on December 31, 2022. Contrary to the Public Staff’s implication that the Companies no longer need to entice customers to install solar PV, historic solar participation indicates that in the absence of a financial incentive, solar PV adoption is considerably lower. As the Companies explained in response to a Public Staff data request³²:

North Carolina established 1:1 net metering in 2005. From 2005 to 2015, Duke did not offer any financial incentive for installation beyond the 1:1 NEM rate, and customers were not compensated for unused exported energy (often referred to as “banked” kWh). During this period, privately owned solar PV installations were very limited. In NC, Duke began offering an upfront rebate for solar PV in 2018 and in response the Companies saw applications for customer-owned solar PV spike. The correlation between the availability of upfront financial incentives and higher levels of solar PV adoption is strong. When Companies offer upfront financial

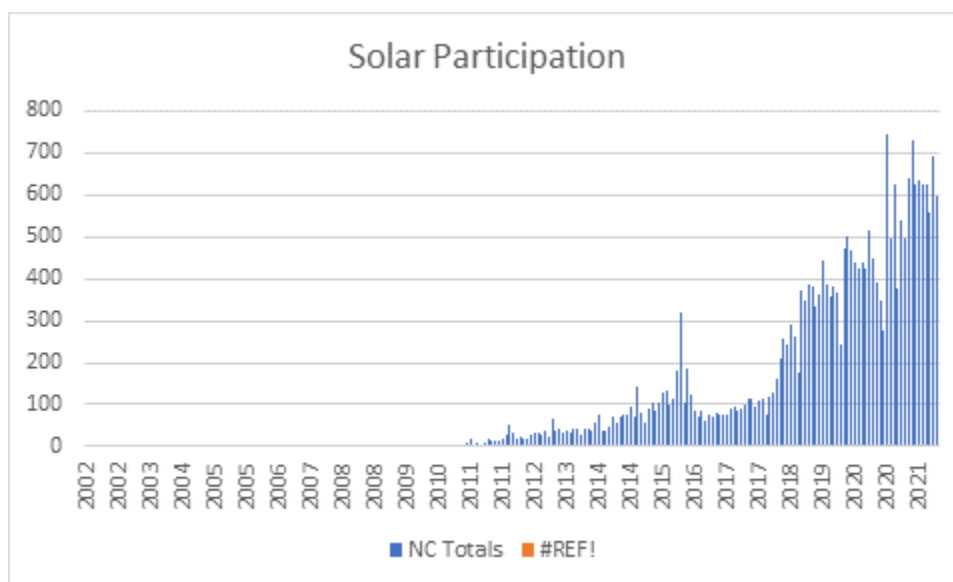
³⁰ EE impacts for cost-effectiveness also do not include the value of exports under the proposed NEM tariffs.

³¹ See Public Staff Comments, at 16.

³² The data request and response are attached to the Joint Intervenors’ comments as Attachment 1 to Exhibit A.

incentives to offset the required upfront cost associated with installing solar PV, adoption of solar PV is far higher. Conversely, if the Company does not offer customers a way to reduce financial barriers such as upfront installation costs, customers are significantly less likely to install solar PV. Clearly the Smart Saver Solar incentives for solar PV installation will increase the likelihood that a customer will invest in solar PV and to reduce energy consumption from the grid while not reducing the participating customer's household function.

36. In their response, the Companies also included a chart illustrating historical residential solar participation for DEC and DEP and the significant increase resulting from the Solar Rebate Program (which first opened on July 9, 2018).



