



California ISO

Subscriber Participating TO Model

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Stakeholder Briefing

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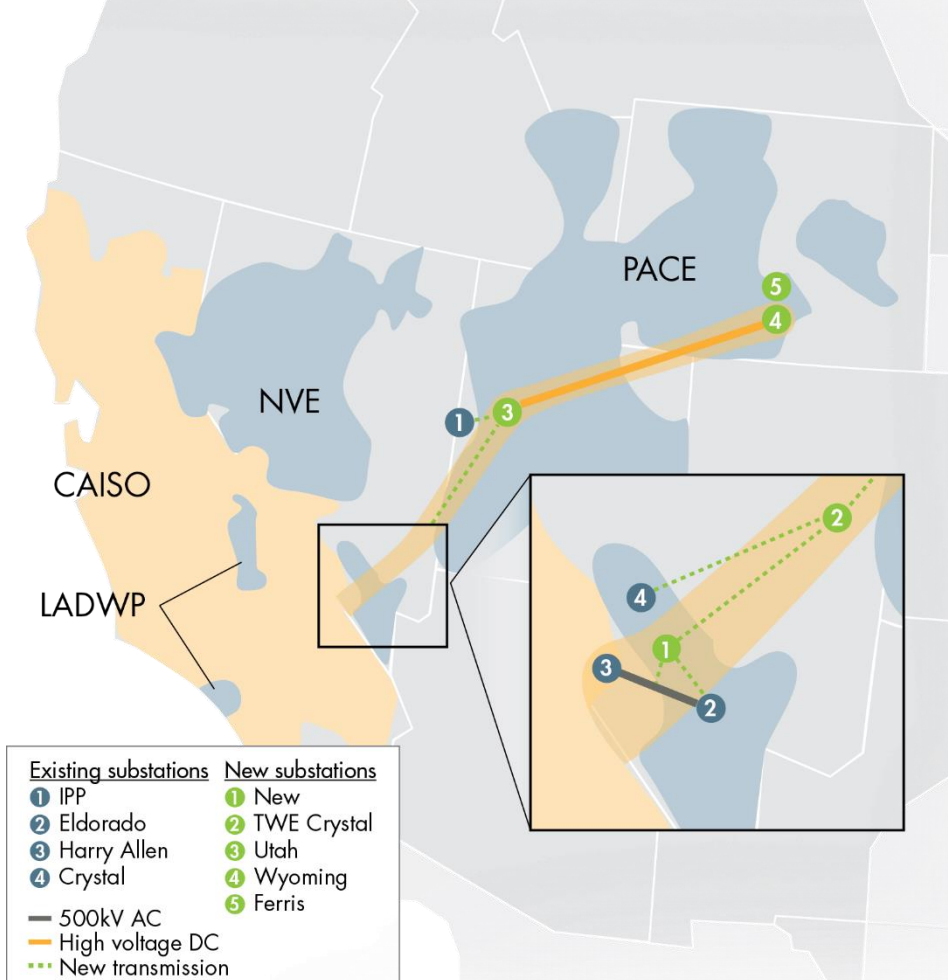
TransWest Express LLC Project

- ISO approached by TransWest Express LLC (Wyoming wind resources) to join the ISO Balancing Authority Area
- Transwest Express ran a FERC approved open season to sell capacity at negotiated rates and has been subscribed
 - The subscriber will need off-takers to execute power purchase agreements that encompass energy, transmission, congestion and losses as a package to fund the project
- Transwest Express includes an HVDC and 500 kV AC line to collect wind resources and deliver them to California
- The ISO posted the PTO application on July 21st

Subscriber Participating TO (SPTO) 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 treated as 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 facilities by non-subscribers
- Subscriber PTO concept would be supported through an amendment to the Transmission Control Agreement

Expanding ISO BAA to include TransWest Express



Boundaries and substation placement are for illustrative purposes only.

