



California ISO

Subscriber Participating TO Model Status Update

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Stakeholder Briefing

December 5, 2022

Housekeeping reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- Meeting is structured to stimulate dialogue and engage different perspectives.
- Please keep comments professional and respectful.
- Please try and be brief and refrain from repeating what has already been said so that we can manage the time efficiently.

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 top right above the chat window. **Note:** #2 only works if you dialed into the meeting.
 - Please remember to state your name and affiliation before making your comment.
- If you need technical assistance during the meeting, please send a chat to the event producer.
- You may also send your question via chat to either Kaitlin McGee or to all panelists.

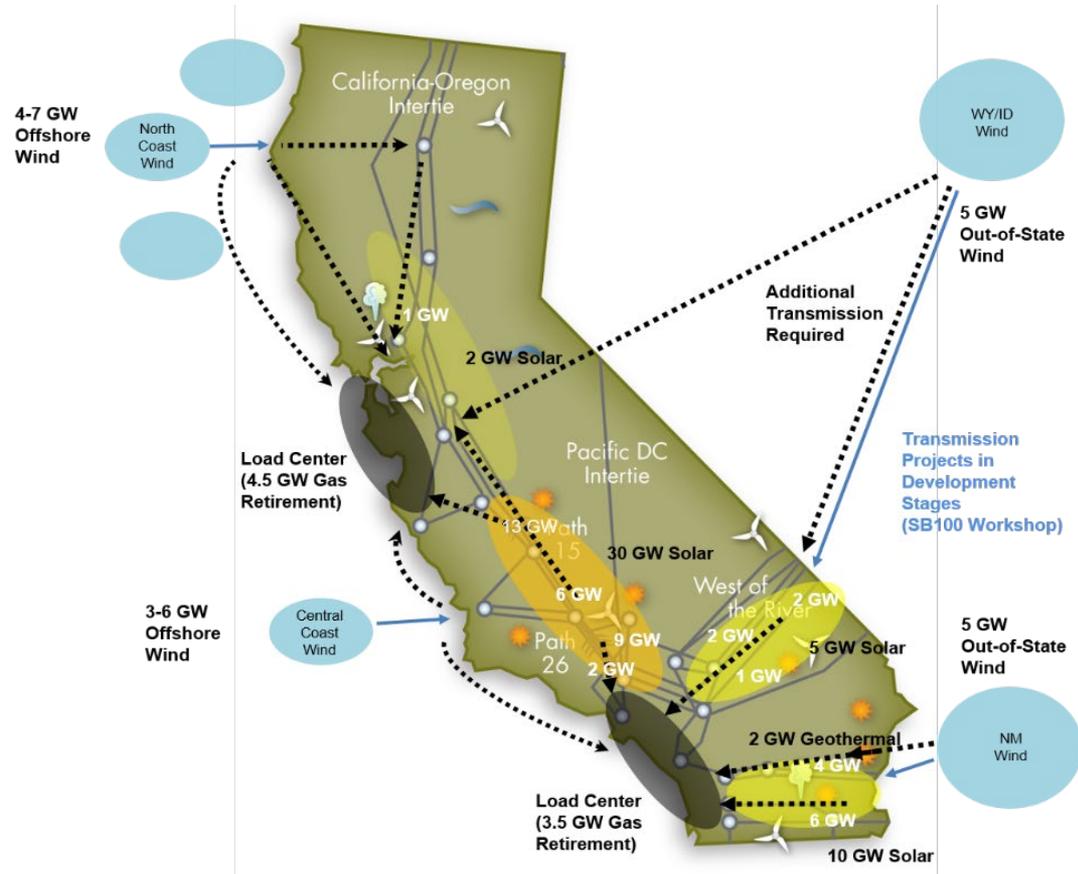
Agenda

- Context of TransWest Express/ISO interaction
- Planned sequence of events
- The Subscriber Participating Transmission Owner Model

Out of state wind resources play a growing role in state agency resource planning

Out of state wind resources in different resource plans:

- The current “Preferred System Plan” calls for 1500 MW in 2032
- The High Transportation Electrification portfolio calls for 4828 MW by 2035
- The “starting point” scenario provided by the CEC and CPUC for the 20 Year Outlook calls for 10 GW by 2040
- These projections also call for roughly matching levels of offshore wind, as well as California wind resources



