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Apr 05 2022

April 5, 2022

VIA ELECTRONIC FILING

Ms. A. Shonta Dunston
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Plans for Sharing of Carbon Plan Inputs and
Assumptions and Further Stakeholder Engagement
Docket No. E-100, Sub 179**

Dear Ms. Dunston:

Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP” and together with DEC, “Duke Energy” or the “Companies”) hereby provide this response to the North Carolina Utilities Commission’s (“Commission”) March 22, 2022 *Order Regarding data Inputs and Assumptions, and Scheduling Additional Update on Stakeholder Process Sufficiency* (“March 22 Order”), including a comprehensive list of inputs and assumptions that can be released prior to the filing of the Carbon Plan as set forth in Attachment A.

As background, on March 22, 2022, the Companies hosted the third of three stakeholder meetings regarding the Companies’ ongoing development of their proposed Carbon Plan as contemplated by Part I, Section 1.(1) of Session Law 2021-165 (“HB 951”) and the Commission’s November 19, 2021 *Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines* (“Carbon Plan Procedural Order”). At each of the three Carbon Plan stakeholder meetings, as well as the additional technical subgroup meetings, the Carbon Plan-focused EE/DSM collaborative meeting and the NCTPC forum, the Companies have engaged with stakeholders on key inputs and issues under consideration in developing the Carolinas Carbon Plan analysis, including increasingly detailed information concerning modeling assumptions and selectable resource options.

In response to stakeholder feedback, the Companies developed plans for sharing certain draft Carbon Plan modeling assumptions by April 15 and for providing all final

Encompass modeling assumptions on May 16 and shared these plans at the March 22 stakeholder meeting.¹

On the same day, the Commission issued its March 22 Order, directing the Companies to:

- (1) By April 5, 2022, identify a comprehensive list of inputs and assumptions that can be shared in advance of May 16, 2022, and the dates on which these data sets will be available;
- (2) Provide intervenors with such data sets as soon as they are available, upon request and subject to nondisclosure agreements; and
- (3) No later than five business days after filing the Carbon Plan, provide intervenors with complete Encompass input and output data files upon request and subject to confidentiality agreements.

The Companies' plans and commitments described in the March 22 stakeholder meeting are consistent with the requirements of the Commission's March 22 Order and are set forth in further detail below.

Draft Carbon Plan Inputs and Assumptions. The Companies will make available to intervenors, by April 15, 2022, the draft data inputs and modeling assumptions identified in Attachment A to this letter. This information will be made available upon request only to intervenors whose participation in this docket has been approved by order of the Commission and who have submitted an executed confidentiality agreement to the Companies (procedural details regarding the confidentiality agreements are provided below). Because the Carbon Plan will still be under development on April 15, the inputs and assumptions the Companies share on that date are draft and subject to change. For the avoidance of doubt, the March 22 Order clearly explained that the Commission's direction for Duke Energy to release available inputs and assumptions to intervenors prior to the filing of the initial Carbon Plan is "not intended to enlarge the time for discovery or to invite discovery disputes." Accordingly, the Companies will object to any discovery related to the draft inputs and assumptions provided in advance of filing the Carbon Plan, including discovery targeted to elicit an explanation regarding any changes made to the draft inputs and assumptions in the final Encompass dataset.

Final Carbon Plan Inputs and Assumptions. The Companies will make available to intervenors on May 16, 2022, the final EnCompass model dataset used to develop the portfolios included in the Carbon Plan. Similar to the draft data inputs and modeling assumptions, this information will be made available upon request to intervenors whose

¹ See DEC/DEP Carbon Plan Third Stakeholder Meeting Summary Report, Attachment 2, Page 7 (filed March 29, 2022).

participation in this docket has been approved by order of the Commission and who have submitted an executed confidentiality agreement to the Companies.

In the spirit of continuing to identify process efficiencies in light of the Commission's expectations set forth in its April 1, 2022 Order Establishing Additional Procedures and Requiring Issues Report ("Issues Report Order"), the Companies also commit to identifying on May 16 in conjunction with producing the final EnCompass model data set any changes made to the draft data inputs and modeling assumptions produced on April 16. In conjunction with doing so, the Companies have two requests of intervenors that intend to submit modified or alternative Carbon Plan modeling results in this docket. These requests will facilitate efficient exchange of information and allow all parties to more quickly identify areas of consensus or differentiating factors for alternative plans. First, in the case of intervenors that intend to perform their own modeling with EnCompass, the Companies request that such intervenors compile all of their changes to inputs or model settings as supplied by the Companies into a single EnCompass dataset. Such dataset should be provided in Excel format in the same manner as originally provided by the Companies, along with a brief summary description indicating the rationale for any changes. The Companies request that such dataset be made available to the Companies on the same day as any such intervenor submits a filing in this docket (reply comments or otherwise) that relies on or references such modeling. Second, in the case of those intervenors that intend to perform their own modeling with a model other than EnCompass, the Companies request that such intervenors flag and annotate all changes to inputs or model settings contained within the Excel files exported from EnCompass as supplied by the Companies. Changes should be flagged by highlighting of the affected cells (or range of cells), with a "note" inserted for the cells (or range of cells) briefly indicating the rationale for the change(s). The Companies request that the modified/annotated Excel files be made available to the Companies on the same day as any such intervenor submits a filing in this docket (reply comments or otherwise) that relies or references such modeling.

