

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

Pennsylvania Public Utility Commission	)	Docket No. EL26-98-000
	)	
v.	)	
	)	
PJM Interconnection, L.L.C.	)	
	)	
	)	

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 211 of the Commission’s Rules and Regulations,¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor (“Market Monitor”) for PJM Interconnection, L.L.C. (“PJM”),² submits these comments in support of the complaint filed August 17, 2026, by the Pennsylvania Public Utility Commission Complaint (“PaPUC”) (“Complaint”) against PJM. The Complaint requests (at 1) that the Commission find that “Schedule 6, Section 1.5.7 of PJM’s Operating Agreement is unjust, unreasonable, and unduly discriminatory or preferential in the manner it selects market efficiency projects, thus harming Pennsylvania consumers.” The PaPUC seeks an order (at 1–3) directing PJM to “include the impact of all (benefitting and non-benefitting) zones when calculating consumer benefits for the purposes of market efficiency projects,” in the

¹ 18 CFR § 385.211 (2026).

² Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff (“OATT”), the PJM Operating Agreement (“OA”) or the PJM Reliability Assurance Agreement (“RAA”).

numerator of the benefit/cost ratio or, in the alternative that it “add the increase in Load Energy Payment and Load Capacity Payment” to the denominator of the benefit/cost ratio.

The Market Monitor agrees that Schedule 6, Section 1.5.7 of PJM’s Operating Agreement is unjust, unreasonable, and unduly discriminatory or preferential in the manner it selects market efficiency projects.

The Market Monitor agrees that including the effect of a proposed transmission project on all (benefitting and non-benefitting) load would eliminate the most unjust, unreasonable, and unduly discriminatory or preferential portion of PJM’s benefit/cost analysis process for evaluating and approving market efficiency projects.

The Market Monitor supports the PAPUC’s requested relief. However, the Market Monitor recommends that the PAPUC’s first proposed modification be adopted rather than the second. The two are not mathematically equivalent and the mismatch between the numerator and denominator in the second proposed modification will result in an understatement of the benefit/cost ratio under the second proposed modification.

I. COMMENTS

A. The Current Rules for Evaluating Market Efficiency Projects Are Unjust and Unreasonable.

PJM’s Regional Transmission Expansion Plan (RTEP) process includes a market efficiency analysis that incorrectly calculates net benefits and therefore results in incorrect conclusions that specific projects have net benefits when they do not. As a result, the rules are unjust and unreasonable. Courts have recognized the Commission’s authority to correct market design flaws that produce inaccurate and inefficient market signals.³ The PaPUC

³ See *PJM Interconnection L.L.C.*, 179 FERC ¶ 61,161, (2022); *Citadel FNGE Ltd. v. FERC*, 77 F.4th 842, 864 (2023) (“The Commission explained that, while it seeks to increase regulatory certainty, circumstances may require it to adjust rates when they are operating contrary to investor expectations by producing anomalous results, contrary to their purpose and design. Here, the Penalty Factor was functioning in an unanticipated and counter-productive manner, and it had

has demonstrated the need for the Commission to correct design flaws in the rules defining market efficiency transmission projects.

PJM recommends projects based on PJM's market efficiency analysis to the PJM Board of Managers for approval. Recommended market efficiency projects must reduce congestion on one or more constraints by at least one dollar, meet a benefit/cost ratio threshold of at least 1.25:1 and have an independent cost review, performed by PJM, if expected costs are over \$50 million. The benefit/cost ratio is the ratio of the present value of the total annual calculated benefit for 15 years to the present value of the total annual calculated cost for the first 15 years of the life of the enhancement or expansion.

When calculating the potential benefits of a proposed market efficiency project, PJM has discretion as to whether to include a calculation of an energy market benefit, a capacity market, or both.⁴ PJM has chosen to rely solely on the energy market benefit calculation. The total benefit of a project is calculated as the sum of the net present value of calculated energy market benefits for a 15 year period, starting with the projected in service date of the project. Depending on the type of project being evaluated, PJM may measure benefits as reductions in estimated load costs and production costs in the energy market, but does not weight increases and decreases in benefits equally.

