

Counterflow

By Steve Huntoon

New Ball and Chain for Renewable Energy



More than 20 years ago it was agreed in PJM, and approved by FERC, that new generators would pay the full capital cost of transmission system upgrades (network upgrades) needed for interconnection.¹ That was, and remains, one of the cornerstones of PJM. It's a basic "but for" test that ensures, as FERC observed more than 20 years ago, that the most economic generation is interconnected.²

The New Ball and Chain

The PJM transmission owners have now proposed to FERC to eliminate that and replace it with a TO option to rate base the cost of such upgrades and charge every generator a monthly formula rate for 20 years (ER21-2282). Generation interconnection customers would face the double whammy of putting up security for the full capital cost of network upgrades, while *also* paying the monthly formula rate for 20 years.³

The analogy to utility service for retail customers would be customers having to put up security equal to *pro rata* shares of total utility rate base, while *also* paying the utility monthly bill with an embedded return on rate base for the next 20 years.

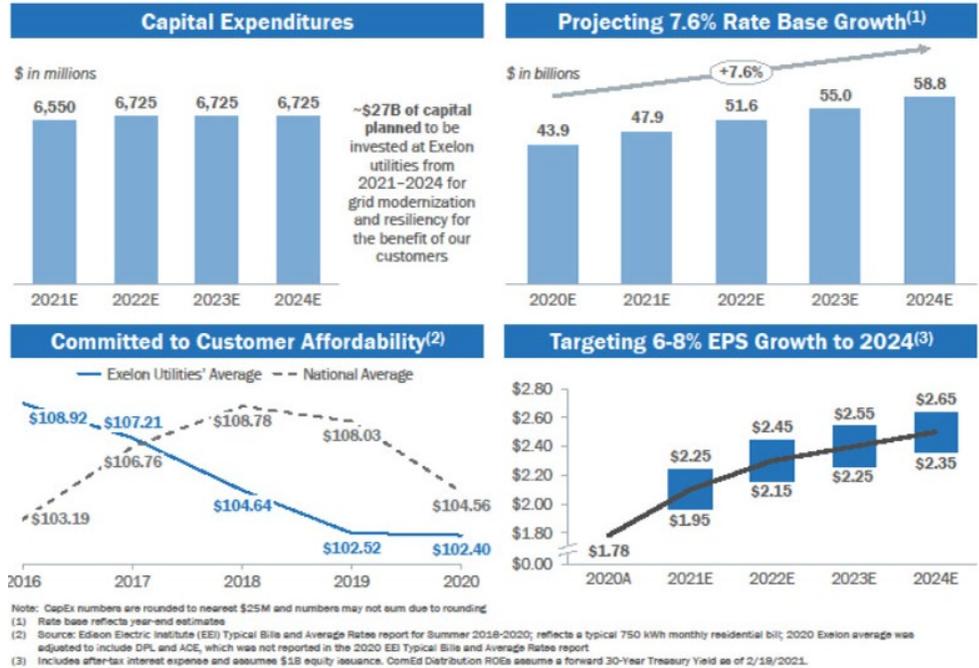
Needless to say, the PJM TOs' proposal would compound the costs and risks of interconnection, with adverse consequences for new wind and solar projects.

PJM Tariff Violations

The PJM TO proposal violates the PJM tariff. Since at least 2007, the PJM tariff has stated: "No Network Upgrade ... shall be a Customer-Funded Upgrade if and to the extent that the costs thereof are included in the rate base of a public utility on which a regulated return is earned."⁴

Because the PJM TO proposal would rate base network upgrades, such upgrades could no longer be Customer-Funded Upgrades for which a generator could have "cost responsibility."⁵ Thus, PJM and the PJM TOs could not impose cost responsibility upon generator customers – violating the fundamental principle of "but for" cost responsibility. And begging the question, if generators do not pay for network upgrades, who does?

