UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.)))	Docket Nos. EL24-119-000 ER24-2338-000
Duquesne Light Company)	ER24-2336-000 (not consolidated)

MOTION FOR LEAVE TO ANSWER AND ANSWER OF PJM INTERCONNECTION, L.L.C.

Pursuant to Rules 212 and 213 of the Federal Energy Regulatory Commission's ("FERC" or the "Commission") Rules of Practice and Procedure, PJM Interconnection, L.L.C. ("PJM") hereby submits this Answer to the Consumer Advocates Answer² and the Joint Protesters Answer³ in the above-captioned proceedings, which were initiated by PJM's June 21, 2024 Filings⁴ and the PJM Transmission Owners' filing proposing amendments to the Consolidated Transmission Owners Agreement ("CTOA") on the same day.⁵

¹ 18 C.F.R. §§ 385.212, 385.213.

² *PJM Interconnection, L.L.C.*, Answer of Consumer Advocates, Docket Nos. EL24-119-000, ER24-2336-000, ER24-2338-000 (Aug. 27, 2024) ("Consumer Advocates Answer").

³ *PJM Interconnection, L.L.C.*, Answer of Joint Protesters, Docket Nos. EL24-119-000, ER24-2336-000, ER24-2338-000 (Sept. 4, 2024) ("Joint Protesters Answer").

⁴ *PJM Interconnection, L.L.C.*, FPA Section 206 Filing of PJM Interconnection, L.L.C., Docket No. EL24-119-000 (June 21, 2024) (hereafter, the "June 21, 2024 FPA Section 206 Filing"); *PJM Interconnection, L.L.C.*, FPA Section 205 Filing of PJM Interconnection, L.L.C., Docket No. ER24-2338-000 (June 21, 2024) (hereafter, the "June 21, 2024 FPA Section 205 Filing") (collectively, the "June 21, 2024 Filings").

⁵ Duquesne Light Co., Amendments to the Consolidated Transmission Owners Agreement, Docket No. ER24-2336-000 (June 21, 2024) (hereafter, the "TOs' FPA Section 205 Filing").

I. MOTION FOR LEAVE TO ANSWER

While an answer to an answer or protest is not a matter of right under the Commission's regulations,⁶ the Commission routinely permits such answers when the answer provides useful and relevant information that will assist the Commission in its decision-making process,⁷ corrects factual inaccuracies and clarifies the issues,⁸ assures a complete record in the proceeding,⁹ provides information helpful to the disposition of an issue,¹⁰ or permits the issues to be narrowed.¹¹

This Answer satisfies each of these criteria, and accordingly PJM respectfully requests that the Commission grant leave and accept this Answer.¹²

⁶ 18 C.F.R. § 385.213(a)(2).

⁷ See, e.g., Pioneer Transmission, LLC v. N. Ind. Pub. Serv. Co. and Midwest Indep. Transmission Sys. Operator, Inc., 140 FERC ¶ 61,057, at P 93 (2012); Midwest Indep. Transmission Sys. Operator, Inc., 131 FERC ¶ 61,285 (2010); Sw. Power Pool, Inc., 131 FERC ¶ 61,252, at P 19 (2010), reh'g denied, 137 FERC ¶ 61,075 (2011) (accepting answers that "provided information that assisted us in our decision-making process"); Duke Energy Ky., Inc., 122 FERC ¶ 61,182, at P 25 (2008) (accepting answers in proceeding that "provided information that assisted us in our decision-making process"); Tallgrass Transmission, LLC, 125 FERC ¶ 61,248, at P 26 (2008); PJM Interconnection, L.L.C., 120 FERC ¶ 61,083, at P 23 (2007) (answer to protests permitted when it provides information to assist the Commission in its decision-making process).

⁸ See, e.g., Entergy Servs. Inc., 126 FERC ¶ 61,227 (2009).

⁹ See, e.g., Pac. Interstate Transmission Co., 85 FERC ¶ 61,378, 62,443 (1998), reh'g denied, 89 FERC ¶ 61,246 (1999); Morgan Stanley Capital Group, Inc. v. N.Y. Indep. Sys. Operator, Inc., 93 FERC ¶ 61,017, 61,036 (2000) (accepting an answer that was "helpful in the development of the record . . . ").

 $^{^{10}}$ See, e.g., CNG Transmission Corp., 89 FERC ¶ 61,100, 61,287, n.11 (1999).

