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June 4, 2018

VIA ELECTRONIC FILING

M. Lynn Jarvis, 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 1168 and E-2, Sub 1169

Dear Ms. Jarvis:

Pursuant to the North Carolina Utilities Commission's (the "Commission") *Order Establishing Proceeding to Review Proposed Community Solar Program Plan*, issued on January 26, 2018, and the Commission's subsequent orders granting an extension of time, issued on March 20, 2018 and May 3, 2018, enclosed for filing are Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Reply Comments.

If you have any questions, please let me know.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH

DOCKET NO. E-2, SUB 1169 DOCKET NO. E-7, SUB 1168

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)	
Petition for Approval of Community)	REPLY COMMENTS OF DUKE
Solar Program to Implement N.C. Gen.)	ENERGY CAROLINAS, LLC AND
Stat. § 62-126.8)	DUKE ENERGY PROGRESS, LLC

Pursuant to the North Carolina Utilities Commission's (the "Commission" or "NCUC") January 26, 2018 *Order Establishing Proceeding to Review Proposed Community Solar Program Plan* and subsequent Orders granting extensions of time, Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, the "Companies") respectfully submit the following Reply Comments in support of the Companies' Community Solar Program Plan ("Program Plan" or the "Program") filed in these dockets for Commission approval in compliance with N.C. Gen. Stat. § 62-126.8 (the "Community Solar Program Statute"). The Companies' Reply Comments respond to initial comments filed by the Public Staff-North Carolina Utilities Commission ("Public Staff"), the North Carolina Sustainable Energy Association ("NCSEA"), the Sierra Club, and NC WARN, Inc. ("NC WARN"). The Companies are also submitting revised Rider SSR Shared Solar Rider (NC) for DEC and Shared Solar Rider SSR-3 for DEP ("Community Solar Tariffs") to reflect the adjustments to the Program Plan discussed below.

INTRODUCTION

In the Joint Petition for Approval of Community Solar Program Plan filed by the Companies in these dockets on January 23, 2018 ("Petition"), the Companies sought Commission approval pursuant to N.C. Gen. Stat. § 62-126.8 of their proposed plan to offer a community solar program for participation by their retail customers. As stated in the Petition, the Program Plan has been designed to allow DEC and DEP customers the ability to participate in and receive the benefits from distributed solar photovoltaic ("PV") resources without having to install, own, or maintain a system of their own. In designing the original Program Plan and in evaluating appropriate adjustments to the proposal as discussed further herein, the Companies have aimed to balance the objectives stated in the Distributed Resources Access Act, N.C. Gen. Stat. § 62-126.1, et al., of "encourage[ing] ... subscription to shared community solar energy facilities" and of avoiding cross-subsidization "by holding harmless electric public utilities' customers that do not participate in such arrangements." N.C. Gen. Stat. § 62-126.8(e)(7).

As demonstrated by these Reply Comments, the Companies value and have taken seriously the comments on the proposed Program offered by intervenors and have dedicated substantial time and effort since the comments were filed to discussing both internally and with stakeholders how to improve upon the Program as originally structured. The Companies believe that the adjustments to the Program Plan presented in these Reply Comments address many of the parties' comments and, with these

¹ As noted in the Petition, DEC and DEP will each offer a community solar Program in their respective service areas, but because their Programs are currently similar, they filed one Plan, which refers to the "Program." DEC and DEP continue to reserve the right to request Commission authorization to modify their Program Plan on an individual basis going forward.

modifications, the Program is reasonable and appropriate and consistent with the requirements of the Community Solar Program Statute and Rule R8-72.

As reflected in the Petition, the Companies proposed to launch the Program outside of their existing billing systems through an upfront fee model. This approach was based on, first, the Companies' assumption that the most important factor for stakeholders interested in community solar was to establish and start implementing the Program sooner rather than later. As noted in the Petition, the upfront subscription fee model was intended to keep administrative costs lower by simplifying management and oversight of the Program over its 20-year term. The Companies explained that managing credits and charges outside of the current billing system would support quicker implementation of the Program at a lower overall cost. The Companies determined that it would be cost prohibitive to try to launch the Program within their existing bill systems, which are not equipped to break up the generation of a solar facility among multiple North Carolina customer subscribers and credit their bills appropriately.

The comments received in response to the Companies' initial proposal showed that, in general, intervenors' priorities for the Program focused less on the timing of the Program's deployment and more on certain elements of the proposed Program that those parties worried would discourage participation and therefore threaten the Program's overall viability. The most significant of these issues included: the larger upfront subscription fees resulting from using an upfront payment model rather than a subscription model; providing a credit to subscribers separate from customers' bills; the limit of project size to 1 megawatt ("MW"); and overall estimated Program costs.

The Companies have adjusted the structure of the Program in response to these concerns. The Companies now plan to align the launch of the Program to the new Duke Energy billing system, Customer Connect, which is currently scheduled to be implemented in DEP in early 2022 and DEC in early 2023. As discussed further below, launching the Program as Customer Connect is rolled out will allow for the use of a subscription model and for greater flexibility to implement ongoing subscription charges, and thereby decrease the upfront subscription fee, as well as provide monthly credits to customers on their bills. In addition, the Companies will allow projects sized up to a maximum of 5 MW to bid into the community solar requests for proposals ("RFPs"), thereby offering additional flexibility to take advantage of the increased efficiencies and cost savings that may be associated with larger facilities.

While the Companies have decided to make several adjustments to the Program in response to intervenor comments, DEC and DEP are maintaining a number of elements of the Program as initially proposed. The Companies note in particular here the major components of the Program that remain the same, and identify in the following Reply Comments other aspects of the Program that are being maintained from the initial proposal.

First, the Program Plan still presents a "Tranche 1" for the Program. As stated in the Petition, because this will be the first community solar Program for the Companies in North Carolina, it has been designed to yield valuable experiences, subscriber feedback, and "lessons learned" for implementing such programs for retail customers going

² For additional and ongoing information about Customer Connect implementation, please see DEP's filings in Docket No. E-2, Sub 1142. On May 24, 2018, for example, after consultation with the Public Staff, DEP filed a proposed format for the required annual reports on the implementation of Customer Connect in Docket No. E-2, Sub 1142. The Commission is also reviewing Customer Connect implementation for DEC in the current DEC general rate case, Docket No. E-7, Sub 1146.

forward, and the Companies may seek to modify their community solar Program implementation in future tranches based on lessons learned.

The Companies also continue to intend to procure solar energy for Tranche 1 of the Program through purchased power agreements ("PPAs") with qualifying small production facilities, as defined in 16 U.S.C. § 796. As discussed further below, however, and in response to the comments of and discussions with intervenors, the Companies have adjusted this aspect of the Program to allow for Tranche 1 PPAs with community solar energy facilities with capacities up to 5 MW as permitted by N.C. Gen. Stat. § 62-126.8(b), rather than limiting Tranche 1 to one facility of about 1 MW in each of the DEC and DEP service areas.

Finally, the Companies maintain their request for exemption from the requirement of N.C. Gen. Stat. § 62-126.8(c) that subscribers be located in the same county or a county contiguous to where the community solar facility is located, to allow a Program facility to be located up to 75 miles from the county of subscribers. The requested exemption is in the public interest because customer participation remains vital to the Program's success. The Companies continue to believe that the Program has the best chance of success if it is marketed in or near urban areas, where more potential subscribers are located, while having the flexibility to site projects within a large enough area nearby to those urban locations to permit lower development costs.

The Companies have engaged in both in-person and conference call meetings with the Public Staff, NCSEA and the Sierra Club to discuss the proposed Program, including the adjustments to the proposal presented herein. Recognizing that these parties can be important partners in helping DEC and DEP make the Program successful,

and mindful of the fact that this is a new program for the Companies in this State, DEC and DEP have made a concerted effort to respond to intervenor concerns and incorporate their good ideas for this new program where possible. With the proposed adjustments to the program discussed in these Reply Comments, agreement with the consulted parties has been achieved on a number of the issues that were raised in the comments. These areas of agreement include reflecting credits on a monthly rather than annual basis, including monthly credits on subscribers' electricity bills, the increased scope of project size allowed to bid into community solar RFPs, permitting Program subscribers to own renewable energy certificates ("RECs") associated with their subscription block, and the exemption from N.C. Gen. Stat. § 62-126.8(c).

The Companies note that they bear the ultimate responsibility of proposing and implementing the Program for the Commission's approval, consistent with the public interest and the specific requirements of N.C. Gen. Stat. § 62-126.8 and Commission Rule R8-72. With the adjustments discussed herein, the Companies believe that the proposed Program Plan serves the public interest and meets the objectives of the Distributed Resources Access Act and, as discussed herein, the specific requirements of the Community Solar Program Statute and Commission Rule R8-72. The Companies therefore request that the Commission approve the revised proposed Program Plan as well as revised Rider SSR, Shared Solar Rider (NC) for DEC and Shared Solar Rider SSR-3 for DEP, attached hereto as Appendix A, and grant their request for exemption from N.C. Gen. Stat. § 62-126.8(c) as discussed further herein.

