UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, LLC	)	Docket No.ER24-2172

PROTEST OF EXELON CORPORATION AND AMERICAN ELECTRIC POWER SERVICE CORPORATION

Pursuant to Rule 211 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.211, Exelon Corporation, on behalf of its subsidiaries Atlantic City Electric, Baltimore Gas and Electric Company, Commonwealth Edison, Delmarva Power and Light Company. PECO Energy Company, and Potomac Electric Power Company (collectively "Exelon") and American Electric Power Service Corporation on behalf of its affiliates[1] (collectively "AEP") respectfully submit this protest of the non-conforming Interconnection Service Agreement (ISA) by and among PJM Interconnection, L.L.C. (PJM) as Transmission Provider, Susquehanna Nuclear, LLC ("Susquehanna") as Interconnection Customer, and PPL Electric Utilities Corporation ("PPL EU"), as Interconnected Transmission Owner (PJM, Susquehanna, and PPL EU are each referred to individually as a "Party" and collectively as the "Parties").

This matter must be set for hearing. Too many questions of fact remain unresolved in what is, by the filing's own admission, an ISA that establishes novel configuration. Absent further factual development, the Commission will be unable to make an informed decision, and parties will be denied due process.

[1] Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company, AEP Appalachian Transmission Company, Inc., AEP Indiana Michigan Transmission Company, Inc., AEP Kentucky Transmission Company, Inc., AEP Ohio Transmission Company, Inc., AEP West Virginia Transmission Company, Inc., and AEP Energy Partners.

Alternatively, should the Commission decline to set the matter for hearing, it should simply reject the Parties' non-conforming ISA. Utilities face a "heavy burden" when submitting non-conforming ISAs—they must show *both* that their ISA is "consistent with or superior to" the *pro forma* ISA and that the non-conforming provisions are "necessary."[2] The Parties have failed on both counts.

The Commission can also reject the ISA because it works an end-run around the PJM stakeholder process and because it appears to memorialize a facial violation of PJM's Open Access Transmission Tariff ("OATT") by creating new categories of load and altering the fundamentals of PJM's market design absent a tariff revision.[3]

I. The Commission Must Set This Matter for Hearing to Address the Many Questions of Fact that Remain Unresolved.

The Parties' non-conforming ISA must be set for hearing because it raises more questions than it answers. Given the scant information provided in the transmittal, absent further factual development, the Commission will be unable to make an informed decision whether to accept the ISA and parties to the proceeding will be denied necessary notice and opportunity to raise informed protests before the Commission.

Further factual development is particularly crucial in this case. The filing itself acknowledges the importance of this non-conforming ISA: not only does it contemplate a novel configuration of facilities co-located with a nuclear power plant, but the filing predicts this to be

[2] *Midwest Indep. Transmission Sys. Operator, Inc.*, 116 FERC ¶ 61,222 at P 22 (2006); *Sw. Power Pool, Inc.*, 178 FERC ¶ 61,157 at P 19 (2022).

[3] *See, e.g.*, PJM, Intra-PJM Tariffs, OATT, § 1 Definition of Network Load (providing that load shall be designated as Network Load or served by Point to Point service) ("PJM OATT"); 16 U.S.C. § 824d(d) ("[N]o change shall be made by any public utility in any such rate, charge, classification, or service, or in any rule, regulation, or contract relating thereto, except after sixty days' notice to the Commission and to the public.").

the first of many such ISAs, all idiosyncratic, all at odds with the *pro forma*.[4] In addition to the reliability and planning concerns, the magnitude of the potential rate impact on customers is huge. The attached declaration of John Reed and Danielle Powers calculates that the cost shift arising from this arrangement alone could be as much as $140 million per year.[5] Multiplied by the many similar projects on the drawing board, it is apparent that this unsupported filing has huge financial consequences, that should not be imposed on ratepayers without sufficient process to determine and evaluate what is really going on. Because there is no precedent for this type of ISA, it is not unreasonable to believe the industry may take guidance from the outcome of this proceeding, which reinforces the need for the result here to be both legally and factually sound.

The number of expected, non-conforming ISAs that the filing anticipates could have a profound effect on the market. Should large quantities of load rush to co-locate with generation on terms that bear even a resemblance to the ISA at issue here, PJM capacity markets will have steadily decreasing volume as the capacity resources flee to serve load that uses and benefits from—but does not pay for—the transmission system and the ancillary services that keep the system running. This will harm existing customers. Given the challenges in interconnection, siting, and approval of both generation and transmission, replacement capacity will take years to develop. The inevitable consequence will be scarcity resulting in rising energy and capacity prices, and (given the fact that the co-located load is likely to prefer generation with very high

[4] *See* PJM Interconnection, L.L.C., Amendment to ISA, SA No. 1442; Queue No. NQ-123 (June 1, 2024) at 15-16 (predicting varied co-located load configurations in the future) ("ISA Transmittal"); *see also, e.g.*, Robert Walton, *Constellation, Vistra and PSEG could be next to ink nuclear-data center supply deals: S&P*, Utility Dive (June 18, 2024), https://www.utilitydive.com/news/constellation-vistra-pseg-nuclear-data-center/719206/.

[5] Decl. of John J. Reed and Danielle S. Powers, Docket No. ER24-2172-000 at ¶ 16 (June 24, 2024) ("Reed–Powers Dec.").

reliability and availability) an exacerbation of the already existing challenges to resource adequacy and reliability. The Commission should take note.

The filing Parties paper over the many legitimate (and complicated) questions raised by the ISA, implying throughout that this is a routine filing. They present their filing as no more than a replacement of older agreements[6] with updated terms and "clarifications" regarding the parties' roles and obligations.[7] The filing casts the submission as a mere housekeeping exercise, as if there is nothing to see here.[8]

This is simply not so. This non-conforming ISA introduces new terms and conditions, in some cases altering fundamental structures of the PJM OATT, for the first time. This is the first time that co-located load has been declared "not Network Load."[9] It is the first time anyone has described, albeit minimally, the mechanisms that the co-located load plans to employ to bring it into conformity with the intent of the ISA.[10] This is the first time, for that matter, that the intent of the ISA has been explained.[11]

There is nothing routine about this filing. It departs from the Parties' earlier ISAs, and it deserves the scrutiny that FERC applies to all non-conforming agreements. And to the extent the Parties appear to rely upon the acceptance of the earlier ISAs as a reason for the Commission to

[6] *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER23-1043-000 (Mar. 17, 2023) ("First ISA"); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER24-1215-001 (May 10, 2024) ("Second ISA"). The forgoing are the two ISAs explicitly relied upon in the Parties' submission, the "ISA Transmittal," and which immediately preceded the current filing.

[7] ISA Transmittal at 2.

[8] *See also* Reed-Powers Dec. at ¶¶ 20-22 (detailing the precedential effect and consequences to the market should this ISA be approved).

[9] *Id.* at 11.

[10] *Id*. at 7–11.

[11] *Id*. at 7, 11.

approve this ISA, that reliance is misplaced. The earlier submissions were approved by delegated order in which the non-conforming aspects discussed here were neither considered by the Commission nor ruled upon. This filing is operating on a blank slate and, as far as the Commission is concerned, this is a matter of first impression.

The Commission must set this matter for hearing (or reject the filing outright) because, as the record currently stands, the Commission will be unable to make a fully informed decision.

The following represents an initial list of the questions of fact that are unresolved but must be addressed for the Commission to make an informed decision.

a. Question 1: Why is the Co-Located Load "not Network Load?"

The filing states, without explanation, that the co-located load is "not Network Load."[12] This is perplexing because there are only two types of load recognized in the PJM Tariff: (1) Network Load, and (2) load that must make its own arrangements for Point-To-Point Service.[13] What are the specific attributes (technical, configurational, commercial) of the co-located load and of the transmission and generation facilities that allow or require PJM's denomination of "not Network Load" in seeming contravention of the PJM Tariff?

It appears on the face of the non-conforming ISA that the co-located load will be synchronized to PJM's transmission system. How can a load that is synchronized to the transmission system and which might draw power from the transmission system be anything other than Network Load?

[12] *Id.* at 11.

[13] *See* PJM OATT, § 1 Definition of Network Load (stating that, for those loads that are not designated Network Load, the customer must make arrangements for Point-To-Point Transmission Service).