¹¹ See, e.g., PJM Interconnection, L.L.C., 84 FERC \P 61,224, 62,078 (1998); New Energy Ventures, Inc. v. S. Cal. Edison Co., 82 FERC \P 61,335, 62,323, n.1 (1998).

¹² PJM does not respond herein to all of the arguments raised in the Consumer Advocates Answer and the Joint Protesters Answer. PJM's silence on any argument made by these parties should not be characterized as agreement or acquiescence.

II. ANSWER

A. Consumer Advocates and Joint Protesters first misidentify, and then dramatically overstate, the evidentiary burden required by the extremely narrow scope of PJM's June 21, 2024 Filings.

Having (finally) conceded that PJM did not predicate its June 21, 2024 Filings on the premise that the location of the RTEP Protocol in the Operating Agreement has historically been unjust and unreasonable, Consumer Advocates and Joint Protesters attempt to migrate to demands that PJM identify with specificity the circumstances *in the future* in which the ability of a minority of the Members Committee to force PJM to submit all of its independent planning proposals under FPA section 206, rather than the normal FPA section 205 process, will harm PJM's ability to effectively plan its system.¹³ Consumer Advocates and Joint Protesters also demand that PJM more explicitly "connect the dots" between these future circumstances and the evidence PJM provided in its June 21, 2024 Filings regarding dramatic changes in resource mix and load growth, and Order No. 1920.

This line of argument first misidentifies, and then dramatically overstates, the evidentiary burden required by the extremely narrow scope of PJM's June 21, 2024 Filings. The argument that PJM must in these proceedings prospectively identify and explain how future assemblies of the Members Committee that do not yet exist will or will not receive theoretical future planning proposals that also do not yet exist is not only unreasonable, it is completely meaningless to the scope of PJM's June 21, 2024 Filings, which is predicated solely on the distinction between FPA section 205 and FPA section 206. The scope of PJM's June 21, 2024 Filings is exclusively (and quite narrowly) focused on the specific <u>statutory form</u> (FPA section 206) under which PJM's independent planning proposals must be submitted when a minority of the Members Committee

¹³ Consumer Advocates Answer at 3-7; Joint Protesters Answer at 3-6.

opposes them.

The specific harm that this regime creates is clear and unequivocal, and exists today. It is a direct outcome of forcing PJM to utilize FPA section 206 for all of its independent planning submissions, without exception. If an exact two-thirds supermajority of the Members Committee does not reach consensus on a planning proposal, the requirement that PJM submit its independent proposal through FPA section 206, rather than the normal FPA section 205 process, needlessly increases that planning proposal's risk of failure. This is because PJM: (i) is first legally required to file a complaint against *itself*; (ii) is legally required to first argue that its existing rules are unjust and unreasonable, completely exogenous to the policy merits of the actual planning proposal and under a higher legal standard than all other RTOs (and virtually all other public utilities) in the United States; and (iii) is unable to ascertain a definitive time period in which the Commission will react, positively or negatively, to that proposal.

The data provided by PJM in its June 21, 2024 Filings regarding dramatic and dynamic changes to resource mix and load growth all converge around the same self-evident reality that make this current regime unjust and unreasonable *going forward*: the consequences of failure of PJM's independent planning proposals are more acute and serious going forward than they have been historically, when (i) the resource mix was largely homogenous and synchronous, (ii) load growth was flat, and (iii) Order No. 1920 did not exist.

To the extent that the Consumer Advocates and Joint Protesters require additional clarity on this point, PJM is appending to this answer the Reply Affidavit of Paul F. McGlynn, PJM's Vice President of Planning ("McGlynn Affidavit"). As described by Mr. McGlynn, the potential harm caused by a failure to address the planning challenges indicated by the data in PJM's June 21, 2024 Filings is significantly greater and more dynamic than has historically been the case in