REPLY COMMENTS

I. Launching The Program With Customer Connect Permits The Use Of A Subscription Model And Will Address Many Of Intervenors' Comments

As discussed in the direct and rebuttal testimony of Retha Hunsicker in the currently pending DEC base rate case, Docket No. E-7, Sub 1146, Customer Connect is a new Customer Information System that will provide universal and simplified processes for customers, improve billing, allow the Companies to easily identify and implement new rate structures for customers, and interface with the Companies' new Advanced Metering Infrastructure ("AMI") technology.³ The Companies currently project that Customer Connect will be fully deployed in DEP in 2021 and in DEC in 2022.

Because Customer Connect will not be available until 2021 in DEP and 2022 in DEC, in developing the originally proposed Program the Companies did not believe that interested parties would support launching the Program with Customer Connect. Because attempting to utilize the Companies' existing billing systems to launch the Program would – given the prohibition on subsidization by non-participating customers contained in N.C. Gen. Stat. § 62-126.8(e)(7) – render the Program cost-prohibitive from the outset, the Companies proposed to implement the Program outside of their existing billing systems. While this approach would have made the Program viable, it did not feature a monthly subscription model or subscriber credits on customer bills. The Companies estimated the upfront cost to be \$500 per block if the PPA cost was \$65/MWh and proposed that each subscriber receive a yearly check as the credit for production.

In its comments, the Public Staff stated its concern that the high upfront fee model combined with off-bill annual credits would depress customer interest in the Program, which as the Companies noted in the Petition was vital to the Program's success.⁴ The

³ For a full description of Customer Connect, please see the Direct and Rebuttal Testimony of Retha Hunsicker, Docket No. E-7, Sub 1146, Tr. Vol. 18 pp. 261, 272-275.

⁴ Public Staff Comments at 4.

Public Staff commented that customers may be discouraged from subscribing by the requirement to essentially "prepay" for a 20-year subscription in exchange for receiving credits spread out over that 20-year period.⁵ Other intervenors voiced similar concerns.⁶ The Sierra Club in particular commented that if the Commission determines that Tranche 1 should require an upfront subscription fee to provide initial revenue to cover program costs, that fee should only include reasonable overhead costs and not PPA costs.⁷ Sierra Club also suggested that the PPA component could be allocated to customers on a monthly basis rather than in the initial subscription fee, which would decrease the upfront financial burden on customers.⁸

Based on the comments received in response to the Petition, the Companies have determined that launching the Program to take advantage of Customer Connect will give the Companies more flexibility to tailor the billing and credit associated with the Program to address intervenors' concerns. Because Duke Energy's development of Customer Connect is a company-wide effort that is not specifically tied to the Program, the Program cannot drive Customer Connect's implementation schedule, and the shift to this model will necessitate aligning the timing of the Program facilities coming online with the implementation of Customer Connect. However, during the lead-up to the availability of Customer Connect, the Companies plan to continue working on Program implementation, including running the RFP, and potentially entering into PPAs and marketing the Program. The Public Staff supports the Companies' plan to launch the Program in alignment with the implementation of Customer Connect.

⁵ *Id*.

⁶ See NCSEA Comments at 4-5, Sierra Club Comments at 13-15, NC WARN Comments at 5-6.

⁷ Sierra Club Comments at 14.

⁸ Id

a. Subscription Model Allows For Monthly Subscription Charges And Reduced Upfront Fee

Whereas the Companies originally proposed, due to the lack of flexibility offered by their existing billing systems, to charge one upfront subscription fee and provide annual credits outside of the customer bills, the advanced technology that will be available through Customer Connect will allow the Companies to apply monthly subscription charges and credits. Launching the Program along with Customer Connect therefore allows the Companies to apply a subscription model to the Program. Under this model, a set monthly subscription fee per block will reflect the total cost of the PPA for the facility associated with that block based on output forecasts, as well as ongoing program management and software license fees. As indicated by the table provided further below, the Companies currently estimate the monthly subscription fee to be \$15. This estimate is based on projected PPA costs, which will include the cost of the REC associated with projected output in addition to the avoided cost, and estimated ongoing Program administration costs. However, this fee amount could be less than \$15 depending on the bids received in the RFP and resulting PPA prices. Removing PPA costs from the upfront fee and recovering these costs through a monthly subscription fee responds directly to the Sierra Club's suggestions, although spreading this recovery over the term of the subscription increases the risk that the Companies will not recover those Program costs.

The subscription model also allows for monthly credits to subscribers, rather than the annual credit originally proposed. As shown in the table, with a projected \$15 monthly charge, when an estimated \$8 monthly credit is assumed, based on an estimated avoided cost rate of \$50/MWh, the subscriber pays a net amount of \$7. If the monthly

charge is lower due to lower than anticipated PPA costs as noted above, the net amount paid will be lower or could become a net credit. In addition, the Community Solar Tariffs have been revised to clarify that monthly subscription credits will be variable based on the actual production of the community solar project to which a customer is subscribed. All of the parties consulted on these Reply Comments support the change to monthly subscription credits.

Because the monthly subscription fee will cover PPA and ongoing Program administration costs, the shift to a subscription model also allows the Companies to reduce the initial subscription fee, which will be applied on a per customer basis, to a level that pays for marketing expense and – for Tranche 1 – set up of the project associated with that subscription in the vendor software. Applying the upfront subscription fee on a customer basis also recognizes the potential for customers to subscribe to multiple blocks of a community solar project. Specifically, the Companies project that the original estimated \$500 upfront fee (for a \$65/MWh PPA) could be reduced to an estimated \$295, assuming no change in the PPA cost. The following table shows the projected upfront and monthly subscription fees for 1 MW, 3 MW and 5 MW Program projects, all assuming a \$65/MWh PPA cost and \$50/MWh avoided cost rate. As indicated in the table, a larger sized project – which as discussed further below is now proposed to be permitted – is projected to result in lower upfront and monthly fees. While with the above stated assumptions each project size still represents a premium program for customers, if the costs to market a Program site are reduced by, for example, the participation by a large customer that subscribes to multiple blocks of a project, the

upfront fee could decrease, and as noted above if PPA costs are less than anticipated, the monthly fee could decrease.

	Shared Solar Customer Costs Summary - 1 MW/Jurisdiction							
One	One-Time Fee			Monthly Fee				
				\$ 10.52	20 yr PPA @ \$65/MWh	/ Block /Mo		
\$	100	IT	/Customer	\$ 1.25	IT	/Customer/Mo		
\$	88	Labor	/Customer	\$ 2.90	Labor	/Customer/Mo		
\$	102	Cost to Acquire	/Customer	\$ 0.51	Customer Engagement /Customer/			
\$	5	Call Center	/Customer	\$ 0.01	Call Center	/Customer/Mo		
\$ 2	95.20			\$ 15.19				
				\$ (7.95)	Credit for 1 kW Subscription @ \$50/MWh			
				\$ 7.24				

	Shared Solar Customer Costs Summary - 3 MW/Jurisdiction							
One-Time Fee			Monthly Fee					
				\$ 10.52	20 yr PPA @ \$65/MWh	/ Block /Mo		
\$	33	IT	/Customer	\$ 1.25	IT	/Customer/Mo		
\$	29	Labor	/Customer	\$ 0.97	Labor	/Customer/Mo		
\$	96	Cost to Acquire	/Customer	\$ 0.27	Customer Engagement /Customer/			
\$	5	Call Center	/Customer	\$ 0.01	Call Center	/Customer/Mo		
\$ 1	64.04			\$ 13.02				
				\$ (7.95)	Credit for 1 kW Subscription @ \$50/MWh			
				\$ 5.07				

	Shared Solar Customer Costs Summary - 5 MW/Jurisdiction							
One-Time Fee			Monthly Fee					
				\$ 10	0.52	20 yr PPA @ \$6	65/MWh	/ Block /Mo
\$	20	IT	/Customer	\$ 1	1.25	IT		/Customer/Mo
\$	18	Labor	/Customer	\$ (0.58	Labor		/Customer/Mo
\$	95	Cost to Acquire	/Customer	\$ (0.22	Customer Engagement /Customer		/Customer/Mo
\$	5	Call Center	/Customer	\$ (0.01	Call Center		/Customer/Mo
\$ 1	37.81			\$ 12	2.58			
				\$ (7	7.95)	Credit for 1 kW Subscription @ \$50/MWh		
				\$ 4	1.63			

b. Customer Connect Allows For Reflection Of Monthly Charges And Credits On Customer Bills

Launching the Program with Customer Connect also allows the Companies to reflect both the monthly subscription fee and monthly credits on customers' bills. In its comments, the Public Staff stated that directly linking a Program subscription to the charges and credits included on a customer's electricity bill is more likely to encourage

subscriber interest and keep the subscriber committed to the Program for the full contract term. The Public Staff also noted the definition of "subscription" of N.C. Gen. Stat. § 62-126.3(15) as "a contract between a subscriber and the owner of a community solar energy facility that allows a subscriber to receive a bill credit for the electricity generated" by the community solar project "in proportion to the electricity generated." Other intervenors expressed similar comments, 11 and some parties raised the issue of whether annual off-bill credits would create income tax or securities issues. 12

With the use of Customer Connect, the Companies will be able to show both monthly subscription charges and credits on customers' bills. Subscribers will therefore be able to track charges and credits on a monthly basis and see those amounts as line items on their regular monthly electricity bills. All of the parties consulted on these Reply Comments agree with this modification.

c. The Companies Have Adjusted The Procedure For Subscribing To The Program To Reflect Shift To Subscription Model

The proposed subscription process has changed to reflect the shift to the subscription model and related modifications discussed above. In addition and in connection with the launch through Customer Connect, the Companies intend to contract with Clean Energy Collective ("CEC"), the largest community solar developer in the country, to deploy a real time application, a customer portal and program administration software. The same tools will be used for the Companies' South Carolina Shared Solar program, which will launch in DEP in July 2018. Based on their experience working with the CEC thus far, the Company believes that the CEC software will deliver a good

⁹ Public Staff Comments at 5.