37. In addition, the implication by the Public Staff that an incentive is unnecessary because those with financial means have installed solar³³ is not an argument that the Commission should seriously entertain. In general, early adopters of

³³ See Public Staff Comments, at 16 (“customers with the economic means to install solar PV on their homes have installed many MWs of solar PV capacity. Much of the solar PV has been installed without incentives.”).

any technology will exist even when the economics make it difficult to justify the costs. In the case of solar PV systems, some customers see the benefit beyond just the financial considerations and are motivated by factors that may include solar PV being viewed as a more green way to reduce their household electric consumption from the grid, while not reducing their households' comfort and function. In any event, as discussed in more detail below, the Companies' free ridership calculations show that the number of customers who would install rooftop solar PV without a financial incentive is exceedingly low, and the ultimate goal of the Programs is make solar PV widely available to all eligible customers – not just the wealthy.³⁴

38. Moreover, as the Joint Intervenors state, “The proposed Programs would also serve as the backbone for future offerings targeted to make rooftop solar more accessible to low-income customers.” Indeed, pursuant to the MOU, the Companies have agreed to explore a potential solar DSM/EE program tailored to low-income customers.

Smart Saver Solar is Cost-Effective

39. The UCT is the determinative cost-effectiveness test for the Companies' DSM/EE programs.³⁵ The UCT evaluates programs based on a comparison of (1) the utility's avoided energy, capacity, and T&D costs – *i.e.*, the costs the utility avoids by NOT having to build new plant due to reductions in customers' consumption – and (2)

³⁴ The same can be said for almost any EE program that involves an incentive or rebate. For example, surely there is a small number of wealthy customers who are environmentally conscious and would install a more expensive high SEER HVAC unit without a financial incentive. That is what a free ridership estimate and EM&V are designed to capture. The Company does not get credit for savings from free riders, and the fact that free riders exist does not mean that an incentive is not necessary to motivate the vast majority of the Companies' customers.

³⁵ “Determination of cost-effectiveness of new and ongoing programs will be calculated using the UCT.” *Order Approving Revised Mechanisms*, at 4.

the costs of the program. This analysis is exclusively focused on reductions in grid energy usage, and this is precisely what the proposed Programs would achieve.

40. If the UCT score is greater than 1.0, it means that:

- (a) The benefits of the program to the utility system exceed the cost of the program;
- (b) The program is lower cost than the equivalent supply-side alternative; and
- (c) Implementation of the program would reduce rates for all customers (not just participants) in the long-run.

41. The UCT result for DEC's Smart Saver Solar program is 2.72. The UCT result for DEP's program is 2.24. This means that for every dollar DEC customers pay into the DSM/EE rider, customers are projected to see a return of \$2.72; for DEP customers, that return is projected to be \$2.24. Based on the UCT evaluation, it would cost the Companies' customers more if the Programs were *not* implemented.

42. In addition, the Programs will reduce customers' grid energy usage more cost-effectively than the Companies building new supply-side resources. Reducing supply-side investments produces utility system benefits to all customers, regardless of whether they choose to participate in the Programs.

43. Contrary to the Public Staff's comments, the Companies' free ridership estimates are completely justified, and if anything, on the conservative side. The Companies have significant experience with offering energy efficiency measures to customers and evaluating the free ridership of measures. Through this experience, the Companies have seen that free ridership tends to be higher with efficiency measures that have high market adoption and low out-of-pocket cost associated with them. For example, the residential A-Line LED bulb saw its free ridership increase up to 60% as

customer adoption increased, with over 50% of residential customers having participated in the program. With total solar adoption still being very low and the significant cost of installing solar, the Companies believe that 10% is a conservative assumption around free ridership. To further validate its free ridership assumption, in 2021, the Companies also looked at the weighted average free ridership (based on energy savings) of all EE measures included in the DEC and DEP portfolios and found the average free ridership rates were just over 8%.

44. The Public Staff applied a 90% free ridership rate to Smart Saver Solar based on the assumed free ridership percentages for the Solar Rebate program. First, applying a free ridership rate that is far higher than any free ridership rate that has ever been established through EM&V for any of the Companies' existing EE programs is absurd. Even more perplexing is the Public Staff's attempt to base free ridership estimates for Smart Saver Solar on the number of applicants for Solar Rebates who did not ultimately obtain a rebate but installed solar PV anyway. Free ridership is designed to measure the percentage of customers who receive a program incentive, but would have participated even if they had not received the incentive – not customers who installed a measure without receiving an incentive. In fact, what the Public Staff is calling free ridership is more in line with the definition of non-participant spillover, which is a measure of the additional energy savings that are achieved when a non-participant implements EE measures or practices as a result of the program's influence (for example, through exposure to the program) but is not accounted for in program savings of customers who adopt the measure. If the Companies were to include positive spillover impacts based on the Solar Rebate program in their evaluation of