RemainCo Has a Strong Growth Trajectory



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Moreover, in one fell swoop the PJM TOs would strip generators of the financial rights (Incremental Auction Revenue Rights, Incremental Available Transfer Capability Revenue Rights and Incremental Capacity Transfer Rights) that they are entitled to from network upgrades they pay for. The PJM tariff does not allow generators to receive financial rights for rate-based network upgrades.⁶ Taking away those rights would violate the PJM tariff, and the many FERC orders accepting and approving these rights over the last 20 years.⁷

The Commission has succinctly summarized both rules: "PJM's tariff provides that a customer cannot fund upgrades and cannot receive financial rights for projects that are included in a utility's cost-of-service."⁸

Nowhere do the PJM TOs explain how they can unilaterally eviscerate these PJM tariff provisions approved by the Commission.

Perverse Incentive Created

The PJM TO proposal would create a perverse incentive for TOs to inflate the scope and costs of network upgrades in order to inflate rate base. Generation interconnection customers would be in weak position to defend against inflated scope and costs because of the TO near monopoly on critical system information

and because the consequence of resisting inflated scope and costs would be project delay or failure.

A Windfall for Existing TO Affiliated Generation

Raising interconnection costs and risks, and piling on the perverse incentive to inflate scope and costs, discourages new entry and thus provides a windfall for existing TO-affiliated generation. It would be highly inequitable to reverse a 20-year cornerstone of PJM to provide a windfall for TO-affiliated generation. This is independent of whether TOs also would discriminate in favor of their *new* affiliated generation.

PJM TOs' Nonexistent Risks

The PJM TOs' arguments for their proposal are insubstantial in theory and unsubstantiated in reality.

The gist of their case for changing the paradigm of the last 20+ years is that they face "untenable financial pressure" from increased risks because of an increase in network upgrades because of increased generation interconnections, principally renewable energy generation (page 8). Surely such an existential threat would be disclosed to shareholders in

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SEC filings. Nope. Not there.⁹

And, in fact, new network upgrades paid for by interconnection customers *decrease*, rather than increase, virtually all of the risks listed by the PJM TOs. Let's take "operational and safety risks" where the PJM TOs cite "transformer fires at substations" (page 14). In this case the relevant network upgrade would be replacing an older, smaller transformer with a new, larger transformer which would of course *reduce* fire risk.

The PJM TOs do not identify a single event associated with network upgrades, among the many thousands of them over the last 20 years, that caused a loss to TO shareholders.

And as for transmission risks generally, the PJM TOs provide no examples of actual loss to shareholders and a paucity of events that somehow could have produced such a loss. The totality of their specific events are:¹⁰

- Dump truck drove through 230-kV tower.
- Fighter jet pilot ejector seat nicked 230-kV line.
- NERC imposed \$2.5 million in penalties in 2020 (across the entire country).
- A switching station was built on contaminated land.¹¹
- Hurricane Isaias caused an outage to 50,000 customers lasting five hours.
- A tornado might have caused 3,798 customers to lose power (but didn't).

In other words, risk is basically nil.

PJM TOs Ignore Insurance

Under the interconnection service agreements in the PJM tariff, PJM TOs are required to carry commercial general liability insurance and excess/umbrella insurance on top of that of not less than \$1 million per occurrence and not less than \$20 million per occurrence.¹² The PJM TOs don't mention insurance, much less explain why insurance wouldn't cover any risks.

PJM TOs' Business Model

The PJM TOs claim that owning and operating facilities that are not rate based adversely affects the TOs' "business model" (pages 14-15). This "business model" was agreed to by the PJM TOs more than 20 years ago. After 20 years investors know — or should be presumed to know — what they are and are not investing in.

A review of the largest TOs' presentations to shareholders this year reveals rosy claims of continued growth in rate base and similar metrics.¹³ Here is Exelon (NASDAQ:EXC) telling shareholders of its "Strong Growth Trajectory" for the utility business, and projecting future utility rate base to increase 7.6% per year, along with a 6-8% increase per year in earnings per share.¹⁴

Wrong Denominator for Alleged Risks

The PJM TOs say that if the historical percentage of network upgrades actually built is applied to projects in the PJM queue, and added to past network upgrades, that the total

dollars would be about 4% of PJM TOs' current combined net transmission plant (page 18). They call this a "material and significant portion of transmission assets." Assuming, for the sake of argument, that past network upgrades should be counted, and that there are actual risks to shareholders associated with network upgrades, the PJM TOs have used the wrong denominator. The significance of any risk to shareholders is relative to total utility rate base, not just transmission.