¹⁰ *Id*. at 6.

¹¹ NCSEA Comments at 5-6; Sierra Club Comments at 17-18; NC WARN Comments at 8.

¹² Sierra Club Comments at 16-17; NC WARN Comments at 8.

customer experience to the Program and help ensure full subscription through real time reporting of subscription levels and wait list functionality. The CEC platform will also allow for real-time determinations of customer eligibility for the Program and of the maximum number of blocks to which a customer may subscribe, which will facilitate enrollment and avoid administrative costs of using a call center for those purposes.

The revised Community Solar Tariffs reflect the changes to the process by which a customer will subscribe to the Program and account for CEC's role in the Program. An eligible customer wishing to subscribe to the Program will submit a request for a specific number of shared solar blocks to DEC or DEP for service under the applicable Rider. That request may be made through the Shared Solar online portal that will be constructed or by otherwise contacting the utility.

As with the original proposal and consistent with N.C. Gen. Stat. § 62-126.8(a), subscriptions will be available on a "first come, first served" basis based upon the date and time that DEC or DEP receives the customer's request. As originally proposed, in all cases subscribers will retain their existing rate tariff associated with billing for energy consumption at their premises. In addition, DEC and DEP each still plan to maintain a waiting list for customers to become subscribers if their respective programs become fully subscribed and additional customers express interest. Finally, subscribers will as originally proposed be able to track the output of the community solar facility associated with their subscription through the shared solar portal.

d. Impact Of Switch To Subscription Model On Portability And Transferability Of Subscriptions

N.C. Gen. Stat. § 62-126.8(c) requires that a subscriber be located in North Carolina and in the same county or a county contiguous to where a community solar

facility is located or, if authorized by the Commission, up to 75 miles from the county where the facility is located. Rule R8-72(c)(1)(iii) requires that the Program Plan address the treatment of subscriptions of subscribers that move within or outside of the offering utility's service territory, and whether and how subscriptions may be transferred from a subscriber to another customer eligible to participate in the program.

In the Petition, the Companies proposed that subscriptions be both portable and, to a limited extent, transferable. As to portability, the Companies proposed to continue to provide credits to subscribers for the duration of the Program, regardless of the location of the subscriber's premises. The Companies noted that because customers rarely live in one place for 20 years, prohibiting portability of subscriptions would increase the difficulty of successfully marketing the Program. In addition, because as originally proposed the Program credits were administered outside of the subscriber's utility bills, this approach did not impose any additional administrative costs or complexity. As to transferability, the Companies were mindful of the potential risk that a subscription fee could be characterized as an investment in a common enterprise and thus subject to federal or state securities regulation, but also recognized that over the course of a 20-year term unexpected circumstances can arise that could prevent a subscriber from continuing to be able to receive Program credits. The Companies therefore proposed to provide subscribers with the option to designate a beneficiary of the subscription upon enrolling in the Program, and to permit the transfer of a subscription from the original subscriber to their designated beneficiary only in cases where an unforeseen event such as death or divorce adversely impacted the original subscriber's ability to receive payments under the Program.

Intervenor comments were generally supportive of these proposals. ¹³ The Public Staff did note its belief that it would be inconsistent with the plain language of N.C. Gen. Stat. § 62-126.8(a) and (c) to allow subscribers to continue to receive credits if they move outside the State or outside the county or a county contiguous to a community solar facility. In cases where a subscriber moves outside the county or contiguous county to a project, or the 75 mile radius if applicable, or is no longer a retail customer of the offering utility, the Public Staff stated that it would support a mechanism to allow for a subscriber to cancel the subscription and receive a pro rata share of any fee returned based on the size of the subscription, or to transfer the subscription to another eligible subscriber. The Public Staff also recommended that the Companies remarket unsubscribed or cancelled shares of the facility. ¹⁴ The Sierra Club noted that if the Companies end up providing subscribers with monthly credits on their utility bills as opposed to an annual off-bill credit, they may not be able to allow customers who relocate outside of the service territories to maintain their subscriptions. ¹⁵

Under the Companies' revised proposal, portability within each utility service area will remain permissible. A subscriber who moves to a new location that is within the service area of the utility to whose Program the subscriber is participating, whether or not a customer in that location would otherwise be eligible to subscribe, will be permitted to maintain their subscription, and monthly charges and credits will continue to appear on that customer's bills. The Companies continue to believe enrollment rates may suffer if a customer must remain in a county contiguous to the array for 20 years in order to

¹³ Public Staff Comments at 6-8; NCSEA Comments at 7; Sierra Club Comments at 22.

¹⁴ Public Staff Comments at 8-9.

¹⁵ Sierra Club Comments at 22.

continue in the Program. This is consistent with the comments provided by the Public Staff and NCSEA and will help to streamline ongoing program management.

However, customers will not be able to carry a subscription with them if they move between or outside of the DEC and DEP service areas, and no transfers of subscriptions will be permitted. These adjustments are consistent with the Sierra Club's and the Public Staff's comments, will alleviate the administrative burden of managing the Program and, with respect to transferability, avoid the risk of securities regulation that may arise with subscription transfers. When a subscriber cancels a subscription, for any reason including moving outside the utility service area or otherwise, the Companies will offer that subscription to the next customer on the Program wait list in order to keep each community solar facility fully subscribed.

II. Other Program Adjustments That Address Intervenor Comments

In addition to launching the Program to align with the deployment of Customer Connect, the Companies have made other adjustments to the proposed Program to reflect intervenor comments. The Companies believe these modifications will increase their flexibility in implementing Tranche 1 of this new Program as well as improve its chances of success.

a. Projects With Capacity Up to 5 MW May Bid Into Community Solar RFPs

Out of caution regarding their ability to fully subscribe community solar projects that are too large, the Companies initially proposed to accept only those bids into the community solar Tranche 1 RFP for projects with capacity of 1-2 MW, with the intention of having one solar energy facility of about 1 MW in each of the DEC and DEP service areas.

In their comments, NCSEA and the Sierra Club questioned whether it was appropriate to limit bids into the community solar RFP to projects with capacities of 1 MW. 16

Based on the comments received, and due to their expectation that shifting to a subscription model with a decreased upfront fee should facilitate the effort to attract subscribers and fully subscribe projects, the Companies have determined it to be appropriate to allow any project under 5 MW to bid into the Program RFP, at least for purposes of Tranche 1. The Companies agree with NCSEA that smaller facilities are more likely to be located geographically close to subscribers and are easier to fully subscribe, while larger facilities offer economies of scale that could translate to lower subscription fees. By increasing the range of projects that may bid into the RFP, the Companies will be able to select the projects that offer the best economic benefit for subscribers. All of the parties consulted on these Reply Comments support this change.

b. Subscription Block Size Increased From 200 Watts To 1 Kilowatt

As discussed in the Petition, consistent with N.C. Gen. Stat. § 62-126.8(a) and Rule R8-72, each facility that is part of the Program will offset the use of not less than five subscribers and no single subscriber will have more than a 40% interest. In addition, a customer may subscribe to multiple blocks, but the number of blocks to which a customer may subscribe will be limited to supply no more than 100% of the maximum annual peak demand of electricity at the subscriber's premises. A Tranche 1 subscription term is still proposed to be 20 years, with the terms and conditions of subscription set forth in Riders SSR and SSR-3.

¹⁶ NCSEA Comments at 3; Sierra Club Comments at 5-6.

However, while the Petition proposed that each subscription block represent 220 watts of solar energy, projected to produce 35 kilowatt-hours ("kWh") per month, fixed over the term of the Program, the Companies now propose that each subscription block represent 1 kilowatt ("kW") of solar energy, still fixed over the Program term, which is projected to produce 159 kWh per month on average. This change will align the Program with the Companies' South Carolina community solar program, which will also utilize Customer Connect when it is available, and therefore facilitate implementation in the billing system in both states. While this change will result in fewer subscriptions per project, it will also produce greater avoided cost credits over the course of the 20-year term due to the larger block size. Specifically, with this increase in block size, the estimated avoided cost credit to a subscriber to Tranche 1 over the 20-year term, using the current estimated avoided cost rate of \$50/MWh, increases from approximately \$420 to approximately \$1900. Based on informal discussions, the Public Staff supports this adjustment.

c. Revised Program Will Allow Subscribers To Own RECS Produced By The Project Associated With Their Subscriptions

The Companies initially proposed that they would retire the RECs produced by the projects on behalf of subscribers. The Companies noted, among other things, that this approach was appropriate given that it will take more than two years for one subscription block of a community solar facility to produce a REC, such that a block's REC value would be immaterial for the majority of subscribers for the first few years of the Program.