Can the Commission assume that, if it is not Network Load, then the co-located load will arrange Point-To-Point Service? If the co-located load is not Network Load, and it is not going to arrange Point-To-Point Service, what kind of load is it?

A related question is: who is the Network Customer? Under the PJM OATT, Network Customers are responsible to PJM for the costs and responsibilities associated with serving their Network Load.[14] The PJM OATT has provisions concerning how the billing determinants for Network Load will be established, worked out over years of amendments to the OATT, but ultimately the load is the responsibility of a Network Customer. When responsibilities are properly defined and assigned under the OATT, PJM knows to whom it must turn in order to ensure that the transmission system's needs, including the procurement of energy and ancillary services, are met and paid for. By declaring up front that the load here is "not Network Load", the ISA evades the issue of which Network Customer has those responsibilities.

These are questions of fact that should be set for hearing.

b. Question 2: How Will this Configuration Prevent the Co-Located Load from Drawing Power From PJM's Transmission System?

The ISA states that it is "intended" that the co-located load does not draw power (real? reactive?) from PJM's transmission system but that it is possible that it will.[15] What happens if the co-located load *does* draw power from PJM's transmission system? This is not a remote or speculative inquiry—as explained in the attached Declaration of David Weaver, nuclear plants are not designed for load following, but loads are not constant, so the load there now has likely been drawing on the PJM transmission system every moment of every day in response to small

[14] *See, e.g.*, PJM OATT, § 28.2 Transmission Provider Responsibilities.

[15] ISA Transmittal at 11.

adjustments in electric demand.[16] Likewise, nuclear plants are not operated to provide the moment-to-moment reactive power and voltage support requirements of the load being served, and it does not appear that the Operating Reserves (spinning or otherwise) required to support the load will be maintained solely at the Susquehanna facility.[17] All of this support will come from elsewhere on PJM's transmission system. And operations will continue this way indefinitely. Further, a unit at this facility had an unplanned outage in November 2023, but it appears no load was dropped—how could that have happened unless the load had relied on the PJM grid?[18]

The ISA states that there is backup generation at Susquehanna.[19] However, the ISA also states that Susquehanna is prohibited from installing facilities that would automatically deliver backup generation to the co-located load.[20] While this might work in the case of planned outages, how will backup generation be supplied in the event of an unplanned outage? Will the backup generation be delivered in such a way that PJM can be certain that no power will be drawn from the PJM transmission system? And what is the backup generation? It appears that ISA actually contemplates that the backup generation would be provided by the other Susquehanna nuclear unit.[21] Put another way, the ISA contemplates that, in the event of an outage, backup generation would be provided from capacity upon which PJM would be relying. The ISA suggests that if that happens, a quick "replacement capacity" arrangement would be

[16] Decl. of David Weaver, Docket No. ER24-2172-000 at ¶ 16 (June 24, 2024) ("Weaver Dec.").

[17] Weaver Dec. ¶¶ 17–20.

[18] Weaver Dec. ¶ 17.

[19] ISA Transmittal at 7.

[20] *Id.* at 9.

[21] Weaver Dec. ¶ 6.

worked out,[22] but such an arrangement could not be instantaneous, might or might not be practical during such an outage, and by any fair assessment would be relying on PJM resources.[23]

The ISA also states that, in the event of a fault, the co-located load will "separate" from the configuration.[24] How will this work? What facilities will be installed? Is such a separation, which presumably would be performed automatically, consistent with utility best practices?[25] Is it consistent with retail load service obligations that would be applicable to the service being provided to this end-use load?

These are questions of fact that must be set for hearing.

c. Question 3: What Happens if the Co-Located Load Draws Power From PJM's Transmission System, Even if that is Not What Is "Intended"?

Given the fact that the co-located load will draw power from PJM's transmission system,[26] what steps have been taken to ensure that such a withdrawal of power will be properly metered and accurately billed when it does occur? What are the terms of that arrangement? Who are the parties to it? If costs are incurred as a result of the load continuing to operate, who is financially responsible?

The Commission should insist upon answers to these questions before it considers approving the Parties' non-conforming ISA. Disputes will inevitably arise in the face of events that are not "intended." Indeed, upon information and belief, the previous incident at

[22] ISA Transmittal at 7.

[23] Weaver Dec. ¶ 6.

[24] ISA Transmittal at 9–10.

[25] Weaver Dec. ¶¶ 24–25.

[26] Weaver Dec. ¶ 25.

Susquehanna was the subject of a dispute. Rates and terms should be established before such an incident occurs again. And to be clear, even absent an outage, the load draws on the PJM transmission system every day for load following and ancillary services as further discussed below. How is that demand assessed, and who pays for it?

These are questions of fact that must be set for hearing.

d. Question 4: Since the Co-Located Load Receives Benefits from the Transmission System, Why Would It Not Pay Transmission Rates?

Longstanding law holds that customers that benefit from the system-wide benefits of a transmission network must pay for those benefits.[27] The Commission has long resisted customers' attempts to allocate only portions of their load to the transmission system or to evade transmission fees based on unique or intermittent usage of the transmission system.[28]

The co-located load described in the ISA will receive two types of benefits from PJM's transmission system, both of which, under longstanding, invariant case law require the payment of transmission rates.

First, the co-located load is receiving power from Susquehanna. Susquehanna is a nuclear power plant. Nuclear power plants cannot operate without electricity; they cannot be islanded. The Nuclear Regulatory Commission (NRC) requires that "[a]n onsite electric power system and an offsite electric power system shall be provided" to operate safety equipment and associated facilities.[29] The NRC further requires that "Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent

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[27] *Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277, 1285 (D.C. Cir. 2007) (upholding the assignment of "the costs of system-wide benefits to all customers on an integrated transmission grid.")

[28] S*ee infra* pp. 22–23*; Amtrak v. PPL Elec. Util. Corp.*, 173 FERC ¶ 61,043 at PP 13–14 (2020).

[29] 10 C.F.R. § 50 Appendix A, General Design Criterion 17 ("GDC 17").

circuits . . . ."[30] This is an explicit mandate to the operator to connect to (and rely upon) the transmission system. To the extent that the co-located load is receiving power from Susquehanna, and Susquehanna is receiving power (or operates in reliance upon the ability to receive power) from PJM's transmission system, the co-located load is necessarily benefiting from PJM's transmission network.[31] The co-located load should not be allowed to operate as a free rider, making use of, and receiving the benefits of, a transmission system paid for by transmission ratepayers. We have no objection to co-location per se, but such load should pay its fair share of system use and other charges, just like other loads and customers.

Second, even if the configuration of Susquehanna and the co-located load operate as "intended," the co-located load will receive direct benefits from PJM's transmission system. While, perhaps, the co-located load will not consume real power drawn from the PJM transmission system to meet its baseline needs, if the configuration operates under ideal, "intended" conditions, it is still the recipient of all of PJM's other services, both ancillary services (regulation and reserves) and capacity.[32]

The ISA appears to contemplate a co-located load that will be synchronized to PJM's transmission system and will therefore benefit from PJM's ancillary services. The ISA also appears to contemplate that in the event of a failure in the generating unit upon which it primarily relies, the co-located load will draw on backup power that will be provided by Susquehanna's other generating unit.[33] While the ISA states that Susquehanna is going to reduce

[30] GDC 17.

[31] Weaver Dec. ¶¶ 13–15.

[32] Weaver Dec. ¶¶ 16–20.

[33] ISA Transmittal at 7.

its capacity interconnection rights by the total quantity of capacity consumed by the co-located load, it says nothing about the capacity that will invariably be on standby in the event that backup power is required.[34] Is that standby capacity being offered into the market? Does the ISA allow a generator to recover twice, once for its capacity supply obligation, and again for the backup service it provides to the co-located load in the event of an outage?

Given that the beneficiaries of a transmission system are obligated to pay for those benefits,[35] and given the evident benefits that the co-located load receives from PJM's transmission system, what specific facts about the co-located load's configuration, services, or commercial arrangements would properly allow it to evade paying transmission rates?

These are questions of fact that must be set for hearing.

e. Question 5: What Are the Transmission Facilities Owned by the Co-Located Load?

