

November 20, 2023

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

Re: *PJM Interconnection, L.L.C., Docket No. ER23-2663-00*,
Submission of Response to Deficiency Letter, Original ISA, SA No. 7038

Dear Secretary Bose:

PJM Interconnection, L.L.C. (“PJM”) submits for filing this response to the Federal Energy Regulatory Commission’s (“Commission”) October 20, 2023 letter requesting additional information¹ concerning the Interconnection Service Agreement (“ISA”) among PJM as Transmission Provider, Virginia Electric and Power Company (“Dominion”) as Interconnection Customer, and Appalachian Power Company (“AEP”) as Interconnected Transmission Owner (“Henry County Solar ISA”).² While certain revisions to the language contained in Schedule F of the Henry County Solar ISA are required, the Schedule F provisions appropriately recognize the specific operational and reliability issues associated with this ISA, and the Commission should accept the use of this nonconforming language.

¹ *PJM Interconnection, L.L.C., Deficiency Letter, Docket No. ER23-2663-000* (Oct. 20, 2023) (“October 20 Letter”).

² *PJM Interconnection, L.L.C., Original ISA, SA No. 7038; Queue No. AE2-047, Docket No. ER23-2663-000* (Aug. 21, 2023) (“August 21 Filing”). Consistent with 18 C.F.R. § 35.3(a)(2), PJM in the August 21 Filing requested an effective date for the Henry County Solar ISA of July 21, 2023. August 21 Filing at 2, 5. Capitalized terms not defined herein have the meaning set forth in PJM’s Open Access Transmission Tariff (“Tariff”) or in the Henry County Solar ISA.

I. INTRODUCTION

The Henry County Solar ISA is intended to facilitate the interconnection of the Henry County Solar Customer Facility, a solar photovoltaic generating facility located in Henry County, Virginia that has a Maximum Facility Output of 50 megawatts (“MW”), to the PJM system.³ Schedule F of the ISA sets forth provisions recognizing the need for the completion of studies by Duke Energy Progress, LLC (“Duke”) as an Affected System Operator and the potential need for upgrades, and states:

As of the effective date of this Agreement, Duke has not completed the studies necessary to determine the transmission facilities or upgrades on the Duke transmission system as an Affected System (“Affected System Upgrades”) required to accommodate the Queue #AE2-047 Interconnection Request. The Interconnection Customer may not be able to receive Interconnection Services for their Maximum Facility Output prior to (i) the completion of the Affected Systems Study by Duke and (ii) the completion of any Affected System Upgrades identified through the study. In order to maintain system reliability, an interim deliverability study will be required to determine whether all or a portion of their output can be accommodated on the transmission system prior to completion of the Duke Affected Systems study and any required Affected System Upgrades. The interim deliverability study will need to be conducted each year until the completion of any required Affected System Upgrades.

In the October 20 Letter, the Commission requested that PJM:

Please explain why the proposed language in Schedule F, which PJM states is non-conforming, is a necessary deviation from PJM’s *pro forma* ISA. In particular, please elaborate on whether there are any specific reliability concerns, novel legal issues, or other unique factors that make the non-conforming language necessary.

The letter also asks PJM to “explain how the non-conforming language is consistent with the PJM tariff requirement that states ‘[i]n no event shall the need for upgrades to an

³ Henry County Solar ISA, Specifications sections 1.0(a)-(c).