While it agreed that the REC value produced by a single community solar subscription is essentially immaterial, the Public Staff commented that N.C. Gen. Stat. § 62-126.8(e)(8), Commission Rule R8-72(c)(1)(ix), and Rule R8-65(g)(iii)(h) require that

subscribers be allowed the option of owning the RECs produced by the project. The Public Staff noted that most subscribers will opt for the utility to retire the RECs on their behalf, but consistent with the statute and Commission rules recommended that the Companies modify the SSR tariff to indicate that a subscriber may elect to own any RECs produced by its subscription, provided that the subscriber pay all fees and apply to create a REC tracking account with an appropriate system such as the North Carolina Renewable Energy Tracking System ("NC-RETS"). The Public Staff also stated that a subscriber that elects to own RECs associated with its block should be responsible to pay any fees required to transfer the RECs from the project's NC-RETS account to the subscriber's chosen REC tracking account. 18

In response to the Public Staff's comments, the Companies will offer subscribers the option of owning any RECs associated with their subscription, provided that the subscriber pay all fees and apply to create a REC tracking account with an appropriate system—i.e. NC-RETS. While the Companies do not expect many subscribers to make this election giving the associated administrative obligations, and still believe absent N.C. Gen. Stat. § 62-126.8(e)(8) that the Companies' retirement of the RECs on customers' behalf is appropriate, allowing subscribers this option is consistent with the statute and should not impose too heavy an administrative burden on the Companies given that a subscriber who chooses to own the RECs must comply with the associated financial and administrative obligations. At the time that a customer subscribes to the Program, the Companies will provide clear information regarding the fees and administrative

¹⁷ Public Staff Comments at 9-10.

¹⁸ *Id*. at 10.

obligations that would apply if the subscriber chooses to own the RECs. All of the parties consulted on these Reply Comments support this change.

III. Goals and Limitations of N.C. Gen. Stat. § 62-126.8 and Requirements of Rule R8-72 Will Be Met With This Revised Program Plan

The Companies continue to believe that customer participation in the Program is vital to its success. DEC and DEP understand that the level of the upfront and monthly subscription fees will drive Program enrollment and are committed to taking appropriate steps to limit costs and to negotiate favorable PPAs with community solar developers. At the same time, however, DEC and DEP remain obligated to abide by the prohibition on subsidization of the Program by non-participating customers of N.C. Gen. Stat. § 62-126.8(e)(7), and also want to minimize risk to the Companies where it is possible and appropriate to do so. Therefore, while DEC and DEP have proposed a Program Plan that they believe will best attract subscribers by keeping costs reasonable, including making the changes discussed above, the reality of the obligation to comply with the requirements of the law means that it is still not yet clear whether this will be premium program or bill credit program. That outcome will largely depend upon the bids received in the RFPs and the resulting PPA price to be paid to winning bids. However, the Companies believe that the Program as designed will achieve the balance of costs and benefits required by the statute and Rule R8-72.

a. Non-Participating Customers Will Continue To Be Held Harmless

As described in the Petition, the community solar facility developer whose bid is selected through the RFP will pay for any reasonable interconnection costs associated with the facility through interconnection fees. Consistent with the prohibition on subsidization of the Program by non-participants, subscribers will be required to pay for

all of the Program's administrative costs, such as management, billing, and the license fee for CEC, as well as marketing costs and the PPA costs, including REC costs, associated with the project to which they are subscribed, through the upfront and monthly subscription fees. Energy generated by the facility will be put to the grid and the total delivered costs, including capacity and non-capacity costs, associated with the purchase will be recovered under N.C. Gen. Stat. § 62-133.2(a1)(10) from all customers using the same methodology applied to other qualifying facility ("QF") purchases. The Companies continue to intend to ensure appropriate cost assignment and recovery through developing accounting codes for the Program. Employees working with the Program will still be trained in properly assigning Project costs to the appropriate code to avoid cross-subsidization of Program costs by non-subscribing customers.

As before, from a ratemaking perspective, recovering no more than the avoided cost component of the purchased power delivered to the grid through the fuel clause holds non-participants harmless because the costs recovered are "avoided costs," which for purposes of implementing the Community Solar Program Statute, represent costs that non-participants would have paid for the same amount of power in the absence of the PPA.

b. The Companies Believe That The Adjustments to the Program Will Help Attract Subscribers, But Cannot Determine Program Costs With Certainty Until After the RFP

i. Marketing

Several parties expressed concern regarding the proposed cost to market the Program. The Public Staff argued that the Companies' marketing plan unduly burdens Program participants, and encouraged the Companies to prioritize marketing efforts to

utilize marketing strategies that are the most effective per dollar. They recommended that the Companies pursue partnerships with third parties to market the Program, and offered to be a stakeholder to help market the Program if that would help lower costs. 19 Sierra Club also expressed concern that the proposed administrative and market costs for the Program are too high and will disincentivize subscriptions and contrasted these proposed costs with other community solar programs. Sierra Club contended that the high marketing and administrative costs are the primary reason that the Program is not projected to deliver an economic benefit to customers. Sierra Club also stated that the marketing cost estimates do not account for subscribers to multiple blocks or the fact that Tranche 1 subscribers may subsidize future tranches. Sierra Club stated that it would consider assisting the Companies in promoting the Program if it is able to support the Program. 20 Sierra Club also suggested that Commission approval should be required prior to the Companies entering into any Program PPA.²¹ NC WARN stated that the Companies should use existing lines of communication with customers (website, social media, bill inserts) and avoid expensive marketing avenues.²²

The Companies recognize intervenors' concerns about marketing cost estimates and are committed to utilizing the most cost effective marketing methods possible and not charging more for marketing than what it will cost to attract enough subscribers to have a successful Program. However, it is not possible to finalize a marketing budget for the Program until the RFP has been conducted and projects selected. As noted in the revised Community Solar Tariffs, the upfront and monthly subscription fees will be

¹⁹ Public Staff Comments at 4-5.

²⁰ Sierra Club at 8-13.

 $^{^{21}}$ *Id*. at 7-8.

²² NC WARN Comments at 4-5.

unique to each site. The Companies' current projection of an upfront fee of \$295 is based on the Companies' estimates of the costs for IT, Call Center, and program management in addition to marketing, which in turn are based on the Companies' experience marketing premium programs and launching new programs. However, as noted above, this amount could be less depending on the costs to market each site to customers, which will reflect the individual characteristics of each site, including size and location, as well as other factors such as whether large customers can be secured to subscribe to multiple blocks. Whether the Companies receive the requested exemption from N.C. Gen. Stat. § 62-126.8(c) could also affect these costs, because allowing the Company to market a project to customers located within 75 miles of a project means the Program can be marketed in or near urban areas, where more potential subscribers are located, while projects can be sited within a large enough area nearby to those urban locations to permit lower development costs. The driving force behind the possibility that the Program will be a premium Program that may not result in economic benefits to customers, however, is the prohibition on subsidization imposed by the statute. The Companies will do what they can to reduce marketing costs based on the results of the RFP, but other factors will play in to the final amount of upfront and monthly subscription fees and the Companies are permitted to recover those costs only from subscribers.

In the Petition, the Companies recognized that community partnerships will be important to the goal of minimizing Program costs to participating customers, and stated that DEC and DEP intend to seek out ways to collaborate with local communities and interested organizations to facilitate the Program's implementation, and to encourage

developers considering community solar facilities to do likewise.²³ The Companies will continue to work with interested parties to find ways to reduce Program costs and attract more subscribers and appreciate the interest expressed by NCSEA, Sierra Club, and the Public Staff to assist with this effort. In the case that a productive commitment or partnership develops that brings in subscribers and reduces the Companies' marketing burden, the upfront subscription fee would decline. The Companies, however, bear the obligation of complying with the Community Solar Program Statute and Rule R8-72, and until the RFP is conducted and resulting specific marketing needs and any partner marketing commitments are known, are not able to reduce projected marketing costs.

With regard to Sierra Club's suggestion that Commission approval be required before executing community solar PPAs, such pre-approval is not contemplated by the statute or Rule R8-72, and the Companies believe such a requirement would unnecessarily delay Program implementation. Moreover, the Companies are committed to selecting Projects and executing PPAs that offer the most cost-effective Program for customers, and will report on these developments in the annual filings required by Rule R8-72(c)(2). Like other PPAs with QFs entered into by DEC and DEP, the Program PPAs will be filed with the Commission annually, and interested parties can execute a confidentiality agreement and receive a copy of the PPAs at that time.

ii. Avoided Cost

In its comments, the Sierra Club stated that because solar prices have decreased substantially since 2015, PPAs entered into in 2018 may have significantly less cost than \$65/MWh.²⁴

²³ Petition at 3.

²⁴ Sierra Club Comments at 4-5.

