STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 158

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities – 2018	)))	ORDER DENYING MOTION FOR RECONSIDERATION

BY THE COMMISSION: On June 15, 2020, the North Carolina Sustainable Energy Association (NCSEA) and the North Carolina Clean Energy Business Alliance (NCCEBA) filed a Joint Motion for Reconsideration and Clarification of the Commission's April 15, 2020 Order Establishing Standard Rates and Contract Terms for Qualifying Facilities in the above-captioned docket (April 15 Order). As detailed below, the Commission denies the motion for reconsideration of the April 15 Order but provides clarification and orders that certain filings be made in the next avoided cost proceeding.

STANDARD OF REVIEW

In their Joint Motion, NCSEA and NCCEBA request reconsideration pursuant to N.C. Gen. Stat. § 62-80 of four issues as described below that were decided by the Commission in its April 15 Order. As provided in N.C.G.S. § 62-80, "[t]he Commission may at any time upon notice to the public utility and to the other parties of record affected, and after opportunity to be heard as provided in the case of complaints, rescind, alter or amend any order or decision made by it." The Commission's decision to rescind, alter, or amend an order upon reconsideration under N.C.G.S. § 62-80 is within the Commission's discretion. *State ex rel. Utilities Comm'n v. MCI Telecommunications Corp.*, 132 N.C. App. 625, 630, 514 S.E.2d 276, 280 (1999). However, the Commission cannot arbitrarily or capriciously rescind, alter, or amend a prior order. Rather, there must be some change in circumstances or a misapprehension or disregard of a fact that provides a basis for the Commission to rescind, alter, or amend a prior order. *State ex rel. Utilities Comm'n v. North Carolina Gas Service*, 128 N.C. App. 288, 293-94, 494 S.E.2d 621, 626, *rev. denied*, 348 N.C. 78, 505 S.E.2d 886 (1998).

ISSUES FOR RECONSIDERATION

Solar Integration Services Charge Technical Review Committee

In the April 15 Order the Commission found that it is appropriate to require Duke Energy Carolinas, LLC (DEC), and Duke Energy Progress, LLC (DEP, and together with DEC, Duke or the Companies), to prospectively apply an integration services charge (or solar integration services charge (SISC)) to all new uncontrolled solar generators that commit to

sell and deliver power into the DEC and DEP systems on or after November 1, 2018. April 15 Order at 12 (Finding of Fact No. 35). The Commission approved amounts for DEC's and DEP's SISC based upon the results of a Solar Ancillary Services Study performed by Astrapé Consulting (Astrapé Study). As explained in the Commission's discussion:

> After careful consideration of such evidence and that no party otherwise contested or disputed such evidence, the Commission determines that DEC and DEP are incurring increased intra-hour ancillary services costs to integrate the "Existing plus Transition" level of solar [qualifying facilities (QFs)] into the DEC and DEP systems. Therefore, for reasons discussed above it is appropriate to require DEC and DEP to account for these costs when calculating the costs and benefits resulting from the purchase of energy and capacity from solar QFs.
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> In determining whether the quantification of Duke's ancillary services costs is reasonable, the Commission finds the testimony of Duke witness Wintermantel, including the Astrapé Study he sponsored as an exhibit, to be quite persuasive. The independent review conducted by the Public Staff, as described by witness Thomas, lends further credibility to Duke's evidence. Further, the agreements reached in the SISC Stipulation reflect the give-and-take in negotiations, and the Commission finds the testimony in support thereof to be quite persuasive. Finally, while NCSEA witness Beach and [Southern Alliance for Clean Energy (SACE)] witness Kirby have advanced reasonable and well-articulated criticisms of this evidence, the Commission determines that Duke and the Public Staff have adequately addressed these criticisms sufficient to rebut these arguments. In summary, the Commission gives weight to the testimony of witnesses Wintermantel and Thomas, and based upon a review of the foregoing evidence and the entire record herein finds that the results of the Astrapé Study that an additional 26 MW of load following reserves are required to integrate 840 MW of solar in DEC at an average cost of $1.10/MWh, and that an additional 166 MW of load following reserves are required to integrate 2,950 MW of solar in DEP at an average cost of $2.39/MWh are reasonable for use in this proceeding. The Commission further finds that it is appropriate for Duke to prospectively apply the integration services charge to all new uncontrolled solar generators that commit to sell and deliver power into the DEC and DEP systems on or after November 1, 2018, and to any pre-existing solar QF not subject to the integration services charge committing to sell to Duke under a new [purchase power agreement (PPA)] in the future.

Id. at 92-93. The Commission further found, however, as follows: (1) "The Astrapé Study methodology used to quantify DEC's and DEP's increased ancillary services costs and to calculate each utility's integration services charge presents novel and complex issues that warrant further consideration," and (2) "It is appropriate to require DEC and DEP to submit the Astrapé Study methodology to an independent technical review and to include the results of that review and any revisions to the methodology that is supported by the results

of that review in its initial filing in the 2020 biennial avoided cost proceeding." *Id.* at 12-13 (Findings of Fact Nos. 40, 42).[1] The Commission, therefore, ordered Duke to "submit the Astrapé Study methodology to an independent technical review . . . and include the results of that review and any revisions to that methodology that is supported by the results of that review in its initial filing in the 2020 avoided cost proceeding." *Id.* at 136 (Ordering Paragraph No. 25). As more fully described in the order:

> [T]he Commission agrees with NCCEBA, NCSEA, and SACE that the Commission would benefit from the results of an independent technical review of the Astrapé Study to inform future biennial avoided cost proceedings where similar issues will be reviewed. Therefore, the Commission directs Duke to assemble a technical review committee to provide a review of the Astrapé Study. The technical review committee shall be comprised of individuals, not otherwise affiliated with Duke or any of its affiliates or organizations in which Duke is a member, who have technical expertise, knowledge, and experience related to the integration of solar generation as well as the development of complex research, development, and modeling. The committee should include personnel employed by the National Laboratories with relevant experience and expertise. The purpose of the work with a technical review committee is to provide an in-depth review of the study methodology and the model used for system simulations. The technical review committee should provide specific comments or feedback to Duke in the form of a report, which report is to be included in the initial filing made in Duke's 2020 biennial avoided cost proceeding.