Smart Saver Solar as the Public Staff suggests, it would actually *increase* cost-effectiveness. In any case, whether it is called “spillover” or “free ridership” (as the Public Staff appears to define it), it is a given for the Solar Rebate program. The way the existing Solar Rebate application process is structured, by the time a customer submits an application for the rebate they either (1) have already installed solar PV system, or (2) are already well down the path of installing solar PV. For example, a customer must have applied for interconnection and have a project number prior to applying to the Solar Rebate program. The customer must complete and submit their Solar Rebate application within 90 days *following installation of the system*. While a customer may apply prior to installation of the generating system, they must provide a written guarantee reserving the rebate. For a residential customer who obtains a rebate reservation prior to installation, the installation must be completed no later than December 31 in the year in which the reservation was obtained. As the Commission is well aware, the demand for the solar rebates far exceeded the number of rebates available in every year that the rebates were offered. Under these circumstances, it is not at all surprising that the number of customers who installed a solar PV system despite not receiving a rebate was high.

45. As the Public Staff notes, the Programs do not pass the participant cost test due to the fact that the Companies’ modeling solely considers the energy savings to be the difference between grid-supplied energy and customer-supplied energy.³⁶ In other words, this analysis looks at the benefit to the participant in the form of reduction in consumption and compares that to the cost to the participant of the solar PV system.

³⁶ See Public Staff Comments, at 25.

It is important to note that the Companies did not include any value associated with the solar PV beyond the direct reduction in consumption from the grid in their analysis under the participant test. While there are potential economic and other benefits available to customers electing to participate in the Programs, the Companies' analysis is appropriately conservative and isolates the impacts of the energy efficiency savings. The Companies' analysis under the participant test was also conservative in its assumption of customer costs, in that it assumed all customers paid full out-of-pocket costs rather than participating in solar leasing which would spread costs and reduce upfront expenditures.

46. In addition, although the participant cost test results appear marginal, rate assumptions (thus bill savings) are conservative. The simple payback will be well below the expected measure life of 25 years, and the solar panels have a much longer useful life, yielding even more bill savings than is presented in the analysis. The participants are not likely to be advised of, or focused on, participant cost test results. The Companies do not view these marginal participant cost test scores as a significant barrier to adoption.

47. In any event, as the Public Staff acknowledges, the UCT is the determinative test for whether the Programs should be approved.³⁷ As demonstrated above, using the Companies' free ridership calculations the UCT scores are extraordinarily high. Even if one were to assume higher free ridership, according to the Public Staff's own calculations, Smart Saver Solar could have free ridership as high

³⁷ Public Staff Comments, at 25.

as 60% (for DEP) and 67% (for DEC) and still be cost-effective under the UCT.³⁸ The Commission-approved Mechanism provides a UCT cost-effectiveness score of 1.0 or greater is sufficient to support the Companies proposing a new DSM/EE program.³⁹

48. Customers will realize savings under Smart Saver Solar, and the protections afforded by the Mechanism will ensure that the Companies only get compensated based upon verified savings. The Companies utilized accepted principles to calculate forecasted savings, and the Mechanism establishes and requires a rigorous evaluation, measurement, and verification (“EM&V”) process once the Programs are implemented in order to validate these savings.⁴⁰ In addition, the Public Staff’s EM&V expert reviews and provides feedback on the EM&V plans prepared by the Companies’ independent evaluators prior to the evaluation of a DSM/EE program, and also reviews, and conducts discovery on, the completed EM&V reports and results during the annual DSM/EE rider proceeding.

