

Transparency and Transmission Projects in the PJM Region: *Data Issues, Concerns, and Recommendations*

David Gardiner and Associates

Developed for the Consumer
Advocates of the PJM States (CAPS)

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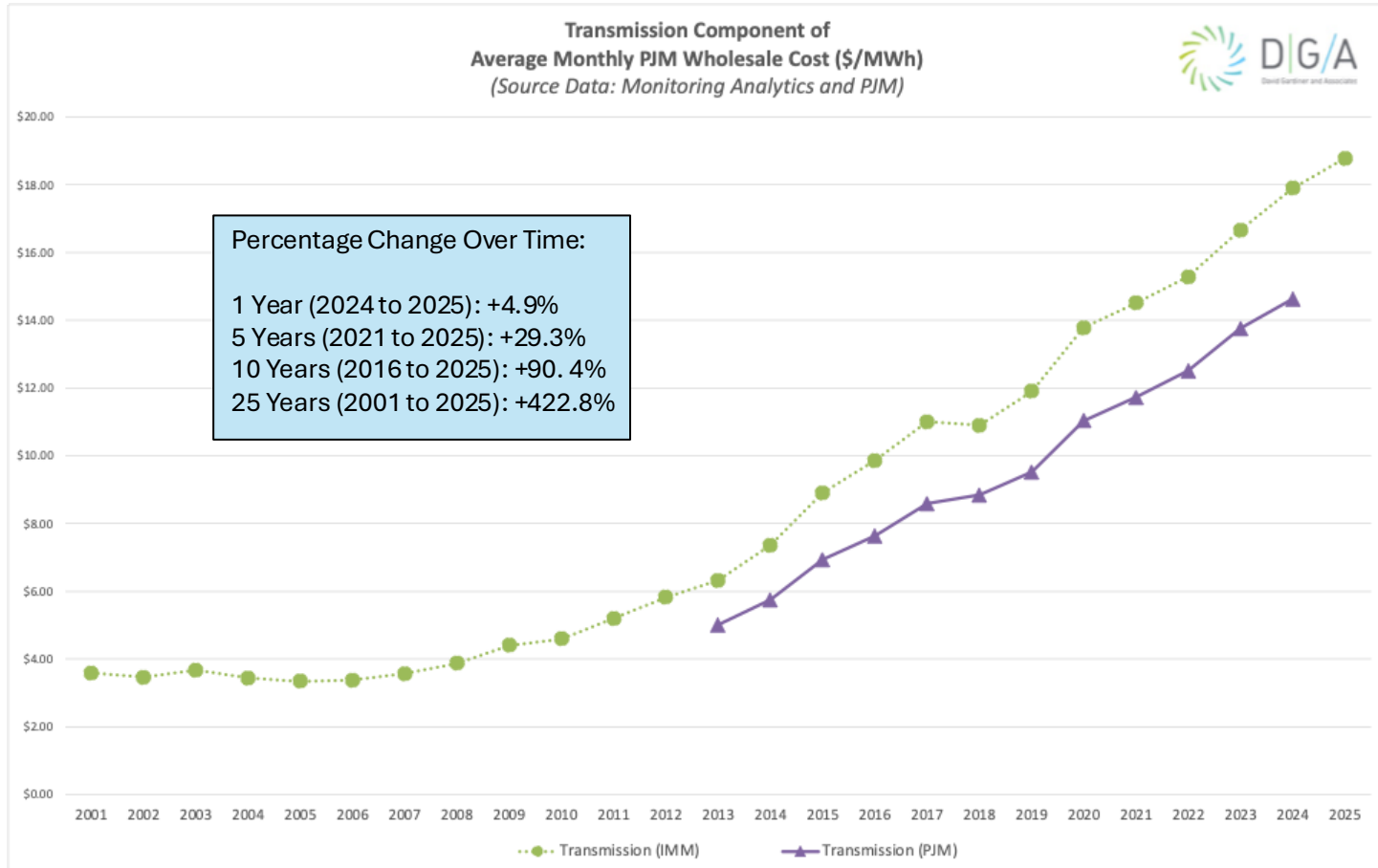
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Introduction & Context

