

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Improvements to Generator) **Docket No. RM22-14-000**
Interconnection Procedures and)
Agreements)
)

**PARTIAL REPLY COMMENTS OF
PJM INTERCONNECTION, L.L.C.**

Pursuant to the Commission’s June 16, 2022 Notice of Proposed Rulemaking,¹ PJM Interconnection, L.L.C. (“PJM”) respectfully submits these Partial Reply Comments to the October 13, 2022 “Comments of Dr. Roy Shanker PH.D,” filed in the above-captioned proceeding.² PJM notes that these Partial Reply Comments are separate and distinct from future reply comments related to the substance of this proceeding, which PJM intends to submit on or before December 14, 2022.³

I. PARTIAL REPLY COMMENTS TO SHANKER COMMENTS

These Partial Reply Comments are divided into three sections. The first section (A) explains why the Shanker Comments are far beyond the scope of this rulemaking, and should be rejected on procedural grounds. The second section (B) directly refutes the specific allegations of non-compliance made in the Shanker Comments. The third section (C) provides important

¹ *Improvements to Generator Interconnection Procedures and Agreements*, 179 FERC ¶ 61,194 (2022) (hereafter, the “NOPR”).

² *Improvements to Generator Interconnection Procedures and Agreement*, Comments of Dr. Roy Shanker PH.D, Docket No. RM22-14-000 (Oct. 13, 2022) (hereafter, the “Shanker Comments”).

³ *Improvements to Generator Interconnection Procedures and Agreements*, Notice on Request for Extension of Time, Docket No. RM22-14-000 (Oct. 28, 2022) (“Upon consideration, notice is hereby given that the deadline to submit reply comments in response to the NOPR in this proceeding is extended from November 14, 2022 to and including December 14, 2022.”).

background information for the Commission related to the allegations of non-compliance in the Shanker Comments.

A. The Shanker Comments Raise Issues Far Beyond the Scope of This NOPR, and Should Be Rejected on Procedural Grounds.

Through this NOPR, the Commission is proposing a set of *generic* reforms, to be instituted across the nation to address certain process issues associated with the operation of interconnection queues. The NOPR addresses on a generic basis topics such as: (i) implementing a first-ready, first-served cluster study process; (ii) increasing the speed of interconnection queue processing; and (iii) incorporating technological advancements into the interconnection process.⁴ The ‘product’ of this rulemaking will ultimately be a set of reforms related to the processing of interconnection queues, and will be applied to Transmission Providers across the country (subject to any future independent entity variations).

By contrast, the Shanker Comments do not address any of the generic issues raised by the NOPR,⁵ and instead focus on specific allegations which their author has repeatedly expressed in the PJM stakeholder process, objecting to PJM’s application of its current tariff language as applied to the accreditation of capacity. Putting aside the merits of this topic (which PJM will nonetheless address below), the Shanker Comments do not even attempt to link this PJM-specific issue with the generic issues being considered in this docket, and are well outside the scope of this proceeding. The Commission should not entertain attempts by third parties to use rulemaking proceedings as a ‘catch-all’ to raise specific complaints relative to the application of individual

⁴ See NOPR at P 4.

⁵ Shanker Comments at P 5 (“I have chosen not to address the specific details of what the Commission has proposed, but rather address what I think are several important and necessary elements related to interconnection that have been mistakenly omitted.”).

public utility tariff provisions. As a result, the Shanker Comments should be rejected as far beyond the scope of this proceeding.

The Shanker Comments also attempt to retroactively re-litigate a specific Commission determination in the July 30, 2021 order⁶ accepting PJM’s Effective Load Carrying Capability (“ELCC”) construct in Docket No. ER21-2043 that undermines the position espoused by the Shanker Comments.⁷ It is unclear if this is intended as a collateral attack on a prior Commission order, or as a statutorily-barred out-of-time rehearing request, but given that either action is prohibited, the Commission should reject the Shanker Comments on these grounds as well.

B. The Allegations of Non-Compliance Made in the Shanker Comments Are Demonstrably Incorrect.

Despite the absence of any nexus between the allegations of non-compliance made in the Shanker Comments and this generic rulemaking, PJM will nonetheless address them directly in this pleading.

PJM is very familiar with the allegations made in the Shanker Comments, and notes that their author is presently providing consulting services in the PJM stakeholder process to parties that have made identical accusations of non-compliance against PJM.⁸

⁶ *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056, at P 53 (2021) (“Given the fact that a Variable Resource may deliver more than its CIR quantity to the PJM system during hours when the transmission system is not constrained, we find PJM’s approach reasonable in contrast to artificially limiting a Variable Resource’s output to its CIRs within the ELCC model.”).

⁷ *See, e.g.*, Shanker Comments at P 10, n.6 (“Note that this statement directly contradicts representations that PJM made to the Commission and that the Commission relied on in its July 30, 2021 Order in Docket ER21-2043. *See PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056 at P 53 (2021).”).

⁸ *See, e.g.*, Shanker Comments, Attachment A, at 2 (“260—On behalf of LS Power Associates L.P. before the Federal Energy Regulatory Commission Docket No. ER21-2043. Affidavit discussing PJM’s revised Effective Load Carrying Capability proposal, its limitations and associated PJM responses to previous comments regarding its initial proposal.”). *See also, e.g.*, LS Power, Presentation (Sept. 23, 2022), <https://www.pjm.com/-/media/committees-groups/committees/pc/2022/20220923-special/item-03b---ls-power-solution-package---presentation.ashx>.