Id. at 95.

Motion for Reconsideration

In their Joint Motion NCSEA and NCCEBA continue to assert that the Astrapé Study contained methodological flaws and suffered from insufficient review, and they applaud the Commission's decision to direct Duke to assemble a technical review committee to review the Astrapé Study. NCSEA and NCCEBA protest, however, that there is no requirement for transparency as to the formation of the technical review committee, and they request the opportunity to observe and monitor the process as it progresses, including the ability to join conference calls, receive notifications and status updates, and review draft documents that are provided by the committee to Duke. NCSEA and NCCEBA state that they desire transparency as to the individuals chosen by Duke to make up the committee, including how their credentials fit the list of criteria set forth by the Commission, and believe that intervenors should be afforded the opportunity to provide comments regarding the makeup of the technical review committee as well as the process through which the committee reviewed the study and provided results to Duke.

[1] These findings of fact were first made in the Supplemental Notice of Decision issued in this docket on October 17, 2019 (Findings of Fact Nos. 11-12).

Lastly, NCSEA and NCCEBA state that Duke should include intervenor comments provided to Duke regarding the committee selection and process as part of the report that Duke will include in its initial filing in the 2020 avoided cost proceeding.

Discussion and Conclusions

As noted above, the requirement for an independent technical review of the Astrapé Study methodology was set forth in the Supplemental Notice of Decision in October. In the April 15 Order the Commission laid out specific, detailed expectations for the makeup of the technical review committee: "The committee should include personnel employed by the National Laboratories with relevant experience and expertise." The Commission is seeking an unbiased, objective, third-party expert review and analysis of the methodology employed by Astrapé to quantify DEC's and DEP's increased ancillary services costs and to calculate each utility's integration services charge. The Commission expects a truly independent review by knowledgeable experts and for Duke to provide to the Commission the committee's own report setting forth its observations and conclusions. The Commission is not expecting Duke to simply hire another consultant but to give over the Astrapé Study methodology to this independent review committee and step away, letting the committee perform its review and analysis.

Intervenors will have the opportunity to review and comment on the committee's makeup and report after the report is filed in the 2020 avoided cost proceeding. The Commission is not persuaded that additional involvement of intervenors in the selection of experts for the committee or in the review process is necessary or helpful, but might instead impair the efficiency of the effort and timely review of the Astrapé Study methodology. The request to reconsider its earlier decisions regarding the selection and intervenor participation in the activities of the technical review committee is, therefore, denied.

Seasonal Allocation Weighting

As noted in the April 15 Order the Commission required Duke to address in its initial filings in this proceeding consideration of issues that impact DEC's and DEP's avoided capacity rates, such as the weighting of capacity value between the summer and non-summer seasons. Such information, including the availability of capacity or energy from a QF during the system daily and seasonal peak loads (including dispatchability, reliability, and the individual and aggregate value of energy and capacity from QFs), as well as the relationship of the availability of energy and capacity from the QF to the ability of the utility to avoid costs, is one of a number of factors to be considered in determining avoided costs. April 15 Order at 27.

On April 18, 2019, Duke filed an Agreement and Stipulation of Partial Settlement with the Public Staff pertaining to rate design methodology (Rate Design Stipulation). In the Rate Design Stipulation, Duke and the Public Staff agreed that it is reasonable and appropriate for the Companies' seasonal and hourly allocations of capacity payments to be based upon the loss of load risk identified in the Astrapé Capacity Value of Solar study, as filed in support of the Companies' 2018 Integrated Resource Plans (IRPs) in Docket

No. E-100, Sub 157. The proposed avoided capacity rates recognized that approximately 90% of DEC's loss of load risk occurs in the winter, while approximately 100% of DEP's loss of load risk occurs in the winter.

In its order the Commission found that the proposed avoided energy and avoided capacity rates presented in the Rate Design Stipulation are reasonable and appropriate. *Id.* at 29. The Commission agreed with Duke and the Public Staff that the use of the loss of load risk values to establish seasonal allocation factors is appropriate, as it aligns with cost causation principles. *Id.* at 27. The Commission further stated that these stipulated rates are responsive to the Commission's direction to develop a rate design that sends stronger price signals to incent QFs to better match the generation needs of utilities. *Id.* at 29. The Commission, therefore, concluded that these agreements should be approved as part of acceptance of the Rate Design Stipulation and specifically found that DEC's and DEP's proposed seasonal allocations are appropriate for use in weighting capacity value between winter and summer to calculate DEC's and DEP's avoided capacity rates in this proceeding. *Id.* at 8 (Finding of Fact No. 6).

The Commission also agreed that these factors change over time and that it is appropriate that the resource adequacy studies, along with all inputs and modeling assumptions, should be updated for use in the 2020 biennial IRP filings and taken into account in the 2020 avoided cost proceedings. Thus, as in the last avoided cost proceeding, Docket No. E-100, Sub 148, the Commission stated that it will continue to review these issues in future avoided cost proceedings. *Id.* at 27-28.

On the related issue of the availability of winter demand-side management (DSM) programs, the Commission agreed with Duke witness Snider that significant differences can exist between utilities, including climate, heating sources, industrial demand, and avoided costs, among others, as well as between portfolios of DSM programs targeting providing summer and winter capacity. *Id.* at 28. The Commission found that Duke's assumptions regarding the availability of DSM programs for reducing winter peak demand are reasonable and appropriate for use in calculating avoided capacity rates in this proceeding. *Id.* at 9 (Finding of Fact No. 7). However, as discussed in the 2018 IRP proceeding, Duke should place additional emphasis on defining and implementing cost-effective DSM programs that will be available to respond to winter demands, and the Commission required Duke to address this issue in its initial statements filed in the 2020 biennial avoided cost proceeding. *Id.* at 27.

