




Transmission Service and Market Scheduling Priorities Initiative

Draft Final Proposal Stakeholder Meeting
December 16, 2022

Reminders

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

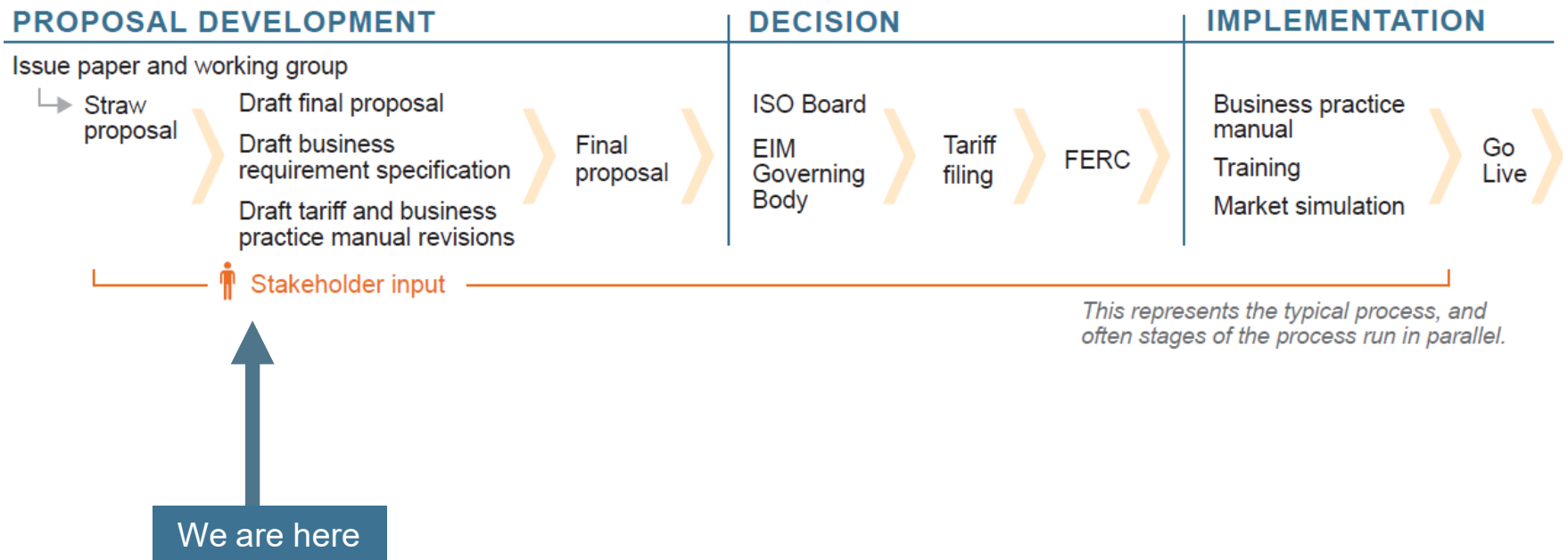
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Note: #2 only works if you dialed into the meeting.
 - Please remember to state your name and affiliation before making your comment.
- If you need technical assistance during the meeting, please send a chat to the event producer.
- You may also send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

Agenda

Topic	Presenter
Welcome & introduction	Isabella Nicosia
Initiative background & overview	Milos Bosanac
Draft final proposal walkthrough	ISO Staff
Next steps	Isabella Nicosia

ISO Policy Initiatives Stakeholder Process



Initiative Background

- The *Transmission Service & Market Scheduling Priorities* initiative seeks to develop a durable design for establishing market scheduling priority associated with wheels through the ISO system.
- Current *interim* design establishing wheeling through scheduling priority expires ahead of Summer 2024.
- Today wheels through the ISO system can establish scheduling priority equal to load by meeting the following requirements at least 45 days ahead of the month for which are seeking priority:
 - Firm power supply contract to serve external load; and
 - Firm transmission to the ISO border, for the month.
- To the extent criteria above is not met, wheels through the ISO system have a lower scheduling priority.

Overview of Proposed Design

- ISO will calculate Available Transfer Capability (ATC) on the interties, which can be reserved in advance to establish wheeling through scheduling priority.
 - ATC calculation across 13-month horizon and daily (7-day) horizon.
- Calculation of ATC requires set-aside of transmission capacity at interties for native load needs.
- Ability to reserve ATC in advance by demonstrating firm power supply contract is in place.
 - Ability to compete for limited ATC based on duration of underlying supply contract.

