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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2020-229-E

Dominion Energy South Carolina, Incorporated's Establishment of a Solar Choice Metering Tariff Pursuant to S.C. Code Ann. Section 58-40-20 (See Docket No. 2019-182-E)	))))))))	**JOINT PARTIAL PROPOSED ORDER OF THE SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, SOUTHERN ALLIANCE FOR CLEAN ENERGY, UPSTATE FOREVER, VOTE SOLAR, NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION, AND SOLAR ENERGY INDUSTRIES ASSOCIATION**

COME NOW Intervenors the South Carolina Coastal Conservation League ("CCL"), Southern Alliance for Clean Energy ("SACE"), Upstate Forever, Vote Solar, North Carolina Sustainable Energy Association ("NCSEA"), and Solar Energy Industries Association ("SEIA") (collectively, "Joint Intervenors"), pursuant to oral instructions from the Chairman of the South Carolina Public Service Commission ("Commission") at the conclusion of the Hearing on March 2, 2021, and hereby file this Joint Partial Proposed Order. This Joint Partial Proposed Order addresses only the residential solar choice proposals put forth in this proceeding.

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I. INTRODUCTION

This matter relates to this Commission's establishment of a Net Energy Metering ("NEM") Solar Choice Tariff for Dominion Energy South Carolina, Inc. ("DESC" or "the Company") pursuant to requirements enacted by the General Assembly in H.3659, also known as the South Carolina Energy Freedom Act ("Act 62"). In brief, we reject the Company's Proposed Solar Choice Tariff on the grounds that it would violate Act 62 by, in part, significantly and unjustifiably decreasing the opportunity for customer-generators to save money on their bills, penalizing solar customers for behind-the-meter solar usage, and ultimately causing major disruption to the solar market in South Carolina. We also reject the Office of Regulatory Staff's ("ORS") proposed modifications to the DESC Solar Choice Proposal, as they would further reduce customer bill savings and cause greater disruption to the market in violation of the express requirements in Act 62.

We find that the solar choice tariff proposed by the South Carolina Coastal Conservation League ("CCL"), Southern Alliance for Clean Energy ("SACE"), Upstate Forever, Vote Solar, Solar Energy Industries Association ("SEIA"), and the North Carolina Sustainable Energy Association ("NCSEA") (collectively, "Joint Intervenors") is just and reasonable, cost-effective for the utility and its customers, and consistent with the overall framework and specific requirements of Act 62. As such, we require that DESC offer the solar choice tariff as outlined in Joint Intervenors' Solar Choice Proposal to all customer-generators that apply on or after June 1, 2021, and to existing NEM customers as described in the proposal.

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A. Background on Net Energy Metering in South Carolina

This Commission first considered net metering in South Carolina in response to an ORS petition requesting that the Commission consider implementing various voluntary provisions of Section 1251 of the Energy Policy Act of 2005 ("EPAct"). In 2007, the Commission adopted net metering on a limited basis in Order No. 2007-618, which required South Carolina's regulated utilities to file net metering tariffs. In 2008, the Commission ordered a twelve-month review of those net metering programs so the Commission could consider whether any changes were warranted at that time. Order No. 2008-416.

In 2009, the Commission undertook a review of the experimental net metering tariffs adopted in compliance with the EPAct and approved a settlement that, among other things: (1) standardized the structure of the NEM program for statewide uniformity; (2) allowed a full retail credit (one-to-one kWh offset) under the flat rate for excess energy credits (as opposed to a mandatory time-of-use rate with a demand component); (3) eliminated standby charges; (4) allowed "renewable energy generators" to retain the rights to Renewable Energy Credits, except for those associated with net excess generation; and (5) provided for review of the program in four years. Order No. 2009-552.

Five years later, in 2014, the General Assembly codified the NEM program as part of the South Carolina Distributed Energy Resource Act, S.1189 ("Act 236"). Act 236 capped participation in NEM at "two percent of the previous five-year average of the electrical utility's South Carolina retail peak demand" (S.C. Code Ann. § 58-40-20(B) (2014)), provided a utility had an approved Distributed Energy Resource ("DER")

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Program.[1] The Commission then approved a settlement ("NEM Settlement") in Order 2015-194 establishing the Act 236 NEM program.

Under the Act 236 NEM program, the Commission established a procedure for annually calculating the value of DERs (the "NEM Methodology") and for collecting the so-called NEM DER Incentive, which was calculated by subtracting the value of DER from the full retail rate that was offset by each kWh of generation for customer-generators. Under the NEM Methodology, the total value of DERs is determined by summing eleven different cost and benefit components; Order No. 2015-194 defines and provides a calculation methodology for each of those components. The NEM Settlement, among other things, also established that full retail net energy metering (i.e., the one-to-one kWh crediting rate) would be offered on a first-come basis through the NEM Settlement effective period (i.e., until January 1, 2021) or until statutory limits on program participation under Act 236 were reached. The NEM Settlement provided that customer-generators applying and receiving service pursuant to the NEM Settlement "shall have the right to remain on that rate, according to the terms and conditions specified in this Settlement Agreement through December 31, 2025." As a result of Act 236 and the Act 236 NEM program, the residential solar market in South Carolina has grown substantially. Currently, over 11,000 customers in DESC territory have rooftop solar installed on their homes.

Following the abandonment of construction of V.C. Summer Units 3 and 4, the General Assembly passed Act 62, and on May 16, 2019, Governor Henry McMaster signed

[1] The DEP program was approved by Order 2015-514 (July 15, 2015); DEC's program was approved by Order No. 2015-515 (July 15, 2015); and SCE&G program was approved by Order No. 2015-512 (July 15, 2015).

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it into law. Act 62 modified many of the statutory provisions related to NEM in Title 58, Chapter 40 of the S.C. Code, including extending the terms of the Act 236 NEM Settlement (approved by Order No. 2015-194) for customer-generators applying for NEM service after the effective date of the Act and before June 1, 2021 ("Interim Customer-Generators"). Act 62 required the Commission to open a generic docket to "(1) investigate and determine the costs and benefits of the current net energy metering program; and (2) establish a methodology for calculating the value of the energy produced by customer-generators." S.C. Code Ann. § 58-40-20(C)(1). The statute further requires the Commission to establish "solar choice metering tariffs" to succeed the Act 236 NEM program, and stated that the utilities would no longer be able to recover the difference between the value of solar and retail rates for customers taking service under the solar choice tariffs. S.C. Code Ann. § 58-40-20(I) ("Electrical utilities are prohibited from recovering lost revenues associated with customer-generators who apply for customer-generator programs on or after June 1, 2021").

The Commission opened generic Docket No. 2019-182-E to investigate the costs and benefits of the existing NEM programs and review the methodology for valuing DERs. The hearing in Docket No. 2019-182-E was held on November 17 and November 18, 2020; the Commission has not yet issued a final order in that proceeding. However, the Commission must approve utility-specific Solar Choice NEM tariffs to be implemented by May 31, 2021.

B. Notice and Intervention

This docket was opened on September 16, 2020, pursuant to Act 62's directive, codified in S.C. Code Ann. § 58-40-20(F)(1), that "[a]fter notice and opportunity for public

comment and public hearing, the commission shall establish a 'solar choice metering tariff' for customer-generators to go into effect for applications received after May 31, 2021." Order 2020-622.

Alder Energy Systems, LLC ("Alder Energy"), Frank Knapp, Jr., NCSEA, SEIA, CCL, SACE, Upstate Forever, and Vote Solar intervened. ORS is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B).

II. REQUIREMENTS FOR NET ENERGY METERING UNDER ACT 62

A. Procedural Requirements

S.C. Code Ann. § 58-40-20 sets forth the procedural requirements for the Commission to establish: (1) a generic proceeding to evaluate the costs and benefits of NEM; and (2) NEM Solar Choice tariffs for each utility.

Under S.C. Code Ann. § 58-40-20 (C), the Commission was directed to open a generic docket by January 1, 2020 to "investigate and determine the costs and benefits of the current net energy metering program" and "establish a methodology for calculating the value of the energy produced by customer-generators." S.C. Code Ann. §58-40-20(D) requires that, in evaluating the costs and benefits of the net energy metering program, the Commission consider:

> "(1) the aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission;
> (2) the cost of service implications of customer-generators on other customers within the same class, including an evaluation of whether customer-generators provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study;
> (3) the value of distributed energy resource generation according to the methodology approved by the commission in Commission Order No. 2015-194;
> (4) the direct and indirect economic impact of the net energy metering program to the State; and
> (5) any other information the commission deems relevant."

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S.C. Code Ann. §58-40-20 (E) further provides that "[t]he value of the energy produced by customer-generators must be updated annually and the methodology revisited every five years."

S.C. Code Ann. § 58-40-20 (F) sets forth the procedural requirements for establishing NEM Solar Choice tariffs, stating that "[a]fter notice and opportunity for public comment and public hearing, the commission shall establish a new tariff to go into effect for applications received after May 31, 2021."

Rooftop solar customers who apply after May 16, 2019 but prior to June 1, 2021 are entitled to continue with retail one-to-one NEM, as established under Order No. 2015-194, through May 31, 2029. S.C. Code Ann. § 58-40-20 (B). Rooftop solar customers who applied prior to May 16, 2019, are entitled to continue on a retail one-to-one NEM rate through December 31, 2025. Order No. 2015-194 at 20.

B. Requirements for Solar Choice Tariffs

i. <u>NEM Solar Choice Tariff Provisions</u>

At the outset of S.C. Code Ann. Section § 58-40-20, the General Assembly states its intent for net energy metering in South Carolina:

> (A) It is the intent of the General Assembly to:
> (1) build upon the successful deployment of solar generating capacity through Act 236 of 2014 to continue enabling market-driven, private investment in distributed energy resources across the State by reducing regulatory and administrative burdens to customer installation and utilization of onsite distributed energy resources;
> (2) avoid disruption to the growing market for customer-scale distributed energy resources; and
> (3) require the commission to establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift or subsidization

> associated with net metering to the greatest extent practicable.

S.C. Code Ann. § 58-40-20(F) sets forth the specific requirements for NEM Solar Choice tariffs. In particular, §58-40-20(F)(2) provides that, "[i]n establishing any successor solar choice metering tariffs, and in approving any future modifications, the commission shall determine how meter information is used for calculating the solar choice metering measurement that is just and reasonable in light of the costs and benefits of the solar choice metering program."

A solar choice tariff also must "include a methodology to compensate customer-generators for the benefits provided by their generation to the power system." §58-40-20(F)(3). The Commission is required to consider four factors when determining the appropriate billing mechanism and energy measurement interval:

> (a) current metering capability and the cost of upgrading hardware and billing systems to accomplish the provisions of the tariff;
> (b) the interaction of the tariff with time-variant rate schedules available to customer-generators and whether different measurement intervals are justified for customer-generators taking service on a time-variant rate schedule;
> (c) whether additional mitigation measures are warranted to transition existing customer-generators; and
> (d) any other information the commission deems relevant.

S.C. Code §58-40-20(G) further provides two directives to the Commission in establishing a successor solar choice metering tariff:

> (1) eliminate any cost shift to the greatest extent practicable on customers who do not have customer-sited generation while also ensuring access to customer-generator options for customers who choose to enroll in customer-generator programs; and
> (2) permit solar choice customer-generators to use customer-generated energy behind the meter without penalty.

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The Commission must also "establish a minimum guaranteed number of years to which solar choice metering customers are entitled pursuant to the commission approved energy measurement interval and other terms of their agreement with the electrical utility." S.C. Code Ann. § 58-40-20(H).

The term "customer-generator" as used in the above quoted sections is defined as "the owner, operator, lessee…of an electric energy generation unit which…is intended primarily to offset part or all of the customer-generator's own electrical energy requirements." S.C. Code Ann. § 58-40-10(C)(5). Implicit in this definition is the requirement that solar choice tariffs give customer generators the option of sizing a solar PV system capable of offsetting all or a portion of the customer's own electrical energy requirements.

ii. Other Relevant Provisions of Act 62

Section 1 and Section 2 of Act 62 also govern the Commission's review of renewable energy issues and rate design proposals, both of which are directly applicable to the establishment of solar choice tariffs. Section 1 of Act 62 requires the Commission to consider renewable energy issues, such as net energy metering programs, in "a fair and balanced manner." S.C. Code Ann. § 58-41-05 (2019). It specifically directs the Commission:

> to address all renewable energy issues in a fair and balanced manner, considering the costs and benefits to all customers of all programs and tariffs that relate to renewable energy and energy storage, both as part of the utility's power system and as direct investments by customers for their own energy needs and renewable goals.

S.C. Code Ann. § 58-41-05 (2019). Moreover, this section directs the Commission "to ensure that the revenue recovery, cost allocation, and rate design of utilities that it

regulates are just and reasonable and properly reflect changes in the industry as a whole, the benefits of customer renewable energy, energy efficiency, and demand response." S.C. Code Ann. § 58-41-05 (2019) (emphasis added).

Section 2 of the EFA places additional emphasis on customer access to bill savings through rates that promote energy efficiency, demand response efforts, and onsite renewable energy options. The General Assembly made an explicit finding that "there is a critical need to: (1) protect customers from rising utility costs, (2) provide opportunities for customers to reduce or manage electrical consumption…and (3) equip customers with the information and ability to manage their electric bills. S.C. Code Ann. § 58-27-845(A). Act 62 then provides an enumeration of electrical utility customer rights to address those critical needs, including stating that:

> Every customer of an electrical utility has the right to a rate schedule that offers the customer a reasonable opportunity to employ such energy and cost-saving measures as energy efficiency, demand response, or onsite distributed energy resources in order to reduce consumption of electricity from the electrical utility's grid and to reduce electrical utility costs

S.C. Code Ann. § 58-27-845 (B). The Commission is further directed to, "[i]n fixing just and reasonable utility rates," abide by the following guidelines:

> [C]onsider whether rates are designed to discourage the wasteful use of public utility services while promoting all use that is economically justified in view of the relationships between costs incurred and benefits received, and that no one class of customers are unduly burdening another, and that each customer class pays, as close as practicable, the cost of providing service to them.
>
> …[And] ensure that each electrical utility offers to each class of service a minimum of one reasonable rate option that aligns the customer's ability to achieve bill savings with long-term reductions in the overall cost the electrical utility

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> will incur in providing electric service, including, but not limited to, time-variant pricing structures

S.C. Code Ann. § 58-27-845 (C)-(D). The Commission must ensure that each utility give customers reasonable opportunities to reduce their bills through DERs, including rooftop solar and energy efficiency, and to encourage the use of time-variant pricing structures.

C. Standard of Review

The Commission must examine the evidence in the record of this proceeding to determine whether the solar choice tariff proposals before it comply with all relevant provisions of Act 62. Many of the factors outlined in the requirements of the Act require the Commission to exercise its discretion and balance potentially competing objectives against each other, such as by reducing any potential "cost shift" to the greatest extent practicable while also ensuring access to solar customers, avoiding disruption to the solar market in South Carolina, and allowing customer generators to use self-generated energy behind the meter without penalty. Given the importance of each of these factors to its findings below, the Commission finds it necessary to further expound on the factors it must balance under Act 62 and the considerations relevant to whether or not those factors are satisfied.

i. <u>Overall Framework of Act 62's NEM Solar Choice Provisions</u>

The General Assembly's support for allowing customers to adopt rooftop solar and other distributed energy resources as bill-saving investments appear throughout Act 62. From the very outset, the Commission is directed to address "all renewable energy issues in a fair and balanced manner" and to consider the costs and benefits of "all programs and tariffs that related to renewable energy," including as part of "direct investments by customers for their own energy needs and renewable goals." S.C. Code Ann. § 58-41-05.

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In the very first sentence of the Act, the General Assembly set forth its intent that direct investments in rooftop solar by customers to meet their own energy needs should remain a viable option for South Carolinians.

Act 62 sets forth a framework for evaluating proposed rate designs to ensure that they allow customers to take advantage of rooftop solar, energy efficiency, and demand response—all of which are reflective of changes in the utility industry—and recognizing that all three can provide benefits to the utility as a whole, and thus to solar and non-solar customers alike. *See* S.C. Code Ann. §58-27-845(A)(2), (B)-(D). This language reflects that it is the policy of South Carolina to provide opportunities for customers to adopt solar, energy efficiency, and demand response in ways that are aligned with reducing the utility's cost of service. In addition, this language reflects the legislative intent to accommodate a diversity of ownership of DERs, including customer-scale rooftop solar.

In sum, Act 62 recognizes that the interests of solar and non-solar customers need not be pitted against each other, but rather can be aligned through a rate design that recognizes the various ways that solar can reduce a utility's overall costs. The Commission is required to balance the interests of all ratepayers, including customer-generators and non-participants when establishing Solar Choice tariffs. The Commission is directed to "eliminate any cost shift to the greatest extent practicable" while at the same time "ensuring access to customer-generator options for customers who choose to enroll in customer-generator programs," "permit solar choice customer-generators to use customer-generated energy behind the meter without penalty," avoiding "disruption to the growing market for customer-scale distributed energy resources," and continuing market-driven, private investment in DERs across the State by reducing regulatory and administrative burdens to

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customer installation and utilization of onsite DERs. As such, Act 62 contemplates a framework for the adoption of solar choice tariffs that avoid disruption to the solar market and ensure continued customer access to solar options in ways that align the interests of all customers.

ii. "Eliminate Cost Shift to the Greatest Extent Practicable"

Definition of "Cost Shift"

Act 62 requires that solar choice tariffs eliminate "cost shift" from solar to non-solar customers "to the greatest extent practicable." Various parties to this proceeding have presented alternative definitions of "cost shift" to the Commission. The term "cost shift" is not explicitly defined within Act 62, but its meaning—and thus how "cost shift" should or should not be calculated—must be understood within the context of the statute as a whole.

The Commission is required to establish solar choice metering requirements that "fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable." § 58-40(A)(3). As such, Act 62 makes clear that a fair allocation of costs and benefits is intended to form the basis of any calculation of "cost shift" under Act 62.

The statute provides the Commission with a framework for how to fairly allocate costs and benefits in its provisions related to the generic NEM docket. Specifically, Act 62 directed the Commission to open a generic docket to investigate the costs and benefits of net metering and establish a methodology to calculate the value of the energy produced by customer-generators. The Commission's re-evaluation of these costs and benefits of solar is not limited to those established under the current NEM methodology. In evaluating the

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costs and benefits of rooftop solar as part of the generic NEM proceeding, Act 62 directed the Commission to consider, in part, the "aggregate impact of customer-generators on the electrical utility's *long-run* marginal costs of generation, transmission, and distribution," the value of DERs under the existing NEM methodology, and the direct and indirect economic impacts of net metering to South Carolina. 58-40-20(D). Such an assessment is necessarily forward-looking, as it identifies how rooftop solar would impact utility costs over the long term. The Commission is also required to consider the "cost of service implications of customer-generators on other customers within the same class, including an evaluation of whether customer-generators provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study." S.C. Code Ann. § 58-40-20(C)(2). This evaluation (like all embedded cost of service studies) is backwards looking, evaluating whether rooftop solar customers are providing the utility with an adequate return relative to the costs required to serve them.