Motion for Reconsideration

In their Joint Motion NCSEA and NCCEBA note the significant interplay between the studies, models, and assumptions used in the Companies' IRPs and the Companies' determination of avoided cost rates. NCSEA and NCCEBA argue, as they and others did in comments and testimony in this and recent IRP proceedings, that "Duke must improve its assumptions and analysis regarding resource adequacy and seasonal planning, including through the implementation of robust demand side management, energy efficiency, and ancillary services markets to protect from the elusive cold winter morning peak."

In its April 6, 2020 order in the IRP docket, Docket No. E-100, Sub 157, the Commission directed that updated resource adequacy studies be filed along with the Companies' 2020 IRPs, including additional detail and support for both the studies' inputs and outputs. Order Accepting Filing of 2019 Update Reports and Accepting 2019 REPS Compliance Plans, *2019 Integrated Resource Plan Update Reports and Related 2019 REPS Compliance Plans*, No. E-100, Sub 157, at 12 (N.C.U.C. Apr. 6, 2020) (2019 IRP Order). NCSEA and NCCEBA believe that the Commission should require Duke to make these same filings in the 2020 avoided cost docket to promote efficiency and transparency in the 2020 avoided cost docket and appropriately acknowledge the fundamental overlap between these issues in both the avoided cost and IRP proceedings.

Moreover, although NCSEA and NCCEBA agree with the Commission's statements in this and the IRP proceedings that Duke should place additional emphasis on defining and implementing cost-effective DSM programs that will be available to respond to winter demands, they protest that the April 15 Order "does not require evidence-based solutions or robust transparency to the underlying model, such as the information described in the 2019 IRP Order on resource adequacy studies." NCSEA and NCCEBA express concern "that without this guidance from the Commission, Duke may lack sufficient direction or incentive to conduct a robust analysis of DSM programs that will facilitate the development of meaningful solutions to Duke's infrequent but heavily weighted winter peaking events."

Discussion and Conclusions

The Commission agrees with NCSEA and NCCEBA and has itself emphasized in recent proceedings the significant interplay between the IRP and avoided cost proceedings and the need for consistency between the studies, models, and assumptions used in these proceedings. The Commission's expectation is, as it has been for some time now, that the same models and analyses will be utilized in both the IRP and avoided cost proceedings to achieve this consistency.

In its April 15 Order the Commission again stressed that the studies utilized in the IRP proceeding, particularly the resource adequacy studies required to be updated for the 2020 IRP proceeding, should be taken into account in determining avoided costs in the next proceeding. Although the Commission could simply take judicial notice of the studies filed in the IRP proceeding, to emphasize the importance and relevance of this nexus even further, the Commission will require as requested by NCSEA and NCCEBA that the updated resource adequacy studies, together with any additional detail and support for the study inputs and outputs, be filed in both the 2020 IRP and avoided cost proceedings.

With regard to NCSEA and NCCEBA's concern that the Commission's statements in the April 15 Order that Duke should place additional emphasis on defining and implementing cost-effective DSM programs that will be available to respond to winter demands lack sufficient guidance or direction, the Commission further notes that in the 2020 IRP proceeding, Docket No. E-100, Sub 165, the Commission required Duke to file its 2020 Market Potential Study performed by Nexant. Order Requiring Filing of Report,

2020 Biennial Integrated Resource Plans and Related 2020 REPS Compliance Plans, No. E-100, Sub 165 (N.C.U.C. June 11, 2020). Duke filed Nexant's energy efficiency and demand-side management market potential studies for Duke Energy North Carolina and Duke Energy South Carolina with the Commission in the 2020 IRP docket on June 23, 2020. The Commission will require that these studies, as well as the resource adequacy studies, also be filed in the 2020 avoided cost proceeding.

The studies referenced above shall be relevant and admissible in both the 2020 IRP and avoided cost proceedings. To the extent that there is any question about transparency, all such studies shall be subject to full discovery or other review by any other parties in either docket, subject, if applicable, to appropriate nondisclosure agreements.

Capacity Payments for Renewing Qualifying Facilities

With regard to the calculation of avoided cost capacity rates, House Bill 589, Session Law 2017-192 (HB 589), provides that "[a] future capacity need shall only be avoided in a year where the utility's most recent biennial [IRP] has identified a projected capacity need to serve system load and the identified need can be met by the type of small power producer resource based upon its availability and reliability of power," but it expressly carves swine and poultry waste generation out from this requirement based upon their designated need to meet REPS compliance. N.C.G.S. § 62-156(b)(3). Section 3(a) of House Bill 329, Session Law 2019-132 (HB 329), adds to N.C.G.S. § 62-156(b)(3) an additional carve out for "legacy" hydroelectric QFs of 5 MW or less selling and delivering power under QF PPAs in effect as of July 27, 2017. Section 3(b) of HB 329 further provides that "[t]he exception for hydropower small power producers from limitations on capacity payments established in G.S. 62-156(b)(3), as amended by Section 3(a) of this act, shall not be construed in any manner to affect the applicability of G.S. 62-156(b)(3) as it relates to any other small power producer."

In the April 15 Order the Commission found, in interpreting N.C.G.S. § 62-156(b)(3), as amended by HB 329, that only certain QFs — (1) those fueled by swine or poultry waste, or (2) hydroelectric facilities 5 MW or less in capacity that have a power purchase agreement in effect as of July 27, 2017 — which commit to sell and deliver energy and capacity for a new fixed-term contract prior to the termination of the QF's existing contract term are avoiding the Utilities'[2] future capacity need for these designated resource types beginning in the first year following expiration of the QF's existing PPA. For other QFs, it is appropriate for the Utilities to recognize a QF's commitment to sell and deliver energy and capacity over a future fixed term as avoiding an undesignated future capacity need beginning only in the first year when there is an avoidable capacity need identified in DEC's, DEP's, or DENC's most recent IRPs. April 15 Order at 10-11 (Findings of Fact Nos. 23-24).