PJM also notes at the outset that: (i) PJM’s approach to considering variable resource output is in compliance with its Commission-jurisdictional governing documents, and has been in place for decades; (ii) the Commission specifically affirmed PJM’s approach in its order approving PJM’s ELCC construct;⁹ (iii) in March 2022, the PJM Board of Managers rejected allegations that are strikingly similar to those made in the Shanker Comments;¹⁰ and (iv) in February 2019, the Commission rejected allegations that are strikingly similar to those made in the Shanker Comments against PJM’s sister Regional Transmission Organization (“RTO”) the Midcontinent Independent System Operator, Inc. (“MISO”), in a failed FPA section 206 attempt in Docket No. EL19-28.¹¹

The Shanker Comments state that PJM “has serially and intentionally violated its tariff, governing agreements, and interconnection agreements by such over accreditation of Capacity Resources for production in excess of the facilities’ [Capacity Interconnection Rights (“CIRs”)].”¹² In support of this accusation, the Shanker Comments provide the following analysis, which PJM recites here unabridged:

The PJM tariff, governing documents, and ISAs do not permit PJM to accredit a Capacity Resource for the value of any energy created in excess of that facility’s CIR. Section 1 of the PJM Tariff defines the term “Energy Resources” as “[a] generating facility that is *not* a Capacity Resource.” Section 36.1.1 of the tariff provides that “Generation Interconnection Customers may request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource.” request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource. [sic] Section 2.0 of the PJM *pro forma* ISA and each individual PJM ISA, requires a specific CIR

⁹ *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056, at P 53 (2021) (“Given the fact that a Variable Resource may deliver more than its CIR quantity to the PJM system during hours when the transmission system is not constrained, we find PJM’s approach reasonable in contrast to artificially limiting a Variable Resource’s output to its CIRs within the ELCC model.”).

¹⁰ PJM, PJM Board Response (March 4, 2022), <https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20220304-board-response-to-p3.ashx>.

¹¹ *Coalition of Midwest Power Producers, Inc. v. Midcontinent Indep. Sys. Operator, Inc.*, 166 FERC ¶ 61,159 (2019).

¹² Shanker Comments at 3.

value to be included in every agreement. Section 2.1(a) of each ISA then goes on to explain in unmistakably clear terms that the PJM capacity accreditation process will only recognize energy production up to the CIR level, stating unequivocally that, “[t]o the extent that any portion of the Customer Facility described in section 2.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource.” Schedule 9.1.H of the PJM Reliability Assurance Agreement (RAA) likewise provides that “Energy Resources are not included in the effective load carrying capability analysis” for generation facilities. I believe the language is clear, and PJM’s use of energy in excess of the CIR level in any accreditation of a Capacity Resource is a tariff violation as well as a material factor creating problems with PJM’s management of new interconnection requests.¹³

PJM believes that this analysis is incorrect for the following reasons, each of which is described in greater detail below in subsections (I)(B)(i) – (I)(B)(v).

1. PJM has always required that wind and solar Capacity Resources meet applicable deliverability requirements, and has never permitted the final capacity values of wind and solar resources to exceed their CIR levels. This has been PJM’s historical practice, and this rule is explicitly memorialized in PJM Manuals 21 and 18.¹⁴
2. The interpretation of ISA, Specifications, Section 2.1a put forth by the Shanker Comments is completely unsupported by the plain text of that provision, and seeks to import a link to PJM’s capacity accreditation process where none textually exists. The referenced single sentence in ISA, Specifications, Section 2.1a is a simple acknowledgement that a device is physically capable of providing energy above its CIR value, up to its Maximum Facility Output (“MFO”). This plain meaning of ISA, Specifications, Section 2.1a is supported by the provision’s only textual cross-reference to ISA, Specifications, Section 1, which identifies the unit’s MFO,¹⁵ and the sentence

¹³ *Id.* at 3-4 (emphasis in original, internal citations omitted).

¹⁴ See PJM, *Manual 21: Rules and Procedures for Determination of Generating Capability*, § 1.2 (rev. 16, Aug. 1, 2021), <https://www.pjm.com/-/media/documents/manuals/m21.ashx> (“Manual 21”) (“Installed Capacity (ICAP) of a generation resource is defined as the summer net capability of a generating unit as determined in accordance with PJM manual M-21, Rules and Procedures for Determination of Generation Capability and within the capacity interconnection right limits of the bus to which it is connected.”) (emphasis added); PJM, *Manual 18: PJM Capacity Market*, § 5.4.1 (rev. 54, Sept. 21, 2022), <https://www.pjm.com/-/media/documents/manuals/m18.ashx> (“Manual 18”) (“ELCC Resources may not offer or otherwise provide UCAP MW quantities above their Capacity Interconnection Rights.”).