Immediately following the requirements for how the costs and benefits of NEM should be determined, Act 62 specifies that the Commission must establish solar choice tariffs that include a "metering measurement that is just and reasonable in light of the costs and benefits of the solar choice metering program," S.C. Code Ann. § 58-40-20 (F)(2), and "a methodology to compensate customer-generators for the benefits provided by their generation to the power system." S.C. Code Ann. § 58-40-20(F)(3). It would make no sense for Act 62 to direct the Commission to fully investigate and re-evaluate the costs and benefits of solar, but then ignore those results when establishing solar choice tariffs that will apply to all rooftop solar customers from June 1, 2021 onward.

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Act 62 thus requires evaluating "cost shift" in two ways, as contemplated in the provisions of S.C. Code Ann. §58-40-20(C) and (D). First, based on a forward-looking, comprehensive evaluation of the "long-run" costs and benefits of solar, including benefits beyond those identified in the current NEM methodology, and the resulting impacts to utility system costs. And second, if available, based on the "cost of service implications of customer-generators on other customers within the same class, including an evaluation of whether customer-generators provide an adequate rate of return to the electrical utility compared to the otherwise applicable rate class when, for analytical purposes only, examined as a separate class within a cost of service study." S.C. Code Ann. § 58-40-20(D)(2). The information to conduct such an embedded cost-of-service study is exclusively within the hands of the electrical utility; as such, Act 62 contemplates that a utility conduct such a study for purposes of evaluating any potential "cost shift" resulting from net metering programs.

We conclude that any definition of "cost shift" that is based on customer bill savings or lost revenues to the utility as a result of customer-generators consumption of customer-generated energy behind the meter or credits for excess generation are inconsistent with Act 62. Act 62 provides that every electrical customer has a right to a rate schedule that affords the customer a reasonable opportunity to save money on their bills through rooftop solar and other DERs. S.C. Code Ann. §58-27-845(B). Further, Act 62 specifies that the legislature intended for solar choice tariffs to avoid disruption to the solar market in South Carolina, and the ability of customers to reduce their bills by installing rooftop solar is a key driver of the solar market in South Carolina. As such, solar customer bill savings are not an appropriate metric by which to measure potential "cost shift."

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Further, because Act 62 removes the NEM DER Incentive as a cost recovery mechanism for NEM Solar Choice tariffs and prohibits electrical utilities from recovering lost revenues associated with customer-generators who adopt NEM Solar Choice tariffs, it is also inappropriate to base "cost shift" solely on a utility's lost revenue from solar customers. S.C. Code Ann. §58-40-20(I). This conclusion is further supported by Act 62's requirement that customers be afforded the right to employ energy efficiency and demand response measures to lower their bills (in addition to distributed energy resources like rooftop solar), measures that also can reduce utility revenues. S.C. Code Ann. §58-27-845(B). In addition, it would be improper to equate "cost shift" with reduced revenues to the electrical utility because such reduced revenues reflect only a short-term consequence of customer adoption of DERs and do not take into account the long-term benefits that accrue to the utility system from savings such as avoided transmission and distribution costs.

Lastly, we conclude that, because DESC is prohibited from recovering lost revenues associated with customer-generators who accept service under the new solar choice program, there will be no actual "cost shift" under solar choice tariff. It is only if the utility requests the collection of that revenue in a future general rate case that any potential "costs" could "shift" to nonparticipating customers. As such, we find that "cost shift" can only be fully measured in the context of a future general rate case, at which point the Commission may consider the issue holistically and balance any potential costs against other relevant factors, including benefits of customer adoption of DERs, to the greatest extent practicable.

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"To the Greatest Extent Practicable"

Act 62 requires that solar choice tariffs reduce cost shift, if one exists, but not to the extent that the solar market would be disrupted or access to rooftop solar would be compromised. Neither of the two "cost shift" provisions in S.C. Code Ann. § 58-40-20(A)(3) or § 58-40-20(G)(1) require that the Commission ensure solar choice tariffs eliminate all potential cost shift, but rather, only "to the greatest extent practicable." S.C. Code Ann. § 58-40-20(G)(1) in particular specifies that cost shift should be eliminated "to the greatest extent practicable…*while ensuring access* to customer-generator options for customers who choose to enroll in customer-generator programs." S.C. Code Ann. § 58-40-20(G)(1) (emphasis added). Act 62 thus includes other directives and policy objectives that are expressed without qualification. The inclusion of the word "practicable" means that the Commission may not choose to eliminate any potential cost shift at the expense of the broader—and potentially higher priority—objectives in Act 62.

For example, Act 62 provides that the General Assembly explicitly intended to *build* upon the successful deployment of solar generating capacity, *continue enabling* investment in DERs, *reduce* the regulatory and administrative burdens to customers installing DERs, and *avoid* disruption to the growing market for customer-scale DERs. The statute also provides that solar choice tariffs must permit customer-generators to consume energy behind the meter without penalty.[2] Here, the General Assembly stated its intent to prioritize the health of the growing solar market in South Carolina and to provide customers with viable options to lease or purchase rooftop solar PV systems. These directives cannot

[2] *See also* §58-27-845 (B)("Every customer of an electrical utility has the right to a rate schedule that offers the customer a reasonable opportunity to employ such energy and cost-saving measures as energy efficiency, demand response, or onsite distributed energy resources in order to reduce consumption of electricity from the electrical utility's grid and to reduce electrical utility costs.")

be fulfilled if solar choice tariffs provide little economic opportunity for customers to choose rooftop solar. These provisions indicate that the General Assembly intended Act 62 to protect the solar market from disruption and to *improve*—not just maintain—customer access to solar. Consistent with the various directives in Act 62, the NEM solar choice program is not merely a way to save a few dollars, but should be viable alternative energy option that can allow customer-generators to achieve bill savings even when the customer's investment in solar is substantial. Unlike the provisions related to cost shift, however, the General Assembly did not specify that any of these factors only be considered to the extent that they are "practicable." The requirement to eliminate "cost shift" to the extent practicable provides the Commission with discretion to balance the potentially competing goals and directives of Act 62 when establishing NEM solar choice tariffs.

iii. Ensuring Access to Customer-Generator Options

As noted above, Act 62 specifies that the Commission must "eliminate any cost shift to the greatest extent practicable *while ensuring access* to customer-generator options for customers who choose to enroll in customer-generator programs." S.C. Code Ann. § 58-40-20(G)(1). "Ensuring access" requires more than a customer having a technical ability to install rooftop solar; a customer must both be *able* to install solar, and have a reason to do so by way of a solar choice tariff that affords them an opportunity for meaningful bill savings. *See* S.C. Code Ann. §58-27-845(B). This requires that customers both be able to reduce their consumption from an electrical utility through behind the meter usage and from bill credits for excess generation that goes onto the utility's grid. *See* S.C. Code Ann. §58-40-20(G)(2) (solar choice tariffs may not penalize solar customers for their behind-the-meter usage) *and* S.C. Code Ann. §58-40-20(F)(3) (solar choice tariffs must

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compensate solar customers for the benefits of their generation to the power system). "Access" further requires that a viable solar market be in place so that customers who want to lease or purchase solar are able to have it installed. S.C. Code Ann. §58-40-20(A)(2).

iv. Permit Behind the Meter Usage Without Penalty

S.C. Code Ann. §58-40-20(G)(2) directs the Commission to adopt a solar choice tariff that "permit[s] solar choice generators to use customer-generated energy behind the meter without penalty." If a solar choice tariff would result in customer-generator paying more to the utility than they would have paid without solar when considering any non-bypassable, fixed mandatory fees and the value of behind the meter consumption, that rate penalizes behind the meter consumption. Further, Act 62 defines a "customer-generator" as "the owner, operator, lessee, or customer generator lessee of an electric energy generation unit which… is intended primarily to offset *part or all of the customer generator's own electrical energy requirements.*" § 58-40-10(C)(5) (emphasis added). This provision clarifies that Act 62 intends for rooftop solar customers to be able to invest in solar systems sized appropriately to be capable of offsetting all the customer's energy usage. Any solar choice tariff that is designed to artificially limit the size of a rooftop solar system so that it cannot economically offset all of a customer-generator's energy use does not comply with Act 62.

v. Evaluation of Solar Choice Tariff Proposals

The Commission must make its decision based on the evidence in the record before it. Because there is not evidence in the record to support whether alternatives or modifications to the proposals presented by the parties in this proceeding would disrupt the solar market in South Carolina, provide customers a reasonable opportunity to save money

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through rooftop solar, or appropriately address any potential cost-shift, we must evaluate whether each proposal, taken as a whole, complies with Act 62.

III. HEARINGS

A. Merits Hearing

The Commission convened a virtual hearing on this matter on February 23, 2021, through March 2, 2021, with the Honorable Justin T. Williams, Chairman, presiding. DESC was represented by K. Chad Burgess, Esquire, and Matthew W. Gissendanner, Esquire. Alder Energy was represented by R. Taylor Speer, Esquire. Mr. Knapp represented himself. NCSEA was represented by Jeffrey W. Kuykendall, Esquire, and Peter Ledford, Esquire. SEIA was represented by Jeffrey W. Kuykendall, Esquire. CCL, SACE, and Upstate Forever were represented by Kate Lee Mixson, Esquire, and David L. Neal, Esquire. Vote Solar was represented by Thadeus B. Culley, Esquire, and Bess DuRant, Esquire. ORS was represented by Jeffrey M. Nelson, Esquire, Jenny R. Pittman, Esquire, and Andrew M. Bateman, Esquire.

DESC presented the direct and rebuttal testimony of Danny Kassis, Margot Everett, and Scott Robinson, and the direct testimony of Allen Rooks. Alder Energy Systems presented the direct and surrebuttal testimony of Donald R. Zimmerman. SEIA and NCSEA presented the direct and surrebuttal testimony of Justin R. Barnes. CCL, SACE, Upstate Forever, Vote Solar, SEIA, and NCSEA jointly presented the direct and surrebuttal testimony of R. Thomas Beach. CCL, SACE, and Upstate Forever presented the surrebuttal testimony of Eddy Moore. ORS presented the direct testimony of Robert A. Lawyer and Brian K. Horii. Mr. Knapp did not present witnesses at the hearing.

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B. Virtual Public Hearing and Public Comments

Pursuant to a Commission Directive Order 2021-26, granting Vote Solar's *Motion to Require Additional Notice and Establish a Public Participation Hearing*, a virtual public participation hearing was held on March 23, 2021 and an opportunity for parties to respond to public comments was set for March 25, 2021 at 9:00 am. Given the large number of people that signed up for the single day designated for public hearing, the Commission allowed ten public witnesses that were unable to speak at the March 23 virtual public hearing the opportunity to speak at the beginning of the March 25 hearing set for party responses.

On March 22, 2021, the Commission held oral arguments to hear the Company's request to strike certain individuals from testifying that were not DESC account holders and not, in the Company's definition, customers of the Company as described in the public notice describing the March 23, 2021 virtual public hearing. The Commission resolved to allow all persons that signed up to testify, but that we would ask the following preliminary questions of all witnesses: (1) name (2) street name and city/town of residence; (3) whether the person is a customer of the Company; and (4) whether the person has a rooftop solar facility.

By the close of business March 22, 2021, 252 persons had signed up to speak at the virtual public hearing. Each person was assigned an estimated time slot for up to three minutes of sworn public testimony. The Commission allowed, as is their right, parties to ask questions of the public witnesses after conclusion of each person's testimony and comment. The Commission also asked questions of public witnesses. Given the unanticipated amount of questioning from the parties and the Commission, approximately

one-hundred-fifty-four persons were able to provide public testimony during the virtual hearing which began at 9:00 a.m. on March 23 and extended past 1 a.m. on March 24.

The Commission convened a virtual public hearing on March 23, 2021, with the Honorable Justin T. Williams, Chairman, presiding. 154 witnesses gave sworn public testimony at during the scheduled virtual public hearing. Of the 154 persons that spoke, approximately 150 provided testimony in opposition to the Company's proposed Solar Choice Proposal. Of those opponents of the Company's proposal, 134 were DESC customers. Of the total 94 customers who attested that they currently had solar generation facilities on their homes or businesses, approximately 91 were DESC customers. Additionally, approximately 25 persons identified themselves as persons employed in a business related to the installation of solar. Twelve of the solar workers attested that they were not DESC customers, while the other thirteen attested that they did receive electric service from the Company. Two individuals spoke affirmatively in support of DESC's Solar Choice Proposal. Those persons were not DESC customers and were associated with the electric industry's trade group, the Edison Electric Institute, and provided testimony from out-of-state.

Public witnesses opposed to the Company's Solar Choice Proposal cited both economic and environmental concerns for what impact the proposal would have on them personally and the state as a whole. Many solar customers, who acknowledged they would not be impacted for a number of years by the current proposal, nonetheless spoke out that they wanted other customers to have the same access and choices that they had to adopt solar for purposes of addressing climate change or reducing their own monthly electric bills. The two public witnesses who expressed support for DESC's Solar Choice Proposal

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cited national trends of changes to net metering and the need to address cross-subsidization issues generally. The solar workers who provided testimony expressed concern that DESC's Solar Choice Proposal would result in the elimination of jobs and threaten their ability to make a good income and provide for their families.

Following the public testimony of these individuals, approximately 40 individuals were asked questions by counsel for parties, including instances where witnesses were asked questions by multiple parties. Counsel for DESC questioned approximately 38 individuals, often asking questions to verify if the person speaking was an account holder or, if the person had attested to having rooftop solar, the person owned or leased the rooftop solar facility. Counsel for SACE, CCL, and Upstate Forever asked questions of four witnesses. Counsel for Alder Energy Systems asked questions of three public witnesses. Counsel for ORS asked questions of three public witnesses. The Commission also asked questions of many of these public witnesses, including many that were not questioned by other parties.

Given the inability to accommodate all 252 individuals that signed up to give public testimony, the Commission provided several individuals that expressed a desire to give testimony, despite being unable to speak in the late hours when the virtual public hearing concluded, the opportunity to speak at the beginning of the time set for party responses to the public testimony given at the virtual public hearing. Ten individuals were contacted to give testimony, but only eight were able to speak. Of those eight, one witness who was not a customer voiced general opposition to subsidies associated with solar but did not discuss DESC's Solar Choice Proposal directly. Seven public witnesses voiced opposition to DESC's proposal, including four solar customers of the Company and two solar workers

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who attested to being customers of the Company. Counsel for DESC asked questions of five of these eight public witnesses; counsel for SACE, CCL, and Upstate Forever and counsel for Alder Energy Systems each asked questions of one public witness.

There were also 190 public comments and letters of protest filed in the docket, the vast majority of which expressed opposition to DESC's proposal.

IV. FINDINGS OF FACT

Based on the testimony and exhibits received into evidence at the hearing and the entire record of these proceedings, the Commission hereby makes the following findings of fact:

Evaluation of DESC Solar Choice Proposal

1. DESC's methodology for calculating cost shift, as discussed in the testimony of Witness Everett, is unreasonable because it improperly equates solar customer bill savings with "cost shift" to non-solar customers.
2. DESC's calculation of cost shift, as set out in Witness Everett's testimony, is unreasonable because DESC considered only the short-term costs to the utility from customers adopting distributed solar, but not the long-term benefits as required by Act 62. The only benefits considered were avoided energy costs at PURPA avoided cost rates (and those benefits were assumed only to the extent of a 3 kilowatt solar PV system, which is less than half the size of the average customer-generator system in DESC's service territory). The avoided costs for distributed solar resources are not equivalent to PURPA avoided costs.
3. DESC's calculation of cost shift, as set out in Witness Everett's testimony, is unreasonable because DESC has not conducted a cost of service evaluation looking at

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whether customer-generators provide an adequate rate of return compared to other customers within the same rate class as required by Act 62.

4. DESC's proposed $19.50 Base Facilities Charge ("BFC") is unreasonable, not cost-based, would penalize solar customers' behind the meter usage, and is inconsistent with Act 62.
5. DESC's proposed $5.40 per kW Subscription Fee is unreasonable, not cost-based, and would penalize solar customers' behind the meter usage in violation of Act 62.
6. DESC's proposal to credit solar exports at avoided cost rates is unreasonable and inconsistent with Act 62.
7. The Commission finds that the TOU periods in DESC's proposal are unreasonable because they do not align with the coincident system peak period identified in the Company's embedded cost of service study to allocate generation and transmission costs.
8. The Commission finds that DESC's proposal to recover avoided cost credits to solar customers as "purchased power fuel expenses" under the fuel clause, even for solar exports it sells at retail rate, would allow the utility to more than double recover its costs; it is reasonable to prohibit the utility from recovering avoided cost credits as purchased power fuel expenses for any solar exports sold at retail rate.
9. DESC's proposed change from annual netting to fifteen-minute interval netting, which would increase the number of exports credited at avoided cost rates as opposed to retail rates, is unreasonable because it fails to adequately compensate customer-generators for the benefits they provide to the system.

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10. DESC's Proposed Solar Choice Tariff, by providing a steeply discounted volumetric energy rate for over 90% of the hours in the year, incentivizes the wasteful use of electricity, contrary to Act 62 and South Carolina policy.
11. The DESC Solar Choice Proposal is designed to discourage solar PV systems that are sized to offset all of a customer-generator's own electrical energy requirements and instead is designed to only be economical for small solar PV systems that supply no more than 40% of a customer's usage. By artificially limiting the economically viable size of a rooftop solar system to offset only a small portion of a customer-generator's own electrical energy requirements, DESC's Solar Choice Proposal is not in compliance with Act 62.
12. The DESC Solar Choice Proposal would penalize solar customers' behind the meter usage. The DESC Solar Choice Proposal will substantially reduce customer bill savings, significantly increase payback periods, remove rooftop solar as an economically viable option for most of DESC's residential customers, and disrupt the solar market in South Carolina in violation of Act 62.

Evaluation of ORS Proposed Modifications to DESC Solar Choice Tariff

13. ORS's proposal accepts the premises and overall framework of DESC's Solar Choice Proposal, with modifications made only to subscription fee and TOU rates that are designed to further reduce bill savings to customers who accept service under solar choice tariffs.
14. ORS's calculation of cost shift, as determined in Witness Horii's testimony is unreasonable because it does not reflect the methodology that DESC uses to determine the costs to serve its customers.