The energy market benefit analysis uses an energy market simulation tool that produces an hourly least-cost, security constrained market solution, including total operational costs, hourly LMPs, bus specific injections and bus specific withdrawals for

proven incapable of sending transparent signals to the market to encourage investment in new energy sources or transmission capability.”).

⁴ See PJM Manual 14B, 2.6.5, <<https://www.pjm.com/-/media/DotCom/documents/manuals/m14b.pdf>>. “Determination and evaluation of cost / benefit of potential RTEP projects specifically targeted for economic efficiency PJM will perform market simulations and produce cost / benefit analysis of projects specifically targeted for economic efficiency. The benefit component of the cost / benefit analysis could consist of an energy market benefit, a Reliability Pricing Model (RPM) benefit, or both if the project addresses both energy market and RPM constraints.”)

each modeled year with and without the proposed RTEP project. Using the output from the model, PJM calculates changes in energy production costs and load energy payments.

PJM rules require that the energy market benefit simulation include sufficient generation capacity to meet load projections plus installed reserve margins over the 15 year study period.⁵ In order to solve the simulation cases, PJM must make assumptions about the existing and future generation capacity to include in the model based on the need to serve load. In the event that the existing installed capacity is not sufficient to meet the load, PJM first adds generation capacity to the model based on projects in the interconnection queue with signed interconnection service agreements. If this is insufficient, PJM simply adds speculative new generation to the model. This process results in approving and building expensive transmission based on speculation about the location and type of capacity additions and load additions. The related impacts are exacerbated by the uncertainty about the actual additions of large data centers.

The definition of the energy benefit analysis depends on whether the project is regional or subregional (Table 1). A regional project is any project rated at or above 230 kV. A subregional project is any project rated at less than 230 kV. For regional projects, the energy benefit for each modeled year is equal to 50 percent of the change in total system energy production costs with and without the project, plus 50 percent of the change in zonal load payments with and without the project but, inexplicably, only for those zones where the project reduces the load payments and not for zones where the project increases load payments. The calculation of production cost savings nets increases and decreases while the calculation of load payments does not. For subregional projects, the calculation of benefits for each modeled year does not include any impact on total system energy production costs but is based only on the change in zonal load energy payments with and

⁵ See PJM Operating Agreement Schedule 61.7.7 (i).

without the project, but again only for those zones where the project reduces the load energy payments and ignoring zones where the project increases load energy payments.

Table 1 Benefit calculation by project type

Project Type	Benefit Calculation
Low Voltage Project Benefit (numerator)	Change in Load Energy Payments (cost reductions only)
High Voltage Project Benefit (numerator)	50% * Change in Total Energy Production Cost + 50% * Change in Load Energy Payment (cost reductions only)
High and Low Voltage Project Cost (denominator)	Transmission Project Cost

There are significant design flaws in PJM's current benefit/cost analysis which cause it to consistently overstate the potential benefits of market efficiency projects.

The primary issue is that the current benefit/cost analysis explicitly and incorrectly ignores the increased costs to load in zones that results from an RTEP project when calculating the energy market benefits. All increases and decreases in costs should be included in all zones.

PJM has defined changes in load costs (charges to load based on LMP and uplift adjusted for ARR revenue) and production costs (revenue sufficient to cover generator costs) as the benefit of transmission projects.

PJM's measure of changes in production costs is the net of positive and negative changes in production costs. This is an internally consistent definition that includes all changes in production cost, whether positive or negative. When transmission capability increases, expensive generators in constrained areas reduce output (production costs are reduced) and less expensive generators in the unconstrained areas increase output (production costs are increased). The net production costs savings is correctly characterized as a societal benefit. This is appropriate.