The ISA refers to the "the Co-Located Load's transmission facilities."[36] Which facilities are those? If this term refers to the radial line that runs to the co-located load from the connection between Susquehanna and the POI, where do these "transmission facilities" begin and end? Are these "transmission facilities" truly transmission facilities at all? Radial lines that provide service to an end use customer are typically designated as distribution facilities.[37] What are the specific attributes of these "transmission facilities" that would permit their designation as transmission instead of distribution facilities, thereby evading state jurisdiction? If they are

[34] *Id.*

[35] *See supra* note 26.

[36] ISA Transmittal at 4, 6, 7, 9, and 13.

[37] *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996) (establishing, in the 7-factor test, among other indicia, that distribution facilities: are normally in close to retail customers; are primarily radial; transport power that is consumed in a restricted area).

legitimately categorized as "transmission facilities" do they have a Commission-approved tariff on file? The Commission requires that all transmission facilities have an Open Access Transmission Tariff.

Further, the sale of power from Susquehanna to the co-located load is a retail sale under the Federal Power Act because it is a sale to an end-use customer. What are the obligations of the retail seller? Some of those will be obligations under state law governing retail service on which the Commission cannot opine, but the structure of the PJM OATT envisions that all end-use load is associated with a responsible Load Serving Entity (LSE). There is none here. How is this consistent with the terms of the ISA?

These are questions of fact that must be set for hearing.

f. Conclusion: The Commission Must Set This Matter for Hearing.

There are many unresolved questions of fact that must be addressed before the Commission (and parties to the proceeding) can fully understand the consequences of the non-conforming ISA. Given the recent history of faults at the Susquehanna generator that has led to unintended power withdrawals from the PJM transmission system, the uncertainty as to how such power flows will be avoided, the clear benefits that the co-located load will derive from the transmission system, and the uncertainty as to the jurisdictional status of the "Co-Located Load's transmission facilities," there is too much uncertainty to approve this ISA without further factual development.

The Commission must set this matter for hearing.

II. In the Alternative, the Commission Should Reject PJM's Non-Conforming ISA Because It's Non-Conforming Provisions Are Inadequately Justified.

Should the Commission decline to set the matter for hearing, it should alternatively reject the Parties' non-conforming ISA because the Parties have failed to adequately support their submission.

In Order No. 2003, the Commission "set[] a high standard for approval of provisions that do not conform to the pro forma interconnection service agreement."[38] The Commission has explained that "parties proposing non-conforming provisions must explain why unique circumstances require the provisions and what operational concerns or other reasons necessitate the changes."[39] Non-conforming ISAs were never intended to be a matter of routine. Order No. 2003 recognized that "there would be a certain number of *extraordinary* interconnections" that would require non-conforming agreements.[40] And although non-conforming ISAs are more common than the Commission had originally intended, proponents of a non-conforming ISA still bear the burden of justifying them on a handful of narrow grounds: "specific reliability concerns, novel legal issues, or other unique factors."[41]

Accordingly, "a transmission provider seeking a case-specific deviation from its pro forma interconnection agreement bears a high burden to justify and explain" that deviation.[42]

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[38] *Midwest Indep. Transmission Sys. Operator,* 116 FERC ¶ 61,222 at P 19 (2006).

[39] *Id.*

[40] *PJM Interconnection, L.L.C.*, 111 FERC ¶ 61,098 at P 8 (2005) (emphasis added); *see also Sw. Power Pool, Inc.*, 133 FERC ¶ 61,084 at P 6 (2010) (recognizing "that non-conforming agreements may be necessary for a *small number* of agreements with specific reliability concerns, novel legal issues, or other unique factors") (emphasis added).

[41] *Renewable World Energies, LLC*, 176 FERC ¶ 61,140 at P 20 (2021).

[42] *Sw. Power Pool, Inc.*, 178 FERC ¶ 61,157 at P 19 (2022).

The proponent must demonstrate that the non-conforming ISA is not only "consistent with or superior to" the pro forma agreement, but also that the changes are "necessary."[43]

a. The Parties Provide Virtually No Justification for This Non-Conforming ISA.

The Parties' non-conforming ISA has a great many non-conforming provisions, yet its transmittal includes virtually nothing in the way of support for those provisions. They offer no justification as to why this non-conforming ISA is "consistent with or superior to" the pro forma and there is no argument supporting their declaration that the non-conforming agreement is "necessary." Most of the statements are either bald assertions or irrelevant comparisons to ISAs that the Commission has accepted in the past.

The filing states, without further explanation, that "the Commission has accepted other ISAs [sic] with provisions intended to advance reliable system operations."[44] True, but irrelevant to the question of whether *this* non-conforming ISA is both "consistent with or superior to" the pro forma or whether the non-conforming provisions are "necessary."

The filing also states, without further explanation, that the "Commission has accepted other filings of agreements that were amended using the agreement to amend process, including the Prior Susquehanna ISA."[45] Also true, but likewise irrelevant to the question of whether *this* non-conforming ISA is either "consistent with or superior to" the pro forma or whether the non-conforming provisions are "necessary." Moreover, parties cannot agree amongst themselves to sidestep the Commission's standards for approval.

[43] *Id.*

[44] ISA Transmittal at 13.

[45] *Id.* at 15.

Finally, the filing states, without further explanation, that the non-conforming "provisions are necessary to support reliable system operations." But it does not explain why or how. This should not be surprising. Either the statement is pretense and it cannot be supported, or the statement is true and, were they to support it, the parties would find themselves in the awkward position of conceding that the prior ISAs created dangers to the transmission system.[46] There are real questions of fact about whether this ISA is consistent with reliable system operations.

This lack of explanation is especially striking in light of a clear alternative treatment that is available here—no obstacle exists to treating this load as network load, like the overwhelming majority of load on the system. Such an approach would limit the non-conforming provisions and align the treatment of the load here with the typical operation of the PJM system on which it relies.

Given the near absence of any reasoned explanation supporting this non-conforming ISA in the transmittal, the Commission cannot approve this non-conforming ISA based on the record before it while remaining consistent with its case law.

b. The Earlier ISAs Do Not Justify Accepting this Filing.

The reason the filing has not attempted to justify this non-conforming ISA is that it cannot. Instead, the filing attempts to rely on the earlier ISAs, both as a means to draw attention away from this ISA (casting it as a mere update to a preexisting agreement) and as a justification for the Commission to accept it. This reliance on the earlier ISAs is misplaced on two counts.

First, to portray this ISA as no more than a revision to earlier agreements is not a fair characterization. The ISA at issue here contains a number of significant new provisions and designations. The earlier two ISAs (beginning in 2023) make no mention of the co-located load

[46] First ISA; Second ISA.

being "not Network Load." They make no mention of the "transmission facilities" owned by the co-located load. They contain no reference to the backup generation, nor to the restriction on installing facilities that would automatically provide backup generation if the primary source of power fails.[47] And while the First ISA says nothing about the co-located load not drawing power from PJM's transmission system, the Second ISA contains little more than an oblique reference, unsupported by any details, to Susquehanna's obligation to "implement an Operating Procedure" to restrict power flow from PPL.[48]

Second, the earlier ISAs were accepted by delegated letter order. These delegated letter orders did not reflect the reasoned decision making of the Commission on the issues raised here and cannot bind the Commission as to these issues. The very text of the orders upon which the filing implicitly relies states as much explicitly: the issuance of the order "is without prejudice to any findings or orders which have been or may hereafter be made by the Commission in any proceeding now pending or hereafter instituted by or against the applicant(s)."[49] The fact that Commission staff decided to approve two earlier non-conforming ISAs, without considering the questions we are raising, cannot aid the filing here.

III. FERC Should Reject this Non-Conforming ISA Because it Is an End-Run Around the PJM Stakeholder Process and Violates Section 205 of the Federal Power Act.

If the Commission declines to set this matter for hearing for further factual development and declines to reject the Parties' ISA as insufficiently justified, it should still reject the Parties'

[47] *Compare* ISA Transmittal at 4, 5, 6, 11, *with* First ISA *and* Second ISA.

[48] Second ISA at 5.

[49] First ISA at 1; *see also Westar Energy, Inc.*, 124 FERC ¶ 61,057 at P 26 (2008).

ISA because it undermines the PJM stakeholder process and violates section 205 of the Federal Power Act.

a. The Commission Must Reject This Non-Conforming ISA Because it Works an End-Run Around the PJM Stakeholder Process.