[2] In the April 15 Order and in this Order, Dominion Energy North Carolina (DENC) together with DEC and DEP are referred to as the Utilities.

Motion for Reconsideration

In their Joint Motion NCSEA and NCCEBA seek reconsideration of the Commission's findings regarding the rights of certain QFs to continue to receive full capacity payments upon execution of a subsequent PPA. NCSEA and NCCEBA argue that the Commission misinterpreted the recent amendments to N.C.G.S. § 62-156(b)(3) in limiting this right to swine waste, poultry waste, and legacy small hydro facilities. Rather, argue NCSEA and NCCEBA, the amended statutory language mandating that small hydro QFs must be allowed to receive full capacity payments does not preclude the Commission from making a determination that other QF generators with existing PPAs, and which are currently providing capacity to the utility, may continue to receive full capacity payments upon execution of a renewal PPA. Reiterating statements made through testimony and in their post-hearing briefs, NCSEA and NCCEBA believe that it would be highly inefficient, discriminatory, and poor public policy to allow the utility to make arrangements to fill any capacity need created at the expiration of an existing QF contract without first giving that QF the opportunity to continue to serve that capacity need.

Noting that the Commission rejected their previous proposal that existing QFs be given an absolute right to continue being paid for capacity by committing to do so three years before their existing PPAs expire, NCSEA and NCCEBA request that the Commission reconsider its decision on this issue and adopt a different solution to ensure that existing QFs are not discriminated against and, in particular, that utilities not be able to make other arrangements for meeting a capacity need arising due to the expiration of existing PURPA PPAs. NCSEA and NCCEBA state that it would be unfair and inefficient if, prior to the expiration of PURPA PPAs, Duke could say that it is forecasting a capacity need solely for that reason and then build a new gas plant (or other generation) without giving the QFs the opportunity to supply the capacity need being created by the expiration of their PPAs.

NCSEA and NCCEBA request that the Commission modify the order to require that each time Duke or DENC identifies a future capacity need based upon expiring QF PPAs, those QFs with expiring PPAs be given an opportunity to commit to supplying that need, without priority right to do so relative to new QFs. NCSEA and NCCEBA recognize that allowing any sort of guarantee to an existing QF may be unfair and prejudicial against new QFs, and they further request that the Commission order Duke, DENC, and the Public Staff to work with them and other intervenors to develop a preferred process for allocating limited capacity rights among QFs.

Discussion and Conclusions

As NCSEA and NCCEBA acknowledge, and as demonstrated in the Commission's discussion in the April 15 Order, this issue was fully litigated in this proceeding and addressed through the testimony of multiple parties' witnesses, including their own, and in post-hearing briefs.

House Bill 589 amended N.C.G.S. § 62-156(b)(3) in 2017 to provide:

> A future capacity need shall only be avoided in a year where the utility's most recent biennial integrated resource plan filed with the Commission pursuant to G.S. 62-110.1(c) has identified a projected capacity need to serve system load and the identified need can be met by the type of small power producer resource based upon its availability and reliability of power, other than swine or poultry waste for which a need is established consistent with G.S. 62-133.8(e) and (f).

House Bill 329 amended N.C.G.S. § 62-156(b)(3) in 2019 to add an exception for "hydropower small power producers with power purchase agreements with an electric public utility in effect as of July 27, 2017, and the renewal of such a power purchase agreement, if the hydroelectric small power producer's facility total capacity is equal to or less than five megawatts (MW)." Thus, the amendments to N.C.G.S. § 62-156(b)(3) enacted by HB 589 and HB 329 provide that facilities utilizing swine or poultry waste and certain small hydro facilities always receive a capacity credit, even when a utility's most recent IRP has not identified a projected capacity need; all other facilities only avoid future capacity needs and receive capacity payments when a utility's most recent IRP has identified a projected capacity need.

All parties agree that the expiration of a wholesale contract can affect the timing of a utility's first capacity need. In making this determination, Duke witness Snider stated that Duke has assumed in its IRPs that upon expiration of any third-party wholesale purchase contract, capacity is reduced by the amount of the capacity provided by the expiring wholesale purchase contract in the year following contract expiration. He further stated that it is prudent resource planning not to rely upon assumed future third-party owned capacity in years where no contract or other legally enforceable commitment guaranteeing delivery exists. He pointed out that there is no guarantee for Duke and its customers that a QF will be able to provide energy and capacity after expiration of the PPA, as QF owners have the right at the end of a contract to make their unrestricted decision as whether to renew their PPAs, cease business, or sell their energy and capacity to another buyer. In response to NCSEA witness Johnson's claim that Duke's approach to contract renewals is discriminatory, witness Snider contended that, actually, witness Johnson's approach was discriminatory in that it would favor existing QFs over new capacity resources, including new QFs.

Public Staff witness Hinton reviewed Duke's assumptions regarding expiring PPAs, and he stated that Duke uses the same assumptions for all wholesale contracts — i.e., that the contracts would expire and the capacity would no longer be available — in establishing its first year of capacity need for avoided cost purposes. The Public Staff stated that Duke's IRPs indicate a reduction in capacity from expiring biomass and hydro PPAs in the planning period, which effectively decreases each utility's available capacity and increases the need for undesignated future resources, but that the IRPs assume an increase in capacity from solar facilities. Witness Hinton stated that while this assumed increase in capacity regarding solar PPAs may be appropriate for planning purposes, it

is inappropriate for determining the first year of capacity need as it could elongate the time before there is a capacity need. Public Staff witness Hinton disagreed with NCSEA that the Utilities should assume that all QF contracts renew and that existing QFs should be entitled to a capacity payment beginning in the first years of their new contract term. The Public Staff pointed out that this issue would have no impact on avoided capacity rates in this proceeding but would become more and more important in future years.

