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January 23, 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 and Duke Energy Progress, LLC's  
Joint Petition for Approval of Community Solar Program Plan  
Docket Nos. E-2, Sub 1169 and E-7, Sub 1168**

Dear Ms. Jarvis:

Please find enclosed for filing Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Joint Petition for Approval of Community Solar Program Plan under N.C. Gen. Stat. § 62-126.8 in the above-referenced dockets.

If you have any questions, please let me know.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

OFFICIAL COPY

Jan 23 2018

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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

In the Matter of	)	<b>DUKE ENERGY CAROLINAS, LLC’S</b>
Petition for Approval of Community	)	<b>AND DUKE ENERGY PROGRESS, LLC’S</b>
Solar Program	)	<b>JOINT PETITION FOR APPROVAL OF</b>
	)	<b>COMMUNITY SOLAR PROGRAM PLAN</b>
	)	<b>UNDER N.C. GEN. STAT. § 62-126.8</b>

NOW COMES Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (collectively, the “Companies”), pursuant to N.C. Gen. Stat. § 62-126.8 and Commission Rule R8-72, and hereby petition the North Carolina Utilities Commission (“Commission”) for approval of DEC’s and DEP’s respective Community Solar Program Plan (“Program Plan”), which is 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. Included in this Program Plan for specific approval are (i) Rider SSR, Shared Solar Rider (NC) for DEC and Shared Solar Rider SSR-3 for DEP and (ii) a request for the community solar energy facilities in both the DEC and the DEP service territories to be located up to 75 miles from the county where subscribers are located, as provided for in N.C. Gen. Stat. § 62-126.8(c).

**Introduction and Overview of Plan**

House Bill 589 (“HB 589”) or “An Act to Reform North Carolina’s Approach to Integration of Renewable Energy Generation Through Amendment of Laws Related to Energy Policy and To Enact the Distributed Resources Access Act” was signed into law on July 27, 2017. In enacting the Distributed Resources Access Act, the General Assembly stated that its goal was to “encourage the leasing of solar energy facilities for retail customers and subscription

to shared community solar energy facilities.” N.C. Gen. Stat. § 62-126.2. The General Assembly further provided that encouragement of leasing and community solar energy facilities must be balanced with the avoidance of cross-subsidization “by holding harmless electric public utilities’ customers that do not participate in such arrangements.” Id. As part of the Distributed Resources Access Act, N.C. Gen. Stat. § 62-126.8 requires the Companies to file a plan with the Commission to offer a community solar facility program for participation by their retail customers (“Program”).<sup>1</sup> N.C. Gen. Stat. § 62-126.8 and Commission Rule R8-72 both specifically provide the requirements for Commission approval of community shared solar energy facility programs under the Distributed Resources Access Act.

Throughout this process and in preparing this Program Plan, the Companies have aimed to thoughtfully balance the objectives of the Distributed Resources Access Act. The Program Plan details how the Companies intend to expand the access to solar power to those retail customers that want to support the development and integration of solar power in North Carolina, but have been unable or do not wish to do so because they cannot host on-site PV systems on their roofs. The Companies have diligently researched the best practices of other community solar programs, discussed the scope of the Program with and solicited input from interested parties, including the Public Staff of the North Carolina Utilities Commission (“Public Staff”), the Sierra Club, and the Smart Energy Power Association, and surveyed Duke Energy customers to gauge potential interest in participation. Therefore, consistent with the objectives of the Distributed Resources Access Act, and, specifically, N.C. Gen. Stat. §62-126.8 and Commission Rule R8-72, the Companies submit this Program Plan<sup>2</sup> for Commission approval.

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<sup>1</sup> DEC and DEP each will offer a Community Solar Program in their respective service areas, but because their Programs are currently similar, they are filing one Plan, which refers to the “Program.”

<sup>2</sup> DEC and DEP reserve the right to request Commission authorization to modify their Program Plan on an individual basis going forward.

Customer participation in the Program (“subscriptions”) is vital to the Program’s success. N.C. Gen. Stat. § 62-126.8(e)(7) requires that the costs of the Program be borne by subscribing customers and that non-participants be held harmless. To that end, the Companies have designed their Program to be accessible and available to subscribers while complying with the requirements of N.C. Gen. Stat. § 62-126.8. Thus, the Companies have designed their Program to attract and retain subscribers by minimizing the costs to be recovered through subscription fees, such as the incremental administrative costs related to managing the Program, and maximizing the benefits of subscribing, such as subscription portability, as much as possible.

Additionally, and in particular because the law prohibits the subsidization of the Program by other customers, the Companies recognize that community partnerships will be important to the goal of minimizing costs to participating customers. DEC and DEP therefore intend to seek out ways to collaborate with local communities and interested organizations to facilitate the implementation of the Program, and to encourage developers considering community solar facilities to do likewise.