The matter of how to treat co-located load within PJM has been the subject of ongoing stakeholder discussions for over two years. In fact, it began as early as November 2021 when two PJM stakeholders raised the fact that PJM's current rules did not include appropriate procedures to support co-located load configurations. At that time, PJM issued a briefing paper describing the application of status quo rules to configurations in which load is co-located behind a generator meter and noted that the current rules required the generator to "de-list" (essentially, to retire from capacity status) the portion of the generation facility serving the co-located load.[50] The two stakeholders asserted that the status quo market rules were a barrier to more innovative options in which a generator could offer the full capacity output of the unit to the PJM grid, facilitated by fast-response, curtailable load and alleged modifications to PJM's market rules could solve the problem.

Recognizing the issue raised by the two stakeholders, in December, 2021 the PJM stakeholders endorsed an Issue Charge entitled "Capacity Offer Opportunities for Generation With Co-Located Load."[51] A two-year stakeholder process followed, including votes on a number of packages of reforms in 2023, none of which were adopted. Of note, although it failed

[50] PJM, Problem/Opportunity Statement, *Capacity Co-Located Load* at 1 (Dec. 1, 2021), https://www.pjm.com/-/media/committees-groups/committees/mic/2021/20211201/20211201-item-13a-co-located-load-problem-statement.ashx.

[51] PJM, Issue Charge, *Capacity Offer Opportunities for Generation With Co-Located Load* (Dec. 1, 2021), https://www.pjm.com/-/media/committees-groups/committees/mic/2021/20211201/20211201-item-13b-co-located-load-issue-charge.ashx ("Issue Charge").

as well, the only package that made it to the Senior Markets and Reliability Committee (MRC) for an October 25, 2023, endorsement vote was a package of reforms advanced by Exelon.[52]

It is also worth noting that during the course of the failed stakeholder process, PJM conducted a poll on competing proposals for how to treat co-located load.[53] One of those proposals, the Brookfield / Constellation proposal, set forth a configuration similar to that contemplated by the ISA at issue here. Among other provisions, the proposal included the requirements that the co-located load not consume any energy from the PJM system, that the co-located load be interruptible, and that relays would curtail the co-located load in the event of a generator trip.[54]

But that proposal was overwhelmingly defeated—it garnered only 16% of the vote.[55] Tellingly, among the comments recorded by PJM were objections over the very questions of fact highlighted in this protest. Among the comments in response to the question, "do you support the Constellation / Brookfield proposal" were:[56]

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[52] *See* PJM, Market Implementation Committee, *Draft Minutes*, Item 2 (Aug. 9, 2023), https://pjm.com/-/media/committees-groups/committees/mic/2023/20230809/20230809-minutes.ashx; PJM, Market Implementation Committee, *Minutes* (Oct. 25, 2023), https://pjm.com/-/media/committees-groups/committees/mic/2023/20230809/20230809-minutes.ashx.

[53] *See* PJM, *Poll Results, Capacity Offer Opportunities for Generation with Co-located Load* at 4 (Dec. 7, 2022), https://pjm.com/-/media/committees-groups/committees/mic/2022/20221207/item-06a---co-located-load-poll-results.ashx ("Poll Results").

[54] PJM, *Why Stakeholders Should Support Capacity Sales for Host Generation With Co-located Load* at 2–3 (Nov. 17, 2022), https://pjm.com/-/media/committees-groups/committees/mic/2022/20221117-special/item-04---constellation-brookfield-co-location-configuration.ashx. Since this was a proposal from early in the stakeholder process, there are a number of differences too. As the title of the original proposal would suggest, one of its central features was that, unlike the ISA at issue here, the capacity value of the generator would *not* be reduced by the value of the co-located load. *Id.* at 3 ("Generator sells full capacity to PJM").

[55] *See* Poll Results at 4.

[56] *See* PJM, *Summarized Poll Results, MIC Special Session Co-Located Load Poll* (Dec. 7, 2022).

- "No. We are concerned with the proposal's premise that co-located load does not benefit from the grid and the resulting impact on customers who may subsidize the costs of these benefits."
- "Further clarity is needed on jurisdictional matters and treatment of transmission charges and ancillary services."
- "Co-located load would benefit from grid transmission services but would not pay for these services; thus, the rest of the system load would be unfairly charged for these services. []Generator would get capacity compensation for energy that would not be available to the system as a whole."
- "Proposal creates a free-rider issue with respect to transmission access for the facility. The generator gets full access to network capability that non-co-located load pays for. There is also a free rider issue regarding capacity whereby non-co-located load pays for a capacity resource but does not receive the energy."

The opposition to the proposal's co-location configurations mirror the problems in the instant ISA.[57] Having failed to garner sufficient support among stakeholders, the Parties to this ISA appear to have disregarded the stakeholder process and attempted to memorialize a co-located load configuration that triggered serious concerns among the stakeholders, and chose to do so through the submission of an obscure non-conforming ISA filing.

It is also telling that following the failure to endorse rules surrounding co-located load configurations, PJM advised stakeholders that it was going to take time to determine next steps. Shortly thereafter, as previously mentioned, a unit tripped at the Susquehanna facility in November 2023, elevating the precise concerns raised in the failed stakeholder process. In

[57] *See also* Reed-Powers Dec. at ¶¶ 12-19.

response, in March, 2024, PJM's issued a draft document entitled "Guidance on Co-Located Load."[58] In that Guidance document, "PJM continue[d] to recommend that all co-located load be served from the PJM Transmission System as PJM Network Load."[59] Given that there was a protracted back and forth between stakeholders and that the stakeholders did not vote for a tariff revision, PJM was aware of what an important issue this had become. While it was disappointing that the stakeholder process did not reach consensus, PJM cannot establish new rules for co-location via a Guidance document or non-conforming ISA. Such changes require a tariff revision.[60]

Moreover, in between PJM's first presentment of the Guidance document to members at an April 3, 2024 Market Implementation Committee (MIC) meeting and its second presentment of the Guidance document at an April 27, 2024 MRC, PJM altered the guidance to (1) eliminate references to PJM not supporting co-located load configurations for which there exists the possibility of an unexpected injection or withdrawal of power on the PJM Transmission System; and (2) to increase the opportunity for co-located load that is not PJM Network Load despite the fact that no provision in the tariff or even PJM's manuals provides for this concept as the original issue charge highlighted.[61] The Guidance document has never been finalized or perfected in any

[58] PJM, *Guidance on Co-Located Load* (Mar. 22, 2024, updated Apr. 17, 2024), https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/pjm-guidance-on-co-located-load.ashx ("Guidance Document"); PJM, *Co-Located Load Guidance* (Apr. 3, 2024), https://pjm.com/-/media/committees-groups/committees/mic/2024/20240403/20240403-item-07---co-located-load-guidance.ashx.

[59] Guidance Document at 1.

[60] 16 U.S.C. § 824d(d) (stating that "no change shall be made by any public utility in any such rate, charge, classification, or service . . . except after sixty days' notice to the Commission and to the public.").

[61] Issue Charge at 1.

manner, but the non-conforming ISA appears to rely heavily on this guidance document that was never presented to FERC for consideration and is not part of the rate on file.[62]

b. The Commission Must Reject This Non-Conforming ISA Because Changes to Rates, Terms and Conditions Require a Tariff Amendment Under FPA Section 205.

The proper mechanism by which to change market fundamentals, which were proposed and debated within PJM, and which were defeated in the stakeholder process, is not through an obscure non-conforming ISA submission, but through a tariff amendment under section 205 of the Federal Power Act.[63] Absent such tariff revision, the arrangement violates the PJM OATT.

The ISA declares, without explanation, that "[t]he Co-Located Load is not Network Load[.]"[64] But the tariff nowhere permits such a designation. To the contrary, and as noted above, the PJM OATT provides for load that is served through Network Integration Transmission Service, or alternatively permits the designation of load served by Point-to-Point Service.[65] The PJM OATT subjects Network Customers that serve Network Load to transmission charges[66] and likewise imposes, through the PJM OA, responsibility for an array of energy, capacity, and

[62] Among the elements of the Guidance Document included in the non-conforming ISA are: the contemplation of load being designated "not PJM Network Load," the netting out of co-located load, a prohibition from the co-located load drawing power from the PJM transmission system, the reduction of CIRs to reflect the co-located load, the requirement to install facilities to prevent unexpected withdrawal from the transmission system, the employment of on-site backup generation, and the fulfillment of obligations to supply power when the on-site backup generators are employed. *See* Guidance Document at 2-3.