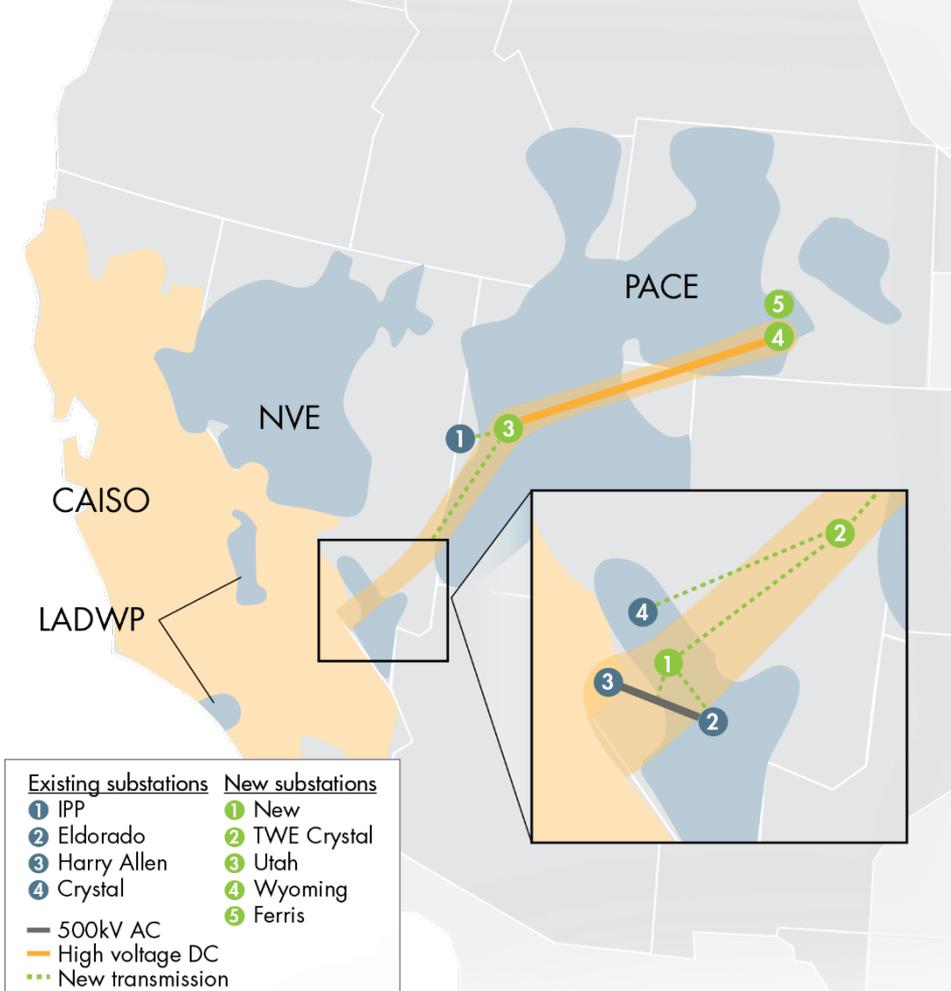
TransWest Express LLC Project

- TransWest ran a FERC approved open season to sell capacity at negotiated rates that have been fully subscribed in the north-to-south direction, e.g. to California
 - The subscriber will need off-takers to execute power purchase agreements that encompass energy, transmission, and congestion as a package to fund the project
- TransWest includes an HVDC and 500 kV AC line to collect wind resources and deliver them to California
- ISO approached by TransWest (transmission project to deliver Wyoming wind resources) to join the ISO Balancing Authority Area
- ISO interested in providing an alternative to a generation-only balancing authority area to achieve operational benefits and respect the subscribers' rights
 - Led to ongoing development of “Subscriber PTO Model”

Planned sequence of events:

- December Board meeting seeking approval as a PTO:
 - Allows TransWest to participate in the Transmission Planning Process as a PTO
 - Allows TransWest to study the connecting generation in Cluster 15 process expected to open in April, 2023
- Subsequently:
 - ISO works to finalize subscriber PTO model in Transmission Control Agreement and resolves administrative tariff provisions
 - Administrative tariff provisions filed with FERC
 - TransWest develops and files subscriber charge
- As TransWest transmission nears completion:
 - TCA and TO Tariff executed and filed with FERC

Expanding the ISO BAA to include TransWest Express



Boundaries and substation placement are for illustrative purposes only.