Affected System delay Initial Operation of an Interconnection Customer's Customer Facility;”⁴ how PJM will conduct the interim deliverability;⁵ and whether PJM will amend the Henry County Solar ISA at a later date to reflect the results of Duke's affected system study.⁶

II. RESPONSE TO THE OCTOBER 20 LETTER

A. *While the Use of Provisions Recognizing the Need for Affected System Upgrades Is Necessary to Address Reliability, Certain Revisions to the Filed Schedule F Provisions Should Be Made.*

Schedule F contains language recognizing the need for the completion of the Affected System Studies and completion of any identified system upgrades that is necessary. However, upon further review, PJM has determined that certain revisions to Schedule F are necessary. Specifically, the reference to the results of a PJM interim deliverability study should be deleted because the determination of available service will be made in accordance with the Duke open access transmission tariff, as it is the Duke transmission system that will be the limiting factor. Accordingly, PJM plans to replace the Schedule F contained in the August 21 Filing to state as follows:

As of the effective date of this ISA, Duke Energy (“Duke”) has not completed the studies necessary to determine whether any upgrades on the Duke transmission system as an Affected System (“Affected System Upgrades”) would be required to reliably accommodate the Queue #AE2-047 Interconnection Request. Therefore, under Applicable Standards, the Customer Facility may be subject to operational limitations by PJM prior to (i) completion of the Duke studies and (ii) completion of any Affected System Upgrades identified through those studies unless the Affected System Operator can verify in advance and in accordance with its Tariff,

⁴ October 20 Letter at 2-3 (citing Tariff, section 218.1).

⁵ October 20 Letter at 3.

⁶ October 20 Letter at 3.

that the Customer Facility can be operational for any portion of its output.

This revised language is appropriate because, as discussed below, it recognizes the need for the completion of the Affected System Studies and completion of any identified system upgrades, and makes the parties aware of their rights and the potential limitations on service. The language also restricts the output of the Customer but does not preclude the Customer Facility's Initial Operation.⁷

B. Responses to Specific Questions in the October 20 Filing:

Question 1:

Please explain why the proposed language in Schedule F, which PJM states is non-conforming, is a necessary deviation from PJM's pro forma ISA. In particular, please elaborate on whether there are any specific reliability concerns, novel legal issues, or other unique factors that make the non-conforming language necessary.

Response:

As described above, PJM proposed to modify Schedule F to state as follows:

As of the effective date of this ISA, Duke Energy ("Duke") has not completed the studies necessary to determine whether any upgrades on the Duke transmission system as an Affected System ("Affected System Upgrades") would be required to reliably accommodate the Queue #AE2-047 Interconnection Request. Therefore, under Applicable Standards, the Customer Facility may be subject to operational limitations by PJM prior to (i) completion of the Duke studies and (ii) completion of any Affected System Upgrades identified through those studies unless the Affected System Operator can verify in advance and in accordance with its Tariff, that the Customer Facility can be operational for any portion of its output.⁸

⁷ PJM will need to consult with Dominion and AEP before making the revisions discussed here. In order to allow PJM time to consult with other parties concerning the revisions, PJM is submitting the Tariff record for the Henry County Solar ISA with an indefinite requested effective date of December 31, 9998 (12/31/9998). To the extent PJM and parties make any additional changes to the revised language above, PJM will explain and justify those changes when it submits the revised agreement.

⁸ Shown in redlined format, PJM proposing to modify the prior Schedule F language as follows:

As modified, Schedule F appropriately recognizes that the Interconnection Service available to Dominion may be restricted pending the identification and, potentially, construction of necessary upgrades on the Duke system. Duke is identified in the interconnection studies performed by PJM as an Affected System Operator affected by the Queue #AE2-047 Interconnection Request.⁹ The revised Schedule F language is necessary because allowing the Customer Facility to go into service prior to completion of the Affected System Study and, if necessary, the construction of upgrades on the Duke transmission system, could have an adverse impact on that system, potentially affecting reliability. These conditions are also consistent with Appendix 2, section 4.1 of the Henry County Solar ISA, which requires the Interconnection Customer to operate, or to cause operation of, its facilities in a safe and reliable manner in accord with Applicable Standards, all applicable rules, procedures and protocols set forth in the Tariff and the Operating Agreement, Applicable Laws and Regulations, and Good Utility Practices. Additionally, the Schedule F language provides the parties to the Henry County Solar ISA with clarity