Because this is the first such Program for DEC and DEP in North Carolina, the Companies have designed it to yield valuable experiences, subscriber feedback, and “lessons learned” for implementing Community Solar Programs for their retail customers going forward. The Companies’ research indicates that certain customers are inclined to support developing shared solar resources in North Carolina through this type of subscription, but it is still unclear if this current willingness to enroll in such a Program is attractive to a sufficient number of customers if the Program does not guarantee any savings over time. Accordingly, the Companies’ Program Plan presents a “Tranche 1” for their Program, and the Companies may

modify how they implement Community Solar Programs in future tranches based on lessons learned.

Key components of the Community Solar Program are as follows:

Participation: Consistent with N.C. Gen. Stat. § 62-126.8, the Program is 100% voluntary and available on a first-come, first-served basis for DEC or DEP retail customers located within the DEC or DEP North Carolina service territory, and within the same county or a contiguous county to the solar energy facility. If authorized to do so by the Commission per the exemption request below, the Companies will open eligibility to retail customers living within 75 miles of the solar energy facility, as permitted by N.C. Gen. Stat. § 62-126.8(c). If the Companies determine that sufficient customer interest exists within the relevant geographic area, the customer (“subscriber”) will pay the first of two installments of the subscription fee. DEC and DEP will each maintain a waiting list for customers to become subscribers if their respective programs become fully subscribed and additional customers express interest.

Consistent with N.C. Gen. Stat. § 62-126.8(a) and Rule R8-72, the Companies have designed their Program so that each facility will offset the use of not less than five subscribers and no single subscriber has more than a forty percent interest. Each subscription block represents 220 watts of solar energy, projected to produce 35 kilowatt hours (“kWh”) per month, fixed over the term of the Program. A customer may subscribe to multiple blocks, but the number of blocks to which subscribers may subscribe will be limited to supply no more than 100% of the maximum annual peak demand of electricity at the subscriber’s premises. The proposed duration of a Tranche 1

subscription for the Program is 20 years. The terms and conditions of subscription are set forth in Riders SSR and SSR-3, attached hereto as Appendix A.

Purchase Power Agreements (PPAs): For Tranche 1, the Companies intend to procure solar energy for the Program through PPAs with qualifying small power production facilities, as defined in 16 U.S.C. § 796. As noted in the Companies' reply comments in Docket No. E-100, Sub 155, they intend for Tranche 1 to yield valuable lessons learned and experience in designing and implementing a community solar program.<sup>3</sup> To that end, Tranche 1 of the Program will include relatively small facilities to test how to attract and retain subscribers to the Program. Tranche 1 will include a solar energy facility of about one megawatt ("MW") solar energy facility in the DEC service territory and one in the DEP service territory.

Tranche 1 Implementation Plan: The Companies plan to commence stakeholder engagement at the time of the filing of this Program Plan and to publicize through internal and external stakeholder channels the types of projects they would like to see submitted into the interconnection queue for the program. The Companies will then identify locations that could facilitate both lower solar costs and, potentially, subscribers willing to commit to larger subscriptions as a way to lower projected marketing expenses. Subsequent to Commission approval of the Program, the Companies will release an RFP, finalize development of marketing materials for the Program, and launch the marketing effort for the Program. Sixty to ninety days after marketing launch, the Companies will determine whether sufficient subscriber interest has been received to proceed with Program implementation or to request that the Commission authorize a delay, suspension

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<sup>3</sup> Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Reply Comments and Proposed Rule to Implement N.C. Gen. Stat. § 62-126.8, filed in Docket No. E-100, Sub 155 on Nov. 21, 2017, at 2 ("Reply Comments").

or closure of the Program. If there is sufficient subscriber interest, the Companies intend to process initial subscriber payments and execute the PPA(s) during the next 90-120 days. The Companies project that the Tranche 1 facilities could achieve commercial operations in 2020-2021.

In summary, the Companies' Program Plan serves the public interest and meets the objectives of the Distributed Resources Access Act and, as discussed herein, the specific requirements of N.C. Gen. Stat. § 62-126.8 and Commission Rule R8-72.

#### **Request for Exemption from Same/Contiguous County Requirement**

Commission Rule R8-72(c)(1)(xi) requires the Program Plan to describe siting considerations and the site selection process for the community solar energy facilities. Within the parameters of the location and size requirements for those facilities contained in N.C. Gen. Stat. § 62-126.8, the Companies believe 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. Pursuant to N.C. Gen. Stat. § 62-126.8(c) and Rule R8-72(e)(4), the Companies therefore respectfully request that the Commission approve an exemption from the requirement that subscribers to the Program be located in the same county or a county contiguous to the community solar facility location, such that customers may subscribe to the Program so long as they are North Carolina residents and are located no more than 75 miles from the facility. This exemption is in the public interest because, as explained throughout this Program Plan, customer participation is vital to the Program's success. With the requested exemption, the Companies can target their Program marketing efforts at the widest possible audience, and seek development opportunities in locations that minimize the upfront cost of

subscription, thereby attracting more subscribers and increasing the Program's chances of success.