¹⁵ PJM Open Access Transmission Tariff (“Tariff”), Attachment O Form (hereafter, the “ISA”), Specifications For ISA, Section 2.1a (“2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource.”) (emphasis added).

that immediately follows, which states that “PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.” The interpretation of ISA, Specifications, Section 2.1a put forth by the Shanker Comments is also fundamentally undermined by the absence of *any* reference to PJM’s capacity accreditation rules, which are located in the RAA and PJM Manuals.

3. The interpretation of ISA, Specifications, Section 2.1a put forth by the Shanker Comments is completely unsupported by the administrative record of the 2005 Federal Power Act (“FPA”) section 205¹⁶ proceeding that introduced that provision into PJM’s Tariff,¹⁷ and in particular the text codified in tariff record “Original Sheet No. 513A” under PJM’s “FERC Electric Tariff, Sixth Revised, Volume No. 1.”
4. PJM’s capacity accreditation rules are contained in the RAA and PJM Manuals, not in the ISAs of individual generators, and the text of the *pro forma* ISA itself affirms that the capacity qualification requirements arise under the RAA, not the ISA.¹⁸
5. The claim that a single sentence in RAA, Schedule 9.1(H) prohibits “PJM’s use of energy in excess of the CIR level in any accreditation of a Capacity Resource” is demonstrably incorrect, because it is directly contradicted by the administrative record that produced RAA, Schedule 9.1(H). Specifically, the Commission’s order approving PJM’s ELCC methodology explicitly rejects the interpretation put forward by the Shanker Comments.¹⁹ In addition, the text of PJM’s FPA section 205 filing proposing RAA, Schedule 9.1(H) affirms that the purpose of this sentence is to make clear that Energy Resource units with no CIRs (*i.e.*, not Capacity Resources) are excluded from the analysis—not “energy in excess of the CIR level in any accreditation of a Capacity Resource.”²⁰

¹⁶ 16 U.S.C. § 824d.

¹⁷ *PJM Interconnection, L.L.C.*, Tariff Filing of PJM Interconnection, L.L.C., Docket No. ER06-28-000 (Oct. 11, 2005) (hereafter, the “October 11, 2005 Filing”).

¹⁸ See ISA, Section 6.3 (“Demonstrating commercial operation includes achieving Initial Operation in accordance with Section 1.4 of Appendix 2 to this ISA and making commercial sales or use of energy, *as well as, if applicable, obtaining capacity qualification in accordance with the requirements of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region.*”) (emphasis added).

¹⁹ *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056, at P 53 (2021) (“Given the fact that a Variable Resource may deliver more than its CIR quantity to the PJM system during hours when the transmission system is not constrained, we find PJM’s approach reasonable in contrast to artificially limiting a Variable Resource’s output to its CIRs within the ELCC model.”).

²⁰ *PJM Interconnection, L.L.C.*, Tariff Filing of PJM Interconnection, L.L.C., Docket No. ER21-2043-000. at n.52 (June 1, 2021) (“Proposed RAA, Schedule 9.1, section H. *PJM will omit energy-only resources from the ELCC analysis, as such resources have no obligation to provide capacity and therefore cannot be relied on to meet reliability needs.* Proposed RAA, Schedule 9.1, section H.”) (emphasis added).

- i. ***PJM has always required that wind and solar Capacity Resources meet applicable delivery requirements, and has never permitted the final capacity values of wind and solar resources to exceed their CIR levels. This rule is explicitly memorialized in PJM’s manuals.***

RAA, Schedule 10 states that “Generation Capacity Resources must be deliverable, consistent with a loss of load expectation as specified by the Reliability Principles and Standards, to the total system load, including portion(s) of the system in the PJM Region that may have a capacity deficiency at any time.” PJM has always required that resources have CIRs up to their final capacity value. For ELCC resources, this requirement is memorialized in Manual 18, Section 5.4.1:

*ELCC Resources may not offer or otherwise provide UCAP MW quantities above their Capacity Interconnection Rights.*²¹

For other resources, this requirement is memorialized in Manual 21, Section 1.2:

*Installed Capacity (ICAP) of a generation resource is defined as the summer net capability of a generating unit as determined in accordance with PJM manual M-21, Rules and Procedures for Determination of Generation Capability **and within the capacity interconnection right limits of the bus to which it is connected.** (emphasis added).*²²

Put another way, PJM has never permitted the final capacity values of wind and solar resources to exceed their CIR levels.

²¹ Manual 18, § 5.4.1.

²² Manual 21, § 1.2.

- ii. ***The claim that ISA, Specifications, Section 2.1a “explain[s] in unmistakably clear terms that the PJM capacity accreditation process will only recognize energy production up to the CIR level” is demonstrably incorrect, because it is unsupported by the plain text of the cited provision.***

As indicated above, the Shanker Comments are largely predicated on a recently formulated interpretation of ISA, Specifications, Section 2.1a that attempts to import a link to PJM’s capacity accreditation process where none textually exists.