the PJM Region, and directly impacts PJM's ability to meet its requirements to plan its system to facilitate efficient, reliable, and non-discriminatory open access transmission service for all customers.¹⁴ This is because the prospect of a significant discrepancy between supply and demand—and in particular this kind of supply and demand, as described in PJM's June 21, 2024 Filings—has simply never existed in the PJM Region. 15 As supply begins to lag and demand increases, the transmission system will continue to become more constrained, threatening operational flexibility and ultimately reliability. ¹⁶ Mr. McGlynn explains that, in light of this engineering reality, "PJM must have the flexibility to move forward with new and innovative planning protocols, as compared to times in the past, in order to meet this rapidly changing future," and that "[t]his is especially true in instances where an exact two-thirds supermajority of the PJM Members Committee cannot agree on a specific planning proposal."¹⁷ In light of this, it is eminently reasonable for PJM, under the direction of its independent Board of Managers, to pursue elimination of the unnecessary increased risk of failure for its independent planning proposals that is "baked into" the requirement that all such proposals be submitted under FPA section 206, rather than the normal FPA section 205 process. It is also eminently reasonable for PJM to pursue the same degree of independence enjoyed by other RTOs in meeting their future planning challenges.

Equally troubling is Joint Protesters' insinuation that PJM must wait for future stakeholder action stymying a proposal that the independent RTO believes is a just and reasonable reform to

¹⁴ McGlynn Affidavit at P 15.

¹⁵ *Id*.

¹⁶ *Id*.

¹⁷ *Id*.

demonstrate that the current regime is unjust and unreasonable going forward. 18 This is a transparent attempt to handcuff the Commission from being able to use its Section 206 authority in these proceedings to ensure that PJM can more easily amend its RTEP Protocol to address clearly identified future challenges, and instead force the Commission to wait until the harm actually occurs in PJM before any proactive reforms can be adopted pursuant to Section 206. In addition to being contrary to precedent, ¹⁹ the legal proposition advanced by the Joint Protesters would have profoundly negative implications for the Commission's ability to make necessary reforms based on clearly foreseeable future trends, instead forcing the Commission to have to sit by and wait for foreseeable negative actions to occur in the markets it regulates. Nothing in the language of Section 206 requires such a limitation on its use. The Joint Protesters' rationale would, in the context of Order No. 1920 for example, force the Commission to have to await demonstrable harm from a specific defined instance of the lack of long-term planning before it could issue sweeping reforms such as it undertook in that Order. By the same token, the Commission would be forced to wait for actual reliability challenges to occur before it could direct reforms to the design of capacity markets or to price formation in the Commission's energy and ancillary service markets. The Commission should be reluctant to straitjacket itself by adopting this myopic view of its ability to consider necessary reforms pursuant to FPA Section 206, whether in an individual FPA section 206 proceeding or a general one.

¹⁸ Joint Protesters Answer at 4 ("If the existing model must henceforth be deemed unjust, unreasonable, or unduly discriminatory, as PJM suggests, it stands to reason that PJM would be able to summon at least one example of how the existing framework has proved deficient in the recent past, but PJM does not.").

¹⁹ See PJM Interconnection, L.L.C., Answer of PJM Interconnection, L.L.C., Docket Nos. EL24-119-000, ER24-2336-000, ER24-2338-000, at 7-13 (Aug. 16, 2024) ("PJM Answer").

B. Section 7.9 of the proposed CTOA Amendments is narrowly tailored to require a direct nexus to enumerated Articles of the CTOA, is backstopped by Tariff, section 9.2, and protects PJM from being forced to submit a filing that it believes contravenes rights and commitments under the CTOA, as PJM was forced to do in the End-of-Life proceeding.

Consumer Advocates and Joint Protesters continue to argue that section 7.9 of the proposed CTOA Amendments will compromise PJM's independence by providing the Transmission Owners with a veto over PJM's independent planning proposals.²⁰

This argument fails on (at least) four grounds. First, Consumer Advocates and Joint Protesters fail to account for the fact that the text of proposed section 7.9 requires an actual nexus with specifically enumerated Articles of the CTOA.

7.9 Filings Contravening the Agreement.

Neither the Parties nor PJM shall make any filing under Section 205 of the Federal Power Act that contravenes Articles 2, 4, 5, 6, 7 or Attachment B of the Agreement or seeks to modify the terms of said Articles, unless PJM consents to such filing by the Parties or the Parties, acting through a vote pursuant to Section 8.5.1, consent to such filing by PJM. If either PJM or the Parties seek to revise or modify the PJM Tariff, including the Regional Transmission Expansion Planning Protocol, under Federal Power Act Section 205, and PJM or a Party believes that such revisions or modifications contravene any part of Articles 2, 4, 5, 6 or 7 or Attachment B of the Agreement, PJM and such Party or Parties shall follow the dispute resolution procedures set forth in Section 9.19.

