Large Load Considerations

Stakeholder Information Session

February 5, 2026

Housekeeping

This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.

The meeting is structured to stimulate dialogue and engage different perspectives.

Please engage in a respectful and professional manner.

Please keep comments brief and avoid repeating points already made so we can manage time and ensure everyone has an opportunity to participate.

You can access Closed Captioning and the Transparency Viewer using the controls located at the bottom of the Webex screen.

Instructions for Raising Your Hand to Ask a Question

If you are connected to audio through your computer or used the ‘call me’ option, select the raise hand icon located on the bottom of your screen.

If you are connected on the phone line only and not the Webex dial *3 to be added to the raise hand queue.

Please remember to state your name and affiliation before making your comment.

You may also send question via chat to all panelists.

If you need technical assistance during the meeting, please send a chat to the event producer at Intellor Events.

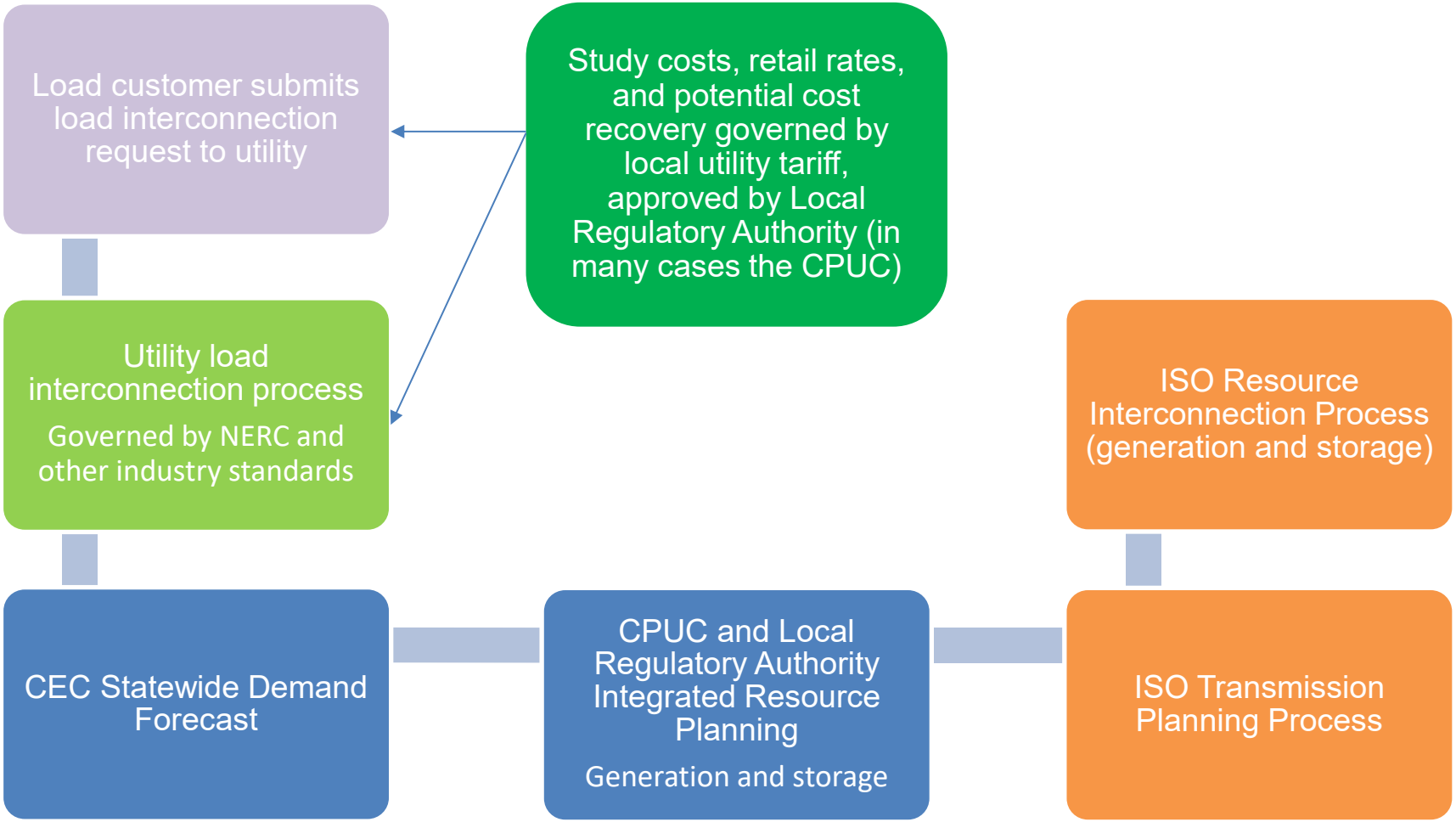
Agenda – February 5, 2026
9:00am-11:30am