- ISO BA boundary at WY with PacifiCorp East, Utah with LADWP and TWE Crystal with NVE
- 3,000 MW capacity on HVDC from Wyoming to Utah
- Expect 1,500 MW delivery to LADWP at Utah
- Remaining 1,500 MW continue on 500 kV AC to southern Nevada to NVE at Crystal or ISO at new substation
- Harry Allen line
 - BA boundary with NVE
 - Line rated 2,700 MW
- Eldorado is already a BA boundary with NVE, SRP, APS and LADWP

Subscriber PTO Model Considerations

- Transmission predominately used to meet state or utility clean energy policy objectives
- Most transmission capacity subscribed in at least one direction, without relying on ISO for funding
- Subscriber rights protected like an Encumbrance
 - Subscriber Encumbrance treated as an Existing Contract
- Subscriber PTO will have its own TAC Area
- Subscriber PTO would be required to fund the transmission revenue requirement from their subscriber, or the off-takers from the subscriber, not from the ISO
- Subscriber PTO could recover an incremental charge for ISO market participant use of the transmission facilities by non-subscribers
- Subscriber PTO concept would be supported through an amendment to the Transmission Control Agreement

Rationale for treating Subscriber Rights as an Encumbrance

- Existing contracts have been treated as encumbrances since ISO inception
- Provides the rights holder with:
 - “Perfect hedge” – no charge for transmission or congestion
 - Scheduling priority
- ISO software and tariff functionality already exists for encumbrances
- Encumbrances are given contract reference numbers (“CRNs”) to ensure proper settlement

Rationale for treating Subscriber Right as an Encumbrance (cont.)

- Only the original subscriber will have an encumbrance for the original generating capacity of the project
- Any additional generation above the original capacity will not be considered an encumbrance
- Any new interconnections into the project will not be considered an encumbrance
- This is the same functionality that will be used in the Extended Day-Ahead Market for EDAM BAA's existing contracts
- The subscriber will need to schedule in the DA or RT market using the CRN otherwise the transmission is available to the market as new firm use

Subscriber Right as an Encumbrance

- Any WEIM transfers in real-time between WEIM BAAs will still be treated the same and the subscriber charge will not be applied due to the reciprocity rule in the tariff
- CRR's are not an acceptable substitute to the subscribers:
 - The ISO has never been successful in compensating a transmission line with just CRRs which is why one has never been built
 - Providing the subscriber CRRs is not certain to compensate an entity willing to build and finance a transmission line of this scale
- TransWest will not be able to add future subscribers

Project Transmission Costs

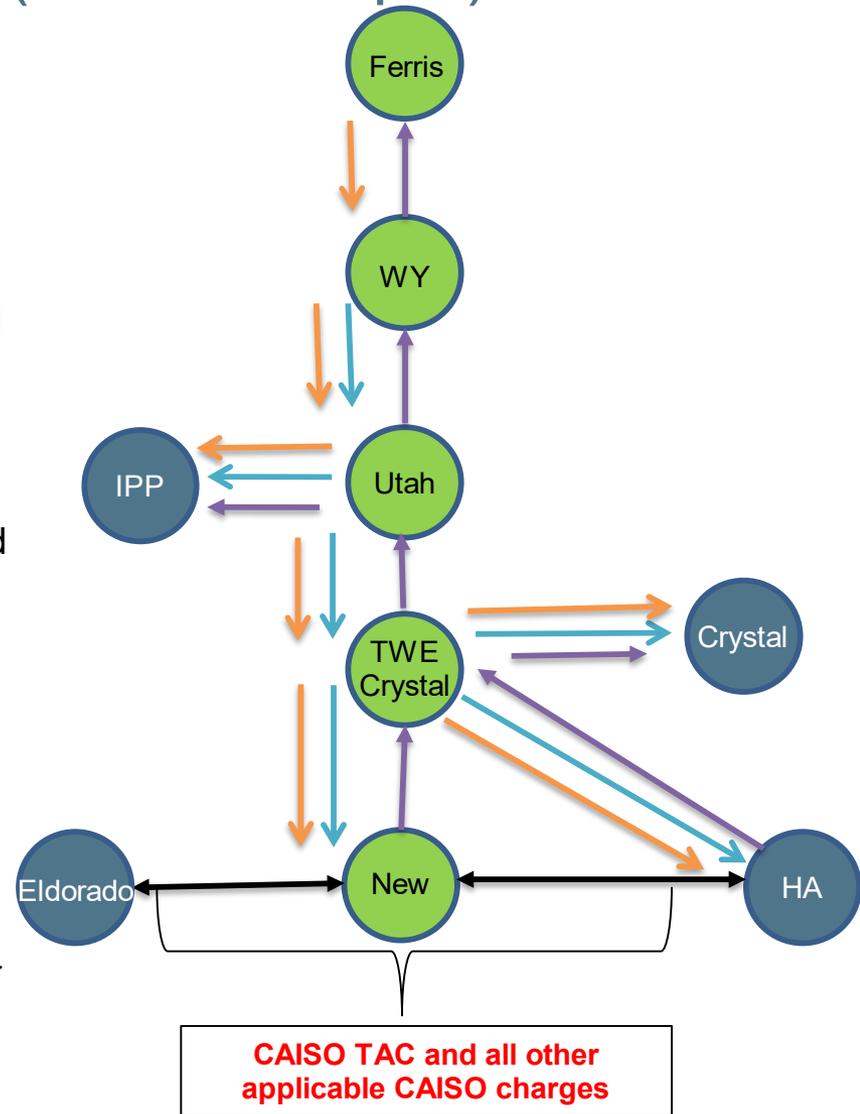
- The project costs ***will not*** be included in the TAC or WAC
- TransWest will develop a \$/MWH Subscriber Charge for non-subscriber use of the project that will accrue to TransWest
- The project will be modeled in the full network model
- If the subscriber(s) do not self-schedule on the project it is available for market use
- Cost recovery of the Subscriber Charge, including updating the charge, will require FERC approval
- The rate will be provided in accordance with the ISO tariff