The Articles of the CTOA to which this section applies are:

- Article 2 Purpose and Objectives of this Agreement;
- Article 4 Parties Commitments;
- Article 5 Parties Retained Rights;
- Article 6 PJM's Rights and Commitments; and

²⁰ Consumer Advocates Answer at 10-12; Joint Protesters Answer at 14-15.

• Article 7 – Changes to Rate Design and Tariff Terms and Conditions; Distribution of Revenues.

Of these Articles, Consumer Advocates point to Section 6.3.4,²¹ which relates to supplemental projects. PJM has already explained at length in these proceedings why this section codifies existing practices and does not in any way usurp PJM's authority to plan regional baseline RTEP projects.²² If there is no nexus to Section 6.3.4 or any of the specifically identified Articles of the CTOA, section 7.9 is simply not implicated at all, as a threshold matter.

Second, Consumer Advocates and Joint Protesters fail to acknowledge the explicit protections for PJM's FPA section 205 filings to amend the Tariff that are already located in Tariff, Section 9.2:

> (b) PJM shall consult with the Transmission Owners and the PJM Members Committee beginning no less than seven (7) days in advance of any Section 205 filing under Section 9.2(a), but neither the Transmission Owners, except as provided for in Section 9.3, nor the PJM Members Committee shall have any right to veto or delay any such Section 205 filing. PJM may file with less than a full 7 day advance consultation in circumstances where imminent harm to system reliability or imminent severe economic harm to electric consumers requires a prompt Section 205 filing; provided that PJM shall provide as much advance notice and consultation with the Transmission Owners and the PJM Members Committee as is practicable in such circumstances, and no such emergency filing shall be made with less than 24 hours advance notice.

Absent any nexus to the specifically enumerated Articles of the CTOA referenced above, Tariff, Section 9.2(b) explicitly prevents the PJM Transmission Owners (or for that matter, the Members Committee) from attempting to "veto or delay" PJM's 205 filings to amend the PJM Tariff, including the RTEP Protocol should it become a part of the PJM Tariff.

Third, Consumer Advocates and Joint Protesters fail to acknowledge the fundamental

²¹ *Id.* at 10.

²² PJM Answer at 26-30.

difference between the Operating Agreement (which is the subject of PJM's June 21, 2024 Filings) and the CTOA. The Operating Agreement is a governing document of PJM and a Tariff of general applicability²³ to which PJM is subject, but as a contract the Operating Agreement is an agreement *among the Members*. This is embodied by its prefatory clause:

Now, therefore, in consideration of the foregoing, and of the covenants and agreements hereinafter set forth, *the Members hereby agree as follows*:

This is also embodied by the fact that PJM is not a signatory to the Operating Agreement, and requires the Members' consent to modify it. By contrast, the CTOA is a governing document of PJM, but is also a bilateral contract *between* PJM and the PJM Transmission Owners, to which PJM is an explicit counterparty and signatory with contractual rights and commitments that are essential to PJM's ability to perform its mission as an RTO and implement Commission policy. Section 7.9 of the CTOA Amendments is designed to ensure that, in the exceptionally rare event that there is a concern that an action of either PJM or the PJM Transmission Owners would violate their respective rights and commitments that they have negotiated and agreed to, those concerns can be expeditiously resolved.²⁴ PJM views Section 7.9 as important to preventing a situation like the End-of-Life proceeding²⁵ from reoccurring, where PJM was forced by the Members Committee

²³ 18 C.F.R. § 35.2(c)(1) ("The term *tariff* as used herein shall mean a statement of (1) electric service as defined in paragraph (a) of this section offered on a generally applicable basis, (2) rates and charges for or in connection with that service, and (3) all classifications, practices, rules, or regulations which in any manner affect or relate to the aforementioned service, rates, and charges. This statement shall be in writing. Any oral agreement or understanding forming a part of such statement shall be reduced to writing and made a part thereof. A tariff is designated with a Tariff Volume number.").

²⁴ The Commission has previously interpreted the CTOA independently and as a modifier to broad provisions of the Operating Agreement. *See, e.g., PJM Interconnection, L.L.C.,* 173 FERC ¶ 61,242 (2020).

