



November 27, 2024

To: Michele Greening & Samantha Rozecki, PJM Interconnection LLC

Re: Transmission Expansion Advisory Committee Special Session on Order No. 1920 - Request for Stakeholder Feedback on Corporate Commitments

The Institute for Policy Integrity at New York University School of Law (Policy Integrity)¹ respectfully submits the following comments in response to PJM Interconnection LLC's (PJM) notice regarding evaluating corporate commitments² in the context of the Federal Energy Regulatory Commission's (FERC) Order No. 1920.³ Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

To comply with Order No. 1920, PJM will need to create at least three plausible and diverse long-term scenarios that incorporate mandatory categories of factors.⁴ When PJM requested stakeholder input on corporate commitments, these were a required consideration.⁵ In Order No. 1920-A, FERC set aside that requirement,⁶ but PJM can still opt to consider corporate commitments as a driver of long-term transmission needs.⁷ Indeed, because these commitments can be a real driver of future transmission needs,⁸ Policy Integrity recommends that PJM incorporate this factor into its scenarios for the sake of accuracy so long as PJM avoids double counting the effects of these commitments when accounting for other transmission drivers.⁹

Regarding estimating and modeling corporate commitments, Policy Integrity specifically recommends that:

- PJM consider a "corporate commitment" to be any corporate pledge that could drive transmission needs in PJM by affecting electricity supply or demand in PJM's footprint.
- PJM should take a top-down approach to estimating the impacts of scope 2 corporate commitments, rather than using a bottom-up aggregation of individual commitments, because these commitments will come from myriad entities and in varied formats. The nuances of each commitment will have

¹ This document does not purport to present the views, if any, of New York University School of Law.

² PJM INTERCONNECTION, REQUEST FOR STAKEHOLDER FEEDBACK ON CORPORATE COMMITMENTS ORDER 1920 – CATEGORY FACTOR 7 (2024), <https://perma.cc/6NG9-YKEC>.

³ *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation*, Order No. 1920, 187 FERC ¶ 61,068 (2024) [hereinafter Order No. 1920].

⁴ *Id.* at P 575.

⁵ *Id.* at P 481.

⁶ *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation*, Order No. 1920-A, 189 FERC ¶ 61,126, at P 303 (2024) [hereinafter Order No. 1920-A].

⁷ Order No. 1920 at P 412.

⁸ *Id.* at P 481.

⁹ See Order No. 1920-A at P 303.

different implications for future transmission needs, so it may be more accurate and administrable for PJM to instead estimate the quantity of energy attribute certificates (EACs)¹⁰ representing zero-emissions generation that companies will voluntarily purchase from PJM-located resources. PJM could then use that parameter to constrain its capacity expansion modeling, ensuring that PJM plans for a future in which these EAC sales are possible.

- PJM could achieve a set of plausible and diverse long-term scenarios by varying the following assumptions about scope 2 commitments across scenarios: (1) the total quantity of voluntary zero-emissions energy procurement; (2) how much of the procurement will need to be hourly matched vs. annually matched, in accordance with evolving accounting methodologies; and (3) levels of procurement from new resources vs. existing resources, also in accordance with evolving accounting methodologies.
- If PJM does rely on bottom-up reporting, it will be important for PJM to verify submissions to minimize strategic misreporting, while balancing confidentiality concerns against transparency requirements.

Responses to Request for Stakeholder Feedback

1. What types of information should fall under the definition of “corporate commitments”?

PJM should consider all corporate commitments that could drive transmission needs by changing electricity supply or demand within PJM’s footprint. Some corporate commitments will be “scope 1”¹¹ pledges to reduce emissions at company-controlled sources like a company’s fleet of generation resources.¹² Other corporate commitments will be “scope 2”¹³ pledges to achieve electricity-emissions benchmarks while drawing electricity from the PJM regional grid. Such pledges may take different forms, including promises to purchase a certain amount of electricity in PJM with specific environmental characteristics (e.g., zero-emissions electricity) by a specific date, or commitments to achieve a reduction in the company’s emissions from electricity purchased within the PJM footprint (e.g., net zero) by a target date.

While many corporate commitments will be pledges that describe the company’s own behavior, some may be “scope 3”¹⁴ commitments to achieve upstream or downstream goals that also affect electricity supply or demand.¹⁵ For example, a company might commit to reducing the greenhouse gas emission from electricity embodied in the products that it purchases for resale.¹⁶ Such commitments can also drive

¹⁰ EACs are certificates like renewable energy certificates (RECs) that represent the environmental characteristics of a unit of energy.