[63] *See* PJM, Market Implementation Committee, *Draft Minutes*, Item 2 (Aug. 9, 2023), https://pjm.com/-/media/committees-groups/committees/mic/2023/20230809/20230809-minutes.ashx; PJM, Market Implementation Committee, *Minutes* (Oct. 25, 2023), https://pjm.com/-/media/committees-groups/committees/mic/2023/20230809/20230809-minutes.ashx.

[64] ISA Transmittal at 11.

[65] PJM OATT, § 1 Definition of Network Load.

[66] *Id.* § 34.1 Monthly Demand Charge.

ancillary services charges, and a host of other obligations associated with serving load from the transmission system.[67]

The ISA does not classify the load as Point-to-Point Load, and the transmittal does not contend that it is. Nor could it. This is not transmission service of a fixed amount from a specified point of receipt on the transmission system to a pre-determined point of delivery. To the contrary, this is Network Integration Transmission Service, in which the needs of this load will be flexibly met from the entire transmission system, even though in the first instance the intended generation resource is the Susquehanna nuclear plant. In any event, the PJM OATT does not provide for any third type of transmission service that is not Point-to-Point Transmission Service or Network Integration Transmission Service; the ISA creates such a new third-type of service out of thin air, and in violation of the PJM OATT.

This is not the first time that an arrangement has been proposed that would create some new class of service. For example, in *Amtrak v. PPL Electric Utilities Corp.*,[68] the complainant argued, under cost causation principles, that its unique service should be charged under some new arrangement that differed from the charges applicable to ordinary Network Transmission Customers. The Commission rejected the complaint, finding that the load was served by the PJM transmission system and thus was appropriately served through the Network Integration Transmission Service arrangement applicable to Network Load.[69] The Commission noted that the complainant could potentially seek Point-to-Point Transmission Service in the alternative, but

[67] *See id*. § 35.2 Network Operating Agreement; *id.,* Attachment H (explaining that PJM Operating Agreement is the governing agreement for Network Integration Transmission Service).

[68] 171 FERC ¶ 61,237 at PP 6–9, *reh'g denied*, 173 FERC ¶ 61,043 (2020).

[69] *Id.* at PP 39–43.

there was no third alternative, and the Commission rejected the ad hoc creation of a third, alternative category of service for an individual customer as inconsistent with the PJM OATT.[70]

Here, by categorically designating the load up-front as "not Network Load," it appears that the intent is to escape having the load designated as being served by a Network Customer, and thereby avoid the obligations borne by such customers, such as payment for the transmission grid under PJM OATT,[71] or payment for other services as required by the PJM OA that governs relations with Network Customers. That is, the apparent intent is to do exactly what was rejected in *Amtrak*, creation of a new and different class of transmission service not provided for in the PJM OATT.

Undoubtedly, the PJM OATT and PJM OA incorporate a host of terms that clarify the charges and responsibilities for each Network Customer. For example, the PJM OATT defines "Behind the Meter Generation" and provides that in the calculation of network transmission charges that load served by such Behind-the-Meter Generation will be netted from other loads served by the Network Customer.[72] But nothing in that netting provision, or any other provision in the tariff, provides for designation of load as "not Network Load," which would allow the Network Customer to avoid clarifying its full array of responsibilities under the PJM OATT and PJM OA. In any case, neither the application nor the ISA cite to any provision of the PJM OATT, including the provisions relating to Behind the Meter Generation, to justify the creation of a new category of service.

[70] *Id*. at P 44.

[71] PJM OATT, § 34.1 Monthly Demand Charge.

[72] *Id.* § 34.2 Netting of Behind the Meter Generation.

In creating this new, third category of transmission service through the ISA instead of by submitting a section 205 filing to amend the PJM OATT, the application presents the Commission with a proposal that is not fully fleshed out and does not adequately (or at all) clarify the rates, terms, and conditions that will apply to this new category of service. Responsibility to pay for ancillary services, backup power, capacity, and transmission usage by the load are unclear, the amounts that would be owed is unclear, and the parties that bear those responsibilities are unclear. Indeed, beyond unclear—they are unstated and left undefined. A Section 205 filing to amend the PJM OATT would necessarily work through and address these issues. The current application instead sidesteps them, and in doing so violates the current terms of the PJM OATT.

IV. Conclusion

The Commission must set this matter for hearing. There are too many questions of fact that are either unresolved or simply papered over.

In the alternative, the Commission should reject the non-conforming ISA on any number of grounds: because its non-conforming provisions are inadequately supported, because it serves as an end-run around both PJM's stakeholder process and section 205 of the Federal Power Act, or because it violates the PJM Tariff.

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

	)	
PJM Interconnection, L.L.C.	)	**Docket No. ER24-2172**
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	)	
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DECLARATION OF JOHN J. REED AND DANIELLE S. POWERS

IN SUPPORT OF PROTEST OF

EXELON CORPORATION AND AMERICAN ELECTRIC POWER SERVICES CORPORATION

DECLARATION OF JOHN J. REED AND DANIELLE S. POWERS

IN SUPPORT OF PROTEST OF

EXELON CORPORATION AND AMERICAN ELECTRIC POWER SERVICES CORPORATION

I. Introduction

1. My name is John J. Reed. I am an economist and the Chairman of the Board of Concentric Energy Advisors, Inc. ("Concentric"). My business address is 293 Boston Post Road West Suite 500, Marlborough, MA 01752.

2. I have more than 47 years of experience in the energy industry and have worked as an executive in, and consultant and economist to, the energy industry. Over the past 34 years, I have directed the energy consulting services of Concentric, Navigant Consulting, and Reed Consulting Group. I have served as Vice Chairman and Co-CEO of the nation's largest publicly-traded consulting firm and as Chief Economist for the nation's largest gas utility. I have provided regulatory policy and regulatory economics support to more than 100 energy and utility clients and have provided expert testimony on regulatory, economic, and financial matters on more than 200 occasions before the Federal Energy Regulatory Commission ("FERC"), state utility regulatory agencies, Canadian regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada.

3. My name is Danielle S. Powers. I am an engineer and Chief Executive Officer of Concentric. My business address is 293 Boston Post Road West Suite 500, Marlborough, MA 01752.

4. I have over thirty-five years of direct experience in the public utility industry. I have worked for an investor-owned utility, an independent system operator, and most recently as a consultant. I have managed and/or participated in a wide variety of consulting engagements as an expert in wholesale market design, power system operations, as well as resource planning. I have provided expert testimony or reports before the Indiana Utility Regulatory Commission, the Federal Energy Regulatory Commission, the Illinois Commerce Commission, the Connecticut Siting Council, the Massachusetts District Court, the Regulatory Commission of Alaska, the New York Public Service Commission, the United States Bankruptcy Court, the Missouri House Utilities Commission, and the Indiana Senate Utilities Committee. My previous testimony has typically addressed issues related to wholesale energy market design, transmission policy, and resource planning.

5. On June 3, 2024, PJM Interconnection, L.L.C. ("PJM") filed an amended Interconnection Service Agreement ("ISA") by and among PJM as Transmission Provider, Susquehanna Nuclear, LLC ("Susquehanna") as Interconnection Customer, and PPL Electric Utilities Corporation ("PPL EU"), as Interconnected Transmission Owner ("the Parties"). The Amended Susquehanna ISA amends an existing ISA among the Parties in order to increase from 300 megawatts ("MW") to 480 MW the amount of Co-Located Load under the ISA and makes revisions related to the treatment of this Co-Located Load.

6. The Susquehanna Generating Facility is a 2,520 MW nuclear generating facility consisting of two 1,260 MW units (Unit #1 and Unit #2), connected to the PJM Transmission System. Currently, the two-unit nuclear power plant, commissioned in 1982 and 1984 is licensed for operation through 2042 (Unit 1) and 2044 (Unit 2).