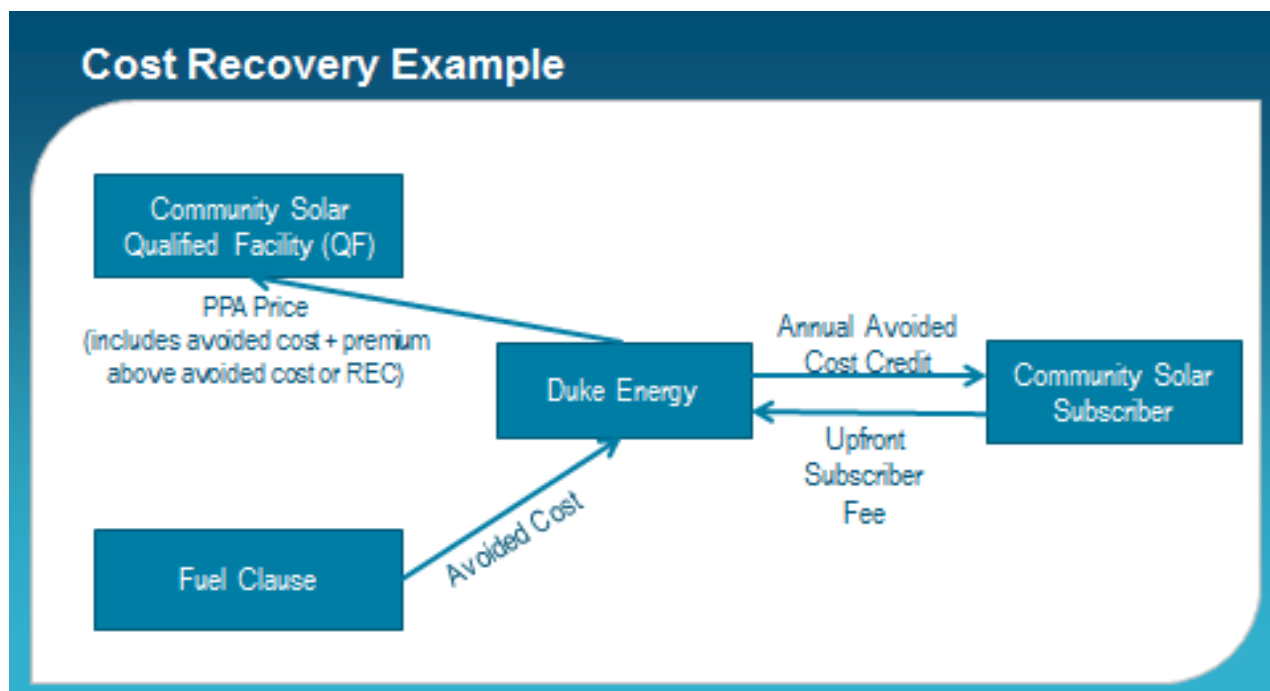
### **Program Plan Filing**

#### **A. Standards and Processes for Recovery of Costs**

As noted, the Companies intend to implement Tranche 1 of the Program by procuring solar energy through a PPA with a qualifying solar small power production facility. The community solar facility developer will pay for any reasonable interconnection costs associated with the facility through interconnection fees. Administrative costs, such as program management, billing, etc., will be recovered from subscribers through the subscription fee. The Companies intend to ensure appropriate cost assignment and recovery through the development of accounting codes associated with the Program. Employees working with the Program will be trained in properly assigning the costs of the Program to the appropriate code to avoid cross-subsidization of Program costs by non-subscribing customers.

The environmental and renewable attributes, or renewable energy credits ("RECs"), from the purchased power will also be paid by subscribers through the subscription fee. The 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 pursuant to N.C. Gen. Stat. § 62-133.2(a1)(10) from all customers utilizing the same methodology applied to other Qualifying Facilities ("QF") purchases. The following diagram illustrates this cost recovery framework. The subscriber fee illustrated in the diagram is paid prior to commercialization of the facility, while the subscriber will receive the credit based on avoided costs on an annual basis:





From a ratemaking perspective, recovering no more than the avoided cost component of the purchased power that is delivered to the grid through the fuel clause holds non-participants harmless because the costs being recovered are “avoided costs,” which, for purposes of implementing the Community Solar Program under N.C. Gen. Stat. § 62-126.8, represent costs that the non-participants would have paid for the same amount of power in the absence of the PPA.