Addressing the text of the provision first, ISA, Specifications, Section 2.1a reads as follows:

2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.²³

The applicable definitions within this text are as follows:

“Customer Facility” shall mean Generation Facilities or Merchant Transmission Facilities interconnected with or added to the Transmission System pursuant to an Interconnection Request under Tariff, Part IV.²⁴

“Capacity Interconnection Rights” shall mean the rights to input generation as a Generation Capacity Resource into the Transmission System at the Point of Interconnection where the generating facilities connect to the Transmission System.²⁵

“Capacity Resources” shall mean megawatts of (i) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources meeting the requirements of the Reliability Assurance Agreement, Schedules 9 and Reliability Assurance Agreement, Schedule 10 that are or will be owned by or contracted to a Party and that are or will be committed to satisfy that Party's obligations under the Reliability Assurance Agreement, or to satisfy the reliability requirements of the PJM Region, for a Delivery Year;

²³ ISA, Specifications For ISA, Section 2.1a.

²⁴ Tariff, Part I, Definitions C-D.

²⁵ *Id.*

(ii) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources not owned or contracted for by a Party which are accredited to the PJM Region pursuant to the procedures set forth in such Schedules 9 and 10; or (iii) load reduction capability provided by Demand Resources or Energy Efficiency Resources that are accredited to the PJM Region pursuant to the procedures set forth in the Reliability Assurance Agreement, Schedule 6.²⁶

“Energy Resource” shall mean a Generating Facility that is not a Capacity Resource.²⁷

“Generating Facilities,” shall mean the Interconnection Customer’s device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer’s Interconnection Facilities.²⁸

The Shanker Comments appear to focus on the definition of “Energy Resource,” and imply that the use of the word “portion” in ISA, Specifications, Section 2.1a somehow translates to ‘output used for capacity accreditation purposes.’

2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity. (emphasis added).²⁹

There is no causal nexus between this interpretation and the text as written, and there is certainly nothing in this provision that “explain[s] in unmistakably clear terms that the PJM capacity accreditation process will only recognize energy production up to the CIR level.”³⁰ The

²⁶ RAA, Article 1, Definitions.

²⁷ Tariff, Part I, Definitions E-F.

²⁸ Tariff, Part I, Definitions G-H (effective April 1, 2020); *See PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226 (2019) (Order on Compliance Filing in Docket No. ER19-1958-000).

²⁹ ISA, Specifications For ISA, Section 2.1a.

³⁰ Shanker Comments at P 9.

single sentence in ISA, Specifications, Section 2.1a that the Shanker Comments focus on is a simple acknowledgement that a device is physically capable of providing energy above its CIR value, up to its MFO. This plain meaning of ISA, Specifications, Section 2.1a is supported by the provision's only textual cross-reference to ISA, Specifications, Section 1.

To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.³¹

ISA, Specifications, Section 1.0 is an extremely short and narrow provision that only identifies three simple pieces of “fill in the blank” information: (i) the facility name; (ii) the facility location; and (iii) the facility MFO. ISA, Specifications, Section 1.0 contains no information related to PJM's capacity accreditation process.

1.0

a. Description of [generating unit(s)] [Merchant Transmission Facilities] (the Customer Facility) to be interconnected with the Transmission System in the PJM Region: a. Name of Customer Facility:

b. Location of Customer Facility:

c. Size in megawatts of Customer Facility: {The following language should be included only for generating units For Generation Interconnection Customer: Maximum Facility Output of _____ MW}

The MFO information recorded in ISA, Specifications, Section 1.0 logically feeds into the sentence in the next section—ISA, Specifications, Section 2.1a. It also logically feeds into the sentence that immediately *follows* the sentence emphasized by the Shanker Comments, which

³¹ ISA, Specifications For ISA, Section 1.

reads “PJM reserves the right to limit total injections *to the Maximum Facility Output* in the event reliability would be affected by output greater than such quantity.”³² (emphasis added)

To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.

To reiterate, the single sentence in ISA, Specifications, Section 2.1a that the Shanker Comments focus on is a simple acknowledgement that a device is physically capable of providing energy above its CIR value, up to its MFO.

In contrast to this plain meaning, the Shanker Comments attempt to link this single sentence in ISA, Specifications, Section 2.1a to PJM’s capacity accreditation process, and conclude that this single sentence “explain[s] in unmistakably clear terms that the PJM capacity accreditation process will only recognize energy production up to the CIR level.”³³ This interpretation is completely unsupported by the text of ISA, Specifications, Section 2.1a, and the sub-definitions therein, which do not in any way speak to how PJM’s capacity value accreditation process is to be conducted. The absence of *any* textual support for this claim is important for understanding why it is incorrect. The Commission has explained that “tariff provisions should be in clear and explicit language that leaves no doubt whatsoever as to their meaning and applicability.”³⁴ Because FPA section 205 requires that customers be apprised of the rates, terms, and conditions of the Commission-jurisdictional services that they may be subject to, the Commission’s implementation of regulations similarly requires that tariffs “clearly and specifically” describe such rates, terms, and

³² ISA, Specifications For ISA, Section 2.1a (emphasis added).

³³ Shanker Comments at P 9.

³⁴ *Algonquin Gas Transmission Co.*, 54 F.P.C. ¶ 675, 692 (1975).

conditions.³⁵ Because there is no textual link to PJM’s capacity accreditation process in ISA, Specifications, Section 2.1a, no plain reading of that provision could reasonably apprise customers of the recently-discovered hidden meaning that the Shanker Comments now claim exists.

iii. The claim that ISA, Specifications, Section 2.1a “explain[s] in unmistakably clear terms that the PJM capacity accreditation process will only recognize energy production up to the CIR level” is demonstrably incorrect, because it is wholly unsupported by the 2005 Commission proceeding that produced the language in ISA, Specifications, Section 2.1a.