Introduction & Context

- Customers want and have a right to:
 - (1) understand what they are paying for and why.
 - (2) receive assurances that transmission investments are prudent.
- In CAPS' experience, PJM's public information has not sufficiently met those needs:
 - While PJM publishes substantial amounts of data, it can be hard to locate, confusing, and/or inaccurate.
 - When CAPS has requested additional detail or explanation, some of the responses have been inadequate.
 - There is a fundamental disconnect over the reliability, accuracy, and usefulness of the data being published by PJM

Context: Transmission Costs are Rising in PJM



Origin of Analysis

Following a TEAC meeting, CAPS submitted the following questions in the Planning Community on specific supplemental projects:

- *“How was the ‘estimated project cost’ developed?”*
- *“Please provide a breakdown of this project budget?”*
- *“Does a state utility commission have oversight?”*

Transmission Owners Initial Answers

- Initial answers from the Transmission Owners used similar, and often identical, phrasing:
 - Estimated Project Cost were developed “in accordance with industry-standard cost estimation practices.”
 - Estimates are “preliminary in nature” based on the “initial scope” and “initial conceptual engineering review” of the proposed project.
 - Initial cost estimates are “regularly updated” and are “posted publicly” on the “PJM Project Status & Cost Allocation on PJM’s website.”
 - Information concerning the state utility commission review is “codified in state law” and “publicly available.”
- In follow-up communication, Transmission Owners further shared that: “PJM also has the Transmission Cost Planner tool (TC Planner) which can help to better understand existing transmission costs and estimate future costs.”
- No Transmission Owners provided breakdowns of project budgets in response to CAPS’ question.

Follow Up and Responses

- **CAPS Q.** It appears that the projected engineering estimate for the project has not changed in over two years. Is there an updated budget? How much has been spent to date on this project? Can you provide additional details into the costs for this project at this point?
 - **A.** “No further cost information is available on these projects through the Attachment M3 process beyond what has already been provided.”
- **CAPS Q.** The project is in service. What were the final costs of the project? If an advocate was seeking specific information about the final costs, where would they find this information?
 - **Answers were mixed:**
 - One utility: “Final cost information goes beyond the scope of information that [the utility] is required to provide through the stakeholder process pursuant to Attachment M-3.”
 - A different utility: “Updated cost estimates for projects – including final costs for projects that have been completed and placed in-service – are available on PJM’s Project Status & Cost Allocation webpage.”

Additional Context: PJM on Transparency

In response to complaints around transparency of baseline projects, PJM has stated that:

PJM maintains a webpage dedicated to “Project Status and Cost Allocation,” which provides the estimated cost for each project, plus each project’s “required” date, as well as its “projected” and “actual” in-service dates. PJM updates the information on this webpage quarterly. In addition. . . PJM regularly reports on the status of ongoing projects and cost changes in its stakeholder process, e.g., the Transmission Expansion Advisory Committee.

AMP, et al. v. PJM, Answer of PJM Interconnection LLC, Docket No. EL22-80, eLibrary No. 20220829-5133, filed Aug. 29, 2022.

Additional Context: PJM Manual Requirements (Baseline)

PJM directed DGA to the sections of its manual that govern project cost reporting: ***Manual 14C: Interconnection Facilities, and Network Upgrade Construction***. The following are relevant sections and excerpts of the manual:

6.1.1 Tracking — “Once upgrades have been identified and approved, the PJM transmission coordinator will be responsible for tracking the status and completion of projects with the assistance of the Transmission Owners/Designated Entities. ... **At a minimum the TO/Designated Entity shall provide the following project updates to PJM quarterly, or communicate an acknowledgment that the current project status and estimates are accurate: ... cost changes...**”

6.1.2 Cost Tracking — “As part of project tracking, **the Transmission Owner or Designated Entity shall supply PJM a current estimate of projected costs at completion.** Tracking of these current estimated costs is critical for PJM's facilitation of the RTEP. It is important for PJM to be made aware of any significant changes in the current estimated costs at completion in a timely manner, rather than after the work is complete.”