PJM's measure of changes in load costs includes the effect on zones where the transmission project will decrease costs but excludes the effect on zones where the transmission project will increase costs. This treatment of positive and negative effects is

internally inconsistent and also inconsistent with PJM's treatment of changes in production costs. This inconsistent treatment is designed to favor transmission projects by exaggerating benefits relative to costs. This is not appropriate.

B. PAPUC's Two Options for a Remedy.

The PAPUC's first option (Table 2) (increases in load costs are netted against decreases in load costs in the numerator of the benefit/cost calculation) would address the inconsistent treatment of load cost in PJM's benefit/cost analysis. Using changes in total load costs (netting increases and decreases in load costs) in the numerator will make the calculation of load cost related benefits of a project consistent with how changes in total production cost (netting increases in and decreases in generator production costs) are calculated in PJM's benefit/cost analysis.

Table 2 PAPUC's first option

Project Type	Benefit Calculation
Low Voltage Project Benefit	Change in Load Energy Payments (positive and negative changes in cost)
High Voltage Project Benefit	50% * Change in Total Energy Production Cost + 50% * Change in Load Energy Payment (positive and negative cost changes)
High and Low Voltage Project Cost (denominator)	Transmission Project Cost

The PAPUC's second option (Table 3) (increases in load costs are added to project costs in the denominator) would not correct the inconsistent treatment of load costs relative to production cost in PJM's benefit/cost analysis. The PAPUC's second option is not mathematically equivalent to the first option.

Changes in total load costs in the numerator in PAPUC's first option (Table 2) can be zero or negative in the case where the increases in the cost to load from a transmission project in unconstrained areas exceed the decreases in the cost to load in the constrained areas. This means that under the PAPUC's first option, net benefits of a project could, appropriately, be zero or negative. Under the PAPUC's second option (Table 3) this is not true, since only zones with cost savings from transmission projects are included in the

numerator as positive benefits. This means that the numerator will be larger in the PAPUC's second option relative to the numerator in the first option. The PAPUC's second option accounts for zones that have increased cost by adding these load cost increases to the transmission project cost in the denominator of the benefit/cost calculation. This increases the denominator calculated in the PAPUC's second option relative to the denominator in the PAPUC's first option. Put simply, relative to the PAPUC's first option, the PAPUC's second option will increase any calculated benefit (and ensure only positive results) and increase any calculated cost (causing the benefit to be divided by a larger number). In the case where the proposed project is a high voltage line, the effect on the denominator is inflated relative to any transmission project benefits for load, since only 50 percent of the load charge reductions are included as a benefit while 100 percent of load charge increases are included as cost.

Table 3 PAPUC's second option

Project Type	Benefit Calculation
Low Voltage Project Benefit (numerator)	Change in Load Energy Payments (cost reductions only)
High Voltage Project Benefit (numerator)	50% * Change in Total Energy Production Cost + 50% * Change in Load Energy Payment (cost reductions only)
High and Low Voltage Project Cost (denominator)	Transmission Project Cost + Changes in Load Energy Payments (cost increases only)

C. The First Option Proposed by the PAPUC Would Address the Flaws Identified by the PAPUC.

The Market Monitor agrees with the PAPUC's diagnosis of the problem and with the PAPUC's first option. As described by the PAPUC, including the effect of a proposed transmission project on all (both cost increases and cost decreases) load would eliminate the most unjust, unreasonable, and unduly discriminatory or preferential portion of PJM's benefit/cost analysis process for evaluating and approving market efficiency projects. The Market Monitor does not agree that the PAPUC's second option to include increases in load costs in the denominator would correct the inconsistent treatment of load costs relative to

production cost in PJM's benefit/cost analysis. The Market Monitor recommends that the Commission require PJM to implement PAPUC's first option.

II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as it resolves the issues raised in this proceeding.

Respectfully submitted,



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Dated: September 30, 2026

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 Eagleville, Pennsylvania,
this 30th day of September, 2026.



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