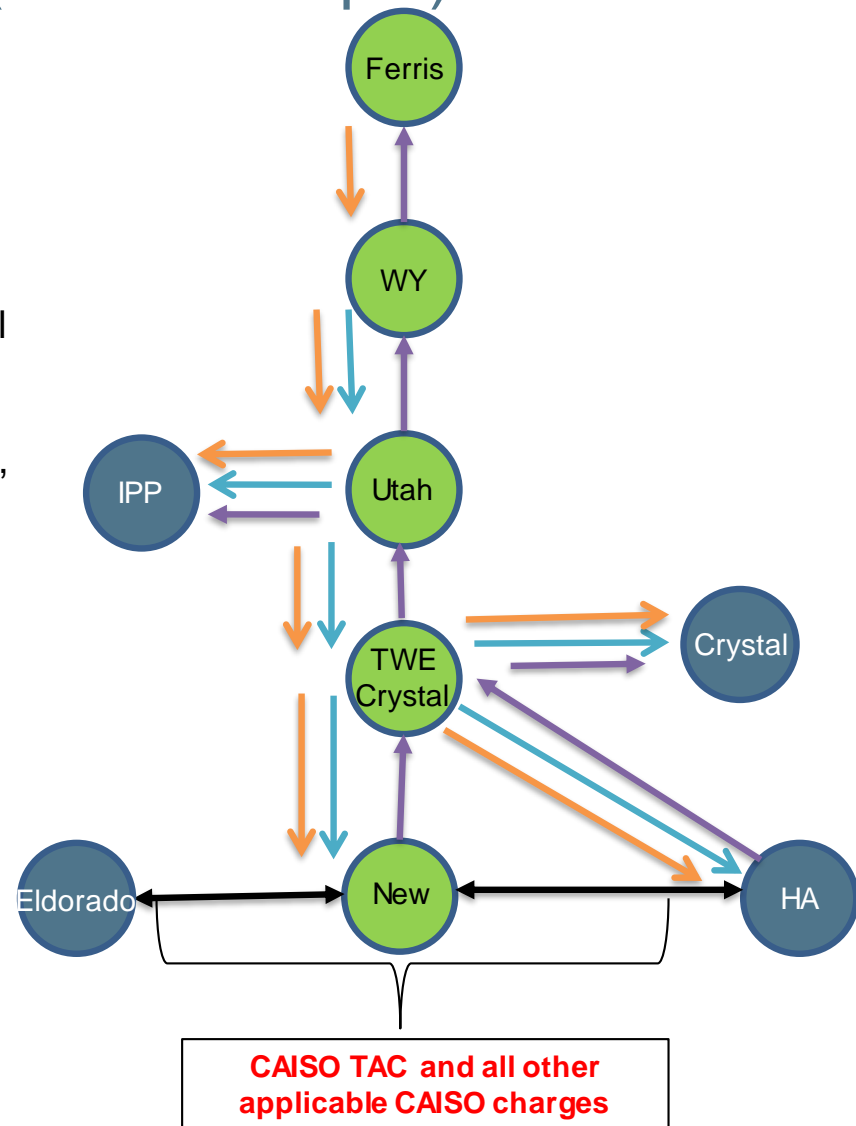
- ISO BA boundary at WY with PacifiCorp East, Utah with LADWP and TWE Crystal with NVE
- 3,000 MW capacity on HVDC from Wyoming to Utah
- Expect 1,500 MW delivery to LADWP at Utah
- Remaining 1,500 MW continue on 500 kV AC to southern Nevada to NVE at Crystal or ISO at new substation
- Harry Allen line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

Potential Rate Structure (TWE example)

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

↓ 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 Wheeling 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 Wheeling 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.



Rate Structure Example – North to South

- Subscriber schedules 100 MW Wyoming wind to SP15:
 - Subscriber pays PCW for transmission, energy, losses and congestion to New or Harry Allen (HA)
 - Subscriber pays ISO LMP from New or HA to Default Load Aggregation Point (DLAP) in SP15 including ISO TAC, GMC, and other appropriate charges
- Non-subscriber schedules 150 MW wind to SP15:
 - Non-subscriber pays LMP at WY wind (energy, losses and congestion), SPTO Wheeling Charge for transmission to New or Harry Allen, plus ISO TAC from New or Harry Allen to SP15 DLAP, GMC, and other appropriate charges

Rate Structure Example – South to North

- Subscriber exports 100 MW at IPP:
 - Subscriber pays ISO LMP at New or Harry Allen plus TAC, GMC, and other appropriate charges
- Non-subscriber schedules 150 MW export at IPP:
 - Non-subscriber pays ISO LMP at New or Harry Allen plus TAC, GMC, and other appropriate charges plus the SPTO Wheeling Charge from New to IPP
 - ISO pays generator the energy component
 - ISO pays Participating TO the Wheeling Access Charge at New or Harry Allen
 - ISO pays TWE the SPTO Wheeling Charge

Amendment to the Transmission Control Agreement

- ISO proposing to add SPTO Protocol as Appendix F of the Transmission Control Agreement (TCA)
- Intent is to use the existing tariff construct to apply to the SPTO and amend the TCA to include:
 - Subscriber Encumbrance: Treated as an acceptable Encumbrance
 - Subscriber Rights: Treated similar to Existing Rights/Contracts
 - Subscriber Wheeling Charge:
 - Separate additive charge above the Regional Wheeling Access Charge
 - Incurred by SC that use SPTO transmission
 - Revenue collected paid solely to SPTO

Generator Interconnection and Deliverability

- SPTO Generation required to go through CAISO interconnection process. First 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 CAISO BAA
- Subscriber or subscriber's off-taker can use their existing Market Import Capability (MIC) in advance of NU completion

The SPTO 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

- The ISO will accept comments on this presentation which are due August 15th to isostakeholderaffairs@caiso.com
- Section 2.2 of the Transmission Control Agreement requires the ISO to allow stakeholders 60 calendar days to comment on the PTO application
 - Comments are due September 19th to RegulatoryContracts@caiso.com
- The ISO will consider amendment of the Transmission Control Agreement to include TransWest Express