6.1.2.1 Cost Changes — “Significant cost increases to baseline upgrades can change the analysis done to solve criteria violations and therefore need to be communicated to PJM as they are discovered. **PJM will use the new cost data to re-analyze the criteria violation and determine if a different, more economical solution is better suited to solve the issue.**”

6.1.9.3 DEA Project Communication, Reporting and Documentation Quarterly Status Reports — For projects subject to a DEA, PJM “requires that the Designated Entity provide a quarterly status report at a minimum. **This report is required to contain... actual cost completion and actual completion date**” for the final status report when a project is in-service.”

Additional Context: PJM Manual Requirements (Supplemental)

6.2.1 Tracking

“The PJM transmission coordinator is responsible for tracking the completion of supplemental upgrades. ... At a minimum, the TO shall provide project updates to PJM quarterly for the following project status updates and milestones or acknowledge that the current estimate is accurate: ... **cost changes...**”

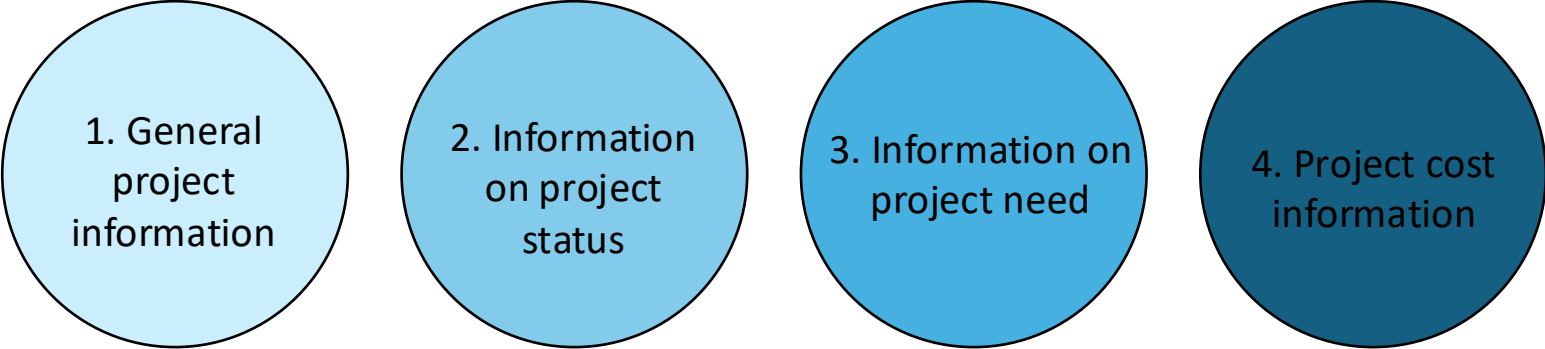
6.2.2 Supplemental Cost Tracking

“As part of the project tracking, the **Transmission Owner is to supply PJM a current overall project cost at completion. Tracking of current estimated costs for all work activities is critical for PJM's facilitation for the RTEP.** Therefore, it is important for PJM to be made aware of any changes in the current estimated costs at completion in a timely manner, rather than after the work is complete.”