B. Program Participation Options and Determination of the Subscription Fee

i. Subscription

Commission Rule R8-72(c)(1)(iii) requires the Companies’ Program Plan to provide a description of and justification for Program participation options. Commission Rule R8-72(c)(1)(iv) requires that the Companies’ Program Plan include the methodology for determining the subscription fee, including whether a subscriber would retain his or her existing rate tariff, and a description and justification for any proposed upfront subscription fee and the projected impact of each such fee on overall participation, and Commission Rule R8-72(c)(1)(x) directs the

Companies to provide an estimate of economic costs and benefits for an average program subscriber. The Companies' discussion of these topics is included below.

The Companies' goal with respect to subscription fees is to minimize the costs associated with the Program where practicable to foster lower subscription fees and, thereby, promote greater participation in the Program. Consistent with that goal, the Companies propose to collect an "upfront" subscription fee for Tranche 1. An upfront subscription fee keeps administrative costs lower because it simplifies the Companies' management and oversight of the Program and mitigates the administrative burden and costs of having DEC and DEP employees receiving, accounting for, and tracking multiple and ongoing subscriber payments and cash transactions throughout the 20-year term of Tranche 1. The subscription fee entitles the subscriber to "a block" of shared solar of 35 kWh per month with each subscription having a term of 20 years.

Each solar energy facility may present varying circumstances, and, therefore, the Companies cannot precisely project the amount of the costs that will make up the subscription fee at this time. Notably, the Companies believe that engaging and educating customers about the Program is necessary to encourage participation. Additionally, the Companies will encourage the community solar energy facility developers to partner with entities that may donate brownfields or other land for the facilities. These efforts may improve the affordability of the program. Without either assistance from outside entities to lower the cost of the subscriptions or subscribers that subscribe to multiple blocks to reduce overall expenses, the Companies project that the Program may not create an economic benefit for customers. The following table shows projected Program costs of \$500/subscription block if the PPA price is \$65/MWh. Given the limitation on potential facility locations near or in an urban county if the 75 mile exemption is not allowed, the size of the initial facilities at approximately 1 MW, and the

Companies' experience from the South Carolina shared solar RFP, \$65/MWH hour is a reasonable forecast. At current avoided cost estimates, the subscriber's credit would be \$420 over the 20-year term. In this example, the subscriber will not recoup his or her subscription fee over the term of the Program. Note that in the table below, the projected PPA and marketing expenses make up the majority of the Program cost; they are also the most variable in terms of determining the overall Program costs. If the Companies are able to lessen these Program costs as described, the subscription fee should decrease as a result.

<b>Cost Category</b>	<b>Projected Estimated Costs</b>
PPA @ approximately \$65/ MWhr	\$284
Marketing and Customer Engagement	\$131
Enrollment / Billing / Credit	\$37
Call Center	\$9
Program Management	\$39
<b>TOTAL</b>	<b>\$500</b>

The Companies plan for the subscription process to work as follows: A customer learns about the Program through the Companies' customer engagement and marketing efforts, and either visits the Program website or contacts DEC or DEP to learn more. Upon deciding to subscribe, the customer completes the online subscription form and provides payment information. Once the Companies determine that enough subscriber interest exists to support the Program, customers will receive notice that the Program is moving forward and will have one week from the notification date to cancel their subscriptions. After the cancellation period has passed, the Companies will collect the first of two installments of the upfront subscription fee

according to the payment information provided by the subscribing customer. As provided in Riders SSR and SSR-3, the first installment of the subscription fee will be priced at \$200 per block. The Companies will then proceed to execute PPAs in each service territory for the Program and, subsequent to execution, will charge each subscriber the second installment payment of the subscription fee. Subscribers will receive updates by email regarding the status of the Program project, including the date of the solar facility site's energization and ribbon cutting. Once the project comes online, subscribers will be able to track their Project's output through an online portal and will receive a fixed annual payment for the term of the Program. In addition to the annual credit, subscribers to Tranche 1 will have the ability to indicate they are participating in a renewable energy program through the retirement of the associated REC, which is discussed in more detail below, and will have participated in fostering the expansion of community based solar generation facilities.

Neither the subscription fee, nor the annual credit the subscriber receives, will be included on the subscriber's bill. Managing credits and charges outside of the billing system supports quicker implementation of the Program at a lower overall cost. In all cases, subscribers will retain their existing rate tariff associated with billing for energy consumption at their premises.

The Companies also do not intend to offer "on-bill" financing of subscription costs for subscribers at this time. As they noted in their reply comments in Docket No. E-100, Sub 155, on-bill financing would increase administrative expense to the program, increasing the subscription fee and dampening the number of subscriptions.<sup>4</sup> Finally, as the Companies 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

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<sup>4</sup> Reply Comments at 11-12.