¹¹ *Scope 1 and Scope 2 Inventory Guidance*, EPA, <https://perma.cc/VWH3-NASY> (“Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles).”).

¹² E.g., INVENERGY, 2023 IMPACT REPORT SUMMARY 2 (2024), <https://perma.cc/AA46-Y5VT>.

¹³ GREENHOUSE GAS PROTOCOL, GHG PROTOCOL SCOPE 2 GUIDANCE 5 (2015), <https://perma.cc/732A-RSYW> (defining “scope 2 emissions” as “emissions from the generation of acquired and consumed electricity, steam, heat, or cooling”).

¹⁴ GREENHOUSE GAS PROTOCOL, CORPORATE VALUE CHAIN (SCOPE 3) ACCOUNTING AND REPORTING STANDARD at 4 (2011), <https://perma.cc/Q5VW-P4KD> (defining “scope 3 emissions” as “indirect emissions resulting from value chain activities”).

¹⁵ E.g., *Climate*, TARGET, <https://perma.cc/YV4K-VE9X>.

¹⁶ E.g., GREENHOUSE GAS PROTOCOL, *supra* note 14, at 5 fig.1.1.

transmission needs to the extent that they drive changes in demand for or supply of electricity within PJM (e.g., if they involve products produced using electricity within PJM). If PJM pursues a bottom-up approach of aggregating corporate commitments, scope 3 commitments present a risk of double counting that PJM should be mindful of, because one company's scope 3 commitment may also appear as another company's scope 1 or 2 commitment.¹⁷

2. What information should PJM be requesting from stakeholders that would be considered corporate commitments?

Question 2 suggests that PJM is considering a bottom-up aggregation of individual corporate commitments, but doing so would present challenges that PJM should be prepared to address. Beyond the sheer number of companies that may have relevant commitments, similar-sounding goals can have very different effects on transmission needs in PJM. Accordingly, at least for scope 2 commitments, Policy Integrity recommends a top-down approach instead that does not involve collecting company-specific data.

If PJM were to pursue a bottom-up aggregation of individual corporate commitments, companies might have radically different approaches to a scope 2 goal like “net zero electricity emissions,” each with different implications for the future of PJM. A company might intend to achieve “net zero” through any combination of: purchasing of a quantity of EACs that are time-matched to the company's energy consumption;¹⁸ procuring EACs associated with avoided emissions that offset the company's induced electricity emissions;¹⁹ purchasing carbon offsets from outside the power sector (e.g., reforestation projects);²⁰ and reducing electricity consumption.

The permutations do not stop there. Two companies might each pursue a time-matching strategy to achieve net zero, but one might accept EACs generated at any time within the same year as that company's electricity consumption (annual time-matching), while the other might insist on EACs that were generated within the same hour (hourly time-matching).²¹ A company might commit to purchasing EACs from generators within a specific deliverability zone (e.g., within PJM, or within a specific zone within PJM), or a company might have no geographic restrictions and thus be willing to purchase EACs from another transmission-planning region.²² Two “net zero” commitments might also reflect entirely different approaches to additionality: One company might decide to purchase EACs only from newly built generation to ensure that it does not siphon zero-emissions electricity from existing uses, while another

¹⁷ See *Scope 3 Inventory Guidance*, EPA, <https://perma.cc/BM28-MUS7> (“The scope 3 emissions for one organization are the scope 1 and 2 emissions of another organization.”).

¹⁸ E.g., GOOGLE, MOVING TOWARD 24X7 CARBON-FREE ENERGY AT GOOGLE DATA CENTERS: PROGRESS AND INSIGHTS (2018), <https://perma.cc/B286-PXFH>.

¹⁹ E.g., *Electricity Emissions Accounting Principles to Drive Climate Action*, EMISSIONS FIRST PARTNERSHIP, <https://perma.cc/6F4X-AJ2K>.

²⁰ Ken Silverstein, *Not All Carbon Credits Are Created Equal. Here's What Companies Must Know*, FORBES (Jun. 22, 2022), <https://www.forbes.com/sites/kensilverstein/2022/06/22/not-all-carbon-credits-are-created-equal-heres-what-companies-must-know/> (last visited Nov. 22, 2024).