With few exceptions, shareholders do not invest in transmission by itself. The Exelon slide shows that Exelon reports total rate base to shareholders. Taking Commonwealth Edison, the largest Exelon utility subsidiary as an example, its transmission plant is only 19.2% of its total utility plant — the lion's share is distribution plant.¹⁵ Using Commonwealth Edison as a go-by, the PJM TOs' 4% of transmission is less than 1% of total utility plant (19.2% of 4%). Tiny.

Assuming TO Risks to be Alleviated by this Filing, TO Rates of Return Should Be Commensurately Reduced

Assuming for the sake of argument that there is some material risk associated with network upgrades, there should be a commensurate and concurrent reduction in the TOs' authorized rate of return if FERC were to relieve TOs of that risk.

In Conclusion

Renewable energy has enough challenges without adding this one. ■

¹ PJM Interconnection, L.L.C., 87 FERC ¶ 61,299, at page 17 (1999) ("...generators will be required to pay the full cost of grid expansion...").

² Id. ("... this type of proposal forces the developer to consider the economic consequences of its siting decisions when evaluating its project options, and should lead to more efficient siting decisions").

³ Transmittal Letter, page 27, and section 4 of the proposed Network Upgrade Funding Agreement.

⁴ Tariff definition of "Customer-Funded Upgrade," then section 1.7A.01, filed December 18, 2006, in PJM Interconnection, L.L.C., Docket No. ER07-344-000, accepted by Letter Order issued February 8, 2007.

⁵ Id. ("Customer-Funded Upgrade" shall mean any Network Upgrade ... for which cost responsibility (i) is imposed on an interconnection customer...")

⁶ Tariff sections 231.6, 233.6, and 234.6.

⁷ Starting with the PJM filing in PJM Interconnection, L.L.C., Docket No. ER00-941-000 (December 29, 1999), accepted by letter order dated March 30, 2000. A recent FERC order involving a generator's incremental capacity transfer rights is Radford's Run Wind Farm, LLC. v. PJM Interconnection, L.L.C., 171 ¶ FERC 61,025 (2020).

⁸ PJM Interconnection, L.L.C., 153 FERC ¶ 61,286 at P 25 (2015).

⁹ Exelon, which provides the affidavit for the PJM TO filing, says nothing in its most recent SEC form 10-K filing about supposed increased risks from increased network upgrades. <https://investors.exeloncorp.com/static-files/ab8f2e58-fb68-4f1c-9197-bdca30371726> (pages 30-46).

¹⁰ Affidavit of David W. Weaver, P.E., pages 10, 14, and 20.

¹¹ This is not identified as a material risk in the most recent SEC form 10-K of Public Service Electric and Gas Company (NYSE:PEG), <https://www.ezodproxy.com/pseg/2021/10k/images/PSEG-10K2020.pdf>, pages 136-142.

¹² Attachment O, Interconnection Service Agreement, Appendix 2, sections 13.1 and 13.2; Attachment P, Interconnection Construction Service Agreement, Appendix 2, sections 11.1 and 11.2.

¹³ E.g., Dominion Energy (NYSE:D) forecasts 13% compound annual rate base growth over next five years for Dominion Energy Virginia. https://s2.q4cdn.com/510812146/files/doc_financials/2020/q4/2021-02-12-DE-IR-4Q-2020-earnings-call-slides-vTC1.pdf, slide 18. AEP (NASDAQ:AEP) forecasts 7.4% compound annual rate base growth over next five years for its utilities. <https://www.aep.com/Assets/docs/investors/events/presentationsandwebcasts/JPMConferencePresentation06-22-21.pdf>, slide 21.

¹⁴ <https://investors.exeloncorp.com/static-files/378e54d7-56c0-46e2-a73b-744501822ec0> (slide 14).

¹⁵ Commonwealth Edison Company, FERC Form 1 for 2020, page 207, lines 58 and 100.