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.

The Companies intend to promote the Program as described herein but, if 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 Program is canceled by the Commission, and there are no subscribers to pay these costs, the Companies plan to seek recovery of administrative costs incurred in promoting and developing the Program in its next general base rate case. Seeking recovery through base rates of Program costs under these circumstances would be appropriate given the statutory mandate that the Companies develop the Program. 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 to be recovered.

ii. Portability and Transferability of Subscriptions

Commission Rule R8-72(c)(1)(iii) also requires that the Companies' Program Plan include information on the treatment of subscriptions if a subscriber moves within or outside of the offering utility's service territory, and whether and how subscriptions may be transferred from a subscriber to another customer who is eligible to participate in the program. Consistent with N.C. Gen. Stat. § 62-126.8(c), when a customer seeks to subscribe to the Program, that customer shall be located in the State of North Carolina and the same county or county contiguous to where the facility is located, or, if authorized by the Commission pursuant to the request for exemption contained herein, up to 75 miles from the county where the facility is located.

Considering that customers rarely live in one place for 20 years, disallowing subscribers from taking their subscriptions with them if they relocate outside of the county or contiguous county after paying their upfront subscription fee would make the program very difficult to market, and likely would result in failure to achieve enough interested subscribers to proceed with the Program. Therefore, after the subscriber pays the subscription fee, the Companies will continue to provide the subscriber's annual credits to the former subscriber for the duration of the Program, regardless of the location of the former subscriber's premises. Because the Program credit is administered outside of the customer's utility bills, continuing with the credit as described does not impose any additional administrative costs or complexity.

With regard to transferability of subscriptions, the Companies are mindful of the potential risk that the subscription fee could be characterized as an investment in a common enterprise and therefore subject to federal or state securities regulation.<sup>5</sup> As with the portability issue, however, the Companies also recognize that 20 years is a long time and that unexpected circumstances other than moving residences might arise that could prevent a subscriber from being able to continue to receive Program credits. Therefore, the Companies plan to provide each subscriber with the option of designating a beneficiary of the subscription upon signing up for 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 impacts the original subscriber's ability to receive payments under the Program. It will be incumbent on the subscriber who wishes to designate a beneficiary to do so when he or she subscribes to the Program. The Companies believe this approach appropriately mitigates the risk of securities

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<sup>5</sup> *SEC v. Howey Co.*, 328 U.S. 293, 301 (1946); *see also* National Renewable Energy Laboratory, A Guide to Community Shared Solar: Utility, Private, and Nonprofit Project Development, at 5, available at <https://www.nrel.gov/docs/fy12osti/54570.pdf> (explaining that community shared solar programs must be sure to avoid inadvertently offering a security).

regulation by limiting the transferability of the subscription while encouraging participation in the Program as much as possible. The Companies intend to provide this information to subscribers when they sign up for the Program.

C. Methodology for Determining the Avoided Cost Rate for Subscription Credits

To determine the avoided cost rates for the annual subscription credits, the Companies intend to follow the avoided cost methodology approved by the Commission at the time the Companies open the Program for subscriptions.

D. Methodology for Determining Nameplate Capacity of the facility

Commission Rule R8-72(c)(1) (vi) requires the Program Plan to contain “the methodology for determining the nameplate capacity of a facility.” The nameplate capacity of a community solar facility can be termed as its continuous rated power output. Continuous rated power output is the facility’s designed and intended maximum continuous output capability, measured in watts, at the facility’s point of interconnection with the distribution or transmission system. The Companies believe that this methodology is appropriate for use with this Program.

E. Promotion of the Program and Information Provided to Customers

i. Projected Costs of Promotion and Communication Materials

As the Commission has stated, the Community Solar Plan is “not a permissive pilot program suggested by the General Assembly; rather, it is a statutory mandate.”<sup>6</sup> Obtaining sufficient subscriptions is key to the Companies’ ability to offer and maintain the Program consistently within the parameters established in N.C. Gen. Stat. § 62-126.8. Each megawatt requires approximately 4300 blocks to be sold within the locations set out by N.C. Gen. Stat. § 62-126.8(c) in each service territory to make the Program viable. If the program costs exceed the avoided cost credits, attracting a sufficient number of customers who will be both (i) committed

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<sup>6</sup>*Order Adopting Rule R8-72*, Docket No. E-100, Sub 155, issued Dec. 19, 2017, at 14.

to paying a premium for their electric power to promote the development of solar energy and (ii) located within one county, a contiguous county or within 75 miles of the facility, presents challenges. Therefore, the Companies believe that a robust marketing effort will be necessary. The Companies have projected marketing costs of approximately \$860,000 for DEC and DEP combined, associated with implementation of Tranche 1. The Companies will use digital and printed communications through the Duke Energy website, email, press releases, newsletters, social media, direct mail, webinars, internal and external stakeholders, and any combination of or all of those methods to market the Program. Examples of the marketing materials are attached hereto as Appendix B. By identifying those customers that demonstrate an interest in the Program in the first phase of the Program and then collecting a subscription fee from those customers, the Companies believe they will incur less costs for marketing. If the Companies or solar developer are able to foster partnerships that lead to lower costs, however, the Program may be more attractive to customers and require less marketing expense.