Topic	Presenter
1. Introduction and housekeeping	Yelena Kopylov-Alford
2. Policy and stakeholder considerations	Danielle Mills
3. Transmission and resource planning	Danielle Mills
4. Transmission connection service offerings	Danielle Mills
5. Cost allocation and responsibility	Bill Weaver
6. Technical requirements and standards	Ebrahim Rahimi
7. Operational requirements	Ali Miremadi
8. Related issues	Amber Motley
9. Next Steps	Yelena Kopylov-Alford

Large loads are increasing

- Data centers present the largest use-case of large loads, but electric vehicle charging, and electrification of agricultural and industrial processes also will contribute to this growth.
- The ISO is studying 4.5 GW of data centers in the current 2025-2026 transmission plan
- The California Energy Commission (CEC) forecasts data center load in the ISO Balancing Area to increase by 1.8 GW by 2030 and 4.9 GW by 2040.
- Utilities are receiving an increasing number of large load interconnection and service applications.

Current large load planning and interconnection processes



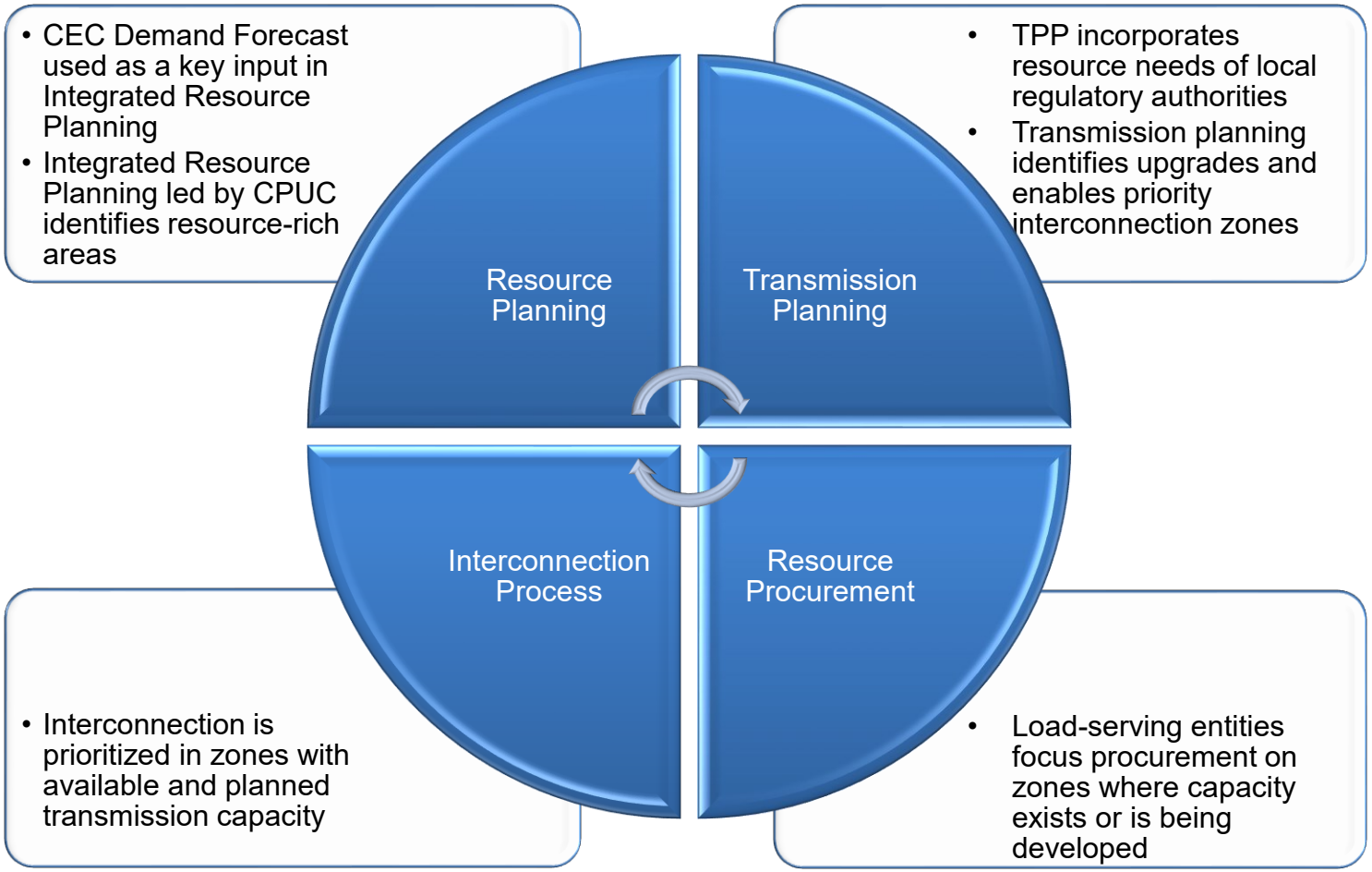
Policy and stakeholder considerations

- Large loads are a topic of great urgency and interest
  - Federal Energy Regulatory Commission (FERC) Advanced Notice of Proposed Rulemaking (ANOPR) on the Interconnection of Large Loads onto the Interstate Transmission System
  - North American Electric Reliability Corporation (NERC) Draft Guideline for Mitigating Risks from Emerging Large Loads