49. Only after the Commission approves the DSM/EE rider may the Companies begin recovering the associated costs. This means that any recoverable costs incurred in connection with the Smart Saver Solar Programs in year 2023 will not be filed as part of DEC and DEP’s respective DSM/EE riders until 2024. Upon Commission approval of that rider, those costs will be recovered from customers beginning in 2025 – two years after the year they were incurred. This process not only ensures that the costs recovered from customers arise from verified and validated

³⁸ *Id.* at 24.

³⁹ See *Order Approving Mechanisms*, Attachment A, at 5; *id.*, Attachment B, at 5.

⁴⁰ See *id.*, Attachment A, at 8; *id.*, Attachment B, at 9 (EM&V of Programs will be conducted using a nationally recognized protocol to ensure that Programs remain cost-effective. EM&V of Programs will be conducted by an independent third-party.).

shared savings, as outlined above, but also contains a correction mechanism (i.e., the Experience Modification Factor) to true-up estimates to actuals. If the actual savings are less than the projections, then the Companies are required to pay back the associated over-collected revenue to customers with interest.

50. In conclusion, the Companies provide their very best estimate of program cost-effectiveness and customer savings when a program is proposed, as they did in this case. Those estimates are then validated and verified by an independent third party using a “nationally recognized protocol.” The DSM/EE rider is then adjusted to reflect the results of EM&V and any overcollections are returned to customers with interest. Each of these steps in the process provide assurance to and protection of customers when new DSM/EE programs are proposed.

The Companies are Entitled to Recover Net Lost Revenues and a Utility Incentive for Smart Saver Solar

51. Senate Bill 3 was passed in August 2007 “to promote the development of renewable energy and energy efficiency through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS).” N.C. Gen. Stat. § 62-2(10). The stated goals of the legislation are to diversify the resources used to reliably meet the energy needs of consumers in the State, provide greater energy security through the use of indigenous energy resources available within the State, encourage private investment in renewable energy and EE, and provide improved air quality and other benefits to energy consumers and citizens of the State. *Id.* To this end, Senate Bill 3 provides that electric utilities “shall implement demand-side management and energy efficiency measures and use supply-side resources to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its

customers.” *See* N.C. Gen. Stat. § 62-133.9. Through the enactment of REPS, Senate Bill 3 also requires each electric public utility in the State to meet increasing percentages of its energy needs each year through EE measures. *See* N.C. Gen. Stat. § 62-133.8. Finally, this legislation provides that the utilities shall be compensated for their DSM/EE efforts and allows incentives to be awarded, including rewards based upon shared savings and avoided costs achieved by DSM/EE measures. *See* N.C. Gen. Stat. § 62-133.9.

52. Apart from Senate Bill 3, the Public Utilities Act more broadly promotes the establishment of “just and reasonable rates...consistent with long-term management and conservation of energy resources by avoiding wasteful, uneconomic and inefficient uses of energy” and encourages “harmony between public utilities, their users and the environment.” *See* N.C. Gen. Stat. § 62-2(4) and (5). In addition, the Act provides that it is the public policy of the State of North Carolina to:

To assure that resources necessary to meet future growth through the provision of adequate, reliable utility service include use of the entire spectrum of demand-side options, including but not limited to conservation, load management and efficiency programs, as additional sources of energy supply and/or energy demand reductions. To that end, to require energy planning and fixing of rates in a manner to result in the least cost mix of generation and demand-reduction measures which is achievable, including consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills[.]

N.C. Gen. Stat. § 62-2(3a).

53. Through Senate Bill 3 and the stated policy of the Public Utilities Act, it is apparent the legislature not only appreciates the importance of energy efficiency, but also recognizes that if a utility is not appropriately compensated and incentivized

for its DSM/EE efforts (which, from a financial perspective, equate to a utility spending money to encourage its customers to buy less of its product), it is difficult to put these efforts on equal footing with supply-side resources, for which the Company receives a return.