A number of variables, including for example recently imposed federal tariffs on solar panels, could impact whether the cost of solar increases or decreases, and will therefore be reflected in the costs of Program project PPAs. Additionally, the Companies believe that the increase in the size limit of projects eligible to bid into the Program RFP to 5 MW may result in a lower per MWh price for the PPA. For purposes of these Reply Comments, however, the Companies have continued to assume a \$65/MWh PPA price in order to facilitate comparison between the original Program proposal and the revised proposal discussed herein. The \$65/MWh estimate is appropriate and is based on updated bids for the South Carolina shared solar RFP received in 2017. While this price still produces a premium Program for customers, the Companies expect this to be offset to an extent by the lower marketing expense that is expected to result from using the subscription model, which makes the Program more attractive to customers due to smaller upfront payments.

iii. Current Uncertainty of Fee Amounts Will Be Clarified After The RFP

NCSEA also commented that uncertainty regarding the amount of the full subscription fee could discourage customers from subscribing and asked that the Companies be required to include in their Program tariffs a "not to exceed" maximum subscription fee amount to allow for better understanding of the maximum potential subscription fee.²⁵ NCSEA suggested that the Companies include updated estimates of subscription charges in the annual updates on the Program's implementation required by Rule R8-72(c)(2).²⁶

²⁵ NCSEA Comments at 4.

²⁶ *Id*. at 4-5

The Companies believe that the benefits of the shift to a subscription model, including reduced upfront subscription fees and monthly reflection of charges and credits on customer bills, should at least alleviate NCSEA's concerns. Regardless, however, DEC and DEP do not believe that incorporating a "not to exceed" amount in the SSR tariffs would be appropriate. First, without the information that will be available after the RFP is conducted, which due to the shift to a subscription model will incorporate a number of variables including location, size, large customers, and PPA price, setting a "not to exceed" amount would be an arbitrary exercise. In addition, this approach would inappropriately increase the Companies' risk of nonrecovery of costs, if the final costs did exceed the stated threshold. In a case where the RFP results in prices that are too high to allow the Companies to attract subscribers to the Program, the more appropriate route would be to delay the Program and run another RFP. The annual reports required by Rule R8-72(c)(2) will provide a logical opportunity for the Companies to report on the outcome of the RFP and updated pricing information. The Companies therefore agree that providing updated fee estimates for the Program in the annual reports would be appropriate as NCSEA suggests.

c. The Companies Continue To Believe That It Is Not Feasible To Incorporate An LMI Component Into Tranche 1 Of The Program

The Companies explained in the Petition that, as they gain more insight and experience from Tranche 1 in implementing a community solar program where non-participating customers are held harmless from the costs, they intend to evaluate the potential for low income customers to access the program in the future through lowered costs due to learning and scale, as well as partnerships with outside organizations.²⁷ In

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²⁷ Petition at 11-12.

their comments, the Sierra Club recommended that the Companies be required to further evaluate incorporating low-to-medium income components into Tranche 1 of the Program, and suggested that the Companies offer subscribers the opportunity to donate an additional amount per block to facilitate the participation of LMI customers. Sierra also suggested that the Companies carve out 5% of the Program for LMI customers. NC WARN also commented that the Companies should provide access to the Program for LMI customers. Program for LMI customers. Program for LMI customers.

The Companies continue to believe that the best approach with regard to this issue is to utilize the learnings and experience gained through Tranche 1 to evaluate the potential for low income customers to participate in the Program in the future. As the Companies discussed in the rulemaking proceeding that resulted in Rule R8-72 (Docket No. E-100, Sub 155), and as noted elsewhere in these Reply Comments, the prohibition on subsidization of the Program by non-participating customers contained at N.C. Gen. Stat. § 62-126.8(e)(7) complicates the Companies' ability to include an LMI component that does not increase subscription fees for other customers, which the majority of intervenors' comments were concerned with minimizing. That is because the incorporation of an LMI component will necessarily increase the costs to administer the Program. As the Companies have also noted before, community solar initiatives that include LMI components in other states also often are not subject to the prohibition on subsidization that applies to the Companies. For example, it has been specifically recognized that the statute that established California's Enhanced Community Renewables option "sets a 'non-participating ratepayer indifference' requirement, which

²⁸ Sierra Comments at 20-22.

²⁹ NC WARN Comments at 5-6.

mandates that nonparticipants cannot bear any of the costs of the program," and that this program will likely be offered at a premium rate, therefore presenting a challenge to LMI participation. ³⁰

Beyond these difficulties, currently the Companies do not and cannot yet know whether the Program will result in savings for subscribers. In addition, Tranche 1 is likely to cost more than future tranches due to the need to fund the majority of Program implementation expenses, such as IT costs. Given these considerations, the Companies believe that it would not be reasonable to impose an LMI obligation on the Program when the Program may not even result in credits to subscribers, and future tranches are likely to cost less. Instead, it is appropriate to wait to design an LMI component to the Program until the Companies can gain experience and knowledge on these issues. For purposes of Tranche 1, however, the Companies are not opposed to third parties providing independent funding assistance to low income customers who wish to subscribe to the Program.

IV. The Companies Will Be Able To Project The Timing And Viability Of Future Tranches After Tranche 1 Is Established

a. Program Viability And Cost Recovery

In the Petition, the Companies stated that if, despite their promotion of the Program, subscriptions are insufficient to cover the costs of the Program in either or both service territories, DEC and/or DEP may petition the Commission to discontinue the Program. If the Commission were to approve cancellation of the Program, and there were no subscribers to pay the administrative costs incurred to promote and develop the

³⁰ Interstate Renewable Energy Council, *Shared Renewable Energy for Low- to Moderate-Income Consumers: Policy Guidelines and Model Provisions*, p. 13 (2013), *available for download at* https://irecusa.org/publications/shared-renewable-energy-for-low-to-moderate-income-consumers-policy-guidelines-and-model-provisions/.

Program, the Companies stated their plan to seek recovery of these costs in their next general base rate cases. The Companies explained that seeking recovery of such costs would be appropriate given the statutory mandate to develop the Program, and emphasized that as with other costs of service requested for recovery pursuant to N.C. Gen. Stat. § 62-133, any such request would be subject to the Commission's review and determination of the reasonableness and prudence of the Program costs sought for recovery.

The Public Staff stated that petitioning the Commission to discontinue the Program would be contrary to N.C. Gen. Stat. § 62-126.8(a), which requires that each utility make its Program available until the total nameplate generating capacity equals 20 MW. The Public Staff commented that because the statute does not explicitly permit the offering utility to cancel the program due to low subscriber interest, it is the utility's responsibility to create and market a program that is "fundamentally designed to succeed." The Public Staff did support a delay in the Program if a specific and reasonable target for subscriber interest is not met in Tranche 1 and the Companies have attempted to scale the project above or below 1 MW to meet customer interest. The Public Staff also stated that it is premature at this point to determine cost recovery for the Program, and noted the requirement of N.C. Gen. Stat. § 62-126.8(e)(7) that customers who do not subscribe to the Program must be held harmless. The Public Staff commented that if a determination is made at this time whether the Companies can recover costs in general rate cases, they may not be properly incentivized to implement a progress that is designed to succeed. The Public Staff also stated that advertising

expenses are normally born by shareholders and stated its belief that such expenses are not reasonable administrative costs.³¹

NC WARN noted the provision at Rule R8-72(c)(4) for Commission approval for a delay, suspension, or closing of a Program to new customers, and stated that if Tranche 1 is not successful, the Companies should seek approval to amend the Program to increase benefits to subscribers and increase participation. 32 NC WARN also commented that the Companies should not be able to recover Program costs in a rate case due to the hold harmless requirement contained in the statute. 33

With regard to potential closure of the Program, N.C. Gen. Stat. § 62-126.8 requires that the Companies "file a plan to offer" a community solar program. While the Companies believe the changes discussed herein will increase the odds of success for the Program, the statute requires them to "file a plan to offer" the Program. If the Program cannot launch due to lack of subscriptions, the statute does not prohibit its cancellation or at least delay. If Tranche 1 is not successful, the Companies will determine whether to seek to amend the program or to cancel at that time, and any such request would be for the Commission's determination.

Similarly, any future request for cost recovery would be subject to Commission review. To be clear, the Companies' proposal to seek to recover costs through a base rate case was limited to administrative costs to promote and develop the Program, and limited to a scenario in which the Program is not successful. The Companies continue to believe that a request for cost recovery under such circumstances would be appropriate in light of the statutory mandate to develop the Program. However, again, this suggestion simply

³¹ Public Staff Comments at 13-14.

³² NC WARN Comments at 6-7.

 $^{^{33}}Id$

was intended to be transparent about the Companies' current intentions in the event that Tranche 1 does not succeed; any such request would be subject to intervenor input and Commission determination and need not be decided at this juncture. The Companies disagree with the Public Staff's suggestion that this will provide a disincentive to design a successful program; the Companies have designed – and now redesigned – the Program to make the best possible effort at success.

b. The Companies Will Be Able To Estimate A Schedule For Future Tranches After Tranche 1 Is Established

As noted above, the Public Staff commented that it would support a delay in the Program if a target for subscriber interest is not met in Tranche 1 and the Companies have attempted to scale the project, and suggested that the Companies scale projects to appropriate sizes to meet demand, either by increasing or decreasing capacity, after the initial marketing period, and to move forward with a project once the reserved capacity reaches a certain point.³⁴ The Sierra Club commented that the Companies did not provide an adequate implementation schedule as required by the Community Solar Program Statute and Rule R8-72 and stated its concern that the lack of an implementation timeline would unduly delay implementation of the Program.³⁵ NC WARN suggested that the Companies should submit a full timeline for the entire 40 MW contemplated by N.C. Gen. Stat. § 62-126.8, with Tranche 2 enrollment being available by 2021 and representing at least 50% of the 40 MW total. NC WARN also suggested that after Tranche 1 is operational, the Companies should hold a public hearing to collect feedback from subscribers and others to improve the Program for Tranche 2. NC Warn also

³⁴ Public Staff Comments at 12-13.