Additional Stakeholder Sub-Group Meetings. The Commission's March 22 Order also encouraged the Companies to consider additional technical subgroup meetings in the interest of additional information sharing. In the March 22 stakeholder meeting, the Companies shared significant information with stakeholders about technical modeling inputs/assumptions, and the Companies will be sharing additional substantive information in ten days, as described herein. In the interest of continuing to engage with stakeholders on issues related to the Carbon Plan, the Companies are developing stakeholder engagement plans to discuss Environmental Justice issues with a discreet group of interested stakeholders. Additionally, plans are underway to discuss community and economic impacts to those communities that will experience coal generation facility retirements in the future. Other stakeholder engagement remains ongoing, such as the EE/DSM Collaborative and the 2022 solar procurement stakeholder engagement. Finally, the Companies anticipate substantial further stakeholder engagement will occur after the May 16 filing consistent with the Commission's expectations in its Issues Report Order.

Ms. A. Shonta Dunston, Chief Clerk

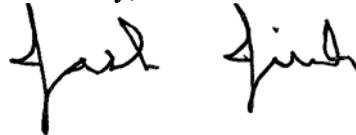
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The Companies look forward to continued engagement with intervenors and stakeholders as this docket progresses. Intervenors interested in having access to the draft data inputs and assumptions identified in Attachment A on April 15th and/or the complete and final EnCompass datasets on May 16th should contact Duke Energy Associate General Counsel Jason Higginbotham (Jason.higginbotham@duke-energy.com) who will be coordinating the confidentiality agreement execution process and providing instructions regarding accessing the information as it becomes available.

If you have any questions, please do not hesitate to contact me. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack E. Jirak".

Jack E. Jirak

cc: Parties of Record

Attachments

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Apr 05 2022

Comprehensive List of Draft Carbon Plan Inputs and Assumptions
Available to Intervenor on April 15, 2022

Recognizing the desire of stakeholders to receive additional detail on key data elements used in the development of the Carolinas Carbon Plan, Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP” and together with DEC, the “Companies”) will provide material inputs and assumptions, as listed below, in draft, preliminary form to all intervenors that execute a confidentiality agreement. From a supply-side perspective, the data elements listed below represent a comprehensive list of selectable resources modelled in the Carbon Plan. Specific details on technology specific cost, performance characteristics, effective load carrying capabilities (“ELCC”), transmission assumptions, and volumetric constraints across time will be provided for each selectable resource analyzed in the model. From a demand-side perspective, the data that the Companies will share on April 15 will include the draft forecast of the annual hourly energy and demand needs on the system for all 8,760 hours per year for each year over the 28-year period spanning 2023 through 2050. This represents nearly 250,000 hourly values for customer demand for each of the three operating areas being modeled (DEC, DEP-East, DEP-West). The Companies will also provide on April 15 additional detail on the sub-components of the Companies’ demand forecast(s), including energy and demand impacts of utility energy efficiency, utility integrated volt/var control (“IVVC”) programs, rooftop solar and electric vehicle assumptions in the load forecast. The following list outlines the specific resource technologies that have been determined to be selectable resources for the upcoming Carolinas Carbon Plan and enumerates the specific information for each selectable resource that will be made available on April 15.

Selectable Resource List:

- Stand-alone solar
- Two configurations of solar paired with energy storage
- Stand-alone battery storage options
- Hydro pumped storage
- On-Shore Wind
- Off-Shore Wind
- New Nuclear Resources
- Simple cycle turbines (“CTs”), including assumptions related to hydrogen capability
- Combined cycle turbines (“CCs”), including assumptions related to hydrogen capability

For each of these resources, the Companies will provide the following draft modeling assumptions, as applicable:

- Capital costs
- Fuel cost assumptions for CTs and CCs
- Fixed Operation and Maintenance costs
- Variable Operation and Maintenance costs
- Unit characteristics including assumed operational profiles and capacity factors for renewable resources and heat rate efficiencies where appropriate for thermal resources
- Configuration options for solar paired with energy storage
- Degradation assumptions for solar and battery storage
- Book life assumptions for all resources

- Assumptions on annual connection limits and the assumed timing of availability for resource selection options in the model
- Transmission cost assumptions for each resource
- ELCC values

Load Forecast Data:

- Hourly energy/demand forecast for DEP-E, DEP-W and DEC, including assumed transfer capability between the modeled operating areas
- Annual energy and demand impacts of utility sponsored energy efficiency
- Rooftop solar adoption impacts
- Electric vehicle adoption impacts
- IVVC impacts