²⁵ On July 2, 2020, PJM submitted a filing developed by several stakeholders to revise Operating Agreement, Schedule 6 to move the planning of all Transmission Facilities determined as at the end of life, to a new category of projects under PJM's RTEP process. The Operating Agreement amendments were approved by the PJM Members Committee – over PJM's objection – so PJM was required to submit them under FPA section 205. *See PJM Interconnection, L.L.C.*, End of Life Joint Stakeholder Proposal Filing, Docket No. ER20-2308-000 (July 2, 2020) ("Stakeholders' EOL Filing"). On the same day it filed the Stakeholders' EOL Filing, PJM filed a protest of the proposal, arguing that the stakeholders' proposal contravenes PJM's Governing Documents, including the CTOA, Commission precedent

to submit an FPA section 205 filing that PJM believed violated the contractual rights and commitments under the CTOA. Absent this kind of extraordinary circumstance that takes direct aim at the contractual rights and commitments under the CTOA, PJM views section 7.9 as having no practical impact at all on its ability to amend the RTEP Protocol or otherwise plan its system.

Fourth, Consumer Advocates and Joint Protesters fail to acknowledge that in the entire history of PJM, formal dispute resolution procedures over filing rights between PJM and the PJM Transmission Owners under current CTOA section 7.6 (which new section 7.9 is entirely based on) *have never been invoked*. This includes during the End-of-Life proceeding, where there was no need to invoke them because both PJM and the PJM Transmission Owners agreed that the filing PJM was being forced to make by the Members Committee violated the rights and commitments of the CTOA. There is no reason to conclude that allowing PJM to submit its independent planning proposals under FPA section 205 rather than FPA section 206 will suddenly create a deluge of calls for dispute resolution over filing rights under the CTOA, when these procedures have never once been invoked before.

Finally, Consumer Advocates' attempt to draw a false equivalency between the use of FPA section 206 as a last resort in an ultra-rare (so rare, in fact, that it has never happened) dispute resolution process over filing rights between PJM and the PJM Transmission Owners under the CTOA, and the *mandatory* use of FPA section 206 for *all* independent PJM planning proposals in *all* circumstances under the Operating Agreement as a matter of policy. There is no equivalency, and the Commission should not be fooled by attempts to manufacture one here. Approving PJM's

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and the PJM Board of Managers' explicit recommendation. *See PJM Interconnection, L.L.C.*, Comments of PJM Interconnection, L.L.C., Docket No. ER20-2308-000, at 2-4 (July 2, 2020). The Commission ultimately rejected the Stakeholders' EOL Filing, agreeing with PJM that the stakeholders' proposal conflicted with the reserved rights of the PJM Transmission Owners under the CTOA. *See PJM Interconnection, L.L.C.*, 173 FERC ¶ 61,242 (2020), *reh'g denied*, 176 FERC ¶ 61,053 (2021).

June 21, 2024 Filings constitutes a dramatic improvement over the status quo, where submission under FPA section 206 is the rule, not the ultra-rare exception.

III. CONCLUSION

PJM respectfully requests that the Commission grant leave and accept this Answer into the record in this proceeding, and accept PJM's June 21, 2024 Filings and the TOs' FPA Section 205 Filing, for the reasons set forth above and more fully in those filings.

Craig Glazer
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September 26, 2024

UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.)))	Docket Nos. EL24-119-000 ER24-2338-000
Duquesne Light Company)))	ER24-2336-000 (not consolidated)

REPLY AFFIDAVIT OF PAUL F. MCGLYNN ON BEHALF OF PJM INTERCONNECTION, L.L.C.

- 1. My name is Paul F. McGlynn, and my business address is 2750 Monroe Blvd., Audubon, Pennsylvania 19403. I currently serve as the Vice President of Planning at PJM Interconnection, L.L.C. ("PJM"). I am submitting this affidavit in support of PJM's June 21, 2024 Filings¹ in these proceedings, and specifically in response to issues raised by the recent Consumer Advocates Answer and the Joint Protesters Answer.²
- 2. Specifically, in this affidavit, I provide additional testimony regarding:
 - The macro-trends in resource mix and load growth, as described in PJM's June 21, 2024 Filings; and
 - Why the consequences of failure of PJM's independent planning proposals are more acute and serious going forward, in light of these macro-trends.