³⁵ Sierra Club Comments at 15-16.

suggested that the Companies "should not limit themselves to the statute" but should seek to increase Program size far beyond 40 MW in the future. ³⁶

The Companies do not currently have sufficient information to project a Program schedule beyond Tranche 1, and will not be ready to file a plan for additional tranches until at least after RFP bids are received and interconnection costs of potential projects are known. The Companies agree with the Public Staff that it may be appropriate to delay the Program's implementation if after the RFP is run and prices determined, insufficient subscriptions are obtained to make the Program successful. However, the Companies cannot set a specific threshold for subscriptions without this information. Additionally, it is not feasible to adjust a project up or down based on customer interest—the size of the project will drive the marketing effort, not vice versa. The Companies have allowed for the "scaling" suggested by the Public Staff through the adjustment to allow projects sized up to 5 MW to bid into the RFP. In addition, the Companies will update the Commission and parties on future tranches in the annual reports required by Rule R8-72(c)(2).

Currently the Companies plan to issue a Program RFP within 90 days of Commission approval of the Program. Executing a PPA and marketing the winning project sites to customers will follow and the Companies will report on those developments annually as required. The Companies are also willing to engage in periodic updates with stakeholders on a more frequent basis than the annual reports to provide information as it becomes available after the RFP runs. With regard to NC WARN's comments, the Companies do not have the luxury to be flexible with the statute.

³⁶ NC WARN Comments at 3, 6-7.

We do however believe that the Program as currently proposed can be implemented and expanded to grow and benefit subscribers.

V. Revised Community Solar Tariffs

With the Petition, the Companies provided proposed Rider SSR for DEC and Rider SSR-3 for DEP. Pursuant to Commission Rule R8-72, the proposed Community Solar Tariffs will provide customers with the terms and conditions regarding costs, risks, and benefits to Program subscribers, an itemized list of any one-time and ongoing subscription fees, an explanation of how RECs will be treated, and when and how a subscriber will receive notifications regarding product status and performance.

Consistent with the Program modifications discussed herein, the Companies have included as Appendix A to these Reply Comments revised proposed Community Solar Tariffs, in clean and blackline formats. Specifically, the Tariffs have been revised to reflect the subscription model, including the inclusion of monthly charges and credits on the customer bill, as well as a modified procedure for customers to subscribe to the Program. The revised Tariffs also indicate the increase in the size of a block from 220 watts to 1 kW and clarify that monthly subscription credits will be variable based on the actual production of the facility. Finally, the revisions incorporate subscribers' ability to own the RECs associated with their block and remove the original provision for transfers of subscriptions. The Companies have also made a few clean-up and wording revisions to the tariffs.

VI. Request For Exemption From N.C. Gen. Stat. § 62-126.8(c)

In the Petition, the Companies requested pursuant to N.C. Gen. Stat. § 62-126.8(c) and Rule R8-72(e)(4) an exemption from the requirement that Program subscribers be

located in the same county or a county contiguous to the community solar project location, such that customers could subscribe to the Program so long as they are North Carolina residents and are located no more than 75 miles from the project. The Companies explained that the exemption was in the public interest as required by the statute due to the importance of customer participation to the Program's success. The Companies stated their belief that the Program has the best chance of success if it is marketed in or near urban areas, where more potential subscribers are located, while having the flexibility to site projects within a large enough area nearby to those urban locations to permit lower development costs.

The Public Staff agreed with the Companies' request for exemption and recommended that the Commission grant the request for the initial community solar offering with future exemption requests to be evaluated on an individual basis.³⁷ NCSEA also supported the exemption request as it will attract subscribers.³⁸ NCSEA also suggested that if the exemption is granted, the Companies should be required to include a summary of whether and how the exemption minimized costs to subscribers in the annual updates to be filed pursuant to Rule R8-72(c)(2).³⁹ The Sierra Club also generally supported the exemption request, and agreed that increasing the permissible proximity between a community solar project and a subscriber may provide the Companies greater flexibility in establishing a lower-priced PPA, which is important for success of the Program. Sierra Club also recommended that the Companies be required to demonstrate that the exemption will result in a net decrease in subscription costs, and that any increase

³⁷ Public Staff Comments at 12.

³⁸ NCSEA Comments at 3-4.

³⁹ *Id.* at 4.

in marketing or other administrative costs required to reach a broader geographic area will not result in increased subscription costs.⁴⁰

The Companies renew their request for exemption from N.C. Gen. Stat. § 61-126.8(c). As explained in the Petition, exemption is in the public interest because it will allow the Companies to target Program marketing efforts at the widest possible audience, including in more populated areas, and to seek development opportunities in locations that minimize the upfront subscription cost, thereby attracting more subscribers and increasing the chances of Program success. The Companies do not expect that it will be possible to correlate the exemption, if granted, to cost savings, in light of the numerous variables that will impact the actual costs of the Program discussed in these Reply Comments. The Companies will however include in their annual Program reports an update on whether the exemption is utilized for a particular Program project.

CONCLUSION

WHEREFORE, based on the foregoing, the Companies respectfully request that the Commission (1) accept these Reply Comments, (2) approve the Companies' Community Solar Program Plan as modified and discussed herein, the revised Schedule SSR for DEC and Schedule SSR-3 for DEP, and the Companies' request for exemption from N.C. Gen. Stat. § 62-126.8(c), and (3) grant any additional relief that the Commission deems appropriate.

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⁴⁰ Sierra Club Comments at 19.

Respectfully submitted, this the 4th day of June, 2018.

/s/Kendrick C. Fentress

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DEC CLEAN AND REDLINED RIDERS

RIDER SSR SHARED SOLAR RIDER (NC)

AVAILABILITY

Available on a voluntary basis, at the Company's option, to customers receiving service from the Company under a metered residential or nonresidential rate schedule who contract for the purchase of Shared Solar. This program is not available for customers concurrently served under a net metering rider or purchased power agreement.

The Company shall solicit participant interest and establish solar photo-voltaic renewable generation sites within its service territory to provide the Shared Solar service. The generation capacity of each individual site shall be a maximum of 5,000 kW. Each site shall have a minimum of 5 subscribers, with no individual subscriber acquiring in excess of 40% of the site capacity. The aggregate capacity of all sites shall not exceed 20,000 kW. Program availability is limited to customers located within, or in the county immediately adjacent to, the county where the supporting renewable generation source is located. Customers located up to 75 miles from the site may also participate upon specific Commission approval.

APPLICATION PROCESS

Applicants must submit a request for service under the Rider through the Shared Solar portal or other means of communication and identify the requested quantity of Shared Solar blocks. Participation is available on a "first-come-first served basis" based upon the date and time of receipt of the Customer's request.

The generation resource may be acquired either from a dedicated Company asset for use solely by this program or from a Purchase Power Agreement. Energy purchased and/or produced from a Shared Solar facility will not be delivered specifically to the individual Customer contracting for the service under this Rider. Pricing parameters shall be developed based upon the estimated date of first production and a project life of 20 years. An Initial Subscription Charge per Shared Solar customer shall be determined to fully recover program development and other costs to establish each site. A Monthly Subscription Charge per Shared Solar Block shall recover the estimated revenue requirement of the generation over the 20-year generating asset life and related ongoing program cost. The Initial and Monthly Subscription Charges shall be unique to each site. Additionally, a Shared Solar Credit rate for each block at a project site shall be determined based upon the Company's corresponding fixed 20-year long-term avoided cost rate and shall not change during the contract term. The Initial Subscription Charge is not refundable, unless the solar facility is not built; however, cancellation of the project is unlikely once the Company has decided to move forward with a project. A reduced Initial Subscription Charge may apply to new applicants acquiring cancelled subscriptions since fewer than 20 years remain in the contract term. The Shared Solar Credit will be paid to participating customers for 20 years following commercial operation of the generation.

CUSTOMER SUBSCRIPTION

A Shared Solar block shall be 1000 watts_{AC} which is expected to produce an average of 159 kWh per month over the generating asset life. The number of Shared Solar blocks available to a Customer shall not exceed one hundred percent (100%) of the Customer's maximum annual demand.

MONTHLY RATES

The Monthly Subscription Charge shall be the contracted number of blocks times a fixed rate per block that is specific to the generation site. The Monthly Subscription Charge shall be applicable for the 20 year contract term.

The Shared Solar Credit shall be the contracted number of blocks times a fixed long-term avoided energy and capacity rate that is specific to the generation site. The amount of the monthly Shared Solar Credit received by the participant will be variable based on the actual production of the solar facility. The Shared Solar Credit is only payable upon receipt of the Initial Subscription Charge by the Company. The Shared Solar Credit shall be payable for 20 years, unless terminated by the Customer.