  - Pacific Gas & Electric Company's (PG&E) Application to the California Public Utilities Commission (CPUC), proposing a new electric rule tariff to interconnect transmission-level customers seeking retail service (Electric Rule 30)

Transmission and resource planning

- A 2022 Memorandum of Understanding (MOU) among the CPUC, CEC, and ISO defines roles in transmission planning, resource planning and resource interconnection
  - CEC completes demand forecast, which includes large loads mapped to substation locations used in the ISO's transmission studies
  - CPUC provides resource planning to the ISO
  - The ISO also receives resource planning information from publicly-owned utilities
  - Resource plans inform transmission planning and zones for priority resource interconnection

Coordination with state and local planning efforts enables the ISO to incorporate large load requests into infrastructure planning efforts



Integrated resource and transmission planning has enabled roughly 31 GW to connect since 2020

- State resource planning and procurement policies have yielded roughly 31 GW of efficient, new power plants coming online since 2020 to serve ISO load.
  - Over 6 GW of new nameplate capacity to serve ISO load in both 2024 and 2025.
- The ISO is currently studying 4.5 GW of data centers in the 2025-2026 Transmission Planning Process (TPP)
- Case study: The ISO has approved transmission projects in the San Jose region to serve increasing data center load and to position the system for additional expansion.