When interpreting a tariff or contract, the Commission has explained that it “looks first to the language of the tariff or contract itself and, only if it cannot discern the meaning of the contract or tariff from the language of the contract or tariff, will it look to extrinsic evidence of intent.”³⁶ PJM maintains that the plain text of ISA, Specifications, Section 2.1a precludes the interpretation put forward by the Shanker Comments, primarily due to the provision’s plain meaning and the absence of any textual link to PJM’s capacity accreditation process, as explained in the prior section (I)(B)(ii). However, to the extent that the Commission finds extrinsic evidence necessary to reject the interpretation of this language put forward in the Shanker Comments, the administrative record that produced the single sentence at issue similarly contains no evidence to support a link to PJM’s capacity accreditation rules.

³⁵ 18 C.F.R. § 35.1(a) (“Every public utility shall file with the Commission and post, in conformity with the requirements of this part, full and complete rate schedules and tariffs and those service agreements not meeting the requirements of § 35.1(g), clearly and specifically setting forth all rates and charges for any transmission or sale of electric energy subject to the jurisdiction of this Commission, the classifications, practices, rules and regulations affecting such rates, charges, classifications, services, rules, regulations or practices, as required by section 205(c) of the Federal Power Act.”).

³⁶ *Light Power & Gas of NY LLC v. New York Independent System Operator, Inc.*, 169 FERC ¶ 61,216, at P 9 (2019).

The referenced language in ISA, Specifications, Section 2.1a was submitted by PJM as part of an FPA section 205 filing on October 11, 2005, in Docket No. ER06-28-000.³⁷ As PJM explained in its transmittal letter, “[t]he enclosed tariff sheets include revisions to the generation and merchant transmission interconnection provisions of the PJM Tariff to clarify certain terms and conditions, to provide consistent references to defined terms, and to make other, primarily ministerial, revisions such as the correction of grammatical or other errors.”³⁸ The language referenced in the Shanker Comments was added as a new tariff sheet, with the designation of “Original Sheet No. 513A,” as shown in the image below. The only description provided by PJM for the bundle of tariff records that include Original Sheet No. 513A, also shown below, does not in *any way* reference the PJM capacity accreditation process, or lend any support to the interpretation put forward in the Shanker Comments.

³⁷ *PJM Interconnection, L.L.C.*, Tariff Filing of PJM Interconnection, L.L.C., Docket No. ER06-28-000 (Oct. 11, 2005) (hereafter, the “October 11, 2005 Filing”).

³⁸ *Id.* at 4.

Exhibit PJM-1: Applicable Excerpts of the October 11, 2005 Filing

PJM Interconnection, L.L.C.
 FERC Electric Tariff
 Sixth Revised Volume No. 1

Original Sheet No. 513A

To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. Pursuant to this Interconnection Service Agreement, the Customer Facility will be permitted to inject _____ MW (nominal) into the system. PJM reserves the right to limit injections to this quantity in the event reliability would be affected by output greater than such quantity.

Section Revised	Brief Description of Revision	New Sheet Designation
Att. O, Specs. Sec. 2.0	<ul style="list-style-type: none"> • Revised language to clarify the amount of Capacity Interconnection Rights granted • Revised to refer to "Point of Interconnection," rather than "bus" • Added language to clarify that a generating unit would be an Energy Resource to the extent it does not receive Capacity Interconnection Rights • Added references to "Controllable A.C. Merchant Transmission Facilities" after "Merchant D.C. Transmission Facilities" • Added Section 2.2A regarding rights if customer is interconnecting Controllable A.C. Merchant Transmission Facilities 	First Revised Sheet No. 513 Original Sheet No. 513A First Revised Sheet No. 514 and Original Sheet No. 514A

The proposed language in Original Sheet No. 513A was accepted without comment via delegated letter order on January 26, 2006.³⁹

- iv. PJM’s capacity accreditation rules are contained in the RAA and PJM manuals, not in the ISAs of individual generators.*

Schedule 9 of the RAA mandates that PJM develop “rules and procedures . . . to determine and demonstrate the capability of Generation Capacity Resources,” and specifies that these rules and procedures “shall be . . . maintained in the PJM Manuals.”⁴⁰ Schedule 9 also requires that these rules “recognize the difference in the relative ability of units to maintain output at stated capability over a specified period of time.”⁴¹

SCHEDULE 9

PROCEDURES FOR ESTABLISHING THE CAPABILITY OF GENERATION CAPACITY RESOURCES

A. Such rules and procedures as may be required to determine and demonstrate the capability of Generation Capacity Resources for the purposes of meeting a Load Serving Entity’s obligations under the Agreement shall be developed by the Office of the Interconnection and maintained in the PJM Manuals.

B. The rules and procedures shall recognize the difference in the relative ability of units to maintain output at stated capability over a specified period of time. Factors affecting such ability include, but are not limited to, fuel availability, stream flow and/or reservoir storage for hydro units, energy storage capability for Energy Storage Resources, energy source variability and intermittency, mechanical limitations, and system operating policies. For this purpose, the basis for determining and demonstrating the capability of a particular generating shall be described in RAA, Schedule 9.1.⁴²

³⁹ *PJM Interconnection, L.L.C.*, Delegated Letter Order, Docket No. ER06-28-000 (Jan. 26, 2006).