²¹ ERIC O'SHAUGHNESSY ET AL., NAT'L RENEWABLE ENERGY LAB'Y, STATUS AND TRENDS IN THE U.S. VOLUNTARY GREEN POWER MARKET: 2022 DATA 13 (2024), <https://perma.cc/8KYF-756U> [hereinafter NREL REPORT].

²² *Id.* at 8–9.

might be content to purchase EACs from existing generation resources that had previously served other customers.²³

Each combination of decisions would result in distinct impacts on PJM's future generation mix and thus PJM's identification of transmission needs. Accordingly, if PJM pursues a bottom-up approach to scope 2 commitments, it should solicit specific and detailed information about the nuances of each commitment.

Given these data-collection challenges, it might be more accurate and administrable for PJM to instead pursue a top-down approach for scope 2 commitments focused on forecasting a single variable: the quantity of EACs representing zero-emissions generation that companies will voluntarily purchase from PJM-located resources.²⁴ Companies have many ways to purchase zero-emissions electricity, but they all involve buying and retiring EACs.²⁵ Thus, PJM could model corporate commitments from the top down by forecasting the quantity of zero-emission EACs that PJM-located resources will sell to corporate customers each year. Then PJM could ensure that its capacity expansion model builds a generation mix that would allow this quantity of EACs to be produced above and beyond those EACs that will be required to meet other demand for them (e.g., the EACs necessary to comply with state renewable portfolio standards (RPSs) and utility green programs for residential customers²⁶). Using such a constraint would be analogous to how modelers can include RPSs in capacity expansion models as a constraint that prevents the model from building incompatible generation.²⁷

Order No. 1920 explicitly presents the possibility of a top-down approach to modeling corporate commitments.²⁸ If PJM were to adopt Policy Integrity's recommended EAC-quantity approach, quantity data may be available from S&P Global, which offers certain ten-year estimates concerning the size of voluntary REC market.²⁹ Relevant data may also be available from the National Renewable Energy

²³ See EPA GREEN POWER PARTNERSHIP, OFFSETS AND RECS: WHAT'S THE DIFFERENCE? 2 (2018), <https://perma.cc/7DY6-V9PA>.

²⁴ Alternatively, PJM might forecast the cost of voluntary zero-emission EACs and alter the economic parameters for zero-emissions generation to account for this additional income stream.

²⁵ NREL REPORT, *supra* note 21, at 1.

²⁶ *Id.* at 3–4 (describing six categories of voluntary EAC purchases and historical national percentage of sales for each).

²⁷ EMMANUELE BOBBIO, PJM INTERCONNECTION, LTRTP WORKSHOP POLICY STUDY 35–37 (2024), <https://perma.cc/6USR-N227>.

²⁸ Order No. 1920 at P 413 n.945 (“For example, transmission providers could aggregate the effect of corporate goals by leveraging publicly available surveys of corporations’ clean energy and electrification goals and then using those surveys to inform the assumptions used to develop Long-Term Scenarios (e.g., 10% more clean energy resources and 10% higher load growth for a Long-Term Scenario that assumes full achievement of those goals than in a Long-Term Scenario that does not consider such goals).”).

²⁹ Tony Lenoir & Adam Wilson, *Voluntary renewable energy certificates set to double state targets past 2030*, S&P GLOBAL (Feb. 22, 2024), <https://www.spglobal.com/market-intelligence/en/news-insights/research/voluntary-renewable-energy-certificates-set-to-double-state-targets-past-2030> (last visited Nov. 21, 2024). PJM has already suggested preliminarily that S&P is the best source for certain techno-economic data for long-term scenario construction. EMMANUELE BOBBIO, PJM INTERCONNECTION, SOURCES FOR TECHNO-ECONOMIC INPUTS (ORDER NO. 1920 SCENARIOS’ FACTOR CATEGORY FOUR) 5, 6, 7, 9 (2024), <https://perma.cc/CC7V-LRHV>.