54. When the Company implements DSM/EE programs, it is delaying the need to build new power plants. Delaying or eliminating the need to build new capacity impacts the expected future earnings for the Company. To remove the financial disincentive associated with the pursuit of DSM/EE, it makes sense to provide the utility with a financial reward similar to that associated with the earnings on a power plant. In other words, in order to further the policy purpose of encouraging utilities to pursue energy efficiency, financial incentives are designed to make the utility essentially indifferent from a financial standpoint with respect to implementing DSM/EE programs versus building a new plant. If the incentive is eliminated, that violates that regulatory compact.

55. Of course, the policies discussed above do not give the Company free reign to implement – and recover incentives for – any DSM and EE programs it chooses to offer without regard to cost to customers. But as discussed above, the Companies have demonstrated that the Programs pass the UCT by a wide margin, and a high UCT score means that the program provides utility system benefits for *all* customers and will result in lower rates over time as a result of delaying and deferring new generation.

56. Once the Solar Rebate program expires, the Companies are no longer obligated by law to offer solar rebates or incentives for residential rooftop solar. Further, there is no doubt that customer-sited solar results in the Companies selling less

electricity to their customers, so without the ability to recover net lost revenues and utility incentives, it would not be financially prudent for the Companies to implement a program like Smart Saver Solar.

57. It is important to recognize that the Companies would not be getting a windfall if the Commission allows them to recover net lost revenues for Smart Saver Solar in accordance with the DSM/EE cost recovery Mechanisms⁴¹ that the Public Staff agreed to and the Commission approved. Net lost revenues simply neutralize the natural disincentive for a utility to pursue EE. In other words, the utility is allowed to recover net lost revenues resulting from the reduction in energy consumed from the grid so that it is in the same position it would have been had it instead invested in new generation, which serves the public policy goal of making a utility whole for investing in energy efficiency measures that are cost-effective, environmentally acceptable, and reduce energy consumption.

58. Likewise, the Companies' primary Commission-approved utility incentive – the Portfolio Performance Incentive or “PPI” – is the sharing of a benefit with customers, not “profit” to the Companies. Indeed, even after considering the Companies' authorized performance incentives that may accrue, customers retain nearly 90% of the net benefits achieved by the Programs.⁴² Under North Carolina law, the utility is permitted to obtain a reasonable return on its investment sufficient to make EE programs at least as financially attractive as construction of new generating facilities.

⁴¹ See *Order Approving Revised Mechanisms*, Attachment A, at 13-15; *id.*, Attachment B, at 15-17.

⁴² See *id.*, Attachment A, at 15-21; *id.*, Attachment B, at 17-23.

59. Accordingly, the Public Staff's suggested alternative – that if the Programs are approved as EE, the Companies should not be eligible for net lost revenues and PPI – is punitive and inconsistent with the Companies' Commission-approved DSM/EE cost recovery Mechanisms, as well as the policy that utilities should be compensated for pursuing cost-effective EE in order to put EE and supply-side resources on a level playing field. As such, the Commission should reject the Public Staff's recommendation and find that the Companies are entitled to recover net lost revenues and PPI for Smart Saver Solar in accordance with N.C. Gen. Stat. § 133.9, Commission Rule R8-69, and their approved Mechanisms.

Smart Saver Solar Does Not Promote Fuel Switching or Unreasonably Discriminate Against Certain Classes of Customers

60. The Public Staff additionally claims that because the Programs incent installation of rooftop solar PV generation for customers with all-electric rates only, they could result in fuel switching and may be unreasonably discriminatory to gas-electric customers that are ineligible. As a result, the Public Staff recommends that, if the Commission approves the Programs, it should direct the Companies to offer the Programs to all residential customers. The Public Staff's arbitrary recommendation, however, would dilute the potential for kWh savings and reduce the cost-effectiveness of these Programs; accordingly, it should be denied.