The Commission adopted the Public Staff's recommendation that the utilities file a formal Statement of Need in future IRP proceedings. The Commission agreed with Duke and the Public Staff that QFs commit to deliver their power for a specified term and that it would be imprudent resource planning to assume that QFs are obligating themselves to deliver capacity and energy past the end of their contract term. The Commission further agreed that it would be discriminatory between QFs to assume that a pre-existing QF has a priority right to enter into a new contract to sell and deliver capacity over a new term versus the rights of any other QF to commit itself to avoid the utility's capacity need. The Commission concluded that for types of QF generation which do not meet a designated capacity need specified by the General Assembly, it is appropriate for QFs electing to obligate themselves to deliver power for a new contract term to be considered as avoiding undesignated new generation projected to be needed in the future to serve the utility's system load.

The Commission fully considered all the evidence and arguments presented by the parties on this issue, and NCSEA and NCCEBA have provided no new evidence, arguments, or other basis upon which to overturn the Commission's decision on reconsideration.

Material Alterations

In its Joint Initial Statement Duke amended its Schedule PP PPA and Terms and Conditions to provide that any material modification to a QF, including the addition of batteries or other technologies for the storage and later injection of energy, without Duke's consent would constitute an event of default resulting in termination of the PPA at Duke's election. Further, Duke proposed amendments to Section 1.4 of the Schedule PP PPA and Section 4 of the Terms and Conditions to clarify that modifying a QF to increase the AC energy output or the delivered DC capacity of the facility would be an event of default.

In response to objections by the Public Staff and other intervenors, in its March 27, 2019 Reply Comments Duke proposed to modify Section 4 of its amended Terms and Conditions to refer to a new defined term, "Material Alteration," to more clearly define what constitutes a material change to a QF. The new definition of Material Alteration provided in Section 3(f) is as follows:

> "Material Alteration" as used in this Agreement shall mean a modification to the Facility which renders the Facility description specified in this Agreement inaccurate in any material sense as determined by Company in a commercially reasonable manner including, without limitation, (i) the addition of a Storage Resource; (ii) a modification which results in an increase to the Contract Capacity, Nameplate Capacity (in AC or DC),

> generating capacity (or similar term used in the Agreement) or the estimated annual energy production of the Facility (the "Existing Capacity"), or (iii) a modification which results in a decrease to the Existing Capacity by more than five (5) percent. Notwithstanding the foregoing, the repair or replacement of equipment at the Facility (including solar panels) with like-kind equipment, which does not increase Existing Capacity or decrease the Existing Capacity by more than five percent (5%), shall not be considered a Material Alteration.

In the April 15 Order the Commission approved Duke's proposed modifications to the Standard Terms and Conditions, April 15 Order at 136 (Ordering Paragraph No. 30), and made the following findings of fact:

> 49. The proposed modifications to the Standard Terms and Conditions proposed by Duke, including the definition of Material Alteration, are reasonable and appropriate. In determining whether updates to a facility are a Material Alteration that would lead to the termination of the existing PPA, Duke should evaluate those changes in a commercially reasonable manner and with a "degree of reasonableness" regarding any increase in capacity that results from equipment replacement and repairs.
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> 50. Prior to increasing their output consistent with the Terms and Conditions of their existing PPAs, "Committed" solar QFs (i.e., facilities that have (i) established a legally enforceable obligation (LEO); (ii) executed a PPA; or (iii) commenced operation and sale of the electric output of the facility) that seek to add storage or otherwise materially increase their output by re-paneling or over-paneling should obtain the utility's consent, contingent on an evaluation of the potential impacts to the utility's system or other customers.
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> 51. Material alterations to committed facilities that increase a utility's obligations to purchase energy at prior avoided cost rates are inappropriate and would unfairly burden ratepayers with increased payments to QFs that exceed current avoided cost rates. However, it is premature at this time to determine whether the Public Staff's compromise position that existing solar facilities that add storage by co-locating a battery behind the meter should be compensated at the current avoided cost rates is appropriate.
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> 52. It is appropriate for the parties to continue to discuss the technical, regulatory, and contractual complexities of separately metering the energy output from energy storage equipment that is co-located at existing solar facilities for further consideration by the Commission.

April 15 Order at 13-14 (Findings of Fact Nos. 49-52).

Motion for Reconsideration

In their Joint Motion NCSEA and NCCEBA seek reconsideration of a number of issues related to the new provision on Material Alteration. First, NCSEA and NCCEBA object to the retroactive application of the new Material Alteration provision to existing standard offer contracts. NCSEA and NCCEBA state that the April 15 Order ignores the fact that contracts are binding legal documents that must be interpreted based on what they actually say, not on what Duke or the Commission believes they should say. NCSEA and NCCEBA argue, after detailing a comprehensive review of previous standard offer contracts, that the documents that comprise the Sub 136 and Sub 140 PPAs do not, under any reasonable interpretation, impose the limitations on QFs that Duke requested and that the Commission has agreed to make to Duke's form PPA and Terms and Conditions going forward. NCSEA and NCCEBA further argue that these modifications, if applied to existing contracts, constitute major substantive changes to the rights and obligations of Duke and QFs relative to the terms of prior standard offer contract documents and that the Commission should reconsider its decision to impose these new and altered terms on QFs retroactively.

NCSEA and NCCEBA next object to the inclusion of a reduction in capacity of more than 5% as a Material Alteration, especially given Duke's repeated complaints about the proliferation of solar QF generation. NCSEA and NCCEBA state that this limitation effectively amounts to a minimum sizing of the QF and note that the Commission has never previously deemed this to be appropriate.