I. QUALIFICATIONS

3. I joined PJM in 2007, and have been continuously employed by PJM for the last 17 years. In my current role, I oversee PJM's Planning Division, and am responsible for all activities related to resource adequacy, generation interconnection, interregional planning and transmission planning, including the development of the Regional Transmission Expansion Plan ("RTEP") under the RTEP Protocol—the location of which is the subject of these proceedings. I am a member of the PJM Executive Team.

¹ *PJM Interconnection, L.L.C.*, FPA Section 206 Filing of PJM Interconnection, L.L.C., Docket No. EL24-119-000 (June 21, 2024) (hereafter, the "June 21, 2024 FPA Section 206 Filing"); *PJM Interconnection, L.L.C.*, FPA Section 205 Filing of PJM Interconnection, L.L.C., Docket No. ER24-2338-000 (June 21, 2024) (hereafter, the "June 21, 2024 FPA Section 205 Filing") (collectively, the "June 21, 2024 Filings").

² *PJM Interconnection, L.L.C.*, Answer of Consumer Advocates, Docket Nos. EL24-119-000, ER24-2336-000, ER24-2338-000, at 3-7 (Aug. 27, 2024) ("Consumer Advocates Answer"); *PJM Interconnection, L.L.C.*, Answer of Joint Protesters, Docket Nos. EL24-119-000, ER24-2336-000, ER24-2338-000, at 3-6 (Sept. 4, 2024) ("Joint Protesters Answer").

- 4. Prior to this position, I served as the Executive Director of System Operations, ensuring the secure, reliable, economic, and coordinated operation of the PJM system, including PJM's real-time dispatch operations and near-term reliability studies. Prior to that role, I worked in the Planning Division, serving as the Senior Director of System Planning. Prior to my time at PJM, I worked at PECO Energy in various engineering and operational roles, where I began my career in 1986.
- 5. I hold a Bachelor of Science degree in electrical engineering from The Pennsylvania State University, and a Master of Science degree in electrical engineering from Drexel University. I am a registered professional engineer in the Commonwealth of Pennsylvania and a senior member of the IEEE.

II. TESTIMONY OF PAUL F. MCGLYNN

- 6. In PJM's June 21, 2024 Filings, PJM described at length how its ability to meet its requirements to plan its system to facilitate efficient, reliable, and non-discriminatory open access transmission service for all customers is currently being challenged by major changes in resource mix and load growth in the PJM Region, the pace of which is expected to significantly accelerate in the coming years.
- 7. PJM provided several data sets to illustrate this point. First, in **Figure PJM-1**, PJM explained that its current summer peak load forecast shows a significant increase in load growth, with the share of total load attributable to data centers (currently 4%) expected to rise to 12% by 2030, and 16% by 2039.
- 8. Additionally, I note that beyond data centers, electric vehicles are a new and evolving demand driver, currently negligible but expected to rise to 11% of load by 2039, as shown in **Figure PJM-1A**. There has also been significant and continued growth in rooftop or behind-the-meter solar (and more recently storage). These show up as an *offset* to load growth and over time change underlying load behavior. *See* **PJM Figure-1B**.