Finally, consistent with Commission Rule R8-72(c)(i)(vii), the Companies will also explain to subscribers when they subscribe the process by which they may file a complaint at the Commission under N.C. Gen. Stat. § 62-73 and Commission Rule R1-9 and will provide subscribers with information on how to access the Commission's website to view Commission Rule R8-72, which governs community solar programs.

ii. Tariff and Terms and Conditions

Commission Rule R8-72 requires the Companies to provide the customer the terms and conditions regarding costs, risks, and benefits to the subscriber, an itemized list of any one-time and ongoing subscription fees, and explanation of RECs, and when and how the subscriber will receive notifications regarding product status and performance. Attached to this petition as



Appendix A are the Riders SSR for DEC and SSR-3 for DEP, which outline the terms and conditions of the Program for the subscribers. They explain how a customer applies to become a subscriber, provide that the first installment of the subscription fee is \$200, and provide information on how subscribers receive their credit, how they may discontinue the Program, and how RECs will be retired on behalf of the subscriber.

As discussed earlier with respect to the subscription process, the Companies will provide additional information on the status of the Program when they provide an email upon signing up for the Program. Moreover, once the community solar energy facility has started producing power, subscribers will be able to access a portal on the Companies' website to review production of that facility.

F. RECs Produced by the Facility

As outlined by the Companies' Riders SSR and SSR-3, they intend to retire the RECs produced by the facilities on behalf of customers. This approach has been described as a "best practice" in community solar programs, because it ensures subscribers may claim that they are participating in a renewable energy program.<sup>7</sup> The Federal Trade Commission Guidelines for Use of Environmental Marketing Claims provide that "[i]f a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy."<sup>8</sup> If subscribers were to sell or otherwise transfer the RECs associated with the Program, they would lose the ability to claim ownership of the environmental attributes of the solar energy.<sup>9</sup> Additionally, retiring RECS on behalf of subscribers results in lower administrative cost and is

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<sup>7</sup> See *Opinion and Order*, Case No. U-17752, Mich. Pub. Serv. Comm'n., issued on June 9, 2016 at 1-2 (discussing Consumer Energy Company's request to retire RECS on their community solar customers' behalf).

<sup>8</sup> *Id.*, citing 16 CFR 260.15(d).

<sup>9</sup> *Id.* at 2.

appropriate given that it will take more than two years for one subscription block of the community solar facility to produce a REC, which results in the block's REC value being immaterial for the majority of subscribers for the first few years of the program.


G. Implementation Schedule

The proposed implementation schedule of Tranche 1 is discussed on pages 5-6 of this Petition. Because the Companies intend to use Tranche 1 to obtain valuable insights and experiences for future tranches of their community solar programs in North Carolina, the Companies have not yet developed an implementation schedule and cost estimates for installing 20 MW of solar energy for each service territory.

**Conclusion**

Based on the foregoing, the Companies' Program Plan is consistent with the goals of the Distributed Resources Access Act in that it expands access to community solar programs, while ensuring that non-participants in the Program will be held harmless from the costs. The Companies respectfully request that the Commission approve the Program Plan provided herein, the associated Schedule SSR for DEC and DEP, and their request for an exemption from N.C. Gen. Stat. § 62-126.8(c) to allow subscribers to the Program to be located within 75 miles of a Program facility as reasonable and consistent with the requirements of N.C. Gen. Stat. § 62-126.8 and Rule R8-72.

Respectfully submitted, this the 23<sup>rd</sup> day of January, 2018.

  
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*Attorney for Duke Energy Carolinas, LLC  
and Duke Energy Progress, LLC*

**VERIFICATION**

STATE OF NORTH CAROLINA	)	
	)	DOCKET NO. E-2, SUB 1169
	)	DOCKET NO. E-7, SUB 1168
COUNTY OF MECKLENBURG	)	

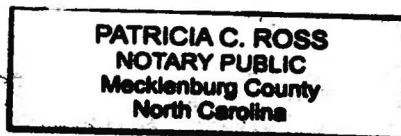
PERSONALLY APPEARED before me, Stacy Phillips, after first being duly sworn, said that she is Senior Product & Services Manager for Duke Energy Carolinas, LLC, and as such is authorized to make this verification; that she has read the foregoing *Application Requesting Approval of Community Solar Program Plan* and knows the contents thereof; and that the same are true and correct to the best of her knowledge, information, and belief.