NCSEA and NCCEBA further note the terms and conditions allow replacements with "like-kind" equipment but lack a definition of "like-kind" or any guidance as to how it is to be interpreted. NCSEA and NCCEBA request that the Commission modify the April 15 Order to define the term "like-kind" to mean "any equipment of the same general nature, and being used for the same general purpose, as the original equipment."

NCSEA and NCCEBA further question why a QF should require Duke's approval to add a battery storage device where there is no increase in the output of the facility. NCSEA and NCCEBA argue that there is no risk of ratepayers having to pay for additional energy at a higher, outdated avoided cost rate. To the extent that the battery allows for shifting of delivery from one time period to another, NCSEA and NCCEBA state that Duke witness Snider asserted that ratepayers are indifferent to this result. Accordingly, NCSEA and NCCEBA request the Commission reconsider its decision and find that added battery storage with no increase in energy output of the facility does not require utility approval.

NCSEA and NCCEBA additionally protest that the Commission has provided no guidance as to what would constitute reasonable grounds for the utility to deny a request for a Material Alteration. NCSEA and NCCEBA cite an apparent concern regarding the payment of old, higher rates as a result of a Material Alteration, and they request that the Commission direct Duke to address this issue in the ongoing storage retrofit stakeholder process required by the Commission and that such issue discussion also include a discussion about increased output from other types of material alterations, including repaneling.

Lastly, NCSEA and NCCEBA note, as provided in Finding of Fact No. 49 of the April 15 Order, that any changes to existing facilities will be evaluated in a commercially reasonable manner. However, in Duke's compliance filing, Section 4(e) of the Terms and Conditions state that Duke may decline to approve a Material Alteration in "its sole discretion." This provision in the compliance filing is inconsistent with Duke's representations and the Commission's order and should be changed.

Discussion and Conclusions

Changes to existing contracts

Like NCSEA and NCCEBA, the Commission also reviewed the terms and conditions of prior avoided cost PPAs as well as the comments, testimony, exhibits, and briefs filed in this proceeding in reaching its decisions in the April 15 Order. The Commission, however, disagrees with NCSEA and NCCEBA; the April 15 Order does not improperly modify existing Standard Offer PPAs to include the provision on Material Alterations and limit a QF's ability to add battery storage to an existing facility.

As NCSEA and NCCEBA note, in the 2012 avoided cost proceeding, Docket No. E-100, Sub 136, DEP filed a rate tariff — Cogeneration and Small Power Producer Schedule CSP-29 — which incorporates specific energy and capacity credits for various contract terms, an Application for Standard Contract by a Qualifying Cogenerator or Small Power Producer, and Terms and Conditions for the Purchase of Electric Power. In the Application, which when accepted by DEP becomes an Agreement to purchase from the "qualifying generating facility" described therein, the owner of the QF requests that DEP purchase its output in accordance with the rate tariff and the Terms and Conditions, "a copy of each being attached and made a part of this Agreement." The Terms and Conditions "provide a mechanism through which [DEP] will agree to purchase energy or capacity or both from an Eligible Qualifying Facility as defined in Company's CSP Rate Schedule." Section 1(c) of the Terms and Conditions specifically provides:

> Application of Terms and Conditions, Schedules, and Riders — All Purchase Agreements in effect at the time of the approval hereof or that may be entered into in the future, are made expressly subject to these Terms and Conditions, and subject to all applicable Schedules and Riders, and any changes therein, substitutions thereof, or additions thereto lawfully made, provided no change may be made in rates or in essential terms and conditions of this contract except by agreement of the parties to this contract or by order of the North Carolina Utilities Commission.

As NCSEA and NCCEBA further note, DEC's filing in the Sub 136 avoided cost proceeding did not include a separate Terms and Conditions, but did include a rate tariff — Schedule PP-H (NC) Hydroelectric Qualifying Facilities Purchased Power or Schedule PP-N (NC) Non-Hydroelectric Qualifying Facilities Purchased Power — and a

Purchased Power Agreement. The Agreement, like DEP's, obligates DEC to purchase the electric power generated by the QF. Section 2 of the Agreement provides:

> Rate Schedule and Service Regulations. The sale, delivery, and use of electric power hereunder, and all services of whatever type to be rendered or performed in connection therewith, shall in all respects be subject to and in accordance with all the terms and conditions of the Company's Rate Schedule [PP-H][PP-N], Electricity No. 4, North Carolina Revised Leaf No. [91][92], [Variable Rate][5-year Fixed Long-Term Rate], [10-year Fixed Long-Term Rate] [15-year Fixed Long-Term Rate] Option [A][B] for [Distribution][Transmission] Interconnection ("Rate Schedule") and its Service Regulations, both of which are now on file with the North Carolina Utilities Commission ("Commission"), and are hereby incorporated by reference and made a part hereof as though fully set forth herein. Said Rate Schedule and Service Regulations are subject to change, revision, alteration or substitution, either in whole or in part, upon order of said Commission or any other regulatory authority having jurisdiction, and any such change, revision, alteration or substitution shall immediately be made a part hereof as though fully written herein, and shall nullify any prior provision in conflict therewith.

In the next avoided cost proceeding, Docket No. E-100, Sub 140, DEC and DEP adopted more similar documents, with each filing a rate tariff, a Purchase Power Agreement, and Terms and Conditions for the Purchase of Electric Power. Section 1(b) of DEC's and DEP's Terms and Conditions filed in the Sub 140 docket are substantially identical to Section 1(c) of DEP's Sub 136 Terms and Conditions, and Section 2 of the Purchase Power Agreement is substantially identical to Section 2 of DEC's Purchased Power Agreement except that it includes a reference to the Terms and Conditions rather than the Service Regulations. This model has been consistently used by DEC and DEP in subsequent avoided cost proceedings, including this proceeding, Sub 158.

