



Transmission Data Dashboard Data Sources – October 2024

Transmission Data Dashboard Metrics

The Public Advocates Office's Transmission Data Dashboard (Dashboard) is an accessible resource to learn about the status of California's electric transmission infrastructure. The Dashboard provides visualizations, facts, and quick analytics on the historical, current, and forecasted state of transmission projects in California. Our office plans to update the transmission metrics on a regular basis.

The data behind the Dashboard comes from the California Independent System Operator (CAISO) Transmission Development Forum (TDF), the CAISO Transmission Planning Process (TPP), the CAISO Generation Interconnection Queue Reports, and the California Public Utilities Commission (CPUC)-managed Transmission Project Review (TPR) process. These data sources are publicly available, but each offers a partial perspective on the status of transmission development. By bringing these disparate data sources together, we are able to provide a more comprehensive picture of the development and cost of transmission in California.

Key metrics available on the Transmission Data Dashboard include:

- estimated backlog of CAISO-approved transmission projects (i.e., projects that have been approved but are not yet operational);
- average duration of delays for CAISO-approved transmission projects (only PG&E projects at this time);
- historical Transmission Access Charge rates;
- long-term projections of transmission cost impacts for planned CAISO-approved transmission projects;
- timelines for transmission project development with CPUC permits; and
- status of energy resource generation interconnection requests in CAISO's queue.

Data Sources

- CAISO 20-Year Transmission Outlook: The CAISO 20-Year Outlook is a long-term conceptual transmission plan to build out the electric grid, within and outside California, to reliably meet California's 2045 climate and energy goals. The 20-Year Transmission Outlook identifies approximately 25 projects at an estimated total cost of \$45.8B to \$63.2B.
- CAISO Transmission Planning Process (TPP): The annual CAISO transmission plan serves as the roadmap for infrastructure requirements for the CAISO balancing authority. The CAISO approves transmission projects needed to meet reliability standards, achieve policy goals, and support economic objectives. In the 2021-2024 CAISO Transmission Plans, CAISO approved 95 projects at an estimated cost of \$8 billion. These include 35 policy projects, 59 reliability projects, and one economic project.
- CAISO Transmission Development Forum (TDF): Transmission owners provide stakeholders with updates on transmission projects, including in-service dates, projects costs, delays, recently



completed projects, and interconnection-related network upgrades. The TDF reports only include CAISO-approved projects being developed by California’s investor-owned utilities (IOUs) and third-party transmission owners, excluding projects initiated by the IOUs themselves.

- Utility Transmission Project Review (TPR): The Transmission Project Review monitors the progress of projects approved in the CAISO Transmission Plans and those approved by the Federal Energy Regulatory Commission to recover costs from customers. It tracks CAISO-approved projects for California IOUs and IOU-initiated projects but does not include information on projects by third-party transmission owners. The TPR provides details such as project description, status, costs and transmission rate base, cost-benefit analysis, and CPUC permitting status (if applicable).
- CAISO Generation Interconnection Queue: For a generator to interconnect to the transmission system, an interconnection request must be filed and approved by CAISO. The types of generation requesting to interconnect to the transmission grid are solar, geothermal, wind, and battery energy storage. CAISO manages a queue of resource interconnection requests through its annual study process and reports on the status of interconnection requests (active, complete, or withdrawn) listed by study process, along with other relevant details.

Below is a table of the data sources used to develop the Transmission Data Dashboard:

Dashboard Topic	Data Source
Transmission Project Backlog	TPP, TDF, and TPR
Transmission Project Timelines and Delay of Projects	TPP, TDF, CPUC Decisions, Quarterly Reports and Applications
Transmission Access Charge	CAISO Reports
Generation Interconnection Queue	CAISO Generation Queue Report (click the "Reporting" tab)

For any questions about the Transmission Data Dashboard, please reach out to Mary Flannelly at mary.flannelly@cpuc.ca.gov.