Figure PJM-1

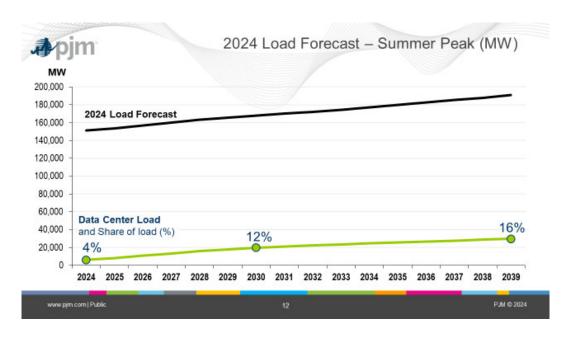


Figure PJM-1A

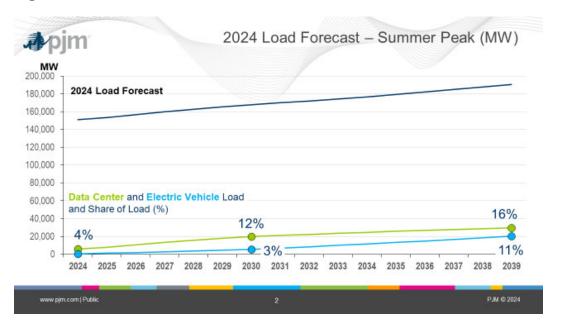
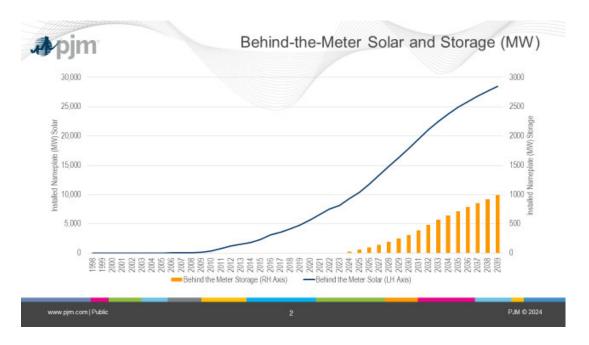
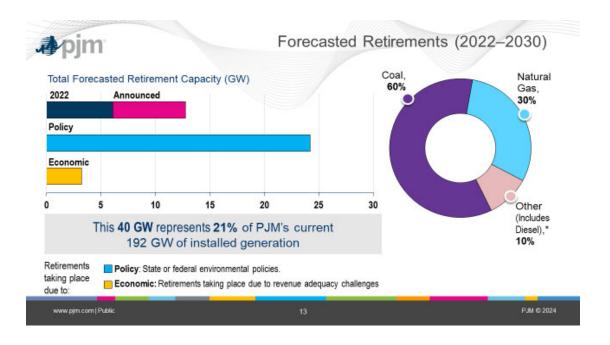


Figure PJM-1B



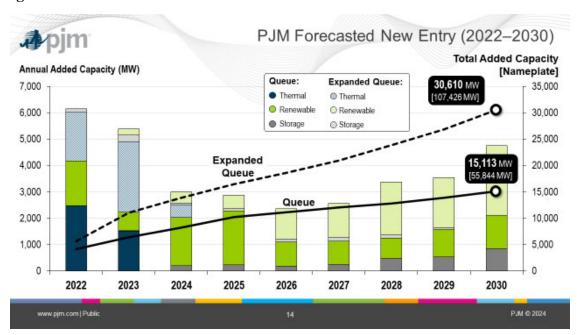
9. Second, in the June 21, 2024 Filings, PJM described how resource adequacy analysis simultaneously indicates significant retirements of existing fossil fuel capacity, with PJM currently projecting the retirement of approximately 40,000 MWs, or 21% of PJM's current 192,000 MW installed generation capacity, between 2022 and 2030. *See* Figure PJM-2.

Figure PJM-2



10. PJM also described the pace of replacement capacity being built and brought into service, as illustrated in **Figure PJM-3**. PJM explained that, based on the historic pace of resources transitioning from the interconnection queue to commercial operation, as well as current renewable development complexities associated with supply chain, financing, and state and local siting, PJM currently projects a shortfall in supply by the end of this decade.

Figure PJM-3



11. Finally, PJM explained how the replacement capacity currently comprising the PJM interconnection queue is overwhelmingly non-traditional, and often intermittent, resources, as evidenced in **Figure PJM-4**. Due to the reduced Effective Load Carrying Capability of these non-traditional resources, more of these resources are required to replace the retiring generation, resulting in an ever greater need for transmission planning and expansion.

Figure PJM-4



Active New Service Request Projects, AE1-AJ1 Cycles - MW Energy

Row Labels	Sum of MW Energy
Hybrid / Multi-Fuel	34,970
Hydro	124
Methane	6
Natural Gas	4,829
Offshore Wind	27,246
Other	43
Solar	96,328
Storage	53,161
Wind	8,746
Grand Total	225,453