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15. ORS is charged with representing the interests of the "using and consuming public"; utility customers who have installed rooftop solar or who may become future lessors or purchasers of rooftop solar are members of "the using and consuming public." ORS is charged with the public interest as defined by the General Assembly. The comprehensive policy directives in Act 62 as set forth by the General Assembly are, by definition, in the public interest.
16. ORS's Modifications to DESC's Solar Choice Tariff would reduce bill savings even further than DESC's proposal and further penalize solar customers' behind the meter usage.
17. Like DESC's Solar Choice Proposal, ORS's Proposed Modifications will substantially reduce customer bill savings, significantly increase payback periods, remove rooftop solar as an economically viable option for most of DESC's residential customers, and disrupt the solar market in South Carolina in violation of Act 62.

Evaluation of Joint Intervenors' Solar Choice Proposal

18. Consistent with Act 62's requirement to permit solar choice customer-generators to use customer-generated energy behind the meter without penalty, it is appropriate to value behind the meter consumption at prevailing retail rates and without the distorting effects of new fixed charges that artificially reduce the value of behind the meter consumption. From the utility system perspective, behind the meter consumption of customer-generated electricity is equivalent to energy efficiency or demand-side management measures as a decrement to system load. It would be unreasonable and discriminatory to value behind the meter consumption of customer-generated energy

less than energy-efficiency savings or conservation efforts realized by non-customer generators.

19. Consistent with Act 62's requirement to "fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable" and to consider "the aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission," it is reasonable to evaluate a solar choice proposal under standard practice manual cost-effectiveness tests. In the absence of the cost of service study required by § 58-40-20(D)(2), any analysis of the cost to serve customer-generators from an embedded cost of service perspective should use the same underlying methodologies for allocating costs that are actually used by the utility.

20. The Participant Cost Test ("PCT") is appropriate for considering whether the Solar Choice customer-generator program provides a reasonable economic opportunity for customers to invest in and use DERs.

21. The Utility Cost Test ("UCT") is appropriate for considering whether any additional costs that result from customer-generator adoption of solar PV or DERs are offset by the direct benefits of the customer-generator and whether a potential cost-shift might occur.

22. The Total Resource Cost ("TRC") and Societal Tests are appropriate as secondary tests to be used in conjunction with the PCT and UCT in evaluating the overall cost-effectiveness of the Solar Choice proposals to determine whether solar resources provide a net benefit to the utility system, its customers, and society more broadly.

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23. When considering the costs and benefits under these standard practice manual cost effectiveness tests, it is appropriate to quantify and consider all of the benefits included in the value stack from Order No. 2015-194 and to consider those benefits on a long-term basis. The appropriate time horizon for evaluating the benefits and costs of distributed solar energy resources is twenty-five years, the typical useful life of a solar PV system.

24. The Joint Solar Choice Proposal results in a reduction in bill savings when compared to the existing NEM program of up to eight percent, depending on solar system size and customer usage profiles when modeled on TOU residential Rate 5. The simple payback period for a typical 7 kW solar PV system is 9.9 years under the Joint Solar Choice proposal, a modest increase over the 9.4 years for the current NEM program.

25. The payback periods under the Joint Solar Choice Proposal are consistent with continued access to solar energy options for South Carolinians in DESC's service territory and will avoid disruption to the growing market for customer-scale DERs.

26. The Joint Solar Choice Proposal passes all of the standard practice manual cost-effectiveness nests, which means that benefits equal or exceed the costs over the long-run, life cycle of distributed solar resources. The Joint Solar Choice Proposal does not cause a potential cost-shift to nonparticipating customers when accounting for long-term benefits. The Joint Solar Choice Proposal does not cause a significant potential cost-shift when considering the cost to serve residential solar customer-generators under DESC's existing embedded cost of service methodology.

27. The Joint Solar Choice Proposal is just and reasonable and comports with the requirements of Act 62, including allowing customers to elect to remain on the standard

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residential tiered Rate 8 for a minimum of ten years until DESC has completed deployment of AMI and made a year's worth of hourly interval data available to its customers. At that time, customers who elect to enroll in the solar choice program would take service under the TOU rates of DESC's current Rate 5.

28. For purposes of the establishment of a solar choice tariff in this proceeding, the Joint Solar Choice Proposal's inclusion of a $13.50 minimum bill, which includes a BFC of $9.00, is a reasonable reflection of customer-related costs; because this issue under dispute in the Company's pending rate case, it is subject to potential future adjustment.

V. REVIEW OF EVIDENCE AND EVIDENTIARY CONCLUSIONS

The Commission has considered and evaluated three solar choice proposals and recommendations in this proceeding: 1) DESC Solar Choice Proposal; 2) ORS Proposed Modifications to DESC's Solar Choice Proposal; and 3) Joint Intervenors' Solar Choice Proposal. For the reasons set out below, the Commission concludes that the Joint Intervenors' Proposed Solar Choice Tariff is just and reasonable in light of the factors set out in Act 62. The Commission finds that the DESC Solar Choice Proposal and the ORS Proposed Modifications to DESC's Solar Choice Proposal do not comply with the requirements set out in Act 62 and must be rejected.

A. Evaluation of DESC Solar Choice Proposal

EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT NOS. 1-12

i. Summary of Evidence

The evidence in support of these findings of fact is found in the pleadings, testimony and exhibits in this Docket, and the entire record in this proceeding.

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DESC Solar Choice Proposal

DESC Witness Allen Rooks sponsored the DESC Solar Choice Proposal and presented direct testimony discussing the components included therein. The DESC Solar Choice Proposal for residential customers consists of five primary components:

(1) a proposed Basic Facilities Charge ("BFC") of $19.50 per month;

(2) a proposed Subscription Fee of $5.40 per kW of installed renewable generation, with a minimum monthly Subscription Fee of $16.20, which is based on a system size of 3 kW;

(3) time of use ("TOU") periods with on-peak hours of 5:00 A.M. to 9:00 A.M. during winter months (December through February) and 4:00 P.M. to 8:00 P.M. during summer months (June through September), excluding Sundays and specified holidays;

(4) proposed energy charges for solar choice customers of $0.18417 per kWh for on-peak winter; $0.16749 per kWh for on-peak summer; and $0.06735 per kWh for all off-peak usage, which covers almost 92% of the hours in a year;

(5) excess power exported to the grid is credited at time-based avoided cost rates, with a value of $0.03622/kWh off-peak, $0.03651/kWh on-peak summer, and $0.03796/kWh on-peak winter; and

(6) a proposed change from annual netting to fifteen-minute interval netting, significantly increasing the amount of solar production that is credited at avoided cost rates as opposed to retail rates.

(Tr. pp. 481.6 – 481.7 [Rooks Direct pp. 6 – 7]; Tr. p. 477, ll. 17-21).[3]

[3] This joint partial proposed order was prepared using a scoped version of the transcript that does not yet include hearing exhibits or prefiled testimony; as such, transcript citations to pages in the pre-filed

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DESC Witness Margot Everett submitted testimony regarding the underlying analysis and development of DESC's Solar Choice Proposal. (Tr. pp. 228 – 231). According to Witness Everett, the DESC Solar Choice Proposal was developed to "alleviate the magnitude of the cost-shift" from solar to non-solar customers in accordance with Act 62. (Tr. p. 232.4 [Everett Direct p. 4]; *see also* Tr. p. 229).

Witness Everett testified that there two types of cost shift under the "current NEM Structure," which she terms "banking cost shift" and "rate design cost shift." (Tr. p. 232.18, ll. 2-13 [Everett Direct p. 8, ll. 2-13]; Tr. p. 229, ll. 7-13). The "banking" cost shift, according to Witness Everett, is calculated by subtracting the avoided cost of a customer's exports (as determined using the PURPA avoided cost values approved in Order No. 2020-244) from the customer's cumulative bill savings, (Tr. p. 232.19, ll. 11-16 [Everett Direct p.19, ll. 11-16]). Witness Everett testified that the typical NEM customer in DESC territory exports 6,148 kWh per year, representing a cumulative bill savings of approximately $691; since the avoided cost of those exports is $216 (using PURPA avoided cost values), Witness Everett calculated that the "banking" cost shift for the typical NEM customer each year would be $475. *Id.* For customers-generators who install a PV system that offsets all of their peak usage, the size of the so-called "banking" cost shift will increase. (Tr. p. 232.26, ll. 16-18 [Everett Direct p. 26, ll. 16-18]).

The "rate design cost shift," according to Witness Everett, is associated with behind the meter self-consumption, which she argues allows solar customers to avoid "fixed costs" the utility otherwise collects through volumetric rates. (Tr. p. 232.22, l. 11 – p. 232.23, l. 3 [Everett Direct p. 22, l. 11 – p. 23, l. 3]). By subtracting PURPA avoided costs from a

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testimony may be subject to change. For the convenience of the Commission, Joint Intervenors have included citations to the transcript and the prefiled testimony directly.

customer's bill savings due to behind the meter usage (assuming a 3 kilowatt solar PV system), Witness Everett calculated that the "rate design cost shift" for a typical NEM customer was $459. (Tr. p. 232.23, ll. 11-14 [Everett Direct p. 23, ll. 11-14]). According to Everett, a typical residential customer causes an annual cost shift totaling $934 due to this combination of "banking" and "rate design" cost shift, which, according to Witness Rooks, translates to a $1.38 per month cost shift for each non-participating customer. (Tr. p. 232.26, ll. 1-3 [Everett Direct p. 26, ll. 1-3]; Tr. p. 479, ll. 9-17).

Witness Everett used a three-step process to develop the DESC Solar Choice Proposal. (Tr. p. 232.29, ll. 11-22 [Everett Direct p. 29, ll. 11-22]). First, Witness Everett determined the revenue requirement that must be collected to ensure that the DESC Solar Choice Proposal was "revenue neutral" for DESC, meaning that the rate design would result in a solar customer paying the same amount under the Solar Choice Tariff as they would pay prior to installing solar (with a small allowance for behind the meter consumption of a 3 kilowatt system at avoided cost rates). (Tr. pp. 258 l. 18 – p. 259 l. 2; Tr. pp. 232.29, ll. 14-17, 232.32, ll. 6-13 [Everett Direct pp. 29, ll. 14-17, 32, ll. 6-13]). Witness Everett then categorized the revenue requirement into rate components segmented by function and then by whether the associated costs were, in her view, fixed, variable, or time differentiated. (Tr. p. 232.29, ll. 18-20 [Everett Direct p. 29, ll. 18-20]). Finally, Witness Everett identified rate mechanisms to recover each of those rate components. (Tr. p. 232.29, ll. 21-22 [Everett Direct p. 29, ll. 21-22]). At the hearing, Witness Everett testified that the delayed implementation of DESC's Solar Choice Proposal for existing customer-generators until 2025 or 2029 was a sufficient "mitigation measure…to transition

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existing customer-generators," as required under S.C. Code Ann. § 58-40-20(F)(3). (Tr. p. 283, l. 15 – p. 284, l. 2).

DESC Evidence in Support of Increasing the BFC

Witness Everett set the BFC for DESC's Solar Choice Proposal to recover the full amount of the per account "customer-related" costs for the residential class that were identified by DESC in the Company's cost of service study in the pending rate case in Docket No. 2020-125-E. (Tr. pp. 232.34, ll. 1-3, 232.42, ll. 4-10 [Everett Direct pp. 34, ll. 1-3, 42, ll. 4-10]). At the hearing, Witness Everett testified in that if the Commission approved a different BFC in the ongoing rate proceeding than the $19.50 proposed in the DESC Solar Choice Proposal it would not "materially matter…because… what was not covered by the BFC would move into the subscription charge." (Tr. p. 303, ll. 14-20).

DESC Witness Rooks also testified that the $19.50 per month BFC is required to recover DESC's customer-related costs as set forth in the Company's current rate case. (Tr. p. 481.6, ll. 1-3 [Rooks Direct p. 6, ll. 1-3]). Witness Rooks acknowledged that he sponsored testimony in the Company's pending rate case in support of a $2.50 per month increase to the BFC for most residential customers. (Tr. p. 515, ll. 4-10). In the rate case, Witness Rooks testified that the Company is keenly aware of the impact of an increase of the BFC on customers who are below average consumers of electricity. (Tr. p. 513, ll. 19-14). Witness Rooks confirmed that the proposed $10.50 increase in the BFC for solar choice customers does not comport with principles of gradualism. (Tr. p. 515, l. 11 – p. 516, l. 9). He also acknowledged that if the Commission ruled in the ongoing rate case that the distribution costs DESC seeks to recover as part of the $19.50 BFC should not be classified as "customer-related," then the proposed solar choice BFC would come out to a

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"different number." (Tr. p. 512, l. 15 – p. 513, l. 5). On cross-examination, Witness Rooks further acknowledged, with respect to fixed charges generally, that if a large percentage of a customer's bill is an unavoidable fixed charge, it reduces that customer's ability to manage her electric bill. (Tr. p. 537, ll. 11-17).

DESC Evidence in Support of its Proposed Subscription Fee

Witness Everett testified that the Subscription Fee is designed to collect costs related to the Company's transmission and distribution ("T&D") systems and to make up for the reduction in "fixed" costs that would otherwise be collected from customer generators as they save money on their bills from their on-site solar production. (Tr. p. 232.43, ll. 1-4 [Everett Direct, p. 43, ll. 1-4]). Witness Everett's calculation of "rate design" cost shift—based on the savings current NEM customers receive for behind the meter consumption of on-site generated electricity—provided justification for the Subscription Fee. (Tr. pp. 232.24, l. 10 – 232.25, l. 10 [Everett Direct, pp. 24, l. 10 – 25, l. 10]; Tr. p. 230, ll. 15-18). Witness Everett calculated the Subscription Fee based on eliminating the rate design cost shift minus a credit for the "value" of self-generation based on an assumed 3 kW system size valued at avoided cost rates; in other words, the Subscription Fee is based on reducing the economic benefit that customer-generators receive for behind the meter consumption. (Tr. pp. 232.43, l. 1 – 232.44, l. 4 [Everett Direct pp. 43, l. 1 – 44, l. 4]). Witness Everett then rounded up the resulting figure to a higher number to make the rate more "customer friendly." *Id.* Witness Everett testified that the Subscription Fee is not a penalty because it is designed so that the customer does not avoid paying fixed costs that are attributable to them and "includes the value of the self-generation as a credit against these fixed costs." (Tr. p. 232.50, ll. 2-15 [Everett Direct p. 50, ll. 2-15]).

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At the hearing, Witness Rooks spoke briefly about the minimum charge under the Subscription Fee. In response to a question from Commissioner Belser asking whether someone who could not afford a 3 kW system and so installed a 1.5 kW system would be "penalized" by the $16 minimum Subscription Fee, Witness Rooks testified that the customer would still be supporting the fixed investment with a "two-way power flow[]" and that DESC had tried to align the costs and pricing. (Tr. p. 601, l. 15 – p. 602, l. 6). However, Witness Rooks agreed with Commissioner Belser that a customer with a 1.5 kW system who was paying minimum of $16.20 would not be paying a fee based on the size of the system. (Tr. p. 602, ll. 7-11).

DESC Evidence in Support of its Proposed TOU Rates

Witness Everett testified that a component of "rate design" cost shift—the bill savings that current NEM customers achieve from behind the meter consumption—can be avoided by shifting to TOU rates that provide different savings levels depending on when they self-generate. (Tr. p. 232.25, ll. 11-17 [Everett Direct, p. 25, ll. 11-17]). According to Witness Everett, TOU rates should be used in combination with one or more of the rate design elements that she recommended, such as subscription fees, fixed customer charges, or demand charges. (Tr. p. 232.24, l. 18 – p. 232.25, l. 17 [Everett Direct, p. 24, l. 18 – p. 25, l. 17]). To develop DESC's proposed TOU rates, Witness Everett used the 2019 load profiles before customer-generators installed solar to determine the ratio of TOU period kilowatt-hours to total kilowatt-hours for each time period. (Tr. p. 232.45, ll. 2-12 [Everett Direct, p. 45, ll. 2-12]).

The DESC Solar Choice Proposal does not include a transition plan for existing customer-generators onto the mandatory TOU rates, as contemplated by S.C. Code Ann. §

58-40-20(F)(3). Witness Everett suggested that the delayed implementation for those existing customers until 2025 or 2029 was a sufficient "mitigation measure…to transition existing customer-generators." (Tr. p. 283, l. 15 – p. 284, l. 2). Witness Rooks likewise testified that additional mitigation measures were not warranted for existing customer-generators. (Tr. p. 558). Witness Everett agreed that it was useful for customers to understand the implications of moving from one tariff to another, but she guessed that by the first transition in 2025, most customers would have hourly usage meters and few years of interval data to inform their transition. (Tr. p. 284, l. 22 – p. 285, l. 16). However, Witness Everett acknowledged that the hourly data required to understand the implications of a new rate is not currently available to customers and did not know whether DESC had taken any steps to educate customers about the DESC Solar Choice Proposal. (Tr. p. 286). Witness Everett was aware that during the transition to mandatory TOU rates in California, customers were given a "best bill provision" for the first year as they became familiar with how their bills were changing. (Tr. p. 287, ll. 10-16).

DESC Evidence in Support of its Proposed Export Credit

Witness Everett testified that DESC's proposed export rates are based on "time differentiated avoided costs" that are paid to utility-scale solar generators, but averaged to the same TOU periods as the DESC Solar Choice Proposal rate. (Tr. p. 232.46, ll. 6-12 [Everett Direct, p. 46, ll. 6-12]). Though time differentiated, there is little difference between the summer peak export rate ($.03651/kWh), the off-peak export rate ($.03622/kWh), and the winter peak export rate ($.03796/kWh). (Tr. p. 232.47, ll. 1-7 [Everett Direct p. 47, ll. 1-7]).

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Witness Everett acknowledged that DESC's current retail rates (and the pending retail rates in its rate case) are based on a summer coincident peak that allocates all generation and transmission costs based on the class contribution to summer system peak that occurs between 2:00 pm and 6:00 pm on a summer afternoon. (Tr. p. 251, l. 1-8). But Witness Everett did not consider the degree to which current solar customer-generators contribute to a reduction in their class's contribution to the utility's summer coincident peak, and thus, result in a savings to all residential customers when allocating the utility's generation and transmission costs. (Tr. pp. 251, l. 23 – 252, l. 2).

At the hearing, Witness Rooks agreed that there were more on-peak hours in the existing DESC residential Rate 5 TOU tariff than the TOU rates proposed in the DESC Solar Choice Proposal and that, as a result, under the Solar Choice Proposal a customer's self-generation would mostly be credited at the lower off peak rate. (Tr. p. 521, l. 12 – 522, l. 5; p. 524, ll. 12-15). He also acknowledged that there was a steeper price differential between peak and off-peak hours in Rate 5 than in DESC's proposal, meaning that Rate 5 sends stronger price signals for consuming in the off-peak periods. (Tr. p. 522, ll. 6-9).