7. The amended ISA defines the treatment of Susquehanna and the Co-Located Load. The Parties have proposed to reduce the capacity value of Susquehanna by the amount of Co-Located Load being contractually served by Susquehanna. In addition, the Parties have proposed that the Co-Located Load will not be treated as Network Load, and assert that the Co-Located Load will never consume capacity and/or energy from the PJM Transmission System, including the Interconnected Transmission Owner's transmission facilities. The amended ISA acknowledges the possibility of power flows from the Interconnected Transmission Owner's facilities to the transmission facilities of the Co-Located Load and proposes to "assess the settlements, reliability and compliance implications for such unexpected withdrawal from the Transmission System".[1] The parties provide no further details around this "unexpected withdrawal".

II. Summary

8. The issues presented by this filing are substantial, precedential, and troubling. The proposed Co-Located Load is expected to become the largest such proposed installation in North American history. The significance of this case lies in its potential to set far-reaching precedents for how similar situations will be handled in the future. The sheer scale of the Co-Located Load presents unique challenges and complexities that have not been encountered before on such a magnitude.

[1] PJM Interconnection, L.L.C., Docket No. ER24-2172-000 Amendment to ISA, SA No. 1442; Queue No. NQ-123 (amend), June 1, 2024.

9. The implications of this case are substantial because they have the potential to fundamentally impact the regulatory landscape, influencing how regulators address cost allocation and rate design. If this proposed Co-Located Load is permitted to avoid significant costs, it could encourage other generators and large consumers to pursue similar arrangements, leading to widespread cross-subsidization issues and leaving unresolved questions of cost responsibility for grid use. This would undermine the principles of cost causation and "beneficiary pays", resulting in unjust and unreasonable rates across the energy market. Moreover, the case is troubling because it highlights potential weaknesses in the current regulatory framework that may not adequately address the economic and operational impacts of large co-located installations.

10. FERC must address the proposed Co-Located Load arrangement by carefully considering the balance between promoting innovative energy solutions and ensuring equitable cost distribution among all consumers. The decisions made in this case will likely influence future regulatory policies and industry practices, making it a critical juncture for co-located arrangements.

11. There may be intrinsic benefits to location of load near generation for the parties involved including timing, reduced investment, service quality, and other potential benefits in addition to avoiding the payment of regulated service rates. However, FERC should be concerned about the extrinsic consequences of this arrangement including shifting costs to other customers. A high-level analysis of the magnitude of the cost shift based on simplifying assumptions regarding the size and energy usage of the Co-Located Load shows that the annual cost avoided by the Co-Located Load through the proposed arrangement is in the range of approximately $58MM to $140MM per year, shifting the fixed costs associated with operating and maintaining the transmission system to others.

III. FERC Just and Reasonable Rates

12. FERC is mandated with ensuring just and reasonable rates through its regulation of the transmission of electricity, natural gas, and oil in interstate commerce. FERC's primary responsibility is to ensure that wholesale prices are fair, equitable, and non-discriminatory. This regulatory framework was, among other things, designed to protect consumers from unjust and unreasonable rates. Over the years, FERC has developed a comprehensive system of rules and guidelines that incorporate cost-of-service principles, market-based rates, and various rate-making methodologies.

13. Cost causation is a principle that dictates that those who cause costs to be incurred should be responsible for paying those costs. By aligning rates with cost causation, the FERC ensures that the financial burden is fairly distributed among those who use or benefit from the infrastructure and services. This prevents cross-subsidization, where one group of consumers would unfairly bear the costs caused by another group, thereby maintaining economic efficiency and equity.

14. Cost responsibility complements the principle of cost causation by specifying that those who use and benefit from the provision of services should be accountable for the associated costs. This principle helps ensure that pricing structures reflect the true cost of providing energy services, including generation, transmission, and distribution. It promotes transparency and fairness in the allocation of costs, making sure that consumers pay rates that reflect their actual usage and impact on the system. Together, these principles underpin the FERC's regulatory framework, fostering a balanced and just energy market where rates are reflective of the real economic impact, thus safeguarding consumer interests, and where accurate price signals are transmitted to users of the system and potential new entrants.

IV Co-Located Load Cross Subsidy

15. The Parties propose to neither classify the Co-Located Load as Network Load nor load under Point-to-Point Transmission Service. This essentially means that the Co-Located Load is "invisible" to PJM and will therefore avoid paying all transmission-related charges to the transmission owner. The fixed costs associated with the transmission system that the Co-Located Load is avoiding will be borne by others in the PJM footprint.

16. Based on a high-level analysis of the costs to serve the Co-Located Load under the PPL Electric Utilities LP-5 tariff rate at an assumed low size range of Co-Located Load of 200 MW and a high size range of Co-Located Load of 480 MW (consistent with the size limitation in the amended ISA) at a 98% load factor, as shown in Attachment 1, the annual cost that the Co-Located Load is avoiding ranges from $58MM to $140MM per year. This includes the cost of transmission, distribution, PPL specific riders, certain services provided by PJM for which PPL incurs costs, and taxes.[2] It is assumed that the Co-Located Load does not avoid energy and capacity charges as the Co-

[2] The Co-Located Load may in addition avoid paying other distribution charges or making a contribution to the funding of other state or local programs which we have not included in this analysis.

Located Load is assumed to be paying Susquehanna for these services. Even when ignoring all other components of the applicable retail tariff rate, the avoided transmission component makes up approximately 98% of the avoided costs. A detailed analysis and comparison of the charges under the PPL tariff compared to assumed costs under the Power Purchase Agreement with Susquehanna could potentially reveal additional costs that the Co-Located Load is bypassing.

17. These costs do not simply disappear. Instead, they must be redistributed and borne by other consumers within the PJM footprint. This redistribution of costs is what defines cross-subsidization: when one group of consumers (in this case, the Co-Located Load) benefits from avoiding certain fixed charges, the financial burden is shifted to another group of consumers, leading to cost increases and inequitable cost allocation for these consumers.

18. This cross-subsidization violates regulatory cost causation and beneficiary pays principles and does not result in just and reasonable rates. The principle of cost causation dictates that those who cause costs to be incurred should be responsible for paying those costs. Similarly, the beneficiary pays principle asserts that those who benefit from a service should bear its costs. When Co-Located Load avoids certain charges, the resulting costs are unfairly shifted to other consumers, thereby breaching these regulatory principles. This misalignment means that the true cost drivers are not accurately identified or charged, leading to an inequitable financial burden on consumers who are not causing those costs.

19. As a result, rates no longer reflect the actual costs of service provision, undermining the fairness and transparency of the rate structure. In addition, price signals for the utilization of, relinquishment of and expansion of the transmission system are distorted. This creates economic inefficiencies and distorts the market by incentivizing behaviors that avoid costs rather than optimize system-wide efficiency. Ultimately, such cross-subsidization leads to rates that are neither just nor reasonable, as mandated by regulatory standards. FERC's objective is to prevent these inequities by ensuring that all consumers pay rates commensurate with the costs they impose on the system and the benefits they receive, thereby fostering a balanced and fair energy market.

V. Co-Location Precedent

20. The amended ISA is not a "one-off" arrangement. The magnitude of the costs and associated cross subsidies will increase as more co-located load

arrangements enter the market. Based on projections, several thousand megawatts of data centers are projected to enter the PJM footprint over the next decade. The amended ISA represents a significant regulatory policy decision with potential widespread implications. By allowing the unique arrangement proposed by the Parties, the amended ISA is poised to set a legal and operational precedent. This precedent will likely influence how future co-located load arrangements are assessed and approved, making it far more than an isolated case. As other large-scale energy consumers and industrial facilities observe the benefits of such arrangements, they may seek similar setups, leveraging the established precedent to justify their requests.

21. As more co-located load arrangements enter the market, the total amount of costs being shifted will also increase, exacerbating the issue of cross-subsidization. This growing cross-subsidy imposes an unfair financial burden on consumers who do not benefit from such arrangements, leading to inequitable cost distribution and potentially higher rates for those consumers.

22. The precedent set by the modified ISA could thus encourage a proliferation of co-located load arrangements, amplifying the magnitude of the associated costs and cross-subsidies. This scenario underscores the importance of carefully considering the broader implications of such regulatory decisions. FERC must ensure that the principles of cost causation and beneficiary pays are upheld to maintain a fair and just rate structure, preventing undue financial impacts on the broader consumer base. Failure to address these concerns could lead to significant economic distortions in the energy market, undermining the integrity and equity of the regulatory framework.