Proposed Rate Structure (TWE example)

- ↓ Subscriber Rights: No CAISO charge for transmission, energy, or congestion

- ↓ New Firm Use (north to south): CAISO calculate LMP at WY to Utah or TWE Crystal as an export, or to CAISO Load; transmission charge is SPTO Charge to Utah or TWE Crystal as an export, or Eldorado, New or HA plus TAC from there to CAISO load. Energy / Ancillary Services and other applicable charges will be based on LMP and calculated in accordance with the tariff

- ↑ New Firm Use (south to north) TAC from CAISO generation to Eldorado, New or Harry Allen, SPTO Charge from Eldorado, New or Harry Allen to TWE Crystal, Utah, or Ferris. Energy / Ancillary Services and other applicable charges will be based on LMP and calculated in accordance with the tariff



Subscriber rights and obligations:

- Subscriber has already paid for transmission, energy, and congestion on the project
- Subscriber will pay the TAC if the generation is synced to load in the ISO BA or WAC if the generation is synced to an export point that is not on the project
- Subscriber will receive the “perfect hedge” and scheduling priority on the project
- Subscriber is excluded from bid cost recovery allocation, offsets and IFM congestion allocation

Non-Subscribers' Rights and Obligations

- Non-Subscriber will pay the TAC and Subscriber Charge if the generation is synced to load in the ISO BA or Subscriber Charge and WAC if the generation is imported on the project and synced to an export point that is not on the project
- Non-Subscriber will pay all other applicable market charges

Impact of WEIM and EDAM

- WEIM
 - Net transfer capability with other WEIM BAs will not be charged (reciprocity agreement)
 - Net import then Subscriber Charge rate allocation to ISO load
 - Day-Ahead export schedules would be subject to the Subscriber Charge when EDAM is in place
- EDAM – *under consideration*
 - Transmission revenue recovery mechanism
 - New transmission estimate based on wheeling
 - Recovery of wheeling through – net transfers

Generator Interconnection and Deliverability

- Subscriber PTO Generation required to go through ISO interconnection process. PCW intends to use the next open window:
 - Cluster 15 opens April 2023
 - Phase I results January 2024
 - Phase II results December 2024
 - Deliverability allocation March 2025
 - Use of deliverability contingent upon network upgrades (NU), if needed, in the ISO BAA
 - Proposed COD in 2027

Transmission Planning and Issues

- Deliverability
 - MIC added at new import points
 - MIC at existing import points not likely to change – Eldorado, Harry Allen, etc.
 - MIC is allocated to load serving entities
 - Generation is within the ISO BA and does not use MIC
 - Allocation to generation is contingent upon the generator interconnection process

General Comments

- The Subscriber PTO Model is not for competitive solicitation projects
 - The ISO is not determining the least-cost, best-fit projects, its up to the load serving entity to make that determination
 - Competitive solicitation projects receive cost recovery through the ISO's Access Charge
- Subscriber will determine if project moves forward based on ability to get off-takers

The Subscriber PTO proposal would benefit ISO market participants without increasing costs

- The Subscriber PTO model would create transmission opportunities for California's load-serving entities to meet future demand and facilitate needed transmission project development in the west
 - Enable access to remote renewable resources without increasing the ISO transmission access charge
 - Provide incremental capacity for a reasonable rate
 - Consistent with state objectives for out-of-state renewables
- Support different options for development given the long-lead time for transmission construction
- Provide open access tariff and honor subscriber agreements to create choice for consumers

Next steps

- Please submit comments on the status update and meeting discussion using the commenting tool linked on the initiative webpage
 - Comments due by end of day, December 19, 2022
initiativecomments@caiso.com
- Visit the webpage for Subscriber PTO Model
[California ISO - Miscellaneous Stakeholder Meetings \(caiso.com\)](https://www.caiso.com/California-ISO-Miscellaneous-Stakeholder-Meetings)
- If you have any questions, please contact
isostakeholderaffairs@caiso.com