As of the effective date of this ~~Agreement~~ISA, Duke ~~Energy~~ (“Duke”) has not completed the studies necessary to determine ~~the transmission facilities or whether~~ any upgrades on the Duke transmission system as an Affected System (“Affected System Upgrades”) would be required to reliably accommodate the Queue #AE2- 047 Interconnection Request. ~~The Interconnection~~Therefore, under Applicable Standards, ~~the~~ Customer ~~may not be able to receive Interconnection Services for their Maximum Facility Output~~may be subject to operational limitations by PJM prior to (i) ~~the~~ completion of the ~~Affected Systems Study by Duke~~ studies and (ii) ~~the~~ completion of any Affected System Upgrades identified through ~~the study~~. ~~In order to maintain system reliability, an interim deliverability study will be required to determine whether all or a those studies unless the Affected System Operator can verify in advance and in accordance with its Tariff, that the Customer Facility can be operational for any portion of their-its output can be accommodated on the transmission system prior to completion of the Duke Affected Systems study and any required Affected System Upgrades. The interim deliverability study will need to be conducted each year until the completion of any required Affected System Upgrades.~~

⁹ See *AE2-047 System Impact Study Report*, PJM Interconnection, L.L.C., Affected System section, (Dec. 5, 2022), https://pjm.com/pub/planning/project-queues/impact_studies/ac2047_imp.htm; *Generation Interconnection Feasibility Study Report for Queue Project AE2-047*, PJM Interconnection, L.L.C., 23, 40 (Oct. 2019), https://pjm.com/pub/planning/project-queues/feas_docs/ac2047_fea.pdf.

as to their rights and the potential limitations on service, and enables Dominion to progress through the interconnection process, rather than having to delay all progress until the identification and completion of any necessary the Affected System upgrades.¹⁰

Notably, the Tariff requires PJM to account for, and coordinate with Duke to evaluate, the impact of the project's interconnection on the Duke system.¹¹ The Schedule F provisions were included to recognize and facilitate that coordination. Moreover, while PJM does not control the timing of work completed by Duke, section 212 of the Tariff requires PJM to tender an ISA to the Interconnection Customer upon completion of the Facilities Study.¹² Tariff, section 212.4 requires that the Interconnection Customer execute the ISA within 60 days of tender.¹³ The Schedule F language allows the project to move forward in accordance with the Tariff, while accommodating necessary Affected System upgrades, and therefore should be accepted. No third party is affected by this nonconforming provision and there will be no adverse impact on reliability.

Question 2:

Please explain how the non-conforming language is consistent with the PJM tariff requirement that states “[i]n no event shall the need for upgrades to an Affected System delay Initial Operation of an Interconnection Customer’s Customer Facility.”

¹⁰ The Duke Affected System study for this project is still pending and it is uncertain when it will be completed.

¹¹ See Tariff, Part VI, section 202 (requiring coordination with Affected System Operators during the interconnection study process); see also Tariff, Part VI, section 218.1 (stating the Interconnection Customer is responsible for the costs of any required transmission facilities or upgrades on the Affected System to the extent consistent with the Affected System Operator's tariff).

¹² Tariff, Part VI, section 212 (“Upon completion of the Facilities Study . . . the Transmission Provider shall tender to each Interconnection Customer an Interconnection Service Agreement (in the form included in Tariff, Attachment O) to be executed by the Interconnection Customer, the Interconnected Transmission Owner and the Transmission Provider.”).

¹³ Tariff, Part VI, section 212.4.