VI. Conclusion

23. The proposed Co-Located Load arrangement presents many issues involving cross-subsidization, price formation, and precedent. The proliferation of co-located load arrangements can be expected to magnify these impacts significantly. Any regulatory decisions made in this case will likely set a precedent that will guide future similar arrangements, influencing how the energy market evolves and how costs are allocated. Thus, it is crucial to address these issues comprehensively to ensure a fair, transparent, and efficient market.

24. As co-located load arrangements become more prevalent, the FERC must carefully consider the broader market and ratemaking implications of such setups. These decisions will significantly impact how costs are distributed

among consumers, the financial health of utility companies, and the overall efficiency of the energy market. By analyzing the potential effects on market dynamics and ensuring that ratemaking practices reflect the true costs and benefits associated with these arrangements, the FERC can create a regulatory environment that promotes fairness and economic efficiency. This approach will help prevent unintended consequences, such as increased cross-subsidization and market distortions, thereby maintaining the integrity of the energy market.

25. To make a well-informed and balanced decision, the FERC must conduct a thorough and transparent examination of the issues and cost impacts associated with co-located load arrangements. An evidentiary hearing provides the ideal forum for this, allowing all stakeholders to present their evidence, arguments, and perspectives. This comprehensive discussion will enable the FERC to consider the full range of potential consequences, ensuring that decisions are based on solid evidence and a deep understanding of the complexities involved. By engaging in such a rigorous analytical process, the FERC can ensure that its decisions are not only fair and reasonable but also grounded in the realities of the market and the principles of sound ratemaking.

VERIFICATION

I declare under penalty of perjury that the foregoing Declaration is true and correct to the best of my information, knowledge, and belief.

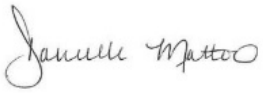
Executed this 24th day of June 2024.

/s/ John J. Reed

Chairman, Concentric Energy Advisers, Inc.

I declare under penalty of perjury that the foregoing Declaration is true and correct to the best of my information, knowledge, and belief.

Executed this 24th day of June 2024.



/s/ Danielle S. Powers

Chief Executive Officer, Concentric Energy Advisers, Inc.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection LLC	**)** **)** **)**	**Docket No. ER24-2172-000**

DECLARATION OF DAVID WEAVER, PE

INTRODUCTION

1. My name is David Weaver. I am the Vice President of Transmission Strategy for Exelon Corporation ("Exelon"). I oversee the transmission strategy organization with responsibility for transmission investment, planning, interconnection contracts, and strategy across all of the Exelon Operating Companies. I began my career with Exelon in January 1996. I have served in various roles at Exelon in engineering, investment strategy, transmission operations, transmission planning, substation design, project management, and business planning. Before joining Exelon, I worked at Delmarva Power as an engineer in Substation Design and Transmission Planning. With more than 35 years of experience in the utility industry, I also served as chair of NERC's Planning Committee, President of the WIRES transmission industry trade group, and currently sit on the board of WIRES and the North American Transmission Forum. I received my bachelor's degree in Electrical Engineering from Drexel University and I am a licensed professional engineer.

PURPOSE OF THE DECLARATION

2. I am providing this Declaration in support of the Protest submitted by Exelon and the American Electric Power Service Corporation. I discuss the engineering, operational, and economic implications of the amended Interconnection Service Agreement ("ISA") by and

among PJM as Transmission Provider, Susquehanna Nuclear, LLC ("Susquehanna") as Interconnection Customer, and PPL Electric Utilities Corporation ("PPL EU"), as Interconnected Transmission Owner (PJM, Susquehanna, and PPL EU are each referred to individually as a "Party" and collectively as the "Parties"), designated as Service Agreement No. 1442 and associated with PJM Queue No. NQ-123 ("Amended Susquehanna ISA"). I am qualified to provide such analysis because I have dealt with the engineering of transmission interconnections and evaluating their impact on the transmission grid for the entirety of my career.

3. As I further discuss below, the Amended Susquehanna ISA creates an arrangement where a large data center will be, as a matter of contract, provided with energy from a unit at the Susquehanna nuclear facility, purportedly without any use of the transmission grid because the physical interconnection is to facilities "behind" the point of generator interconnection. The application refers to the data center as "Co-Located Load", meaning that it is located proximate to the two Susquehanna nuclear units and that its interconnection with the grid occurs through facilities owned by Talen that are also used to interconnect Susquehanna rather than being separately interconnected to the grid through a different substation or even to facilities at Susquehanna that are owned by PPL. As I explain below, the arrangement nonetheless relies on the transmission grid in numerous ways, and its purported independence from the grid is a fiction. Condoning this fiction is a danger to grid reliability and will unjustly shift the very real costs of the grid from one user to others. The application suggests that more such arrangements are likely, and I am aware that similar arrangements are in process—so this proceeding will serve as important precedent concerning whether the Commission will allow cost avoidance through such arrangements.

It will also set a precedent on whether arrangements such as the Amended Susquehanna ISA that simply fail to address key issues concerning usage of the grid and grid resources will be accepted.

THE ISA

4. As described in the Application, the Amended Susquehanna ISA permits up to 480 MW of data center load to be connected "behind" the Points of Interconnection (POI) of the Susquehanna units on the portion of the PJM grid owned by PPL that serve Units 1 and 2 of the Susquehanna nuclear facility. The capacity values of the Susquehanna units would be reduced by an amount equal to the Co-Located Load being served, the theory being that the capacity would now be devoted to serving the data center load behind the units' POI.

5. The Amended Susquehanna ISA provides that the data center is "not Network Load, and it is intended that the Co-Located Load will never consume capacity and/or energy from the PJM Transmission System, including the Interconnected Transmission Owner's transmission facilities". The Amended Susquehanna ISA further provides that there must be a "protection scheme" to ensure the load "separates" from the PJM grid in the event of a loss of generation at the facility.

6. The Amended Susquehanna ISA contemplates that on-site back-up generation can be used to supply energy to the load in the event of a loss of the nuclear generation intended to be dedicated to serve that function. While the Amended Susquehanna ISA is unclear, it appears that the backup generation in this context means the other Susquehanna unit, not some additional dedicated generation nor already participating in the capacity markets. That is, if Unit 1 goes down, the load would rely on Unit 2, or vice versa. This reliance on the other generating unit for back-up power means that the back-up will be generation

capacity that is providing capacity to the PJM markets. To get around this problem, the Amended Susquehanna ISA provides that in the event such back-up generation is required, the Interconnection Customer will find "replacement capacity" somewhere else on the grid to substitute for the Susquehanna capacity diverted to use as back-up generation for the data center. But, it is silent on how that is to happen or what the consequences are if it is not found, or is not available to be found.

7. As further discussed below, the arrangement described in the Amended Susquehanna ISA does rely on the PJM transmission grid at all times, not just when the intended nuclear generation if off-line. The attestations that the load will be served independently from the grid is not accurate as an engineering matter.

TYPE OF SERVICE

8. Order 888 established and defined two basic types of transmission service provided by transmission owner/operators. First, the very flexible Network Service, in which loads are provided as much power as they need from Network Resources scattered around the grid, with payment based on the load's proportionate share of the total grid usage. Second, the more narrow Point-to-Point Service, which provides the right to deliver a defined amount of power from a specified Point of Receipt to a specified Point of Delivery. PJM contemplates those same two types of transmission service.

9. The Amended Susquehanna ISA explicitly rejects the notion that the arrangement involves service to Network Load and suggests that the significant end-use load is not the load of any specified Network Customer. But, the service is also not Point-to-Point Service, as it does not include the designation of any Point-to-Point Customer and there is no specified Point of Receipt or Delivery and no reservation of transmission capacity between those

points. Thus, is not clear where the service as characterized under the Amended Susquehanna ISA fits. Put simply, the ISA appears to contemplate the creation of an entirely new class of service—neither Network nor Point-to-Point, not governed by any service agreement for PJM transmission service.

10. In addition to being characterized as neither Network Service nor Point-to-Point Service, it should be noted that it the Amended Susquehanna ISA is not a wholesale energy service rate. The load is end-use and not station power and the service provided is service to an end-use customer, and thus involves retail components, subject to state regulation. (If there is some intermediate load serving entity that receives the power and sells it to the end-use customer, the Amended Susquehanna ISA certainly does not say so.) There are PJM transmission owners who have put in place network service arrangements to accommodate state mandated retail access programs, but neither the ISA nor the application suggest that this service is being provided pursuant to any such service arrangement.