In his direct testimony, Witness Rooks noted that "DESC will recover the avoided cost credits for excess power exported to the grid as purchased power fuel expenses as permitted under the Fuel Clause, and in a similar manner as its existing PURPA-related power purchases." (Tr. p. 481.10, ll. 6-11 [Rooks Direct p. 10, ll. 6-11). Witness Rooks did not explain whether the Company would seek to recover these costs even for solar exports the Company sold to other customers at retail rate.

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DESC Evidence in Support of its Proposed Low Volumetric Rates

At the hearing, DESC Witness Rooks admitted that the way for customers under the DESC Solar Choice Proposal to save money was through their consumption of electricity from DESC's proposed low volumetric rate. (Tr. p. 524, l. 22 – p. 525, l. 3). Witness Rooks further testified that he agreed that rates should promote efficient use of electricity and recalled testifying in the general rate case that "rates should be designed to recover costs and to provide clear signals to promote the efficient use of electricity." (Tr. p. 527, l. 10 – p. 528, l. 11). However, Witness Rooks—DESC's Manager of Electric Pricing and Rate Administration—was unaware of S.C. Code Section 58-27-845, which states that "there is a critical need to: (1) protect customers from rising utility costs; and (2) to provide opportunities for customer measures to reduce or manage electrical consumption from electrical utilities in manner that contributes to reductions in utility peak electrical demand and other drivers of electrical utility costs" and places emphasis on giving customers the ability to reduce energy bills through energy efficiency measures. (Tr. pp. 530, 533, ll. 12-18). Witness Rooks testified that he had not analyzed how the low volumetric rate under the DESC Solar Choice Proposal might affect a customer-generator's incentives or economic interest to invest in energy efficiency. (Tr. p. 539, l. 24 – p. 540, l. 6). Witness Rooks testified that he is familiar with the concept of the price elasticity of electricity and acknowledged that as a price for a good goes down, that all other things being equal, consumption of that good is likely to increase. (Tr. p. 540, l. 22 – p. 541, l. 1).

Witness Everett also testified that she "did not analyze the implications of implementing a time-of-use rate on energy-efficiency investment" and further observed during cross-examination, that "[o]n average, if the customer's cost per kilowatt-hour is

lower, then the economic decision to install energy efficiency would be impacted." (Tr. pp. 273, ll. 17-21, 274, ll. 16-18).

DESC Evidence in Support of Fifteen Minute Interval Netting

From the DESC Proposed "Subscription Solar Choice" tariff, the netting interval is not made explicit to potential solar choice customers. (HE. 6 [Rooks Direct Ex. AWR-1]). From the evidence presented at the hearing, it is not apparent to the Commission whether DESC would allow credits from behind the meter consumption to rollover to subsequent months in the event that a customer-generator's behind the meter consumption offset all of their net consumption of electricity from DESC. Because neither bill credits from excess generation nor savings from behind-the-meter consumption can offset the $19.50 BFC or the per kW subscription charge, not allowing any credits from behind the meter consumption or export credits to roll over to subsequent months could result in customers losing some portion or all of the value of behind-the-meter consumption of customer-generated electricity. To the extent customers are not allowed to roll-over any credits from excess exports of electricity from one month to the next, those customers could also lose the value of that exported electricity.

DESC Evidence Related to Cost-Shift

According to Witness Everett, the DESC Solar Choice Proposal would "moderat[e] the impacts to non-participants that they experience under the current NEM program." (Tr. p. 232.50, ll. 19-21 [Everett Direct, p. 232.50, ll. 19-21]). On cross examination, when asked whether the "current NEM program" referred to the DER NEM incentive under Act 236, Witness Everett testified that she was not familiar with the DER NEM Incentive, and was not referring to that cost-recovery mechanism when she testified that current NEM customers are causing a cost-shift to nonparticipating customers. (Tr. pp. 252, l. 3 – p. 253,

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l. 16). Witness Everett agreed that any potential cost shift would not be imposed on nonparticipating customers until and unless those costs were allowed to be recovered in a future general rate case, during which the Commission could consider other factors such as savings related to customer-generators and the reasonable and prudence of the utility's expenses. (Tr. p. 255). Witness Everett further acknowledged that, under the structure of the NEM DER incentive, were the Company to quantify a value for avoided T&D costs, the incentive would decrease. But on redirect, Witness Everett testified that the NEM DER incentive collected in the Company's annual fuel docket is a way that costs from NEM are passed along to non-customer generators. (Tr. p. 361, ll. 20-24).

Witness Rooks admitted during cross-examination that the NEM portion constituted only 46 percent of the overall NEM DER incentive, which is capped at $1.00 per month for residential customers. (Tr. p. 544, ll. 14-18). He further acknowledged that non-participating customers would not see a financial benefit from any reduced cost shift until a future general rate hearing. (Tr. p. 503; p. 508, l.23 – p. 508, l. 15; p. 584, l. 19 – 585, l. 1). As a result, the public would not see an immediate reduction in utility bills if the DESC Solar Choice Proposal goes into effect. (Tr. p. 504, ll. 2-6). Witness Rooks also noted that "a general rate proceeding involves a full determination of the costs of the utility," agreeing that the Commission may in those proceedings look at the Company's possible revenue declines in the context of load growth and other issues that may affect costs. (Tr. p. 509, ll. 7-14).

DESC Witness Kassis testified that the DESC Solar Choice Proposal complied with Act 62 and that it would reduce but not eliminate cost shift per the Company's cost shift methodology. (Tr. p. 170, ll. 5-13). Witness Kassis testified more specifically that DESC's

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Solar Choice Proposal reduces the "cost-shift…arising under the current NEM program, which particularly benefits nonparticipating low-income customers." (Tr. p. 17, ll. 10-14). However, when asked how and when low-income customers would benefit from the reduced cost shift under DESC's Solar Choice Proposal, Witness Kassis referred again to the $1 per month that residential customers pay under the current NEM program, which will not apply to solar choice customers. (Tr. p. 89, ll. 14-20; p. 91, l. 9 – p. 93, l. 3). In response to a question from Commissioner Williams, Witness Kassis clarified that the elimination of the recovery mechanism under Act 236 would benefit low to moderate income customers. (Tr. p. 208, l. 20 – p. 209, l. 12).

DESC Evidence of Impact to Solar Market

Witness Kassis testified that DESC's Solar Choice Proposal would permit customer-generators to offset their energy usage from DESC in the same way that customers can offset their usage under the current NEM programs and that customer-generators would not be charged a "premium" based on the amount of self-supplied energy that they consume. (Tr. p. 19.13, ll. 8-13 [Kassis Direct p. 13, ll. 8-13]). But Witness Kassis also acknowledged that there could be months when customer-generators would not see any savings on their bills from self-consumption of behind the meter electricity generated from their rooftop solar array when accounting for the increased BFC and the new Subscription Fee. (Tr. p. 107, l. 20 – p. 109, l. 7). In addition, customers who reduce their consumption from energy efficiency or conservation measures would continue to receive bill savings at the retail rate, whereas customers under the DESC Solar Choice Proposal would not see bill savings from their reduced consumption of DESC's electricity from behind the meter consumption. (Tr. p. 109, ll. 8-14). Instead, any potential bill savings

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would come from purchases of DESC's electricity at steeply discounted off-peak rates (in combination with any exports at avoided cost rates). (Tr. p. 108, l. 10 – p. 109, l. 7; p. 198, ll. 6-18).

Witness Kassis also testified that while DESC "did participate in a stakeholder process" as part of the generic proceeding, it did not host a separate stakeholder process for this proceeding. (Tr. p. 134, l. 20 – 135, l. 25). Witness Kassis noted that DESC did hear directly from some market participants regarding their thoughts on a tariff design and felt adequately informed as to stakeholders' positions. (Tr. p. 19.8, ll. 13-17 [Kassis Direct p. 8, ll. 13-17]). At the hearing, however, Witness Kassis was unable to identify what "market participants" the Company had spoken with or what specific input they incorporated into their proposal. (Tr. p. 143, ll. 3-10; p. 144, l. 23 – p. 145, l. 25). Witness Kassis further conceded that DESC did not conduct any outreach with the intervening parties in this proceeding. (Tr. p. 133; Tr. p. 19.8, ll. 6-17 [Kassis Direct p. 8, ll. 6-17]).

DESC Witness Robinson presented testimony on a range of solar PV adoption forecasts in DESC territory. Witness Robinson examined three components of customer economics for adopting solar: the simple payback period, return on investment, and customer bill ratio. (Tr. p. 385.4, l. 18 – p. 385.5, l. 1 [Robinson Direct p. 4, l. 18 – p. 5, l. 1]). Witness Robinson estimated that payback periods under the DESC Solar Choice Proposal would be 6.9 years, 8.9 years, or 9.7 years under low, mid-, and high-cost scenarios for a cash-purchased 3 kW residential system. (Tr. p. 385.13, Robinson Direct p. 13). In calculating the payback periods, DESC Witness Robinson assumed that the federal investment tax credit would be extended at 30% in the "low-cost" scenario. (Tr. p. 385.6, ll. 17-18, Robinson Direct p. 6, ll. 17-18).

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At the hearing, Witness Robinson theorized that the price of solar may actually decrease under the DESC Solar Choice Proposal depending on how solar installers respond to the "slightly lower payback." (Tr. p. 451, ll. 13-16). But Witness Robinson also acknowledged that a less attractive payback period may have the opposite effect, causing solar installers to leave the state because it is no longer profitable as was the case in Nevada. (Tr. p. 455, l. 19 – p. 456, l. 13).

Intervenor Direct Testimony

SACE, CCL, Upstate Forever, Vote Solar, NCSEA, and SEIA Witness Tom Beach (hereinafter "Joint Witness Beach") presented testimony opposing the DESC Solar Choice Proposal, stating that the Company's proposed tariff was based on a variety of improper assumptions and methodologies and would not comply with the mandates of Act 62. Joint Witness Beach testified that, taken together, the DESC Solar Choice Proposal would reduce bill savings for an average NEM customer[4] by 55% compared to the current NEM program and would only be economical for customers with high energy consumption and small solar systems that were designed to offset no more than 40% of the customer's load. (Tr. p. 753, ll. 14-19). For a typical customer, even after taking into account federal and state tax credits, Witness Beach calculated that the payback period for DESC's Solar Choice Proposal would be over 20 years. (Tr. p. 753, l. 14 – p. 754, l. 2). In response to the testimony from DESC Witness Robinson regarding payback period, Witness Beach noted that Witness Robinson's calculations were based on a small 3 kW-DC system whose output is only about one-third of the typical annual usage of residential solar customers, and far

[4] Defined as a customer with an average monthly energy usage of 1000 kWh and with an 8kW rooftop solar system installed.

smaller than the 7 kW-AC system size on which DESC Witness Everett based her calculations. (Tr. p. 756.23, l. 17 – p. 756.24, l. 16 [Beach Direct p. 23, l. 17 – p. 24, l. 16]).

Witness Beach further explained that bill savings under DESC's proposal are not sensitive to the size of the system due to the monthly Subscription Fee, which would largely offset any bill savings from adding an additional kilowatt of solar capacity. (Tr. p. 756.25, ll. 1-11 [Beach Direct p. 25, ll. 1-11]). As a result, Witness Beach testified that DESC's proposal would make it uneconomical for residential customers to install any system larger than about 3 kW-AC. *Id*. Joint Witness Beach also testified that the Subscription Fee, coupled with low volumetric rates, would send price signals to customers encouraging inefficient energy use. (Tr. p. 754, ll. 3-20). Indeed, Witness Beach testified that the DESC Solar Choice Proposal would only be economic for residential customers with significantly above-average energy usage and very small 3 kW-AC systems. *Id.* Witness Beach testified that customers could only save money under the DESC Solar Choice Proposal by consuming energy at the lower rate. (Tr. p. 756.25, l. 12 – p. 756.26, l. 6 [Beach Direct p. 25, l. 12 – p. 26, l. 6]).

Joint Witness Beach questioned DESC's justification for the Subscription Fee, concluding that DESC improperly assumed that all T&D costs allocated to residential customers are "fixed." (Tr. p. 756.29, Beach Direct p. 29). Witness Beach noted this approach was inconsistent with DESC's own cost-of-service studies, where the utility recognizes transmission and most distribution costs as demand-related. *Id.* Joint Witness Beach testified that DESC's proposal did not comply with Act 62's directive to consider "the cost of service implications of customer generators on other customers within the same class." (Tr. pp. 756.29 – 756.30, Beach Direct pp. 29 – 30). Witness Beach noted that

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Witness Everett's residential load and solar profiles showed that, in the top 10% of residential peak demand hours, solar customers reduced peak loads by 29% of solar nameplate capacity; according to Witness Beach, this provides further evidence that distribution costs, like transmission costs, are not "fixed" costs that solar customers cannot avoid. (Tr. p. 756.30, l. 1 – p. 756.31, l. 11, Beach Direct p. 30, l. 1 – p. 31, l. 11).

Joint Witness Beach further took issue with DESC Witness Everett's overall rate design approach, stating that "the utility has sought to 'reverse engineer' a rate that, in essence, would ensure that a solar customer contributes the same amount of revenue to DESC that it paid before adding solar, except for a modest amount of avoided energy and generation capacity costs derived from the avoided cost pricing for wholesale qualifying facilities (QFs)." (Tr. p. 756.28, l. 23 – p. 756.9, l. 4, Beach Direct p. 28, l. 23 – p. 29, l. 4). At the hearing, Witness Beach attributed this approach in part to the fact that it is "very easy to calculate…the revenues that Dominion might have realized if somebody hadn't put solar on their roof" but it is "more difficult to calculate …the benefits to the utility of customer producing their own power on their own premises, using their own private capital, and what those benefits are over 25 years." (Tr. p. 807, ll. 17-24). Witness Beach testified that, rather than taking a look at the costs and *benefits* of solar as Act 62 requires, "Dominion seems to think that the benefits side has already been set." (Tr. p. 804, ll. 5-12).

Witness Beach demonstrated with his own cost-benefit analysis of solar that, when properly valuing the benefits of rooftop solar, there is no potential cost shift under the current NEM structure or the Joint Solar Choice Proposal (discussed in more detail below, in Section V.C). Under standard practice manual cost-effectiveness tests, the benefits of rooftop solar to non-participants exceed the costs, demonstrating that there is not a potential

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cost shift. (Tr. p. 756.20 [Beach Direct p. 20]; Tr. p. 615, ll. 2-8). Witness Beach emphasized the importance of quantifying all benefits of solar, such as avoided costs for generation, and avoided T&D costs over the full life cycle of a solar installation. (Tr. p. 752, ll. 15-25; p. 766, ll. 6-14). Witness Beach noted that almost "every other study in the US that has looked at avoided cost for distributed solar has considered avoided T&D costs." (Tr. p. 806). When asked on cross-examination about whether the $1 DER NEM incentive that customers pay under the current NEM structure was a "cost-shift," Witness Beach testified that he would "agree that people pay that cost, but they're also getting benefits in the long run from reduced utility investments in infrastructure that will more than offset what they pay in that line item." (Tr. p. 782, ll. 2-19).

Witness Beach gave an example of how rooftop solar provides quantifiable benefits to the utility by reducing T&D costs: he explained that "a 7 kilowatt system that's serving 80 or 90 percent of the customer's usage" will produce more power than the customer uses in the middle of the day "and that power will go out to the grid and serve the customer's neighbors" and "when the power goes out to the grid, it doesn't go very far. It serves…the neighbors [a]nd it displaces power that the utility would have to generate in a far-off power plant and then transmit and distribute over its wires to reach those neighboring customers." (Tr. p. 789, l. 11 – p. 790, l. 14). As a result, because the customer-generator's investment "frees up space in the utility's wires that it can use to serve other customers[,]… transmission-and-distribution costs are avoided by distributed solar; you're putting generation right down where the load is, and you need a few hundred feet of wires instead of, you know, hundreds of miles of wires." *Id.* Over the long run, these benefits can save the utility money because the utility can "take that space that's freed up in their

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transmission-and-distribution system and use it to serve new customers, to serve new loads, like electric vehicles." *Id.* Witness Beach noted that California, which has the largest solar market in the country, has recently canceled $3 billion of otherwise planned investments in transmission due to a combination of rooftop solar and energy efficiency. (Tr. p. 808, ll. 6-22).

Witness Beach objected to two other aspects of DESC's Solar Choice Proposal. With respect to the BFC, Witness Beach testified that DESC's proposed increase in the BFC for solar customers from $9.00 to $19.50 was not reflective of customer-related costs, which he argues should be limited to metering, service drop, billing, and customer service costs required to provide access to the grid. (Tr. p. 756.31, ll. 15-20, Beach Direct p. 31, ll. 15-20). With respect to DESC's proposal to change from annual netting to fifteen-minute interval netting, increasing the amount of exports that are credited at PURPA avoided cost rates as opposed to retail rates, Witness Beach testified that this change was not necessary because, as demonstrated by his cost-benefit analysis, the actual costs avoided by the utility from private investment in distributed solar are comparable to retail rates. (Tr. p. 756.31, l. 27 – p. 756.32, l. 2 [Beach Direct p. 31, l. 27 – p. 32, l. 2]).

Witness Beach concluded that DESC's proposal was, as a whole, contrary to the legislative intent underlying Act 62 because it would "place unreasonable new limitations on the size of the solar systems that would be economic to deploy in DESC's service territory" and would "clearly disrupt the solar market." (Tr. p. 756.28, ll. 1-16, Beach Direct p. 28, ll. 1-16). At the hearing, Witness Beach agreed with Chairman Williams that the solar industry under DESC's Solar Choice Proposal would not survive in its current form. (Tr. p. 802, l. 24 – 803, l. 17).

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SEIA/NCSEA Witness Justin Barnes also testified in opposition to DESC's Solar Choice Proposal. Witness Barnes testified that the Company's proposed Subscription Fee would effectively charge customers for the electricity produced behind the meter because the Company calculates the charge based on the amount of energy the customer uses behind the meter that would otherwise been have purchased from the Company. (Tr. pp. 915.15 – 915.52 [Barnes Direct pp. at 51 – 52]). Witness Barnes equated this methodology with levying an extra charge on those customers who reduce their electricity consumption with energy efficiency measures. (Tr. p. 915.52, ll. 9-11 [Barnes Direct p. 52, ll. 9-11]). Witness Barnes further disputed the Company's assertion that its proposed Subscription Fee is based on its embedded T&D costs associated with solar customers; Witness Barnes testified that such costs may be identified only through an embedded cost of service study of solar customers, which the Company has not yet conducted. (Tr. p. 915.52, ll. 12-20 [Barnes Direct p. 52, ll. 12-20]; *see also* HE. 2 [Vote Solar Everett Cross Ex. 6]). Witness Barnes testified that, while other jurisdictions have imposed subscription fees, those fees were lower than those proposed by DESC and were in support of more reasonable objectives, such as a New York program that collects a charge to support public benefit programs like energy efficiency incentive programs. (Tr. pp. 915.53 – 915.54 [Barnes Direct pp. 53 – 54]).