⁴⁰ RAA, Schedule 9.

⁴¹ *Id.*

⁴² *Id.* (emphasis added).

In direct compliance with this requirement in RAA Schedule 9, PJM has for decades detailed its approach to accounting for variable resource output in Manual 21, which explicitly states at page 6 “[t]his manual is specifically intended to reinforce and augment Schedule 9 of the Reliability Assurance Agreement.”⁴³

Market rules of general applicability, and the calculation methodology implementing those market rules, would be ill-suited for a form service agreement under an umbrella tariff, given that individual ISAs can be non-conforming, exist as stand-alone service agreements, and by their text are only effective upon execution or alternatively FERC approval of that specific agreement.⁴⁴ These are not characteristics conducive to a comprehensive regime of market design. Moreover, *the text of the ISA itself* affirms that capacity qualification requirements arise under the RAA, not the ISA. *See* ISA, Section 6.3:

6.3 Commercial Operation. (i) On or before _____, Interconnection Customer must demonstrate commercial operation of __ generating units; (ii) On or before _____, Interconnection Customer must demonstrate commercial operation of __ additional generating units. Demonstrating commercial operation includes achieving Initial Operation in accordance with Section 1.4 of Appendix 2 to this ISA and making commercial sales or use of energy, ***as well as, if applicable, obtaining capacity qualification in accordance with the requirements of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region.***⁴⁵

⁴³ Manual 21, Introduction, at 6. *See also, e.g.*, Manual 21, §§ 1.1.7 & Appendix B.

⁴⁴ *See, e.g.*, ISA, Section 4.0 (“Subject to any necessary regulatory acceptance, this ISA shall become effective on the date it is executed by all Interconnection Parties, or, if the agreement is filed with FERC unexecuted, upon the date specified by FERC.”).

⁴⁵ ISA, Section 6.3.

- v. ***The claim that RAA, Schedule 9.1(H) prohibits “PJM’s use of energy in excess of the CIR level in any accreditation of a Capacity Resource” is demonstrably incorrect, because it is directly contradicted by the record of the administrative proceeding that produced RAA, Schedule 9.1(H).***

As described above, the Shanker Comments propose a new interpretation of ISA, Specifications, Section 2.1a that is wholly unsupported by both the plain text of the ISA, and the administrative record of the language from 2005. The Shanker Comments then attempt to import this interpretation into PJM’s ELCC construct by juxtaposing the single sentence in ISA, Specifications, Section 2.1a with a single sentence in RAA, Schedule 9.1(H).

To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. (ISA, Specifications, Section 2.1a)

Energy Resources are not included in the effective load carrying capability analysis. (RAA, Schedule 9.1(H))

The Shanker Comments conclude that these two sentences mean “PJM’s use of energy in excess of the CIR level in any accreditation of a Capacity Resource is a tariff violation”⁴⁶

There are two (primary) problems with this analysis. The first is that the Commission explicitly rejected this argument in favor of PJM’s historical approach in its July 2021 Order⁴⁷ accepting PJM’s ELCC methodology in Docket No. ER21-2043.

Additionally, PJM states it will implicitly account for historically binding transmission constraints by considering each Variable Resource’s historic performance, including instances of curtailment due to transmission constraints. ***Given the fact that a Variable Resource may deliver more than its CIR quantity to the PJM system during hours when the transmission system is not constrained, we find PJM’s approach reasonable in contrast to artificially limiting a Variable Resource’s output to its CIRs within the ELCC model.*** FN131

⁴⁶ Shanker Comments at P 9.

⁴⁷ *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056, at n.131 (2021).

FN131 – As PJM notes, historic aggregate data from the PJM wind fleet illustrate that wind output during summer afternoons is often significantly above the average value, which is the basis for wind resources’ CIRs.

The Shanker Comments imply that the Commission did not actually mean what the words in its order actually say, due to unspecified (and uncited) “representations” that the Commission relied on in the proceeding.⁴⁸ The procedural impropriety of this accusation is axiomatic, and described above in section (I)(A).

The second problem with this analysis is the complete lack of *any* support for this interpretation in the administrative record of Docket No. ER21-2043, and the existence of record evidence in Docket No. ER21-2043 that directly explains what RAA, Schedule 9.1(H) means. The purpose of the sentence in RAA, Schedule 9.1(H) that “Energy Resources are not included in the Effective Load Carrying Capability Analysis” is to make clear that Energy Resource units with no CIRs (*i.e.*, not Capacity Resources) are excluded from the analysis.⁴⁹ One does not need to speculate as to whether or not this was the public utility’s intent, *because it is explicitly stated in PJM’s June 1, 2021 transmittal letter.*

Proposed RAA, Schedule 9.1, section H. *PJM will omit energy-only resources from the ELCC analysis, as such resources have no obligation to provide capacity and therefore cannot be relied on to meet reliability needs.* Proposed RAA, Schedule 9.1, section H.⁵⁰

PJM’s stated intent is in no way negated or contradicted by ISA, Specifications, Section 2.1a, because the instructions applicable to ISA, Specifications, Section 2.1a state that this provision only applies to Capacity Resources.