61. Commission Rule R8-68 provides that, in determining whether to approve a proposed energy efficiency program, the Commission may consider, among other things, (i) whether the proposed measure or program *unreasonably* discriminates among persons receiving or applying for the same kind and degree of service or (ii) whether the proposed measure or program *promotes unfair or destructive competition*

or is inconsistent with the public policy of this State as set forth in N.C. Gen. Stat. §§ 62-2 and 62-140. The Public Staff's comments do not demonstrate that the Programs are unreasonably discriminatory or that they promote unfair or destructive competition. Instead, the Public Staff conjectures that "incentivizing installing of rooftop solar PV generation, as the Companies have proposed, *could* affect a customer's decision to install natural gas over electric service because the Programs are open only to customers on an all-electric rate."⁴³ Additionally, the Public Staff simply suggests that "the ineligibility of customers that may choose to install natural gas *appears to be unreasonably discriminatory* pursuant to N.C.G.S. § 62-140."⁴⁴ No party has claimed that the Programs provide incentives to third-party builders to induce customers to deliberately construct electric-only homes so that they may participate in these Programs or that there is a causal effect between the Programs and a customer's decision to not install natural gas space conditioning, clothes drying, and water heating appliances or to switch to electric-only service. The unsupported speculation by the Public Staff (and the Public Staff alone)⁴⁵ is wholly insufficient to raise a colorable claim that the Commission should not approve the Programs or that it should direct the Companies to open the Programs to customers who are not on an all-electric rate, thereby reducing the benefit that *all DEC and DEP customers* receive from the Programs.

⁴³ Public Staff Comments, at 27 (emphasis added).

⁴⁴ *Id.* at 28 (emphasis added).

⁴⁵ The Companies fully complied with R8-68(d)(2) by serving the natural gas companies with the applications for approval of these Programs, and the Public Staff does not claim otherwise.

62. Consistent with the Companies' obligations to pursue energy savings from cost-effective energy efficiency programs, they designed the Programs, with their eligibility requirements, to maximize the energy consumption reduction from the grid associated with the participating customer, not to displace natural gas service for space and water heating or try to entice customers to switch their natural gas service to all-electric utility service. More kWh of energy savings will yield more avoided cost benefits that support the Programs' cost-effectiveness. In other words, the pool of customers eligible for the Programs will likely use more energy than the ineligible customers primarily because of the energy consumption associated with space and water heating. With this higher energy consumption comes greater opportunities to reduce a customer's electricity consumption from the grid without correspondingly reducing a household's function. The overall cost-effectiveness is enhanced with the Programs' fixed costs spreading over a larger avoided cost benefit associated with the higher kWh savings. Therefore, the Programs are available to reduce the energy consumption from the grid for customers that use electricity for space conditioning, water heating, and clothes drying (even if they use natural gas for cooking purposes). In turn, this reduction of participating customers' energy consumption from the grid results in utility system benefits that outweigh the cost of the Programs – a benefit to all customers.

63. No party, including the Public Staff, contests that the Programs' design maximizes cost-effectiveness to the benefit of all customers. Nevertheless, the Public Staff still recommends that the Companies open the Programs to gas-electric customers, regardless of the impact on cost-effectiveness under the UCT. Moreover,

the Public Staff further recommends that if the expanded eligibility for the Programs makes them no longer cost-effective under the UCT, the Companies should decline to offer the Programs. These recommendations run counter to the intent of Senate Bill 3, which was to encourage utilities to implement cost-effective energy efficiency measures.⁴⁶ As designed by the Companies, these cost-effective Programs benefit *both* electric and gas-electric customers because the Programs' UCT scores demonstrate that the benefits to the entire, respective utility systems exceed their costs, and the reduction of customers' grid energy usage is more cost-effective than the Companies building new supply-side resources.

