WESTERN ENERGY IMBALANCE MARKET (WEIM)

California ISO West-wide Transmission Activities

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WEIM Governing Body meeting
General Session
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The ISO’s planning activities coordinate with the rest of the western interconnection – most of which is outside of an ISO/RTO structure.

ISO coordination statistics
• ISO recorded peak demand: 52,061 MW
• ISO serves 80% of California load, plus parts of Nevada
• The Western Energy Imbalance Market operates in 11 states and extends into parts of Canada
• 42 balancing areas and transmission operators currently receive reliability coordinator services from ISO’s RC West
The ISO’s transmission planning is coordinated with footprint-wide forecasting and resource planning.

- Generic clean firm/long-duration energy storage
- Long-duration energy storage (pumped storage)
- Battery-energy storage
- Biomass
- Geothermal
- Out-of-state wind
- Offshore wind
- In-state wind
- Distributed Solar
- Utility-Scale Solar

20-Year Transmission Outlook (both May 2022 and Update) includes retirement of 15,000 MW of gas-fired generation.

Increase in trend of IEPR forecasts for 2027 to 2021 especially with inclusion of high transportation scenario.
The ISO’s 20 Year Transmission Outlook sets the strategic direction for the annual planning process including the need for interregional coordination.

2021-2022 Transmission Plan
- 16 reliability projects totaling $1.41 billion
- 6 policy-driven transmission projects totaling $1.51 billion
- 1 economic-driven project totaling 40 million

2022-2023 Transmission Plan
- 24 reliability projects totaling $1.76 billion
- 21 policy-driven transmission projects totaling $5.53 billion
- SWIP North participation later approved as an extension of the plan

2023-2024 Transmission Plan
- 19 reliability projects totaling $1.54 billion
- 7 policy-driven projects totaling $4.59 billion
The ISO is working bilaterally as well as through established processes to explore transmission opportunities.

Significant Transmission Projects in the Western Interconnection moving forward:

1. **S-Line Project**
   - **Developer:** IID and Citizens Energy
   - **Status:** Under construction
   - **Expected In-Service Date:** 2024
   - **Financing:** CAISO High Voltage Transmission Access Charge rate-based
   - **Generation Enabled:** Reduces deliverability limitations in addition to economic benefits
   - **CAISO Engagement:** Approved as economic-driven transmission project in 2018
   - **Partnership/Benefits:** Enables increased bidirectional delivery of supply to IID as well as renewable supply from IID to CAISO. Decreases local requirements in San Diego / Imperial Valley area.

2. **Ten West Project**
   - **Developer:** Lotus Infrastructure Partners
   - **Status:** Under construction
   - **Expected In-Service Date:** May 2024
   - **Financing:** CAISO High Voltage Transmission Access Charge rate-based
   - **Generation Enabled:** 1000MW of renewables in Imperial Valley, Palo Verde trading hub
   - **CAISO Engagement:** Approved by CAISO Board in 2014 as part of 2013-2014 TPP. Transmission inside CAISO BA.
   - **Partnership/Benefits:** Enables additional renewables from Southwest to CAISO as well as increased export capability to the Southwest.

3. **TransWest Express**
   - **Developer:** TransWest Express LLC, subsidiary of Anschutz Corp.
   - **Status:** Construction started Sept. 2023
   - **Expected In-Service Date:** 2027
   - **Financing:** Subscriber funded
   - **Generation Enabled:** 3000MW of Wyoming wind resources
   - **CAISO Engagement:** Line will be in the CAISO BAA and operate under Subscriber Participating Transmission Owner (SPTO) tariff mechanism
   - **Partnership/Benefits:** Enables partnership with entities engaged with west-wide development/procurement activity.

4. **Sunzia**
   - **Developer:** Pattern Energy
   - **Status:** Construction started July 2023
   - **Expected In-Service Date:** 2026
   - **Financing:** Merchant subscriber transmission development
   - **Generation Enabled:** 3,500MW of New Mexico wind
   - **CAISO Engagement:** Submitted application to become subscriber participating transmission owner in January 2024
   - **Partnership/Benefits:** Enables access to New Mexico wind by CA and SW load serving entities.

5. **Southwest Intertie Project – North (SWIP-N)**
   - **Developer:** LS Power
   - **Status:** Conditionally approved as addendum to 2022-2023 Transmission Plan by CAISO Board Dec. 2023
   - **Expected In-Service Date:** End of 2026
   - **Financing:** Cost of service rate recovery shared between CAISO and Idaho Power
   - **Generation Enabled:** 2000MW of Idaho wind resources
   - **CAISO Engagement:** Monitoring requirements of conditions included in the approved addendum to 2022-2023 CAISO Transmission Plan.
   - **Partnership/Benefits:** Enables partnership providing mutual benefits to and from Idaho and California while also providing additional transfer capability from Northwest to Southwest entities.
ISO and our neighbors have an interregional coordination framework approved by FERC

Interregional coordination
- Annual exchange of information
- Annual public interregional coordination meeting
- WestConnect’s and Northern Grid’s biennial processes have been coordinated with two cycles of the ISO’s annual process

Interregional cost allocation
- Interregional projects only considered if comparing favorably to a regional solution to a regional need
- Costs shared in proportion to each region’s share of total benefits (not capacity)
We coordinate west-wide transmission planning on multiple tracks.

Information-sharing to support west-wide study efforts
- FERC Order 1000 interregional coordination planning
- FERC Order 1920 – transmission planning and cost allocation
- DOE - congestion study, long term planning study, West Coast Offshore Wind transmission study
- WECC system planning studies
- NERC interregional transfer capability study
- Gridworks/Gridlab/PNNL Connected West initiative
- Western Transmission Expansion Coalition
- Western States Transmission Initiative (CREPC)

Informal discussions with transmission planning peers
- Regional transmission planning discussions

Creative bilateral efforts to advance projects
- Subscriber PTO approach
- Other bilateral arrangements

Monitor and engage in process reform
- WEIM education and engagement on transmission planning efforts
- FERC technical conferences
- Comments on FERC NOPRs
- DOE National Interest Electricity Transmission Corridor (NIETC) comments
- DOE Grid Deployment Office (GDO) loan program support
Regional and interregional transmission - opportunities and challenges

• Coordinate and collaborate to identify the most effective solutions
  – Effective dialogue is critical
  – Interregional transmission planning needs to be coordinated with resource planning – we cannot wait until resources are developed and then look for opportunities
  – We continue to tighten the linkages between procurement processes and interconnection and planning processes for regional and interregional transmission

• Explore funding options to lower the delivered cost of electricity to consumers
  – The ISO has had ample investor interest in competitively procured transmission

• Be creative and flexible
  – Develop and support options like the subscriber transmission owner model