- 12. These data evidence a dramatic change in system dynamics and corresponding planning needs that are of a fundamentally different scale and scope than what PJM has faced historically, when resource mix was dramatically more homogenous and comprised of primarily large synchronous resources, and load growth was flat.
- 13. First, regarding resource mix, the scale of the transformation currently underway in PJM and the corresponding implications for system planning are a direct result of a paradigm shift in how electricity is being generated, and is fundamentally different from prior transitions in PJM. In the 2000s, when the proliferation of natural gas supply lead to a large-scale migration toward gas-fired generation, the basic mechanics of producing electricity did not fundamentally change from an engineering and system planning perspective. Like nuclear or coal-fired resources, gas-fired resources are fundamentally large, thermal, and centralized rotating resources that have comparable impacts in terms of voltage support, load following, stability, and dispatchability. This made the task of modeling and planning for the impacts of gas-fired resources corollary to the analysis conducted for other large, thermal, and centralized rotating generation facilities in the PJM Region. Yet the resources that comprise the vast majority of PJM's interconnection queue today (Figure PJM-4) will generate electricity in a fundamentally different way, in that they are inverter-based, intermittent, non-thermal, and decentralized. The corresponding implications of this basic engineering fact for system planning are profound, and will require planning authorities like PJM to adapt to the changing environment through the use of new analytical techniques, incorporating new and different data, and resulting in the need to evolve the planning protocols, potentially, on a more frequent basis.
- 14. Second, regarding load growth, for much of PJM's recent history, load growth has been essentially flat. Growth in weather normal summer peak load over the past 10 years (prior

to 2024) has been approximately 0%. While the load growth attributable to data centers (illustrated in **Figure PJM-1**) is comparatively new and dramatically impactful from an engineering perspective, there are other trends in load that also directly impact PJM's planning efforts. These include significant projected increases in electric vehicle penetration and charging infrastructure (**Figure PJM-1A**), as well as electrification policy efforts like the proliferation of conversions to electric heat pumps, and greater penetration of rooftop solar (**Figure PJM 1-B**) which PJM accounts for as an offset to load. Additionally, with the potential for increased growth associated with battery storage, the incorporation of techniques to account for rapid changes from load to generation behavior from an individual storage resource may also necessitate changes to how PJM will analyze these facilities. These dynamic changes in load growth present unique and unprecedented challenges to PJM from a planning perspective.

- 15. Taken together, the interconnection of large-scale data centers and other trends in dynamic load growth, coupled with the retirement of conventional generation, and slow pace of new entry, requires either: (i) increases in the capability of existing transmission lines; or (ii) new transmission paths in order to reliably transfer power from existing generation to these new load centers. These changing factors necessitate broad, holistic planning, including the selection of robust transmission solutions that are paramount to preserving resource adequacy and the reliability of the system. In 2023, PJM moved forward the largest suite of baseline transmission upgrades in the past 10 years to face these challenges. In the 2024 RTEP Window 1 competitive transmission solicitation window, PJM will have received the highest number of proposals for resolving transmission constraints in its history due to the large number of Extra High Voltage ("EHV") violations found during the 2024 RTEP analysis.
- 16. The potential harm caused by a failure to address these planning challenges is significantly greater and more dynamic than has historically been the case in the PJM Region, and directly impacts PJM's ability to meet its requirements to plan its system to facilitate efficient, reliable, and non-discriminatory open access transmission service for all customers. This is fundamentally because the prospect of a significant discrepancy between supply and demand—and supply and demand of these *types*—has simply never existed in the PJM Region. As supply begins to lag and demand increases, the transmission system will continue to become more constrained, threatening operational flexibility and ultimately reliability. PJM must have the flexibility to move forward with new and innovative planning protocols, as compared to times in the past, in order to meet this rapidly changing future. This is especially true in instances where an exact two-thirds supermajority of the PJM Members Committee cannot agree on a specific planning proposal.
- 17. This concludes my Affidavit.

UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.)))	Docket Nos. EL24-119-000 ER24-2338-000
Duquesne Light Company)))	ER24-2336-000 (not consolidated)

VERIFICATION OF PAUL F. MCGLYNN

Paul F. McGlynn, being first duly sworn, deposes and states on this date of September 26, 2024, that he is the Paul F. McGlynn referred to in the foregoing document entitled "Affidavit of Paul F. McGlynn on Behalf of PJM Interconnection, L.L.C.," that he has read the same and is familiar with the contents thereof, and that the testimony set forth therein is true and correct to the best of his knowledge, information, and belief.

Paul F. McGlynn Vice President

Planning

PJM Interconnection, L.L.C.

Commonwealth of Pennsylvania - Notary Seal MICHELE A MATTICOLA - Notary Public Montgomery County

My Commission Expires December 23, 2027 Commission Number 1249359

CERTIFICATE OF SERVICE

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

Dated at Washington, D.C., this 26th day of September 2024.

/s/ Jesse Jacobe
Jesse Jacobe
PJM Interconnection, L.L.C.
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