A proper reading of each of these contracts provides that the terms and conditions of the contract, other than the specific rates, "are subject to change, revision, alteration or substitution, either in whole or in part, upon order of [the] Commission . . ., and any such change, revision, alteration or substitution shall immediately be made a part hereof as though fully written herein, and shall nullify any prior provision in conflict therewith." For DEC, the initial change was one approved in the rate tariff; for DEP and subsequent DEC tariffs, the change was in the Terms and Conditions. Here, the Commission approved an amendment to the Terms and Conditions to add the provision regarding Material Alterations. This amendment to the Terms and Conditions does not "interpret the existing PPA terms and conditions in a manner different than their strict contractual language" and does not violate a QF's right to sell energy and capacity under an existing PPA as the facility was described at the time the agreement was entered into and at the rates set forth in that agreement. Thus, not only are such changes consistent with the language of prior agreements, they were contemplated and specifically included in the contract language. Parties are on notice and presumably aware upon entering the

agreement that certain terms and conditions are subject to change by the Commission. The Commission, therefore, denies reconsideration on this issue and affirms its finding that the modifications to the Standard Terms and Conditions proposed by Duke, including the definition of Material Alteration, are reasonable and appropriate

A QF cannot demand strict compliance with the agreement with a modified facility. NCSEA and NCCEBA's analysis of previously approved Standard Offer PPAs erroneously focuses on "estimated annual energy production" and not on changes that would increase the capacity of the facility. In describing the Sub 140 Terms and Conditions, NCSEA and NCCEBA quote the modification that "[t]he Seller shall not change its generating capacity . . . without receiving the Company's consent," but then allege that "[t]he Sub 140 Terms and Conditions do not prohibit or require DEC/DEP approval of changes to the Facility's DC rating, changes in the time of delivery, or equipment modifications."

A Material Alteration to a facility should result in a review of payments under the existing contract. The Commission agreed that allowing a QF to modify its facility to substantially increase energy output and be compensated at prior avoided cost rates would result in significant overpayment beyond the current avoided cost, which would be unfair to ratepayers. The Commission did not adopt the compromise position proposed by the Public Staff for bifurcated avoided cost rates, but the Commission did find it appropriate to continue to investigate the proposed compromise as a potential solution to properly encourage the addition of battery storage in a manner that is fair to ratepayers.

Reduction of capacity

As discussed above, a Material Alteration includes any deviation from the description of the facility in the original PPA. A decrease in capacity may have operational or planning impacts on the utility the same as capacity increases. NCSEA and NCCEBA have provided no new evidence, arguments, or other basis upon which to overturn the Commission's decision on reconsideration. The Commission, therefore, affirms its prior finding that Duke's proposed definition of Material Alteration, including a modification which results in an increase in the estimated annual energy production of the QF (Existing Capacity) or a decrease by more than five percent is appropriate and denies reconsideration on this issue.

Definition of "like-kind"

The Commission stated in the April 15 Order that the owner of a QF should be allowed to maintain the facility during the term of the contract, including repair and replacement of parts and equipment. The definition of Material Alteration specifically provides that "the repair or replacement of equipment at the Facility (including solar panels) with like-kind equipment, which does not increase Existing Capacity or decrease the Existing Capacity by more than five percent (5%), shall not be considered a Material Alteration." The Commission concluded that this language in the definition of "Material Alteration," which expressly allows replacement of "like-kind" equipment and provides that

Material Alterations will be evaluated in a "commercially reasonable manner," adequately addressed NCSEA and NCCEBA's concerns.

While the Commission agrees that the term "like-kind" may include "any equipment of the same general nature, and being used for the same general purpose, as the original equipment," to define "like-kind" as such appears unnecessary and may actually limit its application as it is impossible to anticipate every scenario that might be encompassed within a "like-kind" replacement. NCSEA and NCCEBA ask, for example, whether a mono-facial solar PV panel may be replaced with a bi-facial panel of the sort commonly being use today. As stated in the definition of Material Alteration, the answer turns on whether the repaneling changes the Existing Capacity. Duke shall act in a commercially reasonable manner regarding Material Alterations and does not have unfettered discretion in determining whether a replacement is with like-kind equipment, and any aggrieved party who believes the utility improperly applied the term "like-kind" may file a complaint with the Commission.

The Commission, therefore, is not persuaded that it is appropriate to adopt a specific definition of like-kind for the purpose of interpreting the Material Alteration provision added to DEC's and DEP's Terms and Conditions and denies reconsideration on this issue.

Addition of battery with no increase in output

NCSEA and NCCEBA base their argument on this issue on testimony by Duke witness Snider which they believe indicates that ratepayers are indifferent to the extent that a battery allows for shifting of delivery from one time period to another. Upon review of witness Snider's testimony, the Commission does not agree with NCSEA and NCCEBA's interpretation. His testimony assumes different pricing during different delivery hours, and he states that ratepayers are indifferent to whether the utility purchases energy at avoided cost rates or generates the energy itself. The testimony cited by NCSEA and NCCEBA does not address potential changes in the delivery of energy under existing PPAs made possible by the addition of storage, even where the capacity is not increased, which may result in additional costs to ratepayers. In other testimony Duke witness Snider clearly states that such time-shifting would be detrimental to ratepayers. In his Supplemental Testimony, for example, Duke witness Snider states:

> For example, the addition of battery storage to an existing QF that has committed to sell under the legacy "Option B" avoided cost rate design would allow the QF to generate/discharge more power during legacy "on-peak" periods that no longer align with the Companies' highest marginal cost hours. In other words, absent the QF entering into a modified or new PPA reflecting Duke's current avoided costs and rate design, the addition of a battery storage system to an existing QF obligates the Companies, and thus their customers, to pay the QF for new and additional output in certain hours at rates exceeding the utility's now-current avoided costs, in a manner

> that was not contemplated by either the QF or the interconnecting utility at the time the QF originally committed to sell its output.