Evaluating Transparency in PJM

Overview

CAPS commissioned DGA to test validity of PJM/TO claims about data transparency by reviewing publicly available information. Data was evaluated across the following four categories:



1. General project information

2. Information on project status

3. Information on project need

4. Project cost information

Methodology

- To conduct its analysis, DGA tracked available cost data for **24 supplemental projects** (31 Upgrade IDs) and **14 baseline projects** (131 Upgrade IDs).
- The projects represent **22 transmission owners**.
- DGA surveyed the following sources for data:
 - *PJM Databases* (Both databases can be downloaded as .xcel and .xms)
 - [PJM Project Status & Cost Allocation Database](#) (PJM Project Database)
 - [PJM Transmission Cost Planner](#) (Transmission Cost Planner) - must sign in to access
 - *Reports and Meeting Materials*
 - [Annual Regional Transmission Expansion Plan \(RTEP\) Reports](#) (RTEP Report)
 - Transmission Expansion Advisory Committee (TEAC) and Subregional RTEP Committee Meeting [materials](#) (TEAC Meeting Materials)
 - *Additional Materials*
 - Utility Form 1 Filings and Formula Rate Updates
 - [PJM's Transmission Enhancement Worksheets](#)

Transparency Rubric

- 10** — Data is simple to locate, accurate, current, verifiable, and reliable in line with PJM Manual requirements; data allows customers to understand what they are paying for and why and provides evidence that the investment is prudent.
- 7 to 9** — Data is simple to locate, and generally appears to be updated and accurate, but it is not clear if all information provided in this category is current or if all PJM Manual requirements are being followed. There are some issues with data quality and reliability.
- 4 to 6** — Data can be located but may not be simple to find. While some data appears to be updated, it is not clear if all information provided in this category is current and accurate. The quality and reliability of data is questionable, and the information is not verifiable.
- 1 to 3** — There is some information, but it is difficult to locate, and is not accurate, current, verifiable, or reliable. It appears that PJM Manual requirements for data reporting have not been followed.
- 0** — There is no data/information available.

Transparency Scores

General Project Information

Overall Grade: 6/10

- Databases and TEAC Meeting Materials provide, among other things, information on Transmission Owner, project description, equipment, voltage.
- Issues:
 - Must dig through multiple years of TEAC Meeting Materials to find decks discussing specific project.
 - Project identifiers are complicated to track between resources.
 - PJM databases are organized by Upgrade Id No. (e.g., s2938, b2986), but:
 - supplemental projects are presented in TEAC Meeting Materials by Attachment M-3 No. (e.g., DEOK-2021-007). The PJM Upgrade No. is not assigned until the 3rd presentation.
 - baseline projects are comprised of multiple Upgrade Id Nos. These numbers may be aggregated differently in TEAC Meeting Materials and the annual RTEP report (e.g., for one baseline proposal, one resource provided on aggregated cost for 30 Upgrade Id Nos. while the other resource provided one aggregated cost for over 100 Upgrade Id Nos).
 - PJM Upgrade Id Nos. are not used at state utility commissions or in Form 1 data, complicating ability to verify accuracy of information against other sources.

Information on Project Status

Overall Grade: 7/10

- PJM Databases provide some updates to project status:
 - PJM Databases include a “Project Status” category and an in-service date.
 - Transmission Cost Planner and downloaded version of the PJM Project Database provide a “percent complete.”
- Some Transmission Owners provided additional information about project status in the Planning Community.
- Issues:
 - Updates are inconsistent.
 - Meaning of “percent complete” in the databases is vague (e.g., two different Upgrade Id Nos. are both 30% complete, but one is listed as under construction, while the other is in engineering and procurement).

Information on Project Need

Overall Grade: 5/10

- TEAC Meeting Materials present information on project need and the PJM databases each include a high-level category for the project “driver.”
- Issues:
 - No independent review of solutions.
 - Minimal evidence of alternatives considered.
 - Depth of information on need varies by utility and by project.
 - For some supplemental projects, multiple years can pass between the needs identification and the solutions meeting even though need may be presented as urgent (e.g., equipment failure).
 - Some supplemental project presentations occurred after project was already in service.