Long-term demand forecasting

- CEC Integrated Energy Policy Report's (IEPR) long-term demand forecast estimates future electricity consumption and peak demand.
  - For data centers, CEC gathers information on applications for load service submitted to utilities and applies adjustments to the requested capacity based on utilization factors, confidence levels, and ramping assumptions.
  - 2025 IEPR forecast projects data center load in the ISO BA to increase by 1.8 GW by 2030 and 4.9 GW by 2040.

ISO Transmission Planning Process (TPP)

- New large load interconnection requests that come in after development of the demand forecast and CPUC portfolios:
  - Participating TOs may submit proposals into the ISO's Transmission Planning Process for the ISO's concurrence in the Transmission Plan.
  - The ISO considers the transmission component of the load interconnection:
    - Reviews and provides concurrence that the load interconnection and potential network upgrades to interconnect the load meet the transmission reliability requirements and are consistent with the long-term transmission plans in the area.

Interconnection of large loads

- Large loads, including data centers, industrial facilities, and electric vehicle (EV) charging stations, can interconnect on either the distribution or transmission system.
- The end-customer interaction in the load interconnection process for CPUC-jurisdictional utilities is regulated through CPUC-approved rules.
- PG&E's Electric Rule 30 Application seeks to streamline interconnection for large loads seeking retail-rate transmission-level service on higher voltage lines.

Co-located large loads and generation

- Large loads that are co-located with generation or storage that are subject to FERC jurisdiction are studied in separate interconnection processes.
  - The load interconnection is studied through the transmission owner's process.
  - The generator interconnection is studied through the ISO's resource interconnection process.

Transmission service offerings

- Transmission service for load on the ISO-controlled grid is generally firm.
- Offering customized service to large loads may create benefits
  - Faster interconnection by providing interim, potentially reduced level of non-firm service to the large load as system reinforcements are built
  - Reduce costs of infrastructure expansion on a longer-term basis
- Additional service offerings would need to be incorporated into ISO operations and planning activities and align with NERC requirements.

Cost allocation and responsibility today

- Cost allocation rules for load interconnections are governed by the utility's retail tariff
  - *E.g.*, CPUC Rules 15, 16, and 30
- Co-located generation would be governed by the ISO tariff (for wholesale generators) or the State/local tariff (for net metering or similar generators)
- Any transmission-level network upgrades would be included in a Participating TO's transmission revenue requirement
- The state or local authority determines the retail rate structure

Cost allocation and responsibility: recent FERC orders

- The DOE/FERC ANOPR states “load and hybrid facilities should be responsible for 100% of the network upgrades that they are assigned through the interconnection studies.”
  - Seeks comment on “whether such costs should be offset through a crediting mechanism and, if so, over how many years.”
- FERC’s co-location order requires PJM to develop rate reflecting grid and ancillary service benefits large loads receive not otherwise captured by a $/MWh charge on gross load.

Technical requirements and standards

- Voltage and frequency ride-through requirements to avoid significant load loss following a system disturbance
- Limits on rapid ramping and pulsating load levels, as observed with AI training
  - Can trigger critical dynamic system frequencies and force system oscillations
  - Can cause sub-synchronous resonance issues with nearby rotating machines
  - Minor but persistent load fluctuations triggering inertial response impacts
- Power quality (harmonics, voltage variation, etc.)
- Modeling requirements, study methodology, and compliance assessment

Technical requirements and standards

- An informal Large Load Technical Requirements Working Group is studying and developing a coordinated set of technical requirements.
- The group is reviewing existing technical requirements, including those in use by California utilities and entities such as ERCOT, Dominion Energy, ATC, Southern Company, and others.
- A parametric study is planned to help the group to draft ISO-specific requirements, if necessary.
- A decision on where these requirements will ultimately be documented and enforced will be made at a later stage. This decision will need to consider the direction NERC is taking to identify national standards.