Stacy Phillips

Stacy Phillips  
Senior Product & Services Manager

Sworn to and subscribed before  
me this 22 day of January, 2018.

Patricia C. Ross  
Notary Public



My Commission expires: 10-17-2019

**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 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 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 of an Application of Initial Interest, (2) payment of an Initial Subscription Fee of Intent to Participate and (3) Payment of Full Subscription Fee. The Application of Initial Interest shall identify the customer's location and the 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.

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. A Subscription Fee per Shared Solar block shall be determined to fully recover the estimated revenue requirement of the generation over the 20-year generating asset life and shall be unique to each site. Additionally, a Shared Solar Credit per block 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 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. 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 220 watts<sub>AC</sub> which will produce an average of 35 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 RATE

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 Shared Solar Credit is only payable upon receipt of the Full Subscription Fee 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.

RIDER SSR  
SHARED SOLAR RIDER (NC)

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 the Company's service territory. Failure to supply an alternate mailing grounds shall be grounds to forfeit all future credit payments. The residential Customer may transfer or otherwise convey Shared Solar blocks to a different residential customer during the contract term upon divorce or death of the residential Customer. The Customer may terminate participation with 30 days' notice without any charge; however, all Shared Solar Credit shall be forfeited thereafter.

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 will no residual value to participants.

## 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 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 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.

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



**180115 Shared Solar NC Radio Options**

NPR version: 15

VO: Support for NPR comes from Duke Energy. If you're interested in bringing solar energy to your community, consider joining the NC Shared Solar program. Learn more at Duke dash Energy dot com slash NCSharedSolar or call XXX-XXX-XXXX.

Script:30

VO: Have you heard the buzz about the NC Shared Solar program from Duke Energy? It's a great way to enjoy the benefits of solar energy without having to have solar panels installed at your home. Be a part of the plan to bring solar to your community and invest in the future of renewable energy in North Carolina. Visit Duke dash Energy dot com slash NCSharedSolar or call XXX-XXX-XXXX to learn more.

Coworker Conversation (Creative) :60

Karen: Hey Mark. How was your weekend?

Mark: Great. We went to see my sister's new house. It's amazing—really modern with solar panels and everything. It really made me wish we could go solar.

Karen: Well, why don't you?

Mark: Nah. We have way too many trees.

Karen: But there's a way you can bring more solar energy here without having to put panels on your house.

Mark: What do you mean?

Karen: It's called the NC Shared Solar Program. It's from Duke Energy. We're already signed up.

Mark: How does it work?

Karen: Well, they've already identified a site here in \_\_\_\_\_ County. If we can get enough people to participate, we can bring solar energy right to our community.

Mark: Really? That sounds great. How can I find out more?

Karen: You can learn more about the NC Shared Solar program by visiting Duke dash Energy dot com slash NCSharedSolar or call XXX-XXX-XXXX.

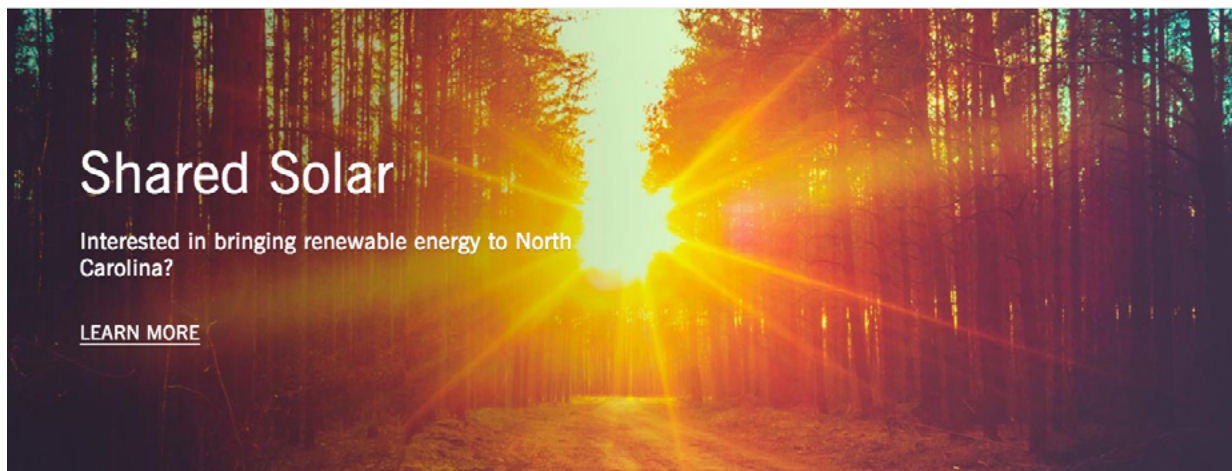
Mark: The NC Shared Solar Program. I'm going to check it out. Thanks!