Witness Barnes next critiqued the TOU periods under DESC's proposal, noting that under the proposed TOU periods solar customers would not receive price signals that would encourage them to act in a way that reduces costs to their broader rate class. (Tr. p. p. 915.36, ll. 5-14 [Barnes Direct p. 36, ll. 5-14]). Witness Barnes testified that the TOU periods under DESC's Rate 5 would be preferable and that it would be "discriminatory" to

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subject solar customers to a separate, special TOU rate. (Tr. p. 915.35 [Barnes Direct p. 35]; Tr. p. 910, ll. 20-25). Witness Barnes further noted that, compared with the TOU rates under DESC's Solar Choice Proposal, Rate 5 has a larger "rate spread" between on-peak and off-peak prices and would thus provide a greater incentive for customers to modify their usage behavior. (Tr. p. 915.34, ll. 8-19 [Barnes Direct p. 34, ll. 8-19]). In particular, the rate spread under Rate 5 is 8.2 cents/kWh and 3.8 cents/kWh higher during the summer and winter, respectively, compared with the rate spread under the DESC Solar Choice Proposal. *Id*.

Witness Barnes additionally criticized DESC's proposal to change from annual netting to fifteen-minute interval netting. He explained that under the current NEM program, a customer-generator that exports more energy than it imports earns "credits" for the amount of the net export to the following month. (Tr. p. 915.10, l. 15 – p. 915.11, l. 2 [Barnes Direct p. 10, l. 15 – p. 11, l. 2]). In contrast, under DESC's proposal, monthly retail netting would be replaced with a "regime that places a monetary value on all exports (i.e., no monthly netting) and applies that value as a monetary credit to the customer's bill at the end of the month." (Tr. p. 756.11, ll. 3-11 [Barnes Direct p. 11, ll. 3-11]). Witness Barnes labeled DESC's proposal to eliminate netting entirely in favor of PURPA avoided costs for all exports as "dramatically punitive" and more extreme than the versions of monetary crediting adopted in other jurisdictions. *Id.* Witness Barnes recommended that the Commission retain the annual netting regime and rely on the retail TOU rate to provide the correct price signal for both load and experts. (Tr. p. 756.28, l.8 – p. 756.30, l. 9 [Barnes Direct p. 28, l.8 – p. 30, l. 9]).

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Witness Barnes testified that Act 62 requires DESC to conduct a cost of service analysis that examines solar customers as a separate class of customers for analytical purposes. (Tr. p. 915.18, ll. 1-11 [Barnes Direct p. 18, ll. 1-11]). He explained that, without such a study, the Commission cannot reach any conclusion about the existence or magnitude of a cost shift. *Id.* Witness Barnes testified that it is important to examine solar customers as a separate class because on-site solar generation system influences a customer's load shape, which in turn affects the load shape of their otherwise applicable rate class that ultimately determines the allocation of different types of costs. (Tr. p. 915.18, ll. 12-22 [Barnes Direct p. 18, ll. 12-22]). Witness Barnes testified that DESC currently uses a summer coincident peak allocator for production and transmission costs and a non-coincident peak allocator for distribution costs, and that solar customers provide a considerable benefit to their respective classes for production and transmission demand-related costs because the timing of the peak matches well with good solar production. (Tr. p. 915.19, l. 9 – p. 915.20, l. 12 [Barnes Direct p. 19, l. 9 – p. 20, l. 12]). Because rooftop solar contributes to peak production, it ultimately saves all ratepayers money because DESC needs to build less generation and transmission. (Tr. p. 925, l. 19 – p. 926, l. 7). Witness Barnes was unable to calculate the precise impact of solar customers on non-coincident peak distribution costs because the cost of service materials made available by DESC did not contain the information necessary to make these calculations. (Tr. p. 915.21, ll. 10-18 [Barnes Direct p. 21, ll. 10-18]).

Using the data that was available, Witness Barnes estimated that, had there been no residential solar on DESC's systems, the production and transmission costs allocated using the coincident peak allocator would have been roughly 0.33% higher (47.07% vs. 46.74%),

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meaning that without solar customers, the residential class would have been allocated an additional $787,000 in DESC's most recent rate case, or $0.01159/kWh. (Tr. pp. 915.22 – 915.23 [Barnes Direct pp. 22 – 23]). Witness Barnes qualified his testimony by noting that he was not able to fully reconstruct the cost of service value of residential solar to the residential class because DESC's cost of service filings did not include all of the necessary information, which means that his calculations underestimate the value provided. (Tr. p. 915.24, l. 18 – p. 915.25, l. 13 [Barnes Direct p. 24, l. 18 – p. 25, l. 13]). Lastly, Witness Barnes testified that the cost of service calculations should not be fully determinative for the Commission because Act 62 had other directives beyond eliminating any identified potential cost shift to the greatest extent practicable. (Tr. p. 915.25, l. 14 – p. 915.26, l. 21 [Barnes Direct p. 25, l. 14 – p. 26, l. 21]).

ORS Witnesses Robert Lawyer and Brian Horii provided testimony regarding two proposed modifications to DESC's proposed tariff that they argue would be required to eliminate all potential cost shift; ORS' testimony is discussed in further detail in Section V.B. of this Order, below.

DESC Rebuttal Testimony

In rebuttal, Witness Everett responded to Witness Barnes' testimony that "one of the critical deficiencies in Dominion's proposal is that it lacks support from a cost of service evaluation" by stating that DESC had "conducted a cost of service analysis of the current NEM program" in the Generic Docket "as required by Act 62." (Tr. p. 239.6, ll. 11-17 [Everett Rebuttal, p. 6, ll. 11-17]). According to Witness Everett, though, "for purposes of designing rates for the Solar Choice Tariffs," DESC "leveraged" the embedded cost of service study prepared for DESC's ongoing rate case in Docket No. 2020-125-E.

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(Tr. p. 239.7, ll. 1-3 [Everett Rebuttal p. 7, ll. 1-3]). During cross-examination Witness Everett clarified this rebuttal testimony, confirming that she had *not* actually "performed the analysis described by Act 62 to look at whether customer-generators, treated as a class for analytical purposes only, would provide an adequate relative rate-of-return relative to other classes." (Tr. p. 369, ll. 8-20; *see also* Tr. p. 550, ll. 10-14 (agreement by DESC Witness Rooks) *and* HE. 2 p. 2). On cross-examination, Witness Everett also agreed with the statement that "basic idea of [her] rate design was to find a way to collect something close to the same revenue that you collected from customers before they installed solar that you collected from customers before they installed solar, with some offset for behind-the-meter consumption valued at avoided cost rates." (Tr. p. 258, l. 21 – p. 259, l. 2).

Witness Everett briefly addressed Witness Beach's testimony concerning the benefits of solar, testifying that societal benefits are "based on theoretical measures," "hypothetical," and "too difficult to quantify to have any real effect on rates" or "justify an increase cost-shift in order to prop up the solar industry." (Tr. p. 38, ll. 5-12). However, in response to a question from Chairman Williams at the hearing, Witness Everett acknowledged that "there are some benefits to non-solar users to have more solar development." (Tr. p. 349, ll. 14-21).

Witness Everett also responded to the testimony from Witnesses Beach and Barnes regarding the specific components of the DESC Solar Choice Proposal. In defense of the proposed BFC of $19.50, Witness Everett stated that it was not a "penalty" because it is "tied to a customer's usage of DESC's system" and "reflective of costs…incurred serving these customers, such as meters and billing." (Tr. p. 236, ll. 12-22). Witness Everett testified that she "carefully studied" DESC's cost of service study and that after she

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"examined" that study, she determined DESC would not adequately recover those "basic" customer costs unless the BFC was set to $19.50. (Tr. pp. 239.16, ll. 11-15, 239.18, ll. 5-13 [Everett Rebuttal pp. 16, ll. 11-15, 18, ll. 5-13]). Witness Everett disagreed with Witness Barnes that the $19.50 BFC recovered distribution costs and testified that the customer-related costs in DESC's cost of service study do not include distribution costs. (Tr. p. 239.15, ll. 10-12 [Everett Rebuttal p. 15, ll. 10-12; Tr. p. 275, ll. 6-18]). However, as DESC Witness Kevin Kochems testified in the Company's pending rate case,[5] DESC does classify a significant portion of shared distribution costs as customer-related in its COSS; these include a portion of overhead lines (FERC accounts 364-365), underground lines (FERC accounts 366-367), and transformers (FERC account 368). (Tr. p. 276, ll. 12-18; Docket No. 2020-125-E, Direct Testimony of Kevin Kochems, p. 16 ll. 9-12, Ex. KRK-1 at 3). Though Witness Everett previously testified that she had "carefully studied" DESC's cost of service study, when asked at the hearing about whether she was aware that the Company classified a significant portion of shared distribution assets as customer-related, Witness Everett confirmed that she did not "specifically study what was included" as customer-related costs in DESC's cost of service study and that she "was not an expert on how DESC does cost-of-service." (Tr. p. 276 ll. 12-19, 24-25). As a result, Witness Everett was not "able to say yes or no" regarding Witness Barnes' assertion that distribution costs are included in the BFC. (Tr., 278, ll. 10-17). She further stated that it was not her testimony "to opine on whether or not the way that [DESC is] doing their cost-of-service study is appropriate." (Tr. p. 279 ll. 17-19).

[5] The Commission took judicial notice of DESC's pending rate case, Docket No. 2020-125-E. Tr. p. 510, l. 20 – p. 511, l. 1).

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DESC Witness Everett justified the Subscription Fee by explaining that the fee "corresponds to the demands placed upon the transmission and distribution assets required to not only accommodate the customers load but also the exports arising from their system." (Tr. p. 236, l. 22 – p. 237, l. 2). Witness Everett explained that though a NEM customer's energy usage will decrease with behind the meter energy production the customer's demands on the DESC system do not change because they are still pulling some energy from the system and also using the system to export energy. (Tr. p. 239.21, ll. 12-19 [Everett Rebuttal p. 21, ll. 12-19]). Because the costs that result from use of the DESC system increase with system size, Witness Everett asserted that it is logical to impose a Subscription Fee that relates to the size of a system. (Tr. p. 239.22, ll. 3-4 [Everett Rebuttal p. 22, ll. 3-4]).

Witness Everett also testified in rebuttal that the TOU rates in DESC's Solar Choice Proposal are based on 2019 data and reflect the latest information on grid costs. (Tr. p. 239.27, ll. 1-13 [Everett Rebuttal p. 27, ll. 1-13]). Witness Everett described the Rate 5 TOU Structure preferred by Witnesses Barnes and Beach as a "30-year-old [rate] that has undergone minimal modifications since its establishment." (Tr. p. 239.35, ll. 18-20 [Everett Rebuttal p. 35, ll. 18-20]). Witness Everett further testified at the hearing that the new TOU rates will be "applicable for a sustainable period of time and reflect the current cost structure that Dominion has" and that the TOU rates are also "designed to create [a] maximum differential between peak and off-peal so that customers can see the benefits to generating during off-peak [sic] periods." (Tr. p. 345, l. 12 – p. 346, l. 14). Witness Everett did not suggest that the Company should update its cost of service allocators to accord with her proposed changes; she also did not respond to Witness Barnes's observation that the

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higher rate spread in Rate 5 TOU incentivizes customers to take more advantage of TOU rates.

In rebuttal, Witness Everett also testified that the 15 minute netting in the DESC Solar Choice Proposal was appropriate. (Tr. p. 239.16, l. 16 – p. 239.17, l. 14 [Everett Rebuttal p. 16, l. 16 – p. 17, l. 14]). She noted that Witness Barnes recommended a banking scheme that assumes the value of an export is equal to the retail rate even though DESC values PURPA avoided costs much lower than the retail rate. *Id.* As a result, Witness Everett testifies that Witness Barnes' proposal would continue to result in a "rate design" cost shift. *Id.*

Witness Everett also did not respond to the Witness Beach's arguments that the components of the DESC Solar Choice Proposal, specifically the high fixed fees and low volumetric rates, would make solar uneconomic for most customers and encourage wasteful energy consumption among the few customers who still see bill savings. Witness Everett did, however, acknowledge that it is "definitely a possibility" that less ratepayers will decide to install solar because the benefits are not the same under DESC's proposal. (Tr. p. 352, l. 20 – p. 352, l. 1). Witness Everett also agreed with Chairman Williams that a reduction in savings for current customer-generator with a 7.2 kW system from about $1350 per year to about $340 per year would be a "material" cut. (Tr. pp. 355 – 356).

DESC Witness Kassis disputed Witness Barnes' claim that the Subscription Fee is a penalty for behind the meter consumption by noting that the "fee is not tied in any way to the amount of energy consumed" and instead recovers T&D costs that arise from the customer-generators two-way flow of energy. (Tr. p. 23, ll. 17-23). More generally, Witness Kassis claimed that the testimony and solar choice proposals submitted by

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intervenors were self-interested and not aligned with the interests of the "using and consuming public." (Tr. p. 26.8, ll. 12-17 [Kassis Rebuttal p. 8, ll. 12-17]). At the hearing, when asked whether he was aware that intervenors CCL, SACE, and Upstate Forever are nonprofit public-interest organizations without a financial stake in the outcome of this docket, Witness Kassis suggested that those organizations were using this docket to fundraise, but did not have any evidence in support of that contention. (Tr. pp. 98 – 99).

DESC Witness Robinson testified in rebuttal that declining solar installations are not due to decreasing residential rates. (Tr. pp. 390.3 – 390.5 [Robinson Rebuttal pp. 3 – 5]). He explained that solar PV adoption has been declining since 2017, which suggests that solar has reached the "long-run equilibrium market share." (Tr. p. 413, l. 11 – p. 414, l. 8). Witness Robinson went on to distinguish various sources of pricing data for solar and compared his sources to those used by Witness Barnes. (Tr. p. 390.8, l. 18 – p. 390.11, l. 6 [Robinson Rebuttal p. 8, l. 18 – p. 11, l. 6]). DESC Witness Robinson also testified that Witness Beach's assertion that the Subscription Fee favored wealthy customers with small systems required more analytical support. (Tr. p. 390.14, ll. 6-15 [Robinson Rebuttal p. 14, ll. 6-15]). In particular, Witness Robinson stated that it was only possible to analyze the impact of the DESC Solar Choice Proposal on smaller systems with access to customer load profiles. *Id.* Witness Robinson further disagreed with Alder Energy Witness Zimmerman's testimony that payback period was over emphasized by commercial and industrial solar adopters. (Tr. pp. 390.16 – 390.17 [Robinson Rebuttal pp. 16 –17]).

Intervenors' Surrebuttal Testimony

In surrebuttal, Joint Witness Beach responded to various claims made by DESC Witnesses Everett and Robinson. Witness Beach joined Witness Barnes in critiquing the

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TOU periods developed by Witness Everett for DESC's Solar Choice Proposal, noting that its "on-peak" periods were not aligned with DESC's system coincident peak. (Tr. p. 760.20, l. 10 – p. 760.21, l. 7 [Beach Surrebuttal p. 20, l. 10 – p. 21, l. 7]). In particular, Joint Witness Beach noted that DESC allocates its generation and transmission costs based on coincident peak usage during the peak summer afternoon (typically in July) from 2:00 to 6:00 p.m., which would only overlap by two hours with the DESC Solar Choice Proposal summer on-peak period of 4:00 to 8:00 p.m. *Id.* Joint Witness Beach testified that this would send the wrong price signals to solar customers, as the higher on-peak rate would encourage rooftop solar customers to reduce their consumption from 6:00 to 8:00 P.M. when the Company does not experience its system peak, and conversely, a lower off-peak energy rate from 2:00 to 4:00 P.M. would encourage solar customers to consume more energy when the Company *does* experience its system peak. (Tr. p. 760.21, ll. 1-20 [Beach Surrebuttal p. 21, ll. 1-20]). Joint Witness Beach further noted that there was no reason for DESC, in developing its proposal, to deviate from the TOU periods set forth in its existing residential TOU rate ("Rate 5"), which uses a standard summer 2:00 to 7:00 p.m. peak period that does align with the Company's system coincident peak. *Id.* Joint Witness Beach also testified that solar customers should not be subject to a unique TOU rate; because TOU rates are intended to signal when energy is more or less valuable to the system as a whole, those signals should not vary within customer classes. *Id.*

Witness Beach also responded to Witness Everett's claim that he was overvaluing the benefits of solar. Witness Beach testified that the health benefits from reductions in criteria air pollutants and benefits of reducing the societal damages from climate change were not "hypothetical." (Tr. p. 760.17, ll. 1-13 [Beach Surrebuttal p. 17, ll. 1-13]). In

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addition, Witness Beach pointed out that DESC's 2020 IRP assumes carbon costs of $25 per metric ton for compliance with future greenhouse gas regulations. (HE. 11 [Ex. RTB-2, p. 15]). Witness Beach noted that it is "standard economics to attempt to 'internalize' real externalities that are direct costs to society as a whole, but that today are not direct costs to the utility." (Tr. p. 760.17, ll. 1-13 [Beach Surrebuttal p. 17, ll. 1-13]). Witness Everett agreed in discovery that externalities should be included in marginal or avoided costs if they can be measured. *Id.* If the Commission is not comfortable quantifying certain societal benefits of rooftop solar in its avoided cost calculation, the benefits could instead be given weight in other aspects of the Commission's review, such as by offsetting any uncertainties in the direct benefits. (Tr. p. 769, l. 23 – p. 770, l. 10; Tr. p. 760.17, l. 14 – p. 760.19, l. 10 [Beach Surrebuttal p. 17, l. 14 – p. 19, l. 10]).

