



California ISO

# Order No. 881 Compliance

Stakeholder Discussion

May 24, 2022

## Order No. 881 establishes new transmission line rating requirements for public utility transmission providers

- Establish and use ambient-adjusted ratings and seasonal ratings for all transmission lines unless excepted
  - Use AARs for near-term transmission service requests
  - Use seasonal rating for long-term transmission service requests
- RTOs/ISOs must implement systems and procedures to allow transmission owners to electronically update transmission line ratings at least hourly
- Use uniquely determined emergency ratings for contingency analysis in the operations horizon and in post-contingency simulations of constraints
- Implement transparency reforms

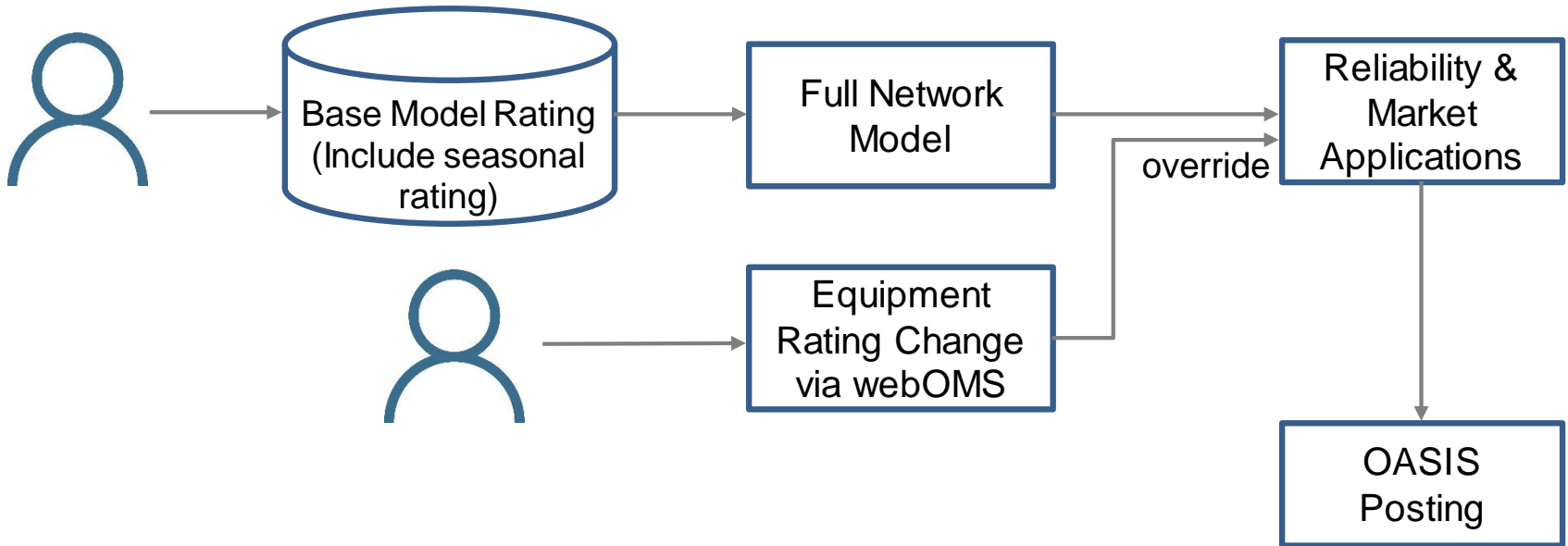
# Compliance and Implementation Schedule

- FERC issued Order No. 881 on December 16, 2021
- Compliance filings are due July 12, 2022
- Implementation required before July 12, 2025

# The CAISO will evolve its current practices to comply with Order No. 881

- The CAISO utilizes seasonal ratings, emergency ratings and ambient adjusted ratings on transmission facilities
  - Ambient adjusted ratings apply to relatively few facilities and involves a manual process to update line ratings for an applicable operating period
  - Participating transmission owner enter ambient adjusted rating as equipment rating change into webOMS applications manually, which informs the CAISO's market and reliability applications for the time period that it applies, *i.e.* a start and stop time that can be updated by the transmission owner

# CAISO's current practice



## Order No. 881 impacts different functional roles

- Transmission provider function
  - Dependent on participating transmission owners
- Western Energy Imbalance Market (WEIM) Operator function
  - Dependent on WEIM Entities
- Reliability Coordinator function
  - Dependent on Balancing Authorities and Transmission Operators

## CAISO believes functional roles should drive implementation

- NERC Reliability Standard FAC-008 allows each transmission owner to have a methodology to determine facility ratings
  - CAISO will support individual rating methodologies but coordination and standardization necessary
- NERC FAC, MOD, TOP and IRO reliability standards require transmission owners and transmission operators to provide the facility rating and system operating limit to transmission service provider and reliability coordinator
  - Order No. 881 offers opportunity to refine sharing and use of information

## Implementation effort will involve significant coordination with stakeholders

- Supporting efforts for transmission owners to refine ratings methodologies
- Integrating ratings into reliability coordinator functions, calculation of forward transmission service, and day-ahead/real-time market applications
- Finding alignment between transmission systems using flow-based congestion for internal flowgate versus contract path congestion on scheduling path