RENEWABLE ENERGY CREDITS

"green tags," associated with the solar photovoltaic (PV) generation system shall be retired by the Company for each site on the Customer's behalf. Alternatively, the Customer may elect to own any RECs produced by their subscription, provided that the Customer informs the Company in writing and applies to create, and pays all registration fees associated with, a REC tracking account with the North Carolina Renewable Energy Tracking or a similar system.

GENERAL PROVISIONS

The Customer shall notify the Company in writing at least 30 days prior to discontinuing electric service. The Customer may relocate to an alternate location in the Company's North Carolina service territory and keep their subscription. The subscription ends when the Customer leaves the Company's service territory. Customers may be removed from the program for non-payment of the Monthly Subscription Charge.

North Carolina (Second Proposed) Original Leaf 113
Effective January 1, 2019
NCUC Docket No. E-7, Sub 1168
Order dated

RIDER SSR SHARED SOLAR RIDER (NC)

CONTRACT PERIOD

The Contract Term for each Shared Solar site shall be twenty (20) years from the date of the first Shared Solar Credit payment under the Rider. Following the expiration of the twenty year period, the Rider will terminate for all participants under contract for the Shared Solar site with no residual value to participants.

Electricity No.4 North Carolina (Second Proposed) Original Leaf No. 113

RIDER SSR SHARED SOLAR RIDER (NC)

AVAILABILITY

Available on a voluntary basis, at the Company's option, to customers receiving service from the Company under a metered residential or nonresidential rate schedule who contract for the purchase of Shared Solar. This program is not available for customers concurrently served under a net metering rider or purchased power agreement.

The Company shall solicit participant interest and establish solar photo-voltaic renewable generation sites within its service territory to provide the Shared Solar service. The generation capacity of each individual site shall be a maximum of 5,000 kW. Each site shall have a minimum of 5 subscribers, with no individual subscriber acquiring in excess of 40% of the site capacity. The aggregate capacity of all sites shall not exceed 20,000 kW. Program availability is limited to customers located within, or in the county immediately adjacent to, the county where the supporting renewable generation source is located. Customers located up to 75 miles from the site may also participate upon specific Commission approval.

APPLICATION PROCESS

The application process shall include three stages: (1) completion Applicants must submit a request for service under the Rider through the Shared Solar portal or other means of an Application of Initial Interest, (2) payment of an Initial Subscription Fee of Intent to Participate Communication and (3) Payment of Full Subscription Fee. The Application of Initial Interest shall identify the customer's location and the requested quantity of Shared Solar blocks-being requested. Participation is available on a "first-come-first served basis" based upon the date and time of receipt of the Customer's Application of Initial Interest request.

The generation resource may be acquired either from a dedicated Company asset for use solely by this program or from a Purchase Power Agreement. Energy purchased and/or produced from a Shared Solar facility will not be delivered specifically to the individual Customer contracting for the service under this Rider. Pricing parameters shall be developed based upon the estimated date of first production and a project life of 20 years. AAn Initial Subscription FeeCharge per Shared Solar blockcustomer shall be determined to fully recover program development and other costs to establish each site. A Monthly Subscription Charge per Shared Solar Block shall recover the estimated revenue requirement of the generation over the 20-year generating asset life and related ongoing program cost. The Initial and Monthly Subscription Charges shall be unique to each site. Additionally, a Shared Solar Credit perrate for each block at a project site shall be determined based upon the Company's corresponding fixed 20-year long-term avoided cost rate. The site's Full Shared Solar Subscription Fee and Credit shall be provided to the applicants and shall both be fixed and will not be subject to change for the contract term. Customers will be required to submit payment information, but fees will not be collected unless the Company believes the solar facility will be fully subscribed by customers. The Company will inform customers of the viability of the project prior to collecting any fees and will provide Customers with an opportunity to cancel their enrollment. The first payment will be \$200 per block. The remainder of the Full Subscription Fee will be collected later, the timing of which will be determined by the date the solar facility is energized. The Initial Subscription Fee is not refundable if the customer chooses not to pay the remainder of the Subscription Fee. The Initial Subscription Fee shall be fully refundable if the solar facility is not and shall not change during the contract term. The Initial Subscription Charge is not refundable, unless the solar facility is not built; however, cancellation of the project is unlikely once the Company has decided to move forward with a project. -

If sufficient Customers subscribe the site, Customers will be notified when construction will be initiated along with an estimated completion date. The Full Subscription Fee, less the amount of the Initial Subscription Fee, must be fully paid by the Customer prior to the completion date. If subscriptions are available after the initial program date, new customers may participate upon payment of the Full Subscription Fee, reduced by 5% for each full expired year of the program term. A reduced Initial Subscription Charge may apply to new applicants acquiring cancelled subscriptions since fewer than 20 years remain in the contract term. The Shared Solar Credit will be paid to participating customers for 20 years following commercial operation of the generation.

CUSTOMER SUBSCRIPTION

A Shared Solar block shall be $\frac{2201000}{1000}$ watts_{AC} which will expected to produce an average of $\frac{35159}{1000}$ kWh per month over the generating asset life. The number of Shared Solar blocks available to a Customer shall not exceed one hundred percent (100%) of the Customer's maximum annual demand.

MONTHLY RATERATES

The Monthly Subscription Charge shall be the contracted number of blocks times a fixed rate per block that is specific to the generation site. The Monthly Subscription Charge shall be applicable for the 20 year contract term.

The Shared Solar Credit rate-shall be the contracted number of blocks times a fixed long-term avoided cost-energy and capacity rate that is specific to the generation site. The amount of the monthly Shared Solar Credit received by the participant will be variable based on the actual production of the solar facility. The Shared Solar Credit is only payable upon receipt of the

North Carolina (Second Proposed) Original Leaf 113
Effective January 1, 2019
NCUC Docket No. E-7, Sub ——1168
Order dated

Electricity No.4 North Carolina (<u>Second Proposed</u>) Original Leaf No. 113

RIDER SSR SHARED SOLAR RIDER (NC)

<u>FullInitial</u> Subscription <u>FeeCharge</u> by the Company and may be payable on a monthly or annual basis and, at the <u>Company's option</u>, may be included on the monthly bill or paid separately. The Shared Solar Credit shall be payable for 20 years, unless terminated by the Customer.

RENEWABLE ENERGY CREDITS

All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags," associated with the solar photovoltaic (PV) generation system shall be retired by the Company for each site on the Customer's behalf. Alternatively, the Customer may elect to own any RECs produced by their subscription, provided that the Customer informs the Company in writing and applies to create, and pays all registration fees associated with, a REC tracking account with the North Carolina Renewable Energy Tracking or a similar system.

GENERAL PROVISIONS

The Customer shall notify the Company in writing at least 30 days prior to discontinuing electric service—at the qualifying location and provide an alternative address for receipt of future Shared Solar Credit payments.. The Customer may relocate to an alternate location on or outside in the Company's North Carolina service territory. Failure to supply an alternate mailing grounds shall be grounds to forfeit all future credit payments, and keep their subscription. The residential—subscription ends when the Customer may transfer or otherwise convey Shared Solar blocks to a different residential customer during leaves the contract term upon divorce or death of Company's service territory. Customers may be removed from the residential Customer. The Customer may terminate participation with 30 days' notice without any charge; however, all Shared Solar Credit shall be forfeited thereafter program for non-payment of the Monthly Subscription Charge.

CONTRACT PERIOD

The Contract Term for each shared Solar site shall be twenty (20) years from the date of the first Shared Solar Credit payment under the Rider. Following the expiration of the twenty year period, the Rider will terminate for all participants under contract for the Shared Solar site willwith no residual value to participants.

DEP CLEAN AND REDLINED RIDERS

SHARED SOLAR RIDER SSR-3

AVAILABILITY

Available on a voluntary basis, at the Company's option, to customers receiving service from the Company under a metered residential or nonresidential rate schedule who contract for the purchase of Shared Solar. This program is not available for customers concurrently served under a net metering rider or purchased power agreement.

The Company shall solicit participant interest and establish solar photo-voltaic renewable generation sites within its service territory to provide the Shared Solar service. The generation capacity of each individual site shall be a maximum of 5,000 kW. Each site shall have a minimum of 5 subscribers, with no individual subscriber acquiring in excess of 40% of the site capacity. The aggregate capacity of all sites shall not exceed 20,000 kW. Program availability is limited to customers located within, or in the county immediately adjacent to, the county where the supporting renewable generation source is located. Customers located up to 75 miles from the site may also participate upon specific Commission approval.

APPLICATION PROCESS

Applicants must submit a request for service under the Rider through the Shared Solar portal or other means of communication and identify the requested quantity of Shared Solar blocks. Participation is available on a "first-come-first served basis" based upon the date and time of receipt of the Customer's request.