Capacity Interconnection Rights: {Instructions: this section will not apply if the Customer Facility is exclusively an Energy

⁴⁸ Shanker Comments at P 10, n.6.

⁴⁹ RAA, Schedule 9.1.

⁵⁰ *PJM Interconnection, L.L.C.*, Transmittal Letter, Docket No. ER21-2043, at n.52 (June 1, 2021).

Resource and thus is granted no CIRs; see alternate section 2.1 below.⁵¹

If the interpretation of RAA, Schedule 9.1(H) presented in the Shanker Comments were actually supported (and not directly refuted) by record evidence, it would have directly contradicted the intent of PJM and its stakeholders in submitting the ELCC construct, and undermined key components of the filing altogether.

C. Additional Information

PJM offers several other pieces of information to the Commission to provide additional context to the Shanker Comments.

First, the allegations of non-compliance contained in the Shanker Comments are the subject of strong and active disagreement among PJM stakeholders. The allegations are strikingly similar to those contained in a letter that was submitted to the PJM Board in February of this year by the PJM Power Providers Group (“P3”).⁵² That letter made allegations of non-compliance that are virtually identical to those made in the Shanker Comments, and specifically requested that the PJM Board unilaterally act to remove the presently-counted megawatts (“MW”) of other PJM Members from the capacity market without a submission to, or approval by, the Commission.

Unfortunately, PJM is knowingly allowing resources that cannot deliver all of their accredited capacity to acquire a capacity obligation greater than what is deliverable. As PJM informed stakeholders this summer, PJM has over-accredited certain intermittent resources hundreds of megawatts of capacity that do not meet PJM’s capacity resource requirements because these resources are not deliverable at peak times. While acknowledging the issue, PJM has taken no action to remedy the capacity deficiency caused by these resources nor has PJM made any changes to the capacity capabilities of these resources in subsequent planning years, including for upcoming Base Residual Auction. *Fortunately, PJM*

⁵¹ ISA, Specifications For ISA, Section 2.1a.

⁵² P3, Letter to the PJM Board (Feb. 1, 2022) (“P3 Letter”), <https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20220201-p3-letter-regarding-capacity-resource-accreditation.ashx>.

*can address this flaw on its own initiative prior to the next BRA by enforcing the current Reliability Assurances Agreement (RAA) requirements—no FERC filing or FERC approval is required.*⁵³

Two other groups of PJM stakeholders—the “Clean Energy Trades”⁵⁴ and the “Multiple Parties”⁵⁵—submitted letters of their own, strongly contesting the claims made in the P3 Letter and the solicitation for the PJM Board to act without a submission to, or approval by, the Commission.

We write in response to the February 1, 2022 letter of the PJM Power Providers Group (“P3 Letter”), and urge the Board of Managers to reject the extraordinary requests therein. *As explained below, the P3 Letter seeks an extreme and unjustified intervention in the market by the PJM Board to remove competitors and circumvent the stakeholder process, a result that would further undermine confidence in PJM’s capacity market. Rather than take hasty action—one that P3 asks it to take with no approval by the Federal Energy Regulatory Commission (“FERC”)—the Board should direct PJM staff to continue with their stakeholder process regarding the intersection of Capacity Interconnection Rights (“CIRs”) and the Effective Load-Carrying Capability (“ELCC”) of certain capacity resources (specifically wind, solar, and energy storage).* Moreover, we implore PJM’s Board of Managers to address the profound disparate treatment in which some resources in the capacity market are now accredited recognizing fuel and weather-related correlated outage risk (ELCC resources), and the remainder (thermal resources) are not.⁵⁶

The P3 letter seeks an undeniably extreme action—to administratively “remove these MWs [of wind and solar] from the supply stack for the 2023-24 planning year as well as subsequent auctions.” This represents an extraordinary step, as it would administratively remove resources from the market based on unproven assertions about the deliverability impact of changes in PJM’s process that were made long after those resources were interconnected. The likely result would be to increase capacity

⁵³ P3 Letter at 1 (emphasis added).

⁵⁴ Clean Trades, Letter to the PJM Board (Feb. 14, 2022) (“Clean Trades Letter”), <https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20220214-clean-trades-response-to-p3.ashx>.

⁵⁵ Multiple Parties, Letter to the PJM Board (Feb. 14, 2022), <https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20220214-letter-to-pjm-board-re-capacity-value-of-renewables.ashx>.