In response to DESC Witness Robinson, Witness Beach testified that a load analysis was not required to deduce that coupling a fixed per-kW Subscription Fee, with low volumetric rates would only provide savings to large residential energy users with small solar PV systems. (Tr. p. 760.24, ll. 9-23 [Beach Surrebuttal p. 24, ll. 9-23]). Witness Beach testified that as system sizes increase, the Subscription Fee would quickly offset additional bill savings resulting from additional solar output; Witness Beach calculated that, for a customer who increased their solar capacity from 2.5 kW-AC to 6.9 kW AC, their additional bill savings would be just $6 under the DESC Solar Choice Proposal, compared to $72 under the current NEM structure. *Id.*

Witness Barnes' surrebuttal testimony highlighted that DESC did not actually study how solar modifies a customer's cost of service and the effects that this would have on other customers within that customer's broader class. (Barnes Surrebuttal p. 8). Witness

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Barnes reiterated that, according to his review of DESC's embedded cost of service study, any supposed cost shift from solar to non-solar customers is minimal or non-existent, and thus the Subscription Fee designed to eliminate it serves no purpose. (Barnes Surrebuttal p. 18). At the hearing, Witness Barnes further explained his cost shift conclusion, noting that "a nonparticipating residential customer is not paying appreciably more, because they have solar customers also with the rate class…[and] by generating during peak times, solar is reducing the allocation of cost to the customer's otherwise applicable class." (Tr. p. 946, ll. 3-11). Witness Barnes also reiterated that Act 62 requires the Commission to balance cost-of-service considerations with other public policy objectives, and that because solar choice tariffs are forward-looking tariff while cost of service studies are backwards-looking, DESC's embedded cost of service study should not be fully determinative. (Barnes Surrebuttal p. 9, ll. 1-5).

Witness Barnes also responded to DESC Witness Robinson's arguments regarding the impact of retail rates on solar adoption. Witness Barnes observed that, despite Witness Robinson's assertions to the contrary, there is a correlation between retail rate increases and solar adoption. (Barnes Surrebuttal pp. 29-30). Witness Barnes also testified that Witness Robinson's average cost figures for installed solar in South Carolina are systemically biased towards lower amounts because the source relied upon by Witness Robinson is biased towards reporting lower costs. (Barnes Surrebuttal p. 9, l. 10 – p. 33, l. 3). Witness Barnes further criticized Witness Robinson's testimony as misstating the federal solar investment tax credit, which currently is set at 26%, not 30% as testified by Witness Robinson. (Barnes Surrebuttal p. 34).

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SACE, CCL, and Upstate Forever Witness Moore submitted surrebuttal testimony detailing his involvement in the legislative process and drafting of Act 62. Witness Moore concluded that because DESC's Solar Choice Proposal would not provide a reasonable opportunity to reduce both solar customer bills and utility costs, it would violate the statute. (Tr. pp. 824 – 826). Witness Moore testified that DESC and ORS did not fully comply with the provisions of Act 62 in their proposals, noting at least three sections in Act 62 that they ignored or only partially addressed. (Tr. p. 825). Witness Moore noted that large fixed fees such as the proposed Subscription Fee would render the TOU component of a rate meaningless and reduce opportunities for customers to manage their bills. (Tr. p. 831.15, ll. 6-11). Witness Moore also highlighted the provision in Act 62 that requires "consideration of mitigation to address any rate shock caused by shifts in solar rates." (Tr. p. 826, ll. 18-20).

Witness Moore further testified that DESC's definition of cost-shift is incorrect because it does not consider the benefits of rooftop solar. (Tr. p. 828). Witness Moore listed several ways that those benefits reduce utility costs and save money for all ratepayers, explaining that solar customers reduce fuel costs, provide a hedge against fuel volatility, generate avoided T&D benefits, and avoid generation capacity. *Id.* Regarding avoided generation capacity, Witness Moore explained that customers who install rooftop solar make room for new utility customers and reduces the need for DESC "to build new power plants, which are the most expensive part of the utility system." (Tr. p. 828, l. 19 – p. 829, l. 2). During cross examination, Moore testified that it was prudent to also consider avoided carbon emissions, as Witness Beach did, when quantifying the benefits of rooftop solar; he explained that though there is currently no carbon tax, there is a high chance that there will

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be a carbon costs during the lifecycle of rooftop solar assets. (Tr. pp. 851 – 852). He noted that DESC itself is planning in its IRP for numerous scenarios with a carbon cost because "you can't do it retroactively when [a carbon cost] hits." *Id.* Witness Moore testified that future avoided costs, such as avoided carbon, "can be either greater than or lower than today's retail rates, because those retail rates are, by definition, backward-looking." (Tr. p. 854, l. 24 – p. 855, l. 1).

When asked specifically about existing cost-shift during cross-examination, Witness Moore testified that, in his opinion, neither DESC nor ORS had established the existence of a cost shift. Witness Moore testified that because DESC did not conduct a cost of service study looking at the actual usage profiles of solar customers, "the assertion that there's a cost shift is not founded on the type of evidence that would be needed to create it." (Tr. p. 846, l. 23 – p. 847, l. 11).

In response to Witness Kassis' suggestion that SACE, CCL, and Upstate Forever's involvement in this docket was driven by self-interest, Witness Moore also emphasized that SACE, CCL, and Upstate Forever "have no financial stake in the solar industry, and—unlike Dominion—no financial interest in the outcome of this proceeding." (Tr. p. 823).

ii. Commission Conclusions

The Commission is required to balance all the factors in Act 62 in determining whether the DESC Solar Choice Proposal complies with the statute. Each of the factors the Commission finds relevant to its conclusions here are discussed below.

DESC Cost Shift Methodology

As an initial matter, the Commission finds that DESC's methodology for calculating cost shift, as discussed in the testimony of Witness Everett, is unreasonable

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because it improperly equates solar customer bill savings—minus PURPA avoided costs—with "cost shift." The Commission rejects this assumption as unreasonable, unjust, and inconsistent with Act 62.

Contrary to DESC's assertion that there is currently a substantial cost shift from NEM to non-NEM customers that must be mitigated through its proposal, the NEM DER Incentive that is currently on customer bills will not be collected in relation to customers who accept service under the new solar choice tariffs. The Commission's decision on what solar choice tariff will apply for customers that apply after May 31, 2021 will have no impact on the NEM DER incentive amount. Currently, the NEM portion of the DER incentive accounts for only 46 percent of the monthly NEM DER rider for residential customers, which is capped at $1.00. (Tr. pp. 544 – 545). As Witness Lawyer conceded at the hearing, were the Company to quantify the value of avoided T&D costs in the current NEM value stack, that incentive amount would go down. (Tr. p. 1003, l. 25 – p. 1003, l. 6). In addition, the NEM DER incentive is specifically intended to allow the utility to collect lost revenues from current NEM customers; however, Act 62 specifically provides that utilities may not collect lost revenues from solar customers who apply after May 31, 2021. This is one of several indications that Act 62 did not intend for solar choice tariffs to be used as a mechanism for the utility to collect lost revenues from solar customers.

Further, even if there were any cost shift from solar to non-solar customers under a solar choice tariff, those costs could not be recovered until DESC's next general rate case. At that time, the Commission would evaluate any solar-related lost revenues the Company was seeking to recover in conjunction with the Company's requested revenue requirement, capital structure, and the many other costs under review, to determine what rates are just

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and reasonable. As several witnesses noted at the hearing, there are many other reasons the Company's revenue might decrease, including from a customer installing energy efficiency measures or switching to natural gas for water and home heating. The Commission does not believe it is reasonable or appropriate to single out rooftop solar customers here and to set rates specifically for the purpose of preemptively preventing DESC's revenue from going down, before all costs and benefits can be fully evaluated in the context of a general rate case.

Further, the Commission gives significant weight to the testimony of Witness Barnes showing that, even under the Company's current embedded cost of service study, the potential cost shift under current retail rate net metering is only minimal or nonexistent. As Witness Barnes testified, solar customers provide a considerable benefit to their respective classes for production and transmission costs because the timing of the Company's summer peak—which is the basis of how it allocates costs to customers—matches well with solar production. In addition, Witness Barnes testified that solar customer-generators provide benefits to reducing demand-related distribution costs for their class.

As shown by Hearing Exhibit 2, the Company did not undertake a cost of service analysis to evaluate its solar customers for analytical purposes only, as was required by Act 62. Had the Company conducted such a study, it could have compared its cost to serve solar customers against the amount they receive from solar customers as relevant evidence relating to potential cost shifts. Instead, however, DESC sought to design a "revenue neutral" rate designed specifically to reduce customer bill savings, which is contrary to the very purpose of Act 62 to protect solar choice in the state and allow customers to save

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money through rooftop solar in ways that are aligned with reducing system costs. *See, e.g.*, S.C. Code Ann. § 58-40-20(A)(2) and § 58-27-845(D).

Subscription Fee and Increased BFC

The Commission finds that DESC's proposed $5.40 per kW Subscription Fee is unreasonable and not cost-based. Further, we conclude that DESC's proposed increase to the BFC is unsupported by evidence in the record and, particularly in combination with DESC's proposed Subscription Fee, would effectively penalize solar customers for their behind-the meter usage in violation of Act 62.

DESC has not provided sufficient evidence that its proposed Subscription Fee would be necessary to recover the additional transmission and distribution costs associated with customers who have larger solar systems. DESC did not conduct the cost-of-service analysis required under Act 62 in order to determine the actual transmission and distribution costs associated with solar customers. Rather, DESC calculated the Subscription Fee based on an improper assumption that all transmission and distribution costs are "fixed," an approach that is inconsistent with DESC's own classification of most distribution costs as "demand related," or dependent of the customer's varying levels of demand, in its rate case. The evidence in this proceeding, as presented by Witness Barnes and Joint Witness Beach, shows that DESC allocates its transmission and generation costs based on summer coincident peak, and that rooftop solar—which is highly productive during that time—helps to reduce demands on the utility's transmission and generation system. As described by Witness Beach, the imposition of the Subscription Fee on solar customers is a penalty "because it doesn't reflect the fact that distributed solar actually can

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avoid transmission-and distribution costs, and it treats…distributed solar as not being able to avoid those costs at all by establishing that fixed subscription fee." (Tr. p. 599).

The Subscription Fee also disincentivizes customers from installing rooftop solar systems capable of offsetting all of their usage, contrary to the definition of "customer-generator" included in Act 62. S.C. Code Ann. § 58-40-10(C)(5). And, as we will discuss further below, we find that DESC's proposed Subscription Fee could improperly incentivize large residential energy users to install a small solar system in order to access the tariff's low volumetric rates; as DESC Witness Rooks admitted, because of the higher fixed charges under DESC's proposal, a solar customer would *only* be able to save money under DESC's Solar Choice Proposal by consuming their electricity from DESC at a lower volumetric rate. (Tr. p. 524 l. 22 – p. 525 l. 3). Energy efficiency measures help to keep utility costs down by reducing consumption and avoiding the need for the utility to invest in more infrastructure to serve its customers, costs that would otherwise go into rate base. The price elasticity of electricity follows fundamental principles of economics: all other things being equal, reducing volumetric rates for electricity can result in increased consumption. As a result, DESC's proposal is contrary to the General Assembly's finding that there is a "critical need" to protect customers from rising utility costs and to reduce their consumption through energy efficiency and rooftop solar.

In sum, DESC's proposed Subscription Fee is contrary to Act 62, and because DESC has not conducted a cost of service analysis on solar customers and failed to adequately account for the benefits of rooftop solar on its transmission and distribution system, there is no evidence in the record to demonstrate that DESC's proposed

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Subscription Fee is necessary to recover its transmission and distribution costs for solar customers.

We further conclude that DESC's proposed increase to the Basic Facilities Charge for solar choice customers from $9.00 to $19.50 is unjustified. While DESC claims this increase is necessary to recover the "customer-related costs" for solar choice customers, this high BFC is being proposed only for solar customers; in its ongoing rate case, DESC is proposing a BFC of $11.50/month for standard residential customers and $15.50/month for residential customers under TOU rates. (Tr. p. 915.38). At the hearing, DESC Witness Rooks acknowledged that the Company had no intent to move the entire residential class to a $19.50 BFC. (Tr. p. 511 ll. 4-22). DESC witnesses also acknowledged that this component of its Solar Choice Proposal would remain even if the Commission rejected DESC's categorization of customer-related costs in the ongoing rate proceedings. (*See* Tr. pp. 303, 609).

This high BFC, particularly in combination with the proposed Subscription Fee, will make solar uneconomic for most customer-generators and effectively penalize behind the meter use. As acknowledged by DESC Witness Kassis, when taking into account DESC's proposed new fixed customer charges and fees, a customer who self-generates and consumes 500 kilowatt hours from a rooftop solar array in a month like March (with no on-peak periods, keeping the calculation straightforward), would still end up owing more to DESC than a typical residential non-solar customer today. (Tr. pp. 107-08). Such a customer would receive a bill credit of $33.68 for that self-consumption (500 kWh multiplied by the low off-peak rate of $0.06735/kWh), which is more than wiped out by the non-bypassable fixed fees of $46.50 (for a 5 kW PV system). *Id.* That bill credit instead

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can only apply to offset the first 500 kilowatt hours consumed from DESC. Thus, before consuming a single electron supplied by DESC's grid and after consuming 500 kilowatt hours of self-generated electricity behind the meter, a solar choice customer would be worse off than a regular customer under Rate 8 without solar who has not self-generated any electricity.

Consistent with our interpretation of Act 62, a solar tariff improperly penalizes behind the meter consumption if a customer-generator would pay more under that tariff than if they did not have solar, when considering the nonbypassable charges and fees on their utility bills and after accounting for the self-consumption of energy used behind the meter. We therefore conclude that DESC's Solar Choice Proposal improperly penalizes customers for installing solar and consuming self-generation behind the meter, in violation of Act 62.

Export Rates

The Commission agrees with the testimony of Joint Witness Beach regarding DESC's proposal to use PURPA avoided costs as a metric for the benefits of solar to the system. Act 62 specifically contemplates that the benefits of net metering include factors that are not included in PURPA avoided cost calculations, and the PURPA avoided cost provisions of Act 62 are entirely separate from the provisions in S.C. Code Ann. §58-40-20 related to net metering and solar choice. Moreover, the use of PURPA avoided costs is inconsistent with broader re-evaluation of costs and benefits as required by Act 62. Put simply, the avoided costs attributable to distributed solar are not equivalent to PURPA avoided costs.

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While PURPA avoided costs are established over a 10-year period, Act 62 requires that solar choice tariffs take into account the aggregate "long-run" impacts of rooftop solar on the utility system; we find that "long-run" in this instance is most appropriately defined as the useful life of the system. The avoided capacity-related costs that result from solar – for generation, transmission, and distribution – are realized in the long-run, over time and multiple rate case cycles, as the lower loads resulting from rooftop solar allow the utility to build fewer facilities. The cost impacts of a 25-year asset to the utility system should be assessed over a 25-year period.

The impact of DESC's proposed lower export rate is to significantly decrease the opportunity for customer-generators to lower their bills by installing solar; this is contrary to Act 62's requirement to ensure access to customer-generator options and avoid disruption to the solar market.

Finally, the Commission would note that DESC's Solar Choice Proposal would allow the utility to recover avoided cost credits to solar customers as "purchased power fuel expenses" under the fuel clause, even for solar exports it sells at retail rate to other customers. This would allow the utility to recover more than double its stated costs, first by allowing it to recover avoided cost credits through the fuel rider, and then also earn the difference between retail rate and PURPA avoided costs (which is substantial) by selling exports to other customers. Due to the serious concerns with this request, even though we decline to adopt the DESC Solar Choice Proposal, we nevertheless find it necessary to affirmatively prohibit the Company from seeking to recover through the fuel rider any avoided cost credits for customer-generator solar exports that DESC sells to other customers at retail rates.

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TOU Periods

The Commission finds that the TOU periods in DESC's Solar Choice Proposal are unreasonable because they do not align with the peak periods identified in the Company's cost of service study. DESC's Solar Choice Proposal would charge customers a steeply discounted volumetric rate during a period that corresponds with DESC's summer coincident peak, which it uses to allocate all its generation and transmission costs to customers. As Witness Barnes testified, this would provide a skewed incentive to solar choice customers to consume more energy from DESC during those periods and contribute to increasing the residential class's contribution to system peak, potentially increasing costs for all residential customers. This is inconsistent with the General Assembly's finding, as provided in Act 62, that there is a "critical need" to protect customers from rising utility costs. It is also inconsistent with Act 62's statement that customers have a right to reduce their consumption through energy efficiency and rooftop solar, and that rates should align customers' incentives to install those measures in a manner that reduces electrical utility costs.

Ensuring Access for Customer-Generators and Impacts to Solar Market

We conclude that the DESC Solar Choice Proposal would so substantially reduce customer bill savings that it would disrupt customer access to the rooftop solar market in South Carolina. We agree with Joint Witness Beach and NCSEA/SEIA Witness Barnes that DESC's proposal would result in significant reductions in bill savings for rooftop solar customers. For an average customer, the DESC Solar Choice Proposal would reduce bill savings compared with the current NEM program by 55%; due to the Subscription Fee, savings opportunities would decrease even more dramatically for customers with systems

sized to offset a significant amount of a customer's load. We reject DESC Witness Robinson's conclusion that payback periods would only be minimally extended under DESC's Solar Choice Proposal. Payback periods would substantially increase for all customers except those with much smaller-than-average rooftop solar systems. (Tr. p. 756.23, l. 17 – p. 756.24, l. 16 [Beach Direct p. 23, l. 17 – p. 24, l. 16]). The payback period associated with this reduction in bill savings would increase from 9.4 years under current NEM tariff to 20 years. *Id*. And for the many customers that lease rooftop solar, the monthly reduction bill savings that would result from DESC's proposal would be sufficient enough to discourage adoption of distributed solar altogether. (Tr. p. 915.75 ll. 4-19 [Barnes Direct p. 75 ll. 4-19]). Solar markets are very sensitive to customer bill savings, and as Witness Barnes testified, the market in South Carolina is already under stress. It is simply common sense that a dramatic reduction in customer bill savings would have a substantial impact on the solar market in South Carolina.

We therefore conclude that DESC's Solar Choice Proposal would impede customer access to solar by significantly reducing customer bill savings and would consequently disrupt the solar market in South Carolina in violation of Act 62.

Overall Conclusions

In sum, the Commission concludes that the DESC Solar Choice Proposal, viewed as a whole, must be rejected for the following reasons:

- DESC used a methodology to calculate cost shift that was unreasonable and contrary to numerous requirements in Act 62.
- The BFC and Subscription Fee in DESC's proposal would improperly penalize behind the meter usage in violation of S.C. Code Ann. § 58-40-20 (G)(2).

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- The low off-peak rate in DESC's Solar Choice Proposal, which is in effect for over 90% of the hours in the year, would improperly incentivize higher energy consumption from DESC and reward the wasteful use of electricity, contrary to Act 62 and South Carolina policy.
- The DESC Solar Choice Proposal would so substantially reduce customer bill savings that it would disrupt customer access to the rooftop solar market in South Carolina.
- DESC further unreasonably failed to consider whether mitigation measures for existing solar customers, particularly customers who lease solar systems, would be warranted.

The Commission thus rejects DESC's Solar Choice Proposal as unreasonable and unlawful under the mandates of Act 62.

B. Evaluation of ORS Proposed Modifications

EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT NOS. 13-17

i. Summary of Evidence

The evidence in support of these findings of fact is found in the pleadings, testimony and exhibits in this Docket, and the entire record in this proceeding.