The generation resource may be acquired either from a dedicated Company asset for use solely by this program or from a Purchase Power Agreement. Energy purchased and/or produced from a Shared Solar facility will not be delivered specifically to the individual Customer contracting for the service under this Rider. Pricing parameters shall be developed based upon the estimated date of first production and a project life of 20 years. An Initial Subscription Charge per Shared Solar customer shall be determined to fully recover program development and other costs to establish each site. A Monthly Subscription Charge per Shared Solar Block shall recover the estimated revenue requirement of the generation over the 20year generating asset life and related ongoing program cost. The Initial and Monthly Subscription Charges shall be unique to each site. Additionally, a Shared Solar Credit rate for each block at a project site shall be determined based upon the Company's corresponding fixed 20-year long-term avoided cost rate and shall not change during the contract term. The Initial Subscription Charge is not refundable, unless the solar facility is not built; however, cancellation of the project is unlikely once the Company has decided to move forward with a project. A reduced Initial Subscription Charge may apply to new applicants acquiring cancelled subscriptions since fewer than 20 years remain in the contract term. The Shared Solar Credit will be paid to participating customers for 20 years following commercial operation of the generation.

CUSTOMER SUBSCRIPTION

A Shared Solar block shall be 1000 watts_{AC} which is expected to produce an average of 159 kWh per month over the generating asset life. The number of Shared Solar blocks available to a Customer shall not exceed one hundred percent (100%) of the Customer's maximum annual demand.

MONTHLY RATES

The Monthly Subscription Charge shall be the contracted number of blocks times a fixed rate per block that is specific to the generation site. The Monthly Subscription Charge shall be applicable for the 20 year contract term.

The Shared Solar Credit shall be the contracted number of blocks times a fixed long-term avoided energy and capacity rate that is specific to the generation site. The amount of the monthly Shared Solar Credit

Rider SSR-3 Sheet 1 of 2 received by the participant will be variable based on the actual production of the solar facility. The Shared Solar Credit is only payable upon receipt of the Initial Subscription Charge by the Company. The Shared Solar Credit shall be payable for 20 years, unless terminated by the Customer.

RENEWABLE ENERGY CREDITS

All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags," associated with the solar photovoltaic (PV) generation system shall be retired by the Company for each site on the Customer's behalf. Alternatively, the Customer may elect to own any RECs produced by their subscription, provided that the Customer informs the Company in writing and applies to create, and pays all registration fees associated with, a REC tracking account with the North Carolina Renewable Energy Tracking or a similar system.

GENERAL PROVISIONS

The Customer shall notify the Company in writing at least 30 days prior to discontinuing electric service. The Customer may relocate to an alternate location in the Company's North Carolina service territory and keep their subscription. The subscription ends when the Customer leaves the Company's service territory. Customers may be removed from the program for non-payment of the Monthly Subscription Charge.

CONTRACT PERIOD

The Contract Term for each Shared Solar site shall be twenty (20) years from the date of the first Shared Solar Credit payment under the Rider. Following the expiration of the twenty year period, the Rider will terminate for all participants under contract for the Shared Solar site with no residual value to participants.

Effective on and after January 1, 2019 NCUC Docket No. E-2, Sub 1169

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SHARED SOLAR RIDER SSR-3

AVAILABILITY

Available on a voluntary basis, at the Company's option, to customers receiving service from the Company under a metered residential or nonresidential rate schedule who contract for the purchase of Shared Solar. This program is not available for customers concurrently served under a net metering rider or purchased power agreement.

The Company shall solicit participant interest and establish solar photo-voltaic renewable generation sites within its service territory to provide the Shared Solar service. The generation capacity of each individual site shall be a maximum of 5,000 kW. Each site shall have a minimum of 5 subscribers, with no individual subscriber acquiring in excess of 40% of the site capacity. The aggregate capacity of all sites shall not exceed 20,000 kW. Program availability is limited to customers located within, or in the county immediately adjacent to, the county where the supporting renewable generation source is located. Customers located up to 75 miles from the site may also participate upon specific Commission approval.

APPLICATION PROCESS

The application process shall include three stages: (1) completion Applicants must submit a request for service under the Rider through the Shared Solar portal or other means of an Application of Initial Interest, (2) payment of an Initial Subscription Fee of Intent to Participatecommunication and (3) Payment of Full Subscription Fee. The Application of Initial Interest shall-identify the customer's location and the requested quantity of Shared Solar blocks being requested. Participation is available on a "first-come-first served basis" based upon the date and time of receipt of the Customer's Application of Initial Interestrequest.

The generation resource may be acquired either from a dedicated Company asset for use solely by this program or from a Purchase Power Agreement. Energy purchased and/or produced from a Shared Solar facility will not be delivered specifically to the individual Customer contracting for the service under this Rider. Pricing parameters shall be developed based upon the estimated date of first production and a project life of 20 years. AAn Initial Subscription FeeCharge per Shared Solar blockcustomer shall be determined to fully recover program development and other costs to establish each site. A Monthly Subscription Charge per Shared Solar Block shall recover the estimated revenue requirement of the generation over the 20-year generating asset life and related ongoing program cost. The Initial and Monthly Subscription Charges shall be unique to each site. Additionally, a Shared Solar Credit perrate for each block at a project site shall be determined based upon the Company's corresponding fixed 20year long-term avoided cost rate. The site's Full Shared Solar Subscription Fee and Credit shall be provided to the applicants and shall both be fixed and will not be subject to change for the contract term. Customers will be required to submit payment information, but fees will not be collected unless the Company believes the solar facility will be fully subscribed by customers. The Company will inform customers of the viability of the project prior to collecting any fees and will provide Customers with an opportunity to cancel their enrollment. The first payment will be \$200 per block. The remainder of the Full Subscription Fee will be collected later, the timing of which will be determined by the date the solar facility is energized. The Initial Subscription Fee is not refundable if the customer chooses not to pay the remainder of the Subscription Fee. The Initial Subscription Fee shall be fully refundable if the solar facility is not and shall not change during the contract term. The Initial Subscription Charge is not refundable, unless the solar facility is not built; however, cancellation of the project is unlikely once the Company has decided to move forward with a project. -

If sufficient Customers subscribe the site, Customers will be notified when construction will be initiated along with an estimated completion date. The Full Subscription Fee, less the amount of the Initial Subscription Fee, must be fully paid by the Customer prior to the completion date. If subscriptions are

Rider SSR-3 Sheet 1 of 2 available after the initial program date, new customers may participate upon payment of the Full Subscription Fee, reduced by 5% for each full expired year of the program term. A reduced Initial Subscription Charge may apply to new applicants acquiring cancelled subscriptions since fewer than 20 years remain in the contract term. The Shared Solar Credit will be paid to participating customers for 20 years following commercial operation of the generation.

CUSTOMER SUBSCRIPTION

A Shared Solar block shall be 2201000 watts_{AC} which willis expected to produce an average of 35159 kWh per month over the generating asset life. The number of Shared Solar blocks available to a Customer shall not exceed one hundred percent (100%) of the Customer's maximum annual demand.

MONTHLY RATERATES

The Monthly Subscription Charge shall be the contracted number of blocks times a fixed rate per block that is specific to the generation site. The Monthly Subscription Charge shall be applicable for the 20 year contract term.

The Shared Solar Credit rate-shall be the contracted number of blocks times a fixed long-term avoided cost-energy and capacity rate that is specific to the generation site. The amount of the monthly Shared Solar Credit received by the participant will be variable based on the actual production of the solar facility. The Shared Solar Credit is only payable upon receipt of the Full Initial Subscription FeeCharge by the Company-and may be payable on a monthly or annual basis and, at the Company's option, may be included on the monthly bill or paid separately. The Shared Solar Credit shall be payable for 20 years, unless terminated by the Customer.

RENEWABLE ENERGY CREDITS

All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags," associated with the solar photovoltaic (PV) generation system shall be retired by the Company for each site on the Customer's behalf. Alternatively, the Customer may elect to own any RECs produced by their subscription, provided that the Customer informs the Company in writing and applies to create, and pays all registration fees associated with, a REC tracking account with the North Carolina Renewable Energy Tracking or a similar system.

GENERAL PROVISIONS

The Customer shall notify the Company in writing at least 30 days prior to discontinuing electric service at the qualifying location and provide an alternative address for receipt of future Shared Solar Credit payments. The Customer may relocate to an alternate location on or outsidein the Company's North Carolina service territory. Failure to supply an alternate mailing grounds shall be grounds to forfeit all future credit payments. and keep their subscription. The residential subscription ends when the Customer may transfer or otherwise convey Shared Solar blocks to a different residential customer duringleaves the contract term upon divorce or death of Company's service territory. Customers may be removed from the residential Customer. The Customer may terminate participation with 30 days' notice without any charge; however, all Shared Solar Credit shall be forfeited thereafterprogram for non-payment of the Monthly Subscription Charge.

CONTRACT PERIOD

The Contract Term for each <u>sharedShared</u> Solar site shall be twenty (20) years from the date of the first Shared Solar Credit payment under the Rider. Following the expiration of the twenty year period, the Rider will terminate for all participants under contract for the Shared Solar site <u>willwith</u> no residual value to participants.

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Effective on and after January 1, 2019 NCUC Docket No. E-2, Sub ——1169

Rider SSR-3 Sheet 3 of 2

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 1168 and E-2, Sub 1169, 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 of record.

This the 4th day of June, 2018.

Kendrick C. Fentress

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