⁵⁶ Clean Trades Letter at 1 (emphasis added).

clearing prices, to the benefit of existing thermal generators in PJM, and to the detriment of customers. Such an action would be a startling circumvention of the stakeholder process considering that PJM’s Planning Committee is actively considering options proposed by both PJM staff and stakeholders. *PJM’s capacity market has been the source of nonstop litigation for at least the past half-decade, and an 11th hour removal of resources, with no regulatory approval, would lead to further litigation and market uncertainty. The Board should allow the stakeholder process to continue and reject P3’s request to exclude resources from the competitive markets.*⁵⁷

*We write in response to the February 1, 2022, letter to you from PJM Power Providers Group (“P3”) regarding capacity accreditation. That letter provides an inaccurate description of the work PJM does and is an inappropriate attack on the stakeholder process and federal regulatory review that are the bedrock of PJM’s legitimacy. For these reasons, we believe the Board should understand the P3 letter as an attempt to bypass the mechanisms for resolving competitive and technical matters established by both PJM under its Operating Agreement and the Federal Energy Regulatory Commission under the Federal Power Act.*⁵⁸

Nothing in PJM’s tariff gives PJM staff or the Board the authority to unilaterally change resources’ capacity accreditation, much less simply remove resources from the supply stack as P3 requests. PJM’s governing documents are clear on how to calculate the capacity value of intermittent resources. The Commission has both specifically endorsed PJM’s approach as adequately accounting for transmission constraints and rejected arguments, such as those espoused in P3’s letter, that additional adjustments to the capacity value of intermittent resources to reflect transmission constraints are necessary. *P3 requests that PJM’s Board require actions by PJM that would be contrary to its tariff. The Board should reject this self-serving request as the illegal and anticompetitive action it would be.*⁵⁹

⁵⁷ *Id.* (emphasis added).

⁵⁸ Multiple Parties Letter at 1 (emphasis added).

⁵⁹ *Id.* at 3 (emphasis added).

After considering the positions of all parties, the PJM Board issued a letter⁶⁰ in March of this year rejecting the allegations of non-compliance that were made in the P3 Letter, and the request to act unilaterally without submission to, or approval by, the Commission.

Second, the allegations contained in the Shanker Comments are similar to those made in a failed FPA section 206 attempt against PJM's sister RTO MISO in 2019 in Docket No. EL19-28.⁶¹

Pursuant to Sections 206, 306 and 309 of the Federal Power Act (the "FPA")¹ and Rule 206 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (the "Commission"), the Coalition of Midwest Power Producers, Inc., ("Complainant") hereby files this complaint ("Complaint") against the Midcontinent Independent System Operator, Inc., ("MISO") *regarding MISO's failure to comply with the terms of its Open Access Transmission, Energy and Operating Reserve Markets Tariff (the "Tariff") Sections 68A.1, 68A.2, and 68A.2.1 by failing to require all Capacity Resources be fully deliverable in the manner consistent with the establishment of the Planning Reserve Margin (all referred to as "PRM" below) and the study methods used to perform its Loss of Load Expectation Study ("LOLE")*. This Complaint concerns serious issues impacting the upcoming Planning Resource Auction ("PRA"), and immediate attention from the Commission is required to prevent MISO from committing a substantial Tariff violation.⁶²

Yet, despite the gravity of the situation, MISO is proceeding in a manner that will continue to improperly count approximately 1,400 MWs of undeliverable generation toward satisfying its reliability requirement, the PRM. The LOLE Study that establishes the PRM relies on the assumption that all Capacity Resources are fully deliverable to the MISO system on an Installed Capacity ("ICAP") basis. To maintain consistency with the LOLE study assumptions the Tariff requires Capacity Resources to demonstrate (1) Network Resource Interconnection Service ("NRIS"), or (2) Energy Resource Interconnection Service ("ERIS") coupled with Firm Transmission Service up to each resource's ICAP level. *But the methodology that MISO is applying in accrediting capacity for*

⁶⁰ PJM, PJM Board Letter Response (Mar. 3, 2022), <https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20220304-board-response-to-p3.ashx>.

⁶¹ *Coalition of Midwest Power Producers, Inc. v. Midcontinent Indep. Sys. Operator, Inc.*, Complaint of the Coalition of Midwest Power Producers, Inc., Docket No. EL19-28-000 (Dec. 31, 2018) (hereafter, the "MISO Complaint").

⁶² *Id.* at 1.

*certain resources deviates from this Tariff requirement. MISO’s action violates the Tariff by allowing a set of resources to demonstrate deliverability only up to the Unforced Capacity (“UCAP”) level. By failing to ensure deliverability on an ICAP basis for all Capacity Resources, MISO is acting contrary to the assumptions of its LOLE study and failing to procure enough fully deliverable resources needed to meet its PRM as its tariff requires.*⁶³

*Compliance with the Tariff for this immediately upcoming auction is critical to ensure just and reasonable, and not unduly discriminatory rates for the 2019/2020 PRA. Indeed, compliance should be required for every PRA. The lack of urgency on this issue is particularly galling given MISO’s focus on dealing with current reliability issues that have resulted in some 19 emergency actions since the start of the 2016/2017 planning year. Accordingly, Complainant requests that the Commission issue an order directing MISO to abide by the Tariff and properly calculate the UCAP value for all Capacity Resources prior to conducting the 2019/2020 PRA.*⁶⁴

The Commission rejected the complaint in its entirety in an order dated February 28, 2019.⁶⁵

II. CONCLUSION

In accordance with the foregoing, PJM respectfully requests that the Commission accept these Partial Reply Comments.

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November 1, 2022

Respectfully submitted,

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⁶³ *Id.* at 2.

⁶⁴ *Id.* at 4.

⁶⁵ *Coalition of Midwest Power Producers, Inc. v. Midcontinent Indep. Sys. Operator, Inc.*, 166 FERC ¶ 61,159 (2019).