Option 1



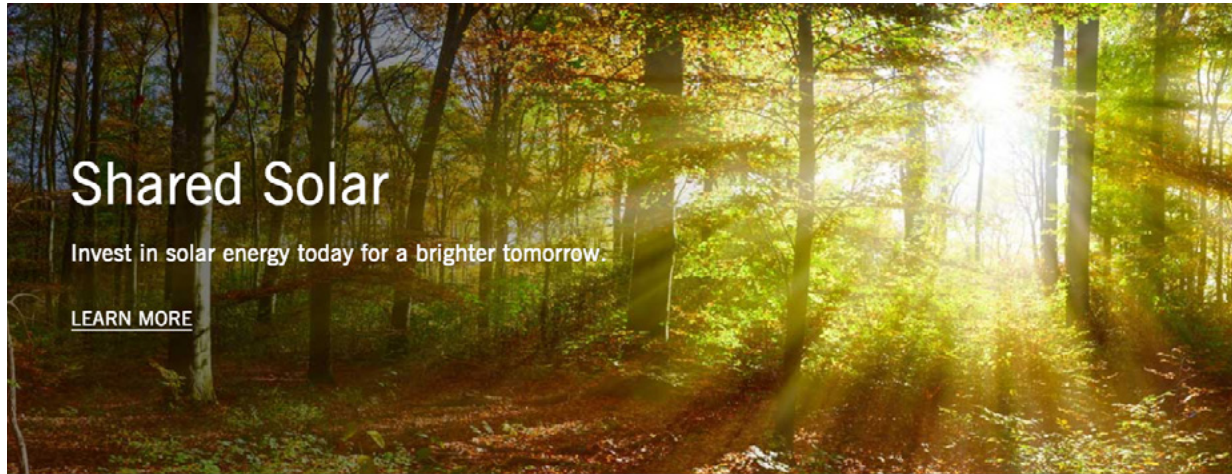
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Option 2



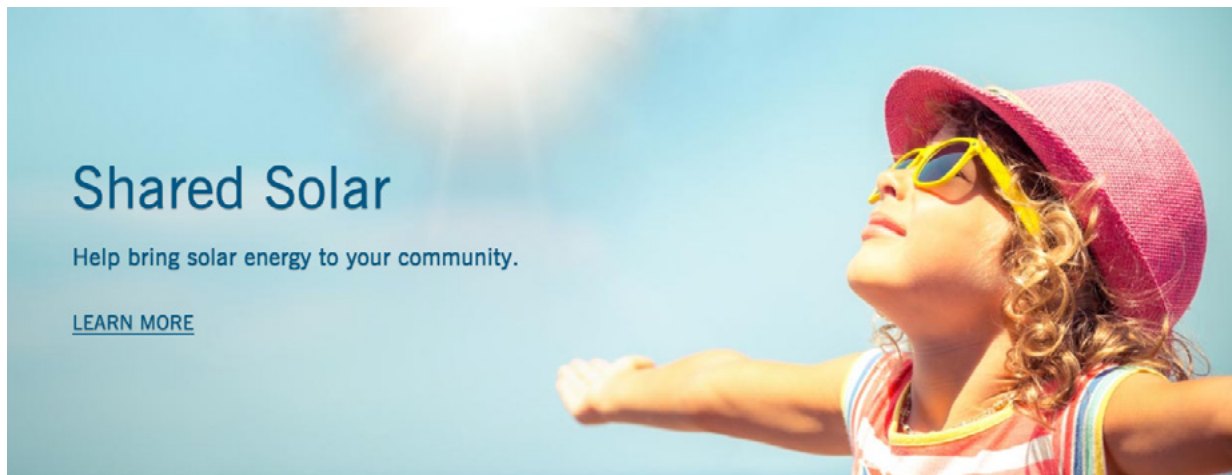
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Option 3



<https://team.duke-energy.com/sites/CreativeDigitalComm/ED/CDP-content/products/SitePages/promo-maker.html?setID=56541598&preview=1>

Option 4

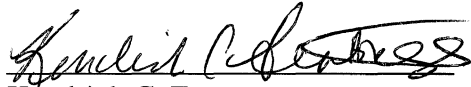


<https://team.duke-energy.com/sites/CreativeDigitalComm/ED/CDP-content/products/SitePages/promo-maker.html?setID=23607948&preview=1>

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Joint Petition for Approval of Community Solar Program Plan in Docket Nos. E-2, Sub 1169 and E-7, Sub 1168 has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1<sup>st</sup> Class Postage Prepaid, properly addressed to parties of record.

This the 23<sup>rd</sup> day of January, 2018.



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