64. The Public Staff's concern about unreasonable discrimination appears to stem solely from the fact that residential customers using natural gas service for space conditioning or water heating are ineligible for the Programs. The Public Staff overlooks that the key eligibility requirement is that residential customers participate in Winter BYOT. As discussed earlier in these reply comments, pairing these two programs maximizes reductions in demand and consumption from the grid on a year-round basis. Customers participating in Winter BYOT will be, by necessity, customers using electric central air conditioning, electric heat pumps, or electric heating sources. In addition, basing eligibility on participation in Winter BYOT allows for potentially pairing the Programs in the future with other load control technologies, like storage. Expansion of the Programs beyond customers using electric water heating, clothes

⁴⁶ As the Commission noted in its December 2, 2008 *Order Denying Motion* in Docket No. E-100, Sub 120, "G.S. 62-133.9(b) requires utilities to implement all cost-effective energy efficiency measures: 'Each electric power supplier shall implement demand-side management and energy efficiency measures and use supply-side resources to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers.'"

drying, and environmental space heating could then be possible, while still maintaining winter capacity savings and optimizing the Programs' cost-effectiveness.

65. In any event, the Commission, has previously approved Riders related to energy efficiency that applied only to certain subsets of residential customers using only electric utility service. For example, Schedule RE is available to residences where all energy required for water heating, cooking, clothes drying and environmental space conditioning is supplied electrically. Schedule ES provides for a lower rate for Energy Star-certified residences where all energy required for water heating, cooking, clothes drying and environmental space conditioning is supplied electrically. It does not appear that the Public Staff raised objections that these Schedules were unreasonably discriminatory under N.C. Gen. Stat. § 62-140, and they were approved.

66. Moreover, the Public Staff's comparison of the Programs' customer eligibility to customer eligibility under the Companies' existing Solar Rebate programs is unavailing. In contrast to the proposed Programs, the Companies' current Solar Rebate offerings under N.C. Gen. Stat. § 62-155(f) were mandated, prescribed in scope, and limited in duration by the North Carolina General Assembly. Maximizing system benefits over costs or a showing of cost-effectiveness under the UCT were never requirements for approval of the Companies' current solar rebate programs under N.C. Gen. Stat. § 62-155(f), as they are for the Programs in this proceeding. Similarly, DEP's previous Sunsense program was not filed under Commission Rule R8-68 or the Companies' respective Mechanisms, which, working together, establish a requirement for the Companies to show cost-effectiveness through the UCT. Neither rebate program should set a precedent requiring these Programs to be offered to gas-electric

customers. Accordingly, the Public Staff has failed to justify its recommendation that the Commission deny or modify the Programs as proposed.

The Commitment Period for Smart Saver Solar and Winter BYOT is Reasonable and Appropriate

67. The Public Staff recommends that if the Commission decides to approve the Programs, it should require the Companies to modify the commitment length of 25 years to 10 years to be consistent with the commitment length of the existing Solar Rebate program. As discussed above, the Solar Rebate program is statutorily-required and is not required to pass the UCT. The 25-year enrollment requirement for Smart Saver Solar is based on the measure life of a solar PV system (based on standard panel performance guarantees seen in the solar industry) and is designed to ensure that in exchange for the upfront incentive, the participating customer continues to deliver energy savings throughout the life of the measure, which benefits all customers through reduced rates in the long run. Likewise, the contractual requirement for Winter BYOT is to ensure the participating customer delivers winter peak capacity savings and is intended to maximize savings to both the customer and to the grid. Customers, including non-participants, will not see the same benefit to the utility system and ultimately, their rates, if the customer removes its solar PV system after 10 years or does not participate in the required Winter BYOT demand response events.

The Companies Agree to File an EM&V Plan After Program Approval

68. Acknowledging that the Companies typically have not hired a third-party evaluator or developed an evaluation plan at the time of an EE program application, the Public Staff recommends that the Companies file within 90 days of program approval the name of the third-party EM&V consultant, an evaluation plan,

the costs of EM&V, and what would constitute energy savings eligible for REPS compliance as EE.⁴⁷ Though the Companies believe that that Public Staff's concerns regarding EM&V are unfounded, they have no objection to this condition. As discussed above, the Companies already vet their EM&V plans, including costs, with the Public Staff and its expert, so this would not be an added burden.