Response:

Schedule F as revised is consistent with the provisions of Tariff, section 218.1, which states “[i]n no event shall the need for upgrades to an Affected System delay Initial Operation of an Interconnection Customer’s Customer Facility.” Specifically, while Schedule F allows for the imposition of operational limitations prior to completion of the Duke studies and completion of any Affected System Upgrades identified through those studies, it does not preclude the Henry County Solar Customer Facility from achieving Initial Operation. The Henry County Solar ISA defines “Initial Operation” as “the commencement of operation of the Customer Facility and Customer Interconnection Facilities after satisfaction of the conditions of Tariff, Attachment O-Appendix 2, section 1.4 (an Interconnection Service Agreement).”¹⁴ This is separate and distinct from commercial operation, which is subject to a separate milestone under the ISA, and includes both achieving Initial Operation and “making commercial sales or use of energy, as well as, if applicable, obtaining capacity qualification.”¹⁵

Finally, PJM has implemented reforms to its Tariff, such that Tariff, section 218.1 will not apply to Interconnection Requests that were not tendered or did not receive an ISA prior to July 10, 2023, or that submit an Interconnection Request after that date.¹⁶ Instead, such Interconnection Requests will be subject to either Tariff, Part VII.G, section 336(A)(2) or Tariff, VIII, section 434(A)(2), which state in relevant part:

In no event shall the need for upgrades to an Affected System delay
Initial Operation of a Project Developer’s Generating Facility or

¹⁴ Henry County Solar ISA, Appendix 1, Definitions. The term “initial operations” generally refers to producing test energy and other steps taken prior to achieving commercial operation.

¹⁵ Henry County Solar ISA, section 6.6 (commercial operation milestone).

¹⁶ See *PJM Interconnection, L.L.C.*, Notification of Occurrence of Transition Date, Docket Nos. ER22-2110-000 and -001 (July 11, 2022).

Merchant Transmission Facility. Notwithstanding the start of Initial Operation, Transmission Provider reserves the right to limit Generating Facility injections in the event of potential Affected System impacts, in accordance with Good Utility Practice. Total injections may be limited pending coordination and completion of any necessary deliverability studies by the Affect System Operator.

This provision is more explicit than Tariff, section 218.1 in that it specifically allows PJM to impose operating limitations on a Generating Facility's output to address Affected System issues, which should eliminate concerns about such limitations in the future.

Question 3:

Please explain how PJM will conduct the interim deliverability study. Specifically, please explain how PJM will determine how much output can be accommodated on the PJM transmission system to the extent Duke has not completed the affected system study by the customer facility's commercial operation date.

Response:

As noted above, PJM has determined that the sentence in Schedule F referencing the results of an interim deliverability study should be deleted because the availability of service will be limited by the impact of the Duke system, and the determination of available service will be made in accordance with the Duke open access transmission tariff. Therefore, PJM will not undertake an interim deliverability study.

Question 4:

Please explain whether PJM will amend the Henry County Solar ISA at a later date to reflect the results of Duke's affected system study.

Response:

PJM cannot determine if an amendment to the Henry County Solar ISA will be required until such time as the Duke Affected System study is completed. In the event any revisions to the Henry County Solar ISA are necessary, PJM will develop the necessary changes in consultation with the parties and will file a revised ISA with the Commission.

III. REQUESTED EFFECTIVE DATE

As noted above, PJM is resubmitting the Henry County Solar ISA record with an indefinite requested effective date (for eTariff purposes) of December 31, 9998. However, PJM requests that whatever action the Commission ultimately takes in this proceeding will not affect the July 21, 2023 effective date originally requested for the Henry County Solar ISA.

IV. SERVICE

As directed in the October 20 Letter, a copy of this filing will be electronically delivered to Emma Brin. Copies of this filing will also be served on Dominion, AEP, and all parties on the Commission's service list established in the proceeding, as well as the affected state regulatory commissions within the PJM Region.

V. CONCLUSION

PJM respectfully submits that the information provided in this response letter and in the August 21 Filing, together with the additional changes described above, provides a sufficient basis for the Commission to accept the Henry County Solar ISA. Please contact any of the undersigned if you require additional information.

Respectfully submitted,

/s/ David S. Berman

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 20th day of November, 2023.

/s/ David S. Berman

David S. Berman