11. The Amended Susquehanna ISA also does not include as a party the end-use customer (or any load serving entity serving the customer). By avoiding inclusion in the service agreement of real transmission customers, the Amended Susquehanna ISA obscures its actual status and evades compliance with requirements expected of transmission customers. For example, as discussed below, the service imposes ancillary service demands on the grid—such as the need for load following, reserves, and reactive support—but by evading inclusion in any transmission service arrangement, those ancillary service demands appear to have been forgotten.

12. Put simply, the Amended Susquehanna ISA appears to contemplate the creation of an entirely new class of service—neither Network nor Point-to-Point, not governed by any

service agreement for PJM transmission service. As further discussed below, the service claims not to make use of the PJM transmission grid, so this is a new, never-before-named-or-discussed type of transmission service. In fact, what that service is, is not even specified in the Amended Susquehanna ISA, it is merely defined by what it purports *not* to be.

SERVICE FROM SUSQUEHANNA NECESSARILY RELIES ON THE PJM GRID

13. It is certainly possible for a load to be served by an on-site generator with no reliance on the transmission grid. Indeed, there are situations where loads are isolated from the grid and depend on on-site generators that are likewise isolated from the grid. But the situation described in the Amended Susquehanna ISA is wholly unlike such situations because the service depends on power produced by nuclear units that MUST be connected to the grid.

14. To be clear, commercial nuclear licenses in the United States require that the units are connected to the transmission grid to support emergency services at the facility and to avoid instabilities that could arise if the unit were not synchronized to the transmission system. The connections to the grid must be both robust and redundant to ensure license compliance. Further, systems must be in place to ensure shutoff of the facilities if they become disconnected from the grid.

15. There is nothing special or different about the Susquehanna units in this respect. They must be interconnected with and supported by the transmission grid to operate. Any load served by the Susquehanna units is therefore necessarily dependent on the continued safe and reliable operation of the PJM grid and its interconnections with the Susquehanna units. This is not merely a legal requirement. There is a cost to maintain that continued reliable operation, and the designation of "Co-Located Load" does not obviate or change that cost and the need to pay for it.

PROVISION OF ANCILLARY SERVICES REQUIRES THE PJM GRID

16. Service to the 480 MW data center as provided in the Amended Susquehanna ISA requires ancillary services. For example, there is no reason to believe that the data center load will be immutably fixed and, indeed, all load typically varies over time to some degree. To the extent the load varies from second to second, minute to minute, or hour to hour, it will require load following services. Nuclear units such as those at Susquehanna are generally not operated to provide such load following services and are generally not capable of providing them. Those load following services will necessarily be provided by other generating units located elsewhere on the PJM grid. The application does not appear to mention load following, or how load following will be provided—it just ignores the issue.

17. Likewise, the system needs to maintain adequate Operating Reserves (e.g,, Spinning and Supplemental Reserves). The Amended Susquehanna ISA makes no mention of how this configuration will maintain or provide such reserves from the Susquehanna units—those reserves will be provided by generators somewhere elsewhere on the system. Any contention that such reserves are not required is unsupported and cannot be. The system maintains reserves to deal with contingencies such as a nuclear unit tripping offline, and the system needs reserves to deal with the entire unit tripping—the reserves cannot be reduced to account for Co-Located Load. Or if the Parties contend that reserves are unneeded or can somehow be avoided, they certainly do not state in the Amended Susquehanna ISA whether that has been studied nor do they explain the basis for such a conclusion.

18. Similarly, the system requires reactive support. Nuclear units can provide reactive power support, but not sufficient support to maintain the entire grid. Indeed, nuclear units are

simply not capable—by themselves, without reliance on grid resources—of providing the fine-grained reactive support required to maintain proper voltage on the system at all times. As I explained above, the nuclear units must remain connected to the grid in order to operate, but the grid cannot stay stable without reactive support provided by generators throughout the transmission system. Again, the Amended Susquehanna ISA does not even attempt to address how adequate reactive support could be provided without interconnection with an operational grid.

19. In addition, if the surrounding system was ever in a position of restoring the grid after a black out, it must rely on black start resources to support the restoration process. Nuclear units are incapable of providing black start services, so the co-located load must rely on black start services from other PJM resources on the grid to come back online.

20. The omission of ancillary services from the Amended Susquehanna ISA is illustrative of the problems created by the configuration set forth in the ISA. Under the Amended Susquehanna ISA apparently nobody is responsible for the reserves, load-following support, and voltage support, that are required to maintain system operation and must be provided from other generating units on the grid and which must be delivered over the interconnected transmission system to support the services agreed to in the Amended Susquehanna ISA.

THE AMENDED SUSQUEHANNA ISA BACKUP SERVICE REQUIRES THE PJM GRID

21. As I explain above, the Amended Susquehanna ISA contemplates that in the event one of the Susquehanna units goes down, the data center will obtain back-up service from another generator which appears to be the other Susquehanna nuclear unit. This is problematic

because the portion of the Susquehanna units not assigned to the data center will be providing capacity to the PJM markets. The back-up service relies on PJM capacity and generation.

22. The Amended Susquehanna ISA attempts to escape this reliance on PJM capacity by providing that the Interconnection Customer will obtain replacement capacity in such instances from elsewhere on the grid as substitute for the PJM capacity which will be used to serve the data center as back-up. But it is only because the Susquehanna units and other generation are part of an interconnected grid that capacity can be replaced when a particular generator is on outage. Or to put it another way, the shifting of service and responsibility among generators scattered among the grid is the essence of Network Transmission Service. While the Amended Susquehanna ISA claims the data center is not Network Load, the back-up arrangement is premised on the interconnected operation of the PJM grid and PJM's ability to shift reliance from one generator to another on that grid.

"SEPARATION" OF THE DATA CENTER LOAD IS INADEQUATELY EXPLAINED AND MAY NOT HAPPEN

23. The Amended Susquehanna ISA provides that there must be a "protection scheme" to ensure the load "separates" from the PJM grid in the event of a loss of generation at the facility. If such a scheme were really in place, it would not change the fact that the load relies on the PJM grid—to support the nuclear units, to provide ancillary services, and for the back-up service contemplated under the Amended Susquehanna ISA—as further described above. But the Amended Susquehanna ISA does not make clear how the system will work, if it works, or if it is even there.

24. Engineering details of the separation scheme are nowhere to be found. Will it operate instantaneously, or on what time frame, and how exactly will it be accomplished? Further, the regulatory details, including compliance with retail regulations that would govern service to this load, are nowhere specified. While submitted as a rate, the Amended Susquehanna ISA does not specify how the costs resulting from a supply interruption not immediately followed by disconnection are to be identified, measured, or assigned.

25. The lack of specificity raises concerns about what protective systems are really in place and recent real-world events amplify these concerns. On November 10, 2023, Susquehanna Unit 1 experienced an outage, as reported in notifications to the NRC, and there is no report of any load curtailment. This suggests that, in that situation, the load leaned on the PJM system in response to the outage—another example of the load relying on the PJM grid.

CONCLUSION

26. The premise of the Amended Susquehanna ISA and associated application is that this data center Co-Located Load is like load on a remote island —one that simply has no impact on the PJM grid and would thus be properly excluded from economic and other responsibility for maintaining the PJM grid. But that storyline does not stand up to scrutiny. Service under the Amended Susquehanna ISA necessarily depends on the PJM grid in order to keep the Susquehanna nuclear units running, to provide and deliver necessary ancillary services, and to meet the back-up requirements of the load. The suggestion that the service is not using the PJM grid is inaccurate from an engineering standpoint. The unfortunate impact would be that the costs of services which the load benefits from are paid by other network customers. Finally, this proposed arrangement depends on the Commission accepting, in

an amended ISA, a new and unnamed type of transmission service that is inadequately explained or defined.

VERIFICATION

I declare under penalty of perjury that the foregoing Declaration is true and correct to the best of my information, knowledge, and belief.

Executed this 24th day of June 2024.

/s/ David Weaver

David Weaver

Vice President, Transmission Strategy
Exelon Corporation

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 Chicago, Illinois this 24th day of July, 2024.

/s/ Geneva Kennedy
Geneva Kennedy
Senior Paralegal
Exelon Corporation