ORS Direct Testimony

DESC Witness Robert Lawyer testified that ORS does not object to DESC's proposal and recommends two modifications to the DESC Solar Choice Proposal. (Tr. p. 978.4, ll. 4-15 [Lawyer Direct p. 4, ll. 4-15]). Witness Lawyer testified that both modifications are aimed at reducing the "cost-shift" of proposed rates. *Id.* ORS first recommends reducing the Subscription Fee in the DESC Solar Tariff and instead

recovering some of the T&D revenue through increased TOU energy charges. (Tr. p. 978.5, ll. 1-3 [Lawyer Direct p. 5, ll. 1-3]). ORS next recommends modifying the TOU rates so that they are calculated based on the energy that customer-generators are expected to purchase from DESC, rather than the energy that would have been consumed by the customer prior to the installation of solar. (Tr. p. 978.5, ll. 4-8 [Lawyer Direct p. 5, ll. 4-8]).

Witness Lawyer testified that ORS's focus in this proceeding was only to eliminate any cost-shift. (Tr. pp. 986, ll. 10-15, 987). Witness Lawyer conceded that there were other aspects to Act 62, but ORS felt those interests were represented by the other parties in the docket. He also stated that he was not offering an opinion as to how the Commission should balance the requirements in Act 62 (Tr. pp. 981, ll.19-23, 1034, ll. 22-24). Witness Lawyer testified that ORS's sole focus on the cost-shift provisions in Act 62 was consistent with ORS's duty to represent the using and consuming public. (Tr. p. 1011, ll. 11-23). Witness Lawyer testified that ORS gives equal weight to the concerns of solar and non-solar customers. (Tr. p. 1026, ll. 10-21). But when Chairman Williams asked why ORS's analysis was limited to only cost-shift and "wouldn't a residential rooftop solar user want ORS to consider the benefits of solar?" Witness Lawyer acknowledged that those solar customers would want ORS to consider the benefits. (Tr. p. 1026, l. 22 – p. 1027, l. 1). Witness Lawyer also disclosed that he had not personally heard any customer complaints concerning cost shift, only complaints regarding the size of electrical bills. (Tr. p. 1024, l. 15 – p. 1025, l. 8).

ORS Witness Brian Horii provided testimony summarizing the reasoning behind ORS's two recommended modifications. (Tr. p. 1055). Despite recommending modifications, Witness Horii testified that DESC's proposal was consistent with the rate

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design components that E3, Witness Horii's energy consulting firm, presented in its 2018 Report on Cost Shift in South Carolina. (Tr. p. 1060.5 [Horii Direct p. 5]).

Witness Horii first recommended reducing the Subscription Fee based on his finding that that solar installation size, which DESC relied on when setting the fee, is actually a poor indicator of the transmission and distribution costs associated with a customer and that a demand charge based on a customer-generator's maximum energy usage or energy exports would be more accurate and cost-correlated. (Tr. p. 1060.12, ll. 3-14 [Horii Direct p. 12, ll. 3-14]). To better reflect the total cost of transmission and distribution costs net the avoided cost of solar, Witness Horii recommended reducing the Subscription Fee to $3.25/KW-month for residential customer-generators. (Tr. p. 1060.12, ll. 10-19 [Horii Direct p. 12, ll. 10-19]). Witness Horii cautioned that his proposed Subscription Fees would need to be further modified if the Commission adopted non-zero values for avoided T&D costs. (Tr. p. 1060.14, l. 14 – p. 1060.2, l. 2 [Horii Direct p. 14, l. 14 – p. 2, l. 2]).

Witness Horii also recommended adjusting DESC's proposed energy rates. Witness Horii testified that the DESC should calculate the rates based on a customer-generator's usage after the solar is installed because DESC's proposed rates which are based on customer usage prior to the installation of solar would result in an under-collection of energy costs once solar is installed and usage decreases. (Tr. p. 1060.15, l. 13 – p. 1060.16, l. 2 [Horii Direct p. 15, l. 13 – p. 16, l. 2]). Witness Horii also recommended increasing the TOU rates to collect T&D costs that are not collected by the Subscription Fees. (Tr. p. 1060.16, l. 6 [Horii Direct p. 16, l. 6]).

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Witnesses Horii and Lawyer accepted without objection DESC's "revenue neutral" approach to designing its Solar Choice Proposal. (Tr. p. 996, ll. 2-18; Tr. p. 1060.8, ll. 6-8 [Horii Direct p. 8, ll. 6-8]). The only error that Witness Horii identified in DESC's cost shift estimate was that DESC's failure to evaluate actual post-solar customer bills resulted in an underestimation of the cost shift. (Tr. p. 1060.9, ll. 3-9 [Horii Direct p. 9, ll. 3-9]). Witness Horii noted that DESC had no plans to conduct an analysis of the cost shift based on an embedded cost of service study, but presented his own cost of service study on behalf of ORS. (Tr. pp. 1060.3, ll. 20-22, 1060.26, ll. 12-16 [Horii Direct pp. 3, ll. 20-22, 26, ll. 12-16]). Witness Horii testified that he had to make certain "simplified assumptions" when conducting his analysis because he did not have the time or the necessary data to run a full embedded cost of service study. (Tr. p. 1092, ll. 6-25). In his analysis, Witness Horii relied on previous avoided cost orders by the Commission to estimate the production capacity of solar, though he testified later in the hearing that the Commission should not feel constrained from changing avoided cost values as part of the generic docket. (*Id.*; Tr. p. 1106, ll. 12-25).

Ultimately, Witness Horii concluded that the avoided cost approach that DESC used to calculated cost shift produced essentially the same results as his embedded cost of service study. (Tr. p. 1060.31, l. 19 – p. 1060.32, l. 2 [Horii Direct p. 31, l. 19 – p. 32, l. 2]). At the hearing, when responding to other parties' claims that he overestimated the cost shift, Witness Horii, like DESC, confirmed that he began his calculation for cost-shift with an estimate of solar customer bill savings and then subtracted the avoided costs derived from his analysis. (Tr. p. 1057, ll. 5-21).

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Like Witness Lawyer, Witness Horii testified that ORS approached this docket with a singular focus on eliminating cost shift. (Tr. p. 1100, l. 9 – p. 1101, l. 10). Witness Horii acknowledged that, as a result, the ORS proposal may be too extreme an option from the Commission's perspective. *Id.* He testified that, had he been hired by the Commission to recommend "the most balanced outcome" under Act 62, he would not recommend the ORS proposal. *Id.*

DESC Rebuttal Testimony

In his rebuttal testimony, DESC Witness Kassis testified that ORS's proposal to even further reduce the cost-shift under the DESC Solar Choice Proposal was reflective of ORS's "fundamental statutory mission" to represent the interests of the using and consuming public. (Tr. p. 19.8, ll. 7-12 [Kassis Direct p. 8, ll. 7-12]). He characterized DESC's and ORS's proposals as "represent[ing] a good faith effort…to balance the policy provisions of Act 62…with the specific mandates put to this Commission." (Tr. p. 19.8, ll. 1-4 [Kassis Direct p. 8, ll. 1-4]). At the hearing, Witness Everett testified that ORS's Proposed Modifications were more aggressive at addressing cost-shift than DESC's Solar Choice Proposal. (Tr. p. 315, ll. 10-21). Witness Everett also testified that Witness Horii used the same types of cost of service analytics that she used in her rate design. *Id.*

Intervenors' Surrebuttal Testimony

Joint Witness Beach testified that ORS's Proposed Modifications to DESC's Solar Choice Proposal would reduce substantially—by about one-half to two-thirds—the available savings from solar systems of all sizes. (Tr. pp. 760.4 – 760.6 [Beach Surrebuttal pp. 4 – 6]). Witness Beach observed that such reduced savings would mean that only wealthy customers who are willing to pay more for electrical service would choose to

install solar. (Tr. p. 760.5 [Beach Surrebuttal p. 5]). Witness Beach concluded that such a tariff would erect an economic barrier to broad use of solar net energy metering and disrupt the solar market in DESC territory. (Tr. p. 760.9, ll. 4-22 [Beach Surrebuttal p. 9, ll. 4-22]). Witness Beach highlighted that Witness Horii had not examined how his proposal would impact payback periods. (Tr. p. 760.10, ll. 1-6 [Beach Surrebuttal p. 10, ll. 1-6]).

Witness Beach testified that ORS, like DESC, over-estimated the cost-shift by failing to quantify system-wide benefits of distributed solar, including avoided transmission and distribution costs. (Tr. p. 760.11, ll. 3-14 [Beach Surrebuttal p. 11, ll. 3-14]). Witness Beach testified that this failure to quantify the benefits of rooftop solar was inconsistent with Witness Horii's prior studies and testimony; he quoted Witness Horii's testimony in the generic NEM hearing stating that "NEM systems can result in lower utility costs (benefits), such as lower energy production and procurement costs, lower generation capacity acquisition costs, and lower transmission and distribution capacity costs." (Tr. p. 760.11, l. 15 – p. 760.14, l. 2 [Beach Surrebuttal p. 11, l. 15 – p. 14, l. 2]). Witness Beach also pointed out that one of the exhibits Witness Horii submitted on behalf of ORS listed twenty-three value of solar studies, twenty-two of which quantify avoided T&D benefits. (Tr. p. 806; *see also* HE. 14 [Ex. BKH-2, p. 29]). Witness Beach critiqued ORS's decision to merely look at the design of the DESC Solar Choice Proposal, "taking the avoided costs as a given," and to not quantify the benefits of distributed solar. (Tr. p. 805, ll. 7-12). Based on Witness Horii's testimony and experience, Witness Beach concluded that Witness Horii could have quantified and evaluated the avoided transmission and distribution costs, as well as other benefits of distributed solar, had ORS asked him to do so. (Tr. p. 760.12, ll. 4-15 [Beach Surrebuttal p. 12, ll. 4-15]).

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SEIA/NCSEA Witness Barnes testified that the embedded cost of service study on which ORS based its proposed Subscription Fee and TOU rates overestimated the cost-shift. (Barnes Surrebuttal pp. 11 – 18; Tr. p. 909, ll. 13-24). Specifically, Witness Barnes identified three flaws in Witness Horii's embedded cost of service study, testifying that Witness Horii: 1) calculated solar production capacity savings based on a different methodology than DESC actually uses for its embedded cost of service study; 2) incorrectly applied the coincident peak allocator for transmission costs; and 3) based his assessment of transmission capacity on the top "net load" peaks as opposed to the "total system load" methodology that DESC employs. (Barnes Surrebuttal p. 11, ll. 9-19). After correcting these values, Witness Barnes conducted another embedded cost of service study using Witness Horii's method and found that the embedded potential cost shift was effectively zero. (Barnes Surrebuttal pp. 16, l. 15 – p. 18, l. 12). As a result, Witness Barnes testified that the Subscription Fee proposed by ORS, which was designed to eliminate a cost shift, is unwarranted. *Id.* At the hearing, ORS Witness Horii responded, acknowledging the merit of Witness Barnes's critique of his decision to use net load, but claimed that, because of the small impact on transmission, even correcting the value would indicate a large embedded cost-of-service cost shift.

CCL, SACE, and Upstate Forever Witness Moore criticized ORS's decision to focus its case on the single issue of eliminating cost shifting, which is only part of one of three legislative purposes stated in Act 62. (Tr. pp. 25, ll. 6-13, 27, ll. 1-10). Witness Moore observed that the General Assembly directed cost shifts to be eliminated "to the greatest extent practicable" and not to the exclusion of other legislative goals. (Tr. p. 827, ll. 13-25). When asked by Chairman Williams why ORS would take such a narrow approach in

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this docket, Witness Moore noted that Witness Horii conducted its 2018 E3 Cost Shift report under Act 236 in 2018, but that Act 62 superseded Act 236 and offered a "more complete vision" of what was contemplated. (Tr. p. 900, l. 22 – p. 901, l. 2). Witness Moore pointed out that because ORS' cost shift study was conducted prior to the enactment of Act 62 in May 2019 it, unsurprisingly, failed to consider each of the goals set out in Act 62. (Tr. p. 831.20, ll. 10-14).

ii. Commission Conclusions

The Commission finds the ORS Proposed Modifications to DESC's Solar Choice Proposal unreasonable in light of the requirements in Act 62. The stated intent in Act 62 is not merely "to eliminate any cost shift," but also to "build upon the successful deployment of solar generating capacity through Act 236 of 2014" and "avoid disruption to the growing market for customer-scale distributed energy resources." S.C. Code. Ann § 58-40-20(A). Act 62's directive to eliminate any cost shift "to the greatest extent *practicable*," further suggests that the Act 62's cost-shift objective was intended to complement the Act's parallel goals, which are expressed without qualification—rather than defeat them entirely.

ORS Witnesses Lawyer and Horii confirmed at the hearing that ORS considered only the cost shift issue when suggesting modifications to DESC's Solar Choice Proposal. The impacts of such a proposal, as Witness Beach persuasively presented, would be disastrous for the solar industry in South Carolina; the ORS modifications to DESC's Solar Choice Proposal would make rooftop solar economically unviable for DESC's customers because it would effectively cost customers more for electric service than it would cost without solar. Surely this was not the intent of the General Assembly when it directed the Commission to "eliminate any cost shift to the greatest extent practicable on customers

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who do not have customer-sited generation *while also ensuring access* to customer-generator options for customers who choose to enroll in customer-generator program." S.C. Code Ann. § 58-40-20(G)(1) (emphasis added). Adopting such a tariff would also fail to "avoid disruption to the growing market for customer-scale distributed energy resources." The Commission also notes that solar customers, both current and prospective, are members of the using and consuming public that ORS is tasked with representing, S.C. Code Ann. § 58-4-10(B), yet ORS's narrow reading of Act 62 considered only the interests of non-participants. Moreover, the public interest is defined by the General Assembly. ORS does not have discretion to choose which legislative mandates are in the public interest and which are not.

The Commission is also not convinced that Witness Horii's cost of service study and cost-shift estimate are accurate. The evidence presented by Witness Beach demonstrated that Witness Horii failed to quantify benefits of distributed solar that he has acknowledged should be quantified in prior testimony before this Commission and in previous studies. Witness Barnes also testified that Witness Horii's cost of service study departed from accepted DESC methodology in ways that significantly underestimated the value of solar and overestimated the corresponding potential cost-shift. Witness Horii himself testified that the study was based on "simplified assumptions," old avoided cost values, and limited data. As a result, though the precise value of solar continues to be in dispute, the Commission finds that Witness Horii's analysis is not a reliable estimation of cost shift to non-participants.

C. Evaluation of Joint Intervenors' Proposed Solar Choice Tariff

EVIDENCE AND CONCLUSIONS SUPPORTING FINDINGS OF FACT NOS. 18-28

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i. Summary of Evidence

The evidence in support of these findings of fact is found in the pleadings, testimony and exhibits in this Docket, and the entire record in this proceeding.

Joint Intervenors' Solar Choice Proposal

The Joint Intervenors have proposed a residential Solar Choice Tariff ("Joint Solar Choice Proposal") with the following features:

(1) a requirement to take service under Rate 5 TOU rate, which provides a more accurate and cost-based rate that can also serve as a platform for additional DERs that customer-generator may adopt (such as electric vehicles).

(2) a minimum bill based on properly calculated customer-related costs. The Joint Solar Choice Proposal includes a $13.50 minimum bill (which would include a $9.00 BFC) as a placeholder for the purpose of analyzing the proposal, recognizing that the exact minimum bill and BFC should be set only after the Commission determines in the pending rate case whether it is improper to consider distribution grid costs (such as poles, wires, and transformers) as "customer-related."

(3) maintaining annual netting, but crediting excess on-peak generation against on-peak usage (and excess off-peak generation against off-peak usage), with any excess exports credited at avoided cost rates at the end of each year, which encourages sizing of systems to no more than offset their annual usage.

(Tr. p. 756.12, l. 6 – p. 756.13, l. 7 [Beach Direct p. 12, l. 6 – p. 13, l. 7]).

Joint Intervenors' Direct Testimony

Joint Witness Beach testified that the Joint Solar Choice Proposal would result in a modest reduction in bill savings up to 8%, depending on customer usage and system size.

(Tr. p. 756.12, ll. 8-16 [Beach Direct p. 12, ll. 8-16]; Tr. p. 620, ll. 3-17). The Joint Solar Choice Proposal would include an immediate imposition of a minimum bill (provisionally set to $13.50) but would not require customers to adopt Rate 5 TOU rates until after they have had access to one year of hourly load data from installed AMI meters. (Tr. p. 756.13, l. 20 – p. 756.14, l. 2 [Beach Direct p. 13, l. 20 – p. 14, l. 2]). Until that time, solar customers should continue to stay on the standard residential tiered Rate 8 (with a minimum bill) for a minimum of ten years. *Id.*

Witness Beach provided the results of standard cost-effectiveness tests (that were also recommended in the generic docket, No. 2019-182-E) of the Joint Solar Choice Proposal, consistent with Act 62's mandate to examine the benefits and costs from the perspective of the utility system as a whole, participating solar customers, and other ratepayers. (Tr. p. 756.13, ll. 12-25 [Beach Direct, p. 13, ll. 12-25]). Witness Beach used the categories of values for DER generation that were approved in Commission Order No. 2015-194, but with actual values for the benefits of DERs (rather than the zero values for some of those benefits put forward by DESC). (Tr. p. 756.13, l. 12 – p. 756.14, l. 2 [Beach Direct p. 13, l. 12 – p. 14, l. 2]). Witness Beach's analysis considered the long-term, life-cycle analysis of benefits and costs of distributed generation, taking into account the useful life of a solar rooftop system, which is typically at least 25 years. (Tr. p. 756.14, ll. 3-10 [Beach Direct p. 14, ll. 3-10]).

Under the standard practice manual tests for cost-effectiveness (Participant Test, Utility Cost Test, Total Resource Cost Test, and Societal Cost Test), Witness Beach found that the benefits of the Joint Solar Choice Proposal outweighed the costs. (Tr. p. 756.20, ll. 5-8 [Beach Direct p. 20, ll. 5-8]). As a result, the Joint Solar Choice Proposal will, in the

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long-run, reduce the utility's cost of service, not cause a cost-shift to non-participating customers, maintain the viability of the rooftop solar market, provide quantifiable benefits to all customers, and provide additional societal benefits that are difficult to quantify. (Tr. p. 756.20, l. 4 – p. 756.21, l. 12 [Beach Direct p. 20, l. 4 – p. 21, l. 12]).