Laboratory, which reports historical data on voluntary green power procurement,³⁰ including a state-by-state breakdown for 2023.³¹

PJM could harmonize this top-down approach with Order No. 1920's requirement that PJM construct at least three plausible and diverse long-term scenarios by varying the binding zero-emissions EAC constraint across scenarios to reflect uncertainty about corporate demand for zero-emissions electricity. Beyond that one adjustment, PJM could also vary its scenarios to account for the evolving rigor of electricity-emissions accounting practices, a topic that was the focus of a recent Policy Integrity conference, to reflect how corporate commitments might develop over Order No. 1920's 20-year planning horizon.³² As discussed at the conference, corporations are shifting from the dominant annual-matching-of-EACs approach to more sophisticated emissions-matching and hourly-matching/spatial-matching methodologies.³³ Similarly, the Greenhouse Gas Protocol is considering whether to alter its widely adopted standards for voluntary reporting of electricity emissions to include granular temporal/geographic requirements and/or additionality requirements.³⁴

Accordingly, PJM could make different assumptions for different scenarios about how these accounting advances will be adopted with respect to the forecasted quantity of EACs. PJM could assume distinct percentages of the total EAC quantity will be subject to hourly matching in each scenario—and implement this by requiring the capacity expansion model to ensure the necessary amount of zero-emissions generation happens in each hour, rather than just across the entire year. Similarly, PJM could implement distinct assumptions about the adoption of additionality requirements by requiring a certain percentage of EACs to come from newly built resources.³⁵

3. How should PJM collect and verify this information? Should corporate commitments require certain levels of evidence to be considered within Category Factor 7?

³⁰ Voluntary Green Power Procurement, NAT'L RENEWABLE ENERGY LAB'Y, <https://www.nrel.gov/analysis/green-power.html> (last visited Nov. 21, 2024).

³¹ *Id.* (download "2023 databook" and select "State-Level Generation" tab).

³² *Conference: Emissions Accounting to Accelerate Decarbonization*, INST. FOR POL'Y INTEGRITY, <https://policyintegrity.org/news/event/conference-emissions-accounting-to-accelerate-decarbonization> (last visited Nov. 21, 2024).

³³ Institute for Policy Integrity, *State of the Art in Emissions Accounting*, YOUTUBE (Sept. 27, 2024), <https://www.youtube.com/watch?v=adbUOhEuszA&list=PL54Voe-jmsAoOeMHsKScDfFVK21aNRG2a&index=4> (Nkiruka Avila of Meta at 15:20 & 1:19:10; Parikhith Sinha of Electric Hydrogen at 24:47).

³⁴ GHG PROTOCOL, SCOPE 2 PROPOSAL SUMMARY at 2–3 (2023), <https://perma.cc/V8T4-QMQU>.

³⁵ While this feedback focuses on scope 2 commitments, similar logic applies to scope 1 pledges concerning emissions from generation assets located in PJM. A generation owner could intend to achieve a "net zero" scope 1 pledge by retiring fossil-fuel resources, selling its fossil-fuel resources to a company that will continue operating them, and/or purchasing EACs or offsets. To some extent, it may make sense for PJM to try to capture the effects of scope 1 pledges on transmission needs in part through PJM's treatment of the interconnection queue and anticipated retirements (two mandatory categories of factors), because these pledges' impacts will be mediated through the entry and exit of PJM-located generation resources. *See* Order No. 1920 at PP 463, 472. But because PJM's treatment of these categories may not capture all relevant corporate plans regarding interconnection and retirement (e.g., a company may plan to build generation within the next 20 years without having entered any specific project into the queue)—and because there are likely fewer relevant scope 1 commitments than scope 2 commitments—PJM may want to devote additional attention to deciphering and accounting for companies' scope 1 plans in order to create plausible scenarios.

To the extent that PJM adopts a top-down approach to estimating corporate commitments, it would not need to vet corporation-specific information. (PJM would still need to solicit stakeholder input and feedback on its approach and intended inputs related to this factor across scenarios.) If PJM instead takes a bottom-up approach, however, verification will be especially important to help ensure that corporate customers with large loads do not strategically misreport their commitments to influence the buildout of the transmission system in ways that benefit them but that would be inefficient under a more accurate state of future corporate demand. If PJM believes an individual corporate commitment is unlikely to be achieved, Order No. 1920 allows PJM to discount that commitment, and PJM can vary the level of discounting by scenario to account for uncertainty.³⁶

4. What confidentiality concerns should PJM take into consideration when soliciting for corporate commitments? If confidentiality concerns exist, how should PJM balance protecting this information with maintaining transparency around its transmission planning assumptions?

Adopting a top-down would avoid any confidentiality concerns that may apply to a bottom-up process.

Sincerely,

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³⁶ *Id.* at P 484.