Project Cost Information

Overall Grade: 2/10

- Databases provide information on cost allocation percentages by TO zone.
- There is some information about transmission costs, **but information is often not reliable or accurate:**
 - Most cost data is static and based on the initial “sticker price.” Given actual construction timelines and supply cost fluctuations, it’s unlikely initial sticker prices are 100% accurate.
 - Cost updates are rare, despite PJM Manual requirements for TOs to share quarterly updates. TEAC Materials may include information about such cost changes, but it takes significant effort to find relevant details in the large number of documents—if they're included at all.
 - Labeling of data is also confusing across PJM resources, making it hard to understand which costs are the most current.
 - No final cost information is available, despite PJM Manual rules requiring TOs to share this info on baseline projects. At least one utility claimed final cost information “goes beyond” the scope of info they are required to provide.
 - Information that is available is often inconsistent, incomplete, and confusing.
- No independent review of cost estimates.

Examples

Example 1: Static Project Costs

- Most project costs remain unchanged after several years have passed, even when projects start construction or go into service.
 - Of 22 tracked supplemental projects, 18 showed no change in reported costs.
 - Of six projects in service as of Nov. 2025, costs changed only for two. DGA found no verification that the cost change represented the final cost.
 - *DGA could not locate public resource(s) that confirmed the final cost of any of the projects.*

PJM Upgrade Id No.: s2940

Information Source	Date	Reported Cost
TEAC Meeting Materials	4/21/2023	\$0.35M
TEAC Meeting Materials	10/25/2023	\$0.35M
RTEP Annual Report	12/31/2023	\$0.35M
PJM Project Database	9/13/2024	\$0.35M
<i>Project in service as of 12/4/2024</i>		
PJM Project Database	1/23/2026	\$0.35M

PJM Upgrade Id: b2959

Information Source	Date	Reported Cost
TEAC Meeting Materials	11/2/2017	\$20M
<i>Project in service as of 11/4/2019</i>		
PJM Project Database and Transmission Cost Planner	1/23/2026	\$20M

Example 2: Supplemental Project Cost Information Issues

PJM Upgrade Id No.: s2938

Information Source	Date	Reported Cost
TEAC Meeting Materials (Needs Meeting)	6/15/2021	--
TEAC Meeting Materials (Solutions Meeting)	4/21/2023	\$3.1M
TEAC Meeting Materials	10/25/2023	\$3.1M
RTEP Annual Report	12/31/2023	\$3.1M
PJM Project Database	9/13/2024	\$3.1M
<i>Project in service as of 6/12/2025</i>		
PJM Project Database and Transmission Cost Planner	2/26/2026	\$10.7M

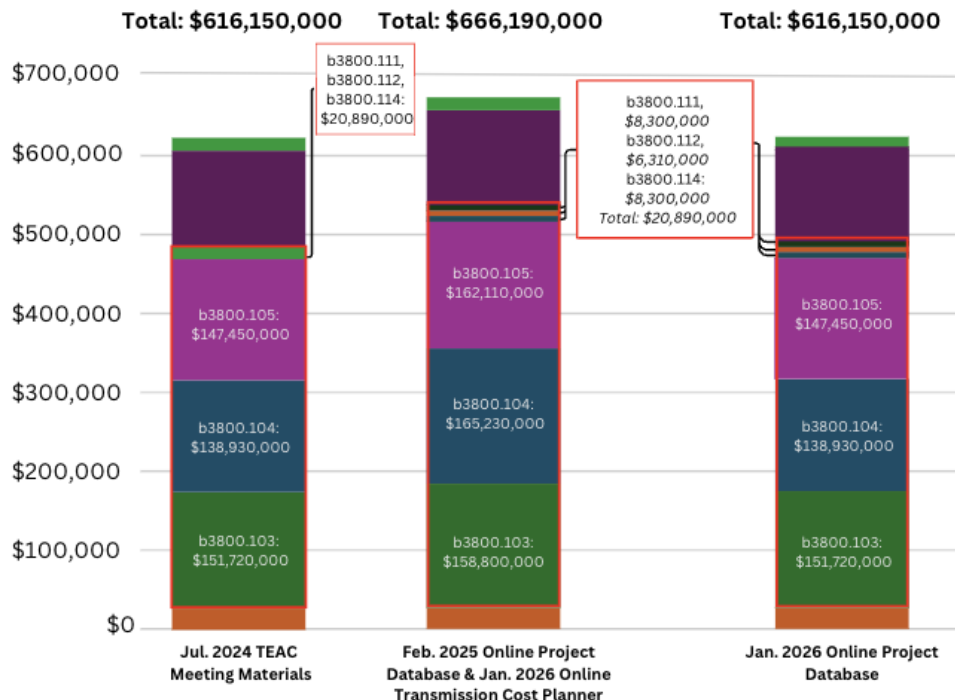
Information Issues:

- Could not locate explanation for the cost increase from \$3.1 to \$10.7 million.
- Labeling of PJM data made it challenging to determine the most updated cost.

Could not locate public resource(s) that confirmed the final cost of the project.

Example 3a: Baseline Project Cost Information Issues

Proposal Id: 2022-W3-853 (FE Scope). **Status (as of January 2026):** Under Construction



Information Issues:

- Initial cost presentation from Dec. 2023 TEAC Meeting aggregated multiple Ids. into one reported cost. But future materials report disaggregated costs (shown here).
- Unexplained cost changes:*
 - In July 2024 TEAC Meeting Materials, the total increased by \$223.6 million from the Dec. 2023 TEAC Meeting. Added two additional Upgrade Id Nos., but \$95 million of increase not explained.
 - In Feb. 2025, total cost in the PJM Project Database (Online) went up another \$50.04M; no explanation for Upgrade Id Nos. b3800.103-105 cost increases.

Example 3b: Baseline Project Cost Information Issues



Proposal Id: 2022-W3-692. **Status (as of January 2026):** Under Construction

Information Issues:

- Upgrade Id Nos. are aggregated and disaggregated differently:
 - First Presentation (Dec. 5, 2023 TEAC Meeting Materials) reported a lump sum cost of \$1,025.06M for 26 Upgrade Id Nos.
 - 2023 RTEP Report (Virginia section) provides aggregated cost of \$3,522.24M for all projects in this proposal plus over 100 additional Upgrade Id Nos.
- Inconsistent reporting for Upgrade Id Nos. b3800.210-212
 - Scope changes are reported in April 2025 and Dec. 2025 TEAC Meeting Materials. Overall, per the TEAC numbers:
 - b3800.210 increased by \$44.85M
 - b3800.211 *decreased* by \$4.15M
 - b3800.212 increased by \$48M
 - Those TEAC costs do not match the numbers listed in the PJM Project Database, seemingly because the \$48M increase in b3800.212 shifted instead to b3800.210.

Project Id No.	Original TEAC Meeting Materials	Dec. 2025 TEAC Meeting Materials	Jan. 2026 PJM Project Database
b3800.210	\$57,950,000	\$102,800,000	\$150,800,000
b3800.211	\$56,930,000	\$52,780,000	\$52,780,000
b3800.212	\$228,040,000	\$276,040,000	\$228,040,000
Total	\$342,920,000	\$431,620,000	\$431,620,000

Recommendations

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1. **Require regular updates:** PJM should ensure TOs provide all required updates on transmission projects and post that information, including:
 - a. any budget and scope changes
 - b. actual spend to date
 - c. project status
 - d. final costs once the transmission project goes into service
2. **Harmonize resources and clarify where to locate information:** PJM should ensure that information is presented consistently within and between resources and should provide:
 1. a chart identifying where to find specific project information
 2. links in the PJM Project Database and Transmission Cost Planner to associated TEAC Meeting Materials
 3. roadmaps of all associated Upgrade IDs
3. **Implement an independent review of project prudence** (need and cost estimates) before project may be integrated into PJM's annual transmission plan and developed. **Provide more oversight over cost overruns during project development.**





Questions?

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