Tr. vol. 2, 166.

While finding that it was premature to decide whether the Public Staff's hybrid rate proposal is appropriate, the Commission found that it is appropriate to continue to investigate the proposed compromise as a potential solution to properly encourage the addition of battery storage in a manner that is fair to ratepayers. The Commission directed stakeholders to virtually meet and consider issues related to the addition of battery storage, including specific technology, commercial, and regulatory issues, and then to report to the Commission on the results of the stakeholder process.

As stated above, a Material Alteration specifically includes the addition of a Storage Resource even where there is no increase in the total energy output of the QF. The Commission found in the April 15 Order that Duke's proposed modifications to the Standard Terms and Conditions, including the definition of Material Alteration, are reasonable and appropriate and finds here that NCSEA and NCCEBA have provided no new evidence, arguments, or other basis upon which to overturn the Commission's decision on reconsideration.

Issues to be discussed in stakeholder process

As noted above, the Commission specifically directed Duke to virtually convene a stakeholder group to consider the various technical, commercial, and regulatory challenges associated with the addition of battery storage at an existing facility. The Commission further required Duke and DENC to report to the Commission on the results of the process by September 1, 2020. The question of other Material Alterations that increase the output of a facility, such as repaneling, also raise the issue of how to compensate the QF for the increased output; however, this issue is beyond the scope of the initial stakeholder discussions and should not be taken up at this time. It is possible that such discussions may be taken up at a later time, but the Commission's focus, as expressed in the April 15 Order, and its directions to the stakeholder group are upon barriers to the addition of battery storage. The stakeholder group has already convened and held several meetings on the issues before it, and the Commission is not persuaded that additional issues should be put before the stakeholder group at this time.

Compliance filing: "In its sole discretion"

As directed by the Commission, Duke made a compliance filing on November 1, 2019, in response to the October 7, 2019 Notice of Decision and October 17, 2019 Supplemental Notice of Decision issued by the Commission in this proceeding. In response to the April 15 Order, Duke made a further compliance filing stating that the filings submitted on November 1, 2019, "accurately reflect the conclusions reached" in the Commission's April 15 Order. No party objected to Duke's November 1, 2019 compliance filing, and no party objected to its May 15, 2020 compliance filing.

In its March 27, 2019 Reply Comments and its November 1, 2019 compliance filing, Duke includes the following language related to Material Alteration:

> 3. DEFINITIONS
>
> (f) "Material Alteration" as used in this Agreement shall mean a modification to the Facility which renders the Facility description specified in this Agreement inaccurate in any material sense as determined by Company in a commercially reasonable manner including, without limitation, (i) the addition of a Storage Resource; (ii) a modification which results in an increase to the Contract Capacity, Nameplate Capacity (in AC or DC), generating capacity (or similar term used in the Agreement) or the estimated annual energy production of the Facility (the "Existing Capacity"), or (iii) a modification which results in a decrease to the Existing Capacity by more than five (5) percent. Notwithstanding the foregoing, the repair or replacement of equipment at the Facility (including solar panels) with like-kind equipment, which does not increase Existing Capacity or decrease the Existing Capacity by more than five percent (5%) shall not be considered a Material Alteration.
>
> 4. CONTRACT CAPACITY
>
> (e) Any Material Alteration to the Facility, including without limitation, an increase in the Existing Capacity, a decrease in the Existing Capacity by more than five (5) percent or the addition of energy storage capability shall require the prior written consent of the Company, which may be withheld in the Company's sole discretion, and shall not be effective until memorialized in an amendment executed by the Company and the Seller.

Thus, while the definition in Section 3 provides that Duke will determine whether a change is a Material Alteration "in a commercially reasonable manner," Section 4 allows Duke to withhold consent for the Material Alteration "in its sole discretion."

This distinction was made in testimony at the hearing. Upon cross-examination by counsel for SACE, Public Staff witness Metz was asked about this apparent discrepancy and explained that commercial reasonableness is provided in the definition of Material Alteration, or the determination of whether a change is a Material Alteration, but the decision whether to approve the change is left to the utility and its determination of system impact as the operator of the electric grid. Tr. vol. 7, 23-25, 27-28. Similar testimony was elicited on further cross-examination of witness Metz by counsel for Duke. Tr. vol. 7, 84-86.

NCSEA and NCCEBA raise this issue as simply a change that was overlooked by Duke in making its compliance filing — a matter that should have been raised at the time the initial compliance filing was made including that language on November 1, 2019.

However, this was not merely an oversight, as this issue was raised at the hearing on cross-examination of Public Staff witness Metz. It is clear — and Duke conceded as such — that the determination of whether a change is a Material Alteration is to be made in a commercially reasonable manner, and that is embodied in the definition of Material Alteration in Section 3 of the Terms and Conditions. The decision whether to allow the Material Alteration is within Duke's sole discretion as the electric grid operator. Again, any aggrieved party may file a complaint with the Commission.

The Commission, therefore, concludes that it fully considered all of the evidence and arguments presented by the parties on this issue, and NCSEA and NCCEBA have provided no new evidence, arguments, or other basis upon which to overturn the Commission's decision on reconsideration.

CONCLUSION

After careful consideration, the Commission finds good cause to deny NCSEA and NCCEBA's motion for reconsideration. As provided herein, however, the Commission will require Duke to file its resource adequacy studies, together with any additional detail and support for the study inputs and outputs, and the Nexant energy efficiency and demand-side management market potential studies in both the 2020 IRP and avoided cost proceedings.

IT IS, THEREFORE, SO ORDERED.

ISSUED BY ORDER OF THE COMMISSION.

This the 21st day of July, 2020.

NORTH CAROLINA UTILITIES COMMISSION

Kimberley A. Campbell, Chief Clerk

Commissioners Kimberly W. Duffley, Jeffrey A. Hughes, and Floyd B. McKissick, Jr., did not participate.