## Ongoing discussions necessary throughout implementation phase

- Coordinating PTO transmission rating methodologies consistent with the requirements of Order No. 881
- Data specification and collection requirements for transmission line ratings, including a standardized unit format for ratings
- Enhancing functionality and interfaces for collecting and using transmission line ratings
- Testing market rule changes to implement the requirements of Order No. 881
- Revising relevant operating procedures and information sharing practices

# The CAISO does not intend to modify the Transmission Control Agreement

- The TCA imposes a requirement on participating transmission owners to provide in a format acceptable to the CAISO applicable ratings of all transmission lines and associated facilities as well as changes to those ratings
  - **Request:** Do stakeholders have a different view and believe modifications to the TCA are necessary

The CAISO does not intend to impose additional tariff requirements on WEIM entities but will account for WEIM Entities' rating methodologies

- Section 29.17 of the CAISO tariff require each WEIM Entity to submit transmission service information to the CAISO
  - **Request:** Do stakeholders have a different view and believe changes to section 29 of the CAISO tariff are necessary?

The CAISO does not intend to impose additional tariff requirements on RC Customers but will account for RC Customers' rating methodologies

- Section 19.5(b)(2) of the CAISO tariff requires each RC Customer to exchanging data, operating plans, operating procedures, studies, and reports with the CAISO in accordance with the Business Practice Manual for RC Services and applicable RC Operating Procedures
  - **Request:** Do stakeholders have a different view and believe changes to section 19 of the CAISO tariff are necessary

## Order No. 881 encourages RTOs/ISOs to coordinate implementation of transmission ratings methodologies

- CAISO proposes to adapt the *pro forma* OATT language state that it will coordinate with participating transmission owners in their development of transmission line methodologies
- CAISO will also coordinate with participating transmission owners on the development of exceptions and alternate ratings
- CAISO is not proposing to create methodology requirements for participating transmission owners or WEIM Entities
  - **Request:** Do stakeholders have a different view and believe the CAISO must create methodology requirements that apply to participating transmission owners or WEIM Entities

## The CAISO will propose to use ambient adjusted ratings in its day-ahead and real-time markets

- CAISO will propose to require submission of ambient adjusted ratings by market close to allow time for CAISO validation and market systems to utilize ratings
  - **Request:** Do stakeholders have any perspective on the use of ambient adjusted ratings in the CAISO's markets or the timing to incorporate ratings
- CAISO will also propose participating transmission owners validate ambient adjusted ratings prior to submission
  - **Request:** Does this proposed requirement create any stakeholder concerns
- CAISO will use seasonal rating if data or system issues prevent use of ambient adjusted rating

## The CAISO proposes to use ambient adjusted ratings from the real-time market in its real-time contingency analysis

- CAISO proposes to reflect the most granular ambient adjusted ratings used in the market as part of its RTCA during that same time interval
  - **Request:** Do stakeholders have any perspective on which ratings to use in RTCA, or potential variance between CAISO and participant RTCAs
  - **Request:** The CAISO requests stakeholder comment on the planned utilization of ambient adjusted ratings in remedial action schemes

## Seasonal ratings will apply to any long-term transmission service provided by the CAISO

- The CAISO is holding working group meetings to foster dialogue on the development of long-term transmission products and reservations, *i.e.* requests for transmission service more than 10 days in the future
- Seasonal rating methodologies would apply to these request for transmission service
  - **Request:** Do stakeholders have any comments on how, if at all, the CAISO should address this issue in its Order No. 881 compliance filing



## Order No. 881 requires the CAISO to implement systems and procedures necessary to allow electronic updates to ratings at least hourly

- Ratings submitted by participating transmission owners directly into the EMS through SCADA or similar systems
- Use of other electronic systems, such as Inter-Control Center Communication Protocol
  - **Request:** Do stakeholders have any perspectives on allowing both functionalities to accommodate PTOs, EIM Entities and RC Customers
  - **Request:** Do stakeholders have perspectives on whether the CAISO should include tariff language governing dynamic line ratings, e.g. a definition and language recognizing dynamic line ratings in transmission rating methodologies

Order No. 881 requires the CAISO maintain a database of ratings and methodologies on OASIS or another password-protected website

- Share ratings and methodologies with Transmission Providers, Market Monitor and other entities
- Maintain database of ratings used and methodologies as well as exceptions and alternate ratings
  - Individual records of ratings in effect for each transmission line at which times
  - Maintain records for 5 years
- CAISO proposes to limit this database to ratings and methodologies of participating transmission owners and not include EIM Entities or RC Customers
  - **Request:** Do stakeholders have any comments on these compliance requirements the CAISO should consider?

# CAISO compliance filing will adapt the *pro forma* OATT language proposed by Order No. 881

- The CAISO has posted initial draft tariff language to comply with Order No. 881
- The CAISO requests feedback on draft language as well as any other issues it should consider to prepare its compliance filing
- The CAISO anticipates posting a revised draft of tariff language in the second half of June

## Proposed schedule

- June 7, 2022: Written comments on Order No. 881 compliance issues and draft tariff language
- On or about June 21, 2022: CAISO publishes revised draft of tariff language
- July 12, 2022: CAISO submits its compliance filing
- Q3 2022: Publish schedule for implementation discussions and activities