NCSEA/SEIA Witness Barnes testified in support of an alternative solar choice tariff proposal that closely mirrors the Joint Solar Choice Proposal. As with the Joint Solar Choice Proposal, Witness Barnes recommends that the BFC be set at the same amount as for the standard residential rate schedule ($11.50 if the Commission approves the Company's proposed increase in the pending rate case; $9.00 if the BFC remains unchanged), that DESC incorporate a minimum bill at a level that corresponds to the otherwise applicable TOU rate ($15.50 if the Commission approves DESC's change to Rate 5 in the pending rate case), customer-generators adopt otherwise available TOU rates (after at least one-year of granular usage data is available), and that the tariff retain the existing annual netting by TOU rates. (Tr. p. 915.77, l. 11 – p. 915.78, l. 6 [Barnes Direct p. 77, l. 11 – p. 78, l. 6]).

Witness Barnes provided additional testimony on the alignment of the existing Rate 5 TOU rate with DESC's cost of service. Witness Barnes observed that Rate 5 meets all of the criteria that Witness Everett required for a solar choice TOU design; it has at least three consecutive months of seasonal peak periods that last at least four hours. (Tr. p. 915.34, ll. 8-19 [Barnes Direct p. 34, ll. 8-19]). But unlike DESC's Solar Choice Proposal, Rate 5 has a bigger spread between on- and off-peak volumetric rates, sending a stronger price signal to avoid usage during the system peaks. (Tr. p. 915.34, ll. 8-19 [Barnes Direct p. 34, ll. 8-19]). Witness Barnes testified that Rate 5 better aligns with the Company's cost of service

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because it overlaps with the Company's summer afternoon coincident peak. (Tr. pp. 915.35 – 915.37 [Barnes Direct pp. 35 – 37]). Witness Barnes testified that, if DESC's existing Rate 5 is not reflective of the Company's cost of service, then DESC has significant problems with its rate design that go beyond the scope of this docket. (Tr. p. 915.37, ll. 11-15 [Barnes Direct p. 37, ll. 11-15]).

Witness Beach concurred that "DESC's standard TOU periods…align more closely with DESC's system peak loads than the proposed Solar Choice tariff TOU Periods." (Tr. p. 760.20, l. 10 – p. 760.21, l. 20 [Beach Surrebuttal p. 20, l. 10 – p. 21, l. 20]). In addition, Witness Beach testified that if TOU rate periods need to be adjusted more broadly, those changes should be made for all residential customers so that consistent price signals will be sent across the entire class. *Id.*

DESC Rebuttal Testimony

DESC Witness Everett testified that the proposals from Witnesses Beach and Barnes would result in an increased cost shift. (Tr. p. 237, l. 15 – p. 238, l. 6). Specifically, Witness Everett disagreed with the value of solar calculation that Witness Beach offered; she testified that both witnesses' decision to quantify societal benefits suggested a desire to ignore Act 62. (Tr. p. 239.38, l. 7 – p. 239.39, l. 4 [Everett Rebuttal p. 38, l. 7 – p. 39, l. 4]). Witness Everett did not address the fact that societal benefits were only included in one of the four cost-benefit tests the Joint Solar Proposal passed. Witness Everett disputed Witness's Beach conclusion that benefits of exported distributed solar could exceed the Company's current embedded costs (as reflected in retail rates) by about 15%. (Tr. p. 239, 35, ll. 10-14 [Everett Rebuttal p. 35, ll. 10-14]). Witness Everett reiterated that her calculation of cost shift is based on the bill savings that current NEM customers receive

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after adopting rooftop solar (the "banking" and "rate design" cost shifts) and a presumption that those bill savings—lost revenue to DESC—will ultimately be collected from nonparticipants in a future general rate case. (Tr. pp. 239.34 – 239.35 [Everett Rebuttal pp. 34-35]). Witness Everett noted that, assuming any lost revenue to DESC from bill savings by customer-generators will later be collected from nonparticipating customers in the form of increased rates, it could raise concerns for how that future potential cost shift could impact low-income customers. (Tr. p. 239.36, ll. 14-21 [Everett Rebuttal p. 36, ll. 14-21]).

Witness Everett further objected to the Joint Solar Choice Proposal because it would continue to encourage "customers to build systems so large that the [sic] produce the amount of electricity the customer uses" while also relying on DESC to accept over 50% of the solar output and "bank" those credits for a year. (Tr. p. 239.36, ll. 3-10 [Everett Rebuttal p. 36, ll. 3-10]). Witness Everett did not square her objection to system sizes that offset all of a customer's electricity use with the definition of "customer-generator" in Act 62.

Regarding specific components of the proposal, Witness Everett testified that the Joint Solar Choice Proposal would eliminate the BFC by replacing it with a minimum bill. (Tr. p. 239.35, ll. 15-18 [Everett Rebuttal p. 35, ll. 15-18]). DESC Witness Everett also disagreed that the residential Rate 5 TOU rate provides a more accurate and cost-based rate than the TOU rates proposed by the Company in its Solar Choice Proposal. Witness Everett testified that DESC's Solar Choice Proposal tariff is based on "updated 2019 data." (Tr. p. 239.27, ll. 1-13 [Everett Rebuttal p. 27, ll. 1-13]).

Witness Everett also criticized Witness Beach's proposal to provide customers with a year of granular usage data before moving them to TOU rates, noting that customers

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under a solar choice tariff will not take service until at least 2025. (Tr. p. 239.27, l. 16 – p. 239.28, l. 9 [Everett Rebuttal p. 27, l. 16 – p. 28, l. 9]). However, Witness Rooks confirmed during the hearing that though the Company is in the process of rolling out advanced metering infrastructure, customers are not yet able to access hourly usage data. (Tr. p. 553, l. 16 – p. 556, l. 8).

ORS Hearing Testimony

ORS Witness Horii did not pre-file surrebuttal testimony but did comment on Joint Witness Beach's analysis at the hearing. Witness Horii testified that the Joint Solar Choice Proposal did not reduce cost shift enough, stating that an 8% reduction in cost shift would be inadequate; because this 8% figure referred to the estimated reduction in customer bill savings under the Joint Solar Choice Proposal, Witness Horii's testimony reiterated his assumption that bill savings are equivalent to cost shift. (Tr. p. 1100, l. 23 – p. 1101, l. 3).

With respect to Witness Beach's cost-effectiveness analysis, Witness Horii testified that Witness Beach overestimated avoided T&D costs (Tr. p. 1068, ll. 20-25). Witness Horii testified that he considers an ideal export rate to be close to current avoided cost with only small additions to account for benefits. (Tr. p. 1098, ll. 7-23). In particular, Witness Horii testified that it was reasonable to look more closely at avoided T&D to see if it was worth accounting for those benefits in the avoided cost rate; he explained that if the system's need occurs at the same time that solar is generating that will reduce the need for local T&D, producing a benefit "that should be recognized." *Id.* Witness Horii also testified that it was "in the Commission's purview" to set avoided costs and that, in setting those values, the Commission should not feel constrained by previous orders, noting that the generic docket provided the Commission the opportunity to reevaluate those values. (Tr.

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p. 1106, ll. 15-25). Witness Horii acknowledged that Act 62's directive to consider the "benefits" of solar does not distinguish between direct, monetary, and societal benefits and testified that it was for the Commission to determine what those "benefits" are. (Tr. p. 1111, ll. 3-16).

Joint Intervenors' Surrebuttal Testimony

In surrebuttal, Witness Beach addressed Witness Everett's objection that "basic logic" cannot support a value of solar that is higher than the utility's current embedded costs, as reflected in retail rates. (Tr. p. 760.16, Beach Surrebuttal p. 16). Witness Beach noted that there is often a difference in embedded costs, which are backward looking, and marginal costs, which are forward looking and based on the marginal cost of adding an additional customer to the DESC system. *Id.* Marginal costs measure how system costs change "on the margin" due to a change in customer usage or demand. *Id.* Marginal costs can be either above or below the historical system average costs that are "embedded" in current rates. *Id.* Marginal costs can exceed average/embedded costs particularly when there are system constraints or societal goals that require new investment in our energy infrastructure. *Id.* Examples of such constraints and goals are decarbonizing the electric system and making generation and T&D infrastructure reliable and resilient in the face of new threats and uncertainties from climate change. *Id.* Marginal costs also can exceed embedded costs if energy costs are rising or if new capacity is needed to meet rising demand. *Id.* In support of his conclusion, Witness Beach noted that Figure 5 of Exhibit BKH-2 from ORS Witness Horii's direct testimony included a comparison of the total marginal/avoided costs to the average/embedded cost residential rate for each of the 23

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utilities studied; for 14 of those 23 utilities, the marginal/avoided cost was higher than the embedded cost as reflected in residential rates. *Id.*

Witness Beach also responded to Witness Everett's assertion that it is inappropriate to quantify "hypothetical" societal values. (Tr. p. 760.17, Beach Surrebuttal p. 17). Witness Beach testified that "health benefits from reductions in criteria air pollutants, or the benefits of reducing the societal damages from climate change" are not hypothetical and can be measured. *Id*. Witness Beach also noted ORS Witness Horii's endorsement of the relevance of societal benefits when considering the value of solar or the potential trade-offs between Act 62's requirements. (Tr. p. 760.20, l. 10 – p. 760.21, l. 20 [Beach Surrebuttal p. 17, l. 14 – p. 19, l. 10]). Witness Beach also noted that societal benefits need not be a direct input into a solar choice tariff in order to be considered by the Commission. Id.

Witness Beach testified that DESC's low value of solar ignores Section 58-40-20(D) of Act 62, which requires consideration of the benefits of distributed, customer-sited solar generation over the long term. (Tr. p. 760.11, ll. 1-14 [Beach Surrebuttal p. 11, ll. 1-14]). Witness Beach testified that because solar systems are long-lived clean energy infrastructure, with a useful life of 25 years, it is "inaccurate and inequitable" to assess avoided utility costs only over a short-term period such as a single rate case cycle. (Tr. p. 760.11, ll. 1-14 [Beach Surrebuttal p. 11, ll. 1-14]). At the hearing, Witness Beach further explained that while the energy benefits of distributed solar are recognized immediately, the capacity-related benefits will only become apparent over the long run, when the utility does not have to spend as much on its T&D system as it would have if distributed solar did not exist. (Tr. p. 766, ll. 6-23).

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Witness Beach rejected Witness Everett's testimony that the Joint Solar Choice proposal would harm low-income nonparticipating DESC customers because when accounting for the full suite of benefits of distributed solar generation, including avoided transmission and distribution costs that would otherwise be passed on to all ratepayers, all ratepayers benefit. (Tr. p. 760.22, l. 17 – p. 760.23, l. 8 [Beach Surrebuttal p. 22, l. 17 – p. 23, l. 8]). In addition, under the Joint Solar Choice Proposal, bill savings for customers who install rooftop solar do not dramatically decrease, as they would under DESC's proposal, providing low- and moderate-income households an opportunity to lower their bills by installing solar (including through a lease). *Id.*

In defense of the components of his proposal, Witness Beach refuted that the Joint Solar Choice Proposal would eliminate the BFC. Instead, the Joint Solar Choice Proposal would include a minimum bill that would include the otherwise applicable BFC *and* any potential difference between Commission-approved customer-related costs and the BFC. (Tr. p. 760.20 [Beach Surrebuttal p. 20]). Witness Beach also explained in response to Witness Everett's testimony concerning his proposed transition year to TOU rates that providing customers with access to at least a year of data on their time-varying use allows them to "understand the economics of switching to a time-of-use tariff." (Tr. p. 786, ll. 10-14).

CCL, SACE, and Upstate Forever Witness Moore testified in surrebuttal that the Joint Solar Choice Proposal was the only solar choice proposal that met the requirements of Act 62 and accordingly recommended that the Commission adopt it. (Tr. p. 829, ll. 18-22). Witness Moore further testified that this proposal gave the Commission "an opportunity to approve a tariff with no cost-shift that also meets the other public-interest goals, such as continuing to reward customer efficiency, customer demand-response." (Tr. p. 849, ll.

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10-17). Witness Moore observed that the Joint Solar Choice Proposal is a more "durable solution" that the one-to-one net metering in place today, in that the higher and lower rates at on-peak and off-peak times incentivize solar customers to lower their use during peak times to reduce costs for other customers. (Tr. p. 864, l. 21 – p. 865, l. 11).

ii. Commission Conclusions

The evidence presented demonstrates that the Joint Solar Choice Proposal complies with and fulfills the intent of Act 62. Act 62 requires the Commission to balance the interests of all ratepayers, including customer-generators and non-participants when establishing solar choice tariffs, and to avoid disrupting the growing solar market in South Carolina. S.C. Code Ann. § 58-40-20. Unlike the proposals presented by DESC and ORS, the Joint Solar Choice Proposal fulfills each of these requirements.

Consistent with Act 62's requirement to permit solar choice customer-generators to use customer-generated energy behind the meter without penalty, S.C. Code Ann. § 58-40-20(G)(2), the Joint Solar Choice Proposal appropriately values behind the meter consumption at prevailing retail rates and without the distorting effects of new fixed charges that artificially reduce the value of behind the meter consumption. From the utility system perspective, behind the meter consumption of customer-generated electricity is equivalent to energy efficiency or demand-side management measures as a decrement to system load. It would be unreasonable and discriminatory to value behind the meter consumption of customer-generated energy less than energy-efficiency savings or conservation efforts realized by non-customer generators. The Joint Solar Choice Proposal also complies with Act 62 because it does not impose large fixed charges on larger systems with the capacity to generate a significant amount of the customer-generator's energy

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needs. DESC Witness Everett's objection to customers building large systems is inconsistent with Act 62's definition of customer-generator as one who installs on-site renewable generation that "is intended primarily to offset *part or all* of the customer-generator's own electrical energy requirements." S.C. Code Ann. § 58-40-10(C)(5) (emphasis added).

Even while permitting behind the meter consumption without penalty, the Joint Solar Choice Proposal complies with Act 62's requirement to "fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable." S.C. Code Ann. § 58-40-20(A)(3). Witness Beach has demonstrated with his cost-benefit analysis that the benefits of solar equal or exceed the costs over the long-run, life cycle of distributed solar resources, and has therefore established that the Joint Solar Choice Proposal will not cause a cost-shift to nonparticipating customers. In his analysis, Witness Beach demonstrates that the Joint Solar Choice Proposal passes all of the standard practice manual cost-effectiveness tests, including the Participant Cost Test, Utility Cost Test, and Total Resource Cost Test. In contrast to the estimations of cost-shift presented by DESC and ORS witnesses, the Joint Solar Choice Proposal is based on a "long-run" assessment of the costs and benefits of solar; Witness Beach supplied values for quantifiable benefits of solar and conducted a long-term, 25-year life-cycle analysis of its cost-effectiveness. Witness Beach's analysis is consistent with Act 62's directive to consider the "aggregate impact of customer-generators on the electrical utility's long-run marginal costs of generation, distribution, and transmission." S.C. Code Ann. § 58-40-20(D)(1). The Commission also agrees with

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Witness Beach that, when properly valuing solar, it is not unreasonable that the marginal costs should exceed embedded costs.

Additionally, the specific components making up the Joint Solar Choice Proposal are reasonable and consistent with Act 62. Witness Beach clarified that he is not recommending that the BFC be eliminated, but rather that it be collected as a component of a new minimum bill, ensuring that customer-related costs are collected from customer-generators. It is reasonable to wait to set the minimum bill until after the Commission approves customer-related costs in DESC's pending rate proceeding (Docket No. 2020-125-E). The Commission also agrees with Witness Beach and Witness Barnes' recommendation to use the standard residential TOU Rate 5 rates in the Joint Solar Choice Proposal, but to set the BFC component of the solar choice TOU rate based on the prevailing residential rate (Rate 8). DESC Witness Everett has failed to justify the imposition of different TOU periods on solar customers. As TOU periods are intended to signal system-wide peaks, it is illogical and imprudent to send solar customers different price signals than are sent to other members of the residential class. Witness Beach's proposal to align on- and off-peak crediting with like consumption in the Joint Solar Choice Proposal will further incentivize solar customers to take advantage of on- and off-peak rates, ultimately helping to reduce peak demand and utility costs. However, the Commission is persuaded by Witness Beach's testimony that Rate 5 should not go into effect until customers have access to at least one-year of hourly load data following DESC's deployment of AMI so that customers understand the economics of TOU rates. In the interim, solar choice customers may elect to stay on the standard residential tiered Rate 8 for a minimum of 10 years, with a minimum bill set as described above.

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Taken together, the Joint Solar Choice Proposal fulfills Act 62's intent to "continue enabling market-driven, private investment in distributed energy resources" and "avoid disruption to the growing marker for customer-scale distributed energy resources." S.C. Code Ann. § 58-40-20(A)(1)-(2). The Commission finds that the Joint Solar Choice Proposal's approximately 8% reduction in bill savings compared to the existing NEM program to be reasonable and that it would not cause disruption to the solar market. Witness Beach's testimony that the simple payback period for a typical 7 kW solar PV system is 9.9 years under the Joint Solar Choice proposal, a modest increase over the 9.4 years for the current NEM program, assures the Commission that rooftop solar will remain viable in South Carolina. As a result, adopting the Joint Solar Choice Proposal will avoid disruption to the growing marker for customer-scale DERs.

VI. ORDERING PARAGRAPHS

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. DESC shall offer a Residential Solar Choice Tariff to all customers that apply for net metering on or after June 1, 2021 that consists of the components identified in the Joint Solar Choice Proposal.

2. Solar choice customers shall not be forced to accept service under the Rate 5 TOU rates until customers have one year of hourly load data available to them, as determined by DESC's deployment of AMI. In the interim, solar choice net metering customers may elect to stay on the standard residential tiered Rate 8 for a minimum of 10 years, with a minimum bill set at $13.50 (which will include the $9.00 BFC).

3. For the purposes of this proceeding, the Commission adopts Witness Beach's cost-benefit analysis in Hearing Exhibit 11, though certain values may be subject to further refinement in the generic proceeding, Docket No. 2019-182-E.

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4. The Company may not seek to recover through the fuel rider any avoided cost credits for customer-generator solar exports that DESC sells to other customers at retail rates.

5. This Order shall remain in full force and effect until further order of the Commission.

BY ORDER OF THE COMMISSION:

_____

Justin T. Williams, Chairman
Public Service Commission of
South Carolina

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2020-229-E

Dominion Energy South Carolina, Incorporated's Establishment of a Solar Choice Metering Tariff Pursuant to S.C. Code Ann. Section 58-40-20 (See Docket No. 2019-182-E)	)))))))))	**CERTIFICATE OF SERVICE**

I certify that the following persons have been served with one (1) copy of the the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Vote Solar, North Carolina Sustainable Energy Association, and Solar Energy Industries Association's Joint Partial Proposed Order via electronic mail at the addresses set forth below:

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This 14th day of April 2021.

s/Kate Lee Mixson

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