The Commission Should Not Postpone Issuing an Order Approving the Programs

69. The Companies, as well as the other parties to the MOU, agree with the AGO that Smart Saver Solar is designed to work in concert with the Companies' proposed NEM tariffs. As SEIA pointed out in its initial comments⁴⁸:

this holistic proposal (i.e., NEM reforms + the Solar Efficiency Incentive) represents a creative resolution to a policy debate that has been one of the more contentious issues before state utility commissions over the last decade...

The Solar Efficiency Incentive is the cornerstone of a compromise among stakeholders and both it and the NEM reforms are designed to work in tandem. Absent either, the balance of the NEM reforms and additional policy objectives of this program will fall short of its potential to transform the energy policy landscape in North Carolina and hamstringing consumers' role in the energy future by eliminating options for those consumers to participate in the energy economy.

70. In its "Report on the Duke NEM Settlement and SmartSaver Solar EE Programs" attached as Exhibit A to the Joint Intervenors' initial comments ("Crossborder Report"), Crossborder Energy, came to a similar conclusion⁴⁹:

⁴⁷ Public Staff Comments, at 26-27.

⁴⁸ SEIA Comments, at 1-2.

⁴⁹ Crossborder Report, at 2-3.

The DEC/DEP NEM reform proposal is the product of dialogue and negotiation between the utilities and important stakeholders, including key representatives of the solar industry as well as clean energy advocates. The development of complex new net metering program through constructive discussions, negotiation, and compromise is a welcome development given that similar issues in other states have resulted in protracted litigation and public controversy. The proposed new NEM tariffs and the associated SmartSaver Solar incentive represent a complicated mix of interrelated concessions and compromises among the involved stakeholders...

Customers who invest in clean distributed solar generation need to see adequate bill savings to make their investment a reasonable economic proposition...Significantly, the availability of the SmartSaver Solar incentive is pivotal [to achieving adequate bill savings]...

71. Despite the interrelatedness of the NEM tariffs and Smart \$aver Solar, the Companies see no need to formally delay a decision in this proceeding, as the AGO suggests. Comments are due to be filed in the NEM docket (Docket No. E-100, Sub 180) on March 29, 2022, with reply comments due April 28, 2022. While the comment cycle in the Smart \$aver Solar dockets is slightly more condensed due to the procedural schedule set forth in Commission Rule R8-68, the proceedings are on similar tracks, and there is no statutorily-prescribed deadline for the Commission to issue an order in either case. To the extent that the Commission would like to consider the NEM tariffs and Smart \$aver Solar at the same time, there is no procedural hurdle that would prevent them from doing so.

72. More concerning to the Companies is the AGO's recommendation that an order on Smart \$aver Solar be postponed until the Companies are farther along in the Carbon Plan process. The Companies' initial Carbon Plan is not due until May 16,

2022, and the deadline for the Commission to develop a final Carbon Plan is December 31, 2022. While the Companies have requested an effective date of January 1, 2023 for Smart \$aver Solar, the Companies would be concerned that the Programs could get lost in the shuffle of broader discussions of the EE programs and solar initiatives to be included in the Carbon Plan, such that there could be a gap in availability of financial incentives for rooftop solar. Though, of course, the Programs will play a key role in reducing carbon emissions, the Commission should not delay consideration of pending EE programs until the Carbon Plan is resolved.

Conclusion

73. For the reasons set forth herein, the Companies respectfully request that the Commission: (1) approve the Smart \$aver Solar EE Programs effective January 1, 2023; (2) find that the Programs meet 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 the Companies associated with Smart \$aver Solar will be eligible for cost recovery through DEC and DEP's annual DSM/EE riders in accordance with Rule R8-69(b); and (4) find that the Companies are eligible to recover utility incentives and net lost revenues associated with the Programs through their annual DSM/EE riders pursuant to their approved DSM/EE Mechanisms in accordance with Rule R8-69.

Respectfully submitted, this the 4th day of April 2022.



By: _____

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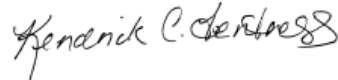
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CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Reply Comments in Docket Nos. E-7, Sub 1261 and E-2, Sub 1287 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 4th day of April, 2022.



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