Operational requirements

- Balancing Authority responsibilities and mechanisms
- Emerging frequency challenges
- Participating vs. Non-Participating load pathways
  - Telemetry
  - Planned operating schedules and outage notification
  - 24/7 curtailable capability
  - Acceptable ramp rate

Related Issues

- Short-term demand and uncertainty forecasting
  - As flexible demands grow, the ISO must protect the critical function of forward demand predictability within the market optimization as well as operational forecasting.
- Market participation
  - Demand and Distributed Energy Market Integration (DDEMI) initiative will address market participation rules and design issues related to participating large loads and related demand response programs.

Related Issues

- Coordination framework
  - strengthen situational awareness across the transmission and distribution (T&D) interface
  - support accurate short-term demand forecasting
  - maintain market efficiency
  - support reliable operations across the T&D interface

Next steps

- Continued discussions with State agencies and local regulatory authorities
- Continued discussions with utilities regarding technical standards
- Monitoring FERC consideration of large loads and co-located load and generation
- Comments on Issue Paper and Stakeholder Information Session

Next Steps

- Please submit written comments on the stakeholder call discussion by end of day Feb. 19, 2026, to ISOStakeholderAffairs@caiso.com.

- Questions? Please email ISOStakeholderAffairs@caiso.com

- Additional information on this process is available on the CAISO website at: https://www.caiso.com/generation-transmission/load/large-load

This Week at the ISO – 2/2/26

Stakeholder Meetings

All public stakeholder meetings are also listed on the CAISO Calendar

- Tuesday, February 3rd – Interconnection Customer User Group
  - 1:00pm – 2:00pm PT (link)
- Wednesday, February 4th – EDAM - Virtual Town Hall
  - 10:00am – 11:30am PT (link)
- Thursday, February 5th – Large Load Information Session
  - 9:00am – 11:30am PT (link)
- Thursday, February 5th – Market Update1
  - 0:00am – 10:30am PT (link)
- Friday, February 6th - Market Surveillance Committee General Session
  - 10:00am – 12:00pm PT (link)

Comment Submission Deadlines

- Friday, February 6th - Congestion Revenue Rights Enhancements

Trainings .

- None Scheduled this week.

This Week at the ISO continued

Market Simulations

- Please refer to our Release Schedule for the most recent updates of initiatives scheduled for MAP- and Production- stage market sims
- Monday, February 2nd – Parallel Operations - DAME, EDAM, EDAM CAISO Balancing Authority Area Participation Rules Market Simulation and Parallel Ops Meeting
  - 9:00am – 10:00am PT (link)
- Thursday, February 5th – Parallel Operations - DAME, EDAM, EDAM CAISO Balancing Authority Area Participation Rules Market Simulation and Parallel Ops Meeting
  - 1:00pm – 2:00pm PT (link)

To participate in the DAME and EDAM Implementation pre-Market Simulation meeting series, please follow these steps:

Submit a CIDI Request:

- Log in to the CAISO Customer Inquiry, Dispute, and Information (CIDI) system.
- Create a new request with the 'Functional Environment' set to "Market Simulation."
- In the request, specify your intent to participate in the DAME & EDAM Market Simulation.
- Include the following information:
  - Market Simulation initiative(s) you will participate in.
  - Any specific resources or systems you plan to test.
  - Contact names and email addresses for coordination.

Email Option:

- If you do not have access to CIDI, you may send an email to marketsim@caiso.com with the subject line "DAME & EDAM Market Simulation Registration."

Business Practice Manual (BPM) Updates

- The status of all PRRs and updated BPMs in the BPM Library are published on the BPM Change Management Website.

Energy Matters blog provides timely insights into ISO grid and market operations as well as other industry-related news.

https://www.caiso.com/about/news/energy-matters-blog

Story | Western Energy Markets

Agenda set for EDAM Virtual Town Hall on Feb. 4

01/28/2026

Story | Inside the California ISO

Evolving Stakeholder Processes for Greater Collaboration

By Joanne Serina, Allie Mace

01/14/2026

Story | Markets

Extended Day-Ahead Market – Virtual Town Hall

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