Overview of Proposed Design

- Introducing a process to study requests to establish wheeling through scheduling priority for a year or longer and ability to pursue transmission upgrades.
 - Leveraging existing study processes (*i.e.*, GIDAP).
- Transmission charge for wheeling through scheduling priority is based upon the underlying duration of the supply contract for which ATC was reserved.
 - A wheeling through customer pays for transmission (WAC) whether or not the reserved prioritization is exercised.
 - For example, a wheel through supported by a 6x16 contract would pay the WAC for those hours for the month) whether or not the transaction is scheduled.



Calculating ATC

ATC Methodology

$$ATC = TTC - ETC - TRM - CBM$$

- Methodology derives the amount of transmission capacity available reservation.
- Total Transfer Capability (TTC) is the rated capability of the path or intertie, and starting point of calculation.
- Existing Transmission Commitments (ETC) represents the transmission rights that need to be set aside to meet existing obligations, including service to native load.
- Transmission Reliability Margin (TRM) and Capacity Benefit Margin (CBM) represent margins for setting aside transmission capacity for uncertainty and emergency conditions.

Calculating Existing Transmission Commitments (ETC)

- ETC represented by set asides of transmission capacity for:
 - Existing transmission contracts (legacy);
 - Reservations of ATC (as part of this future process); and
 - Forecasted native load needs, including load growth.
- For the ISO, existing contracts are represented by “ETCs/TORs” that may exist across different interties.
- Native load needs are an estimation or forecast of transmission set aside to serve native load.
 - Reasonable estimation, not unduly tying up transmission capacity.

Calculating ETC – Native Load Needs

- Proposed methodology for deriving native load needs at the ISO interties is based upon:
 - Resource adequacy (RA) shown imports at individual interties – “higher of” showings for the month being calculated over the previous two years; and
 - Non-RA shown contracted imports at individual interties – “higher of” showing for the month being calculated over the previous two years.
 - Requires LSEs to share information on contracted imports not shown on RA plans.
- For example, if deriving native load needs for September 2023 consider RA showings and non-RA contracted import volumes from September 2022 and 2021 (higher of).
- At T-30 timeframe, once current final RA plans are submitted, “true up” set aside for native load with contracted import supply.
 - Includes shown non-RA contracted import supply.

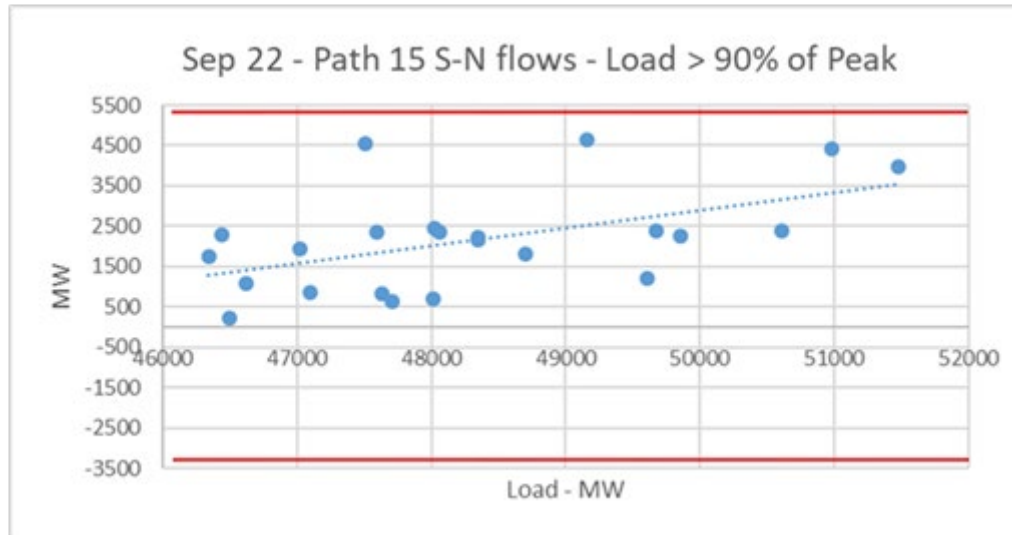
Accounting for Load Growth and Uncertainty

- Methodology sets aside transmission capacity for native load growth
 - Based on load growth year over year, CEC load forecast
 - Attributing portion of that load growth as served by imports
 - Derive ratio of RA imports shown to total RA shown
 - Example: if RA imports are 10% of total RA shown, then 10% of load growth attributed to being served by imports
- Accounting for a level of uncertainty through the Transmission Reliability Margin (TRM) set aside of transmission capacity
 - Up to 6% of TTC set aside at interties to account for uncertainty related to:
 - Transmission system topology (outage risk)
 - Variations in generation dispatch
 - Aggregate load forecast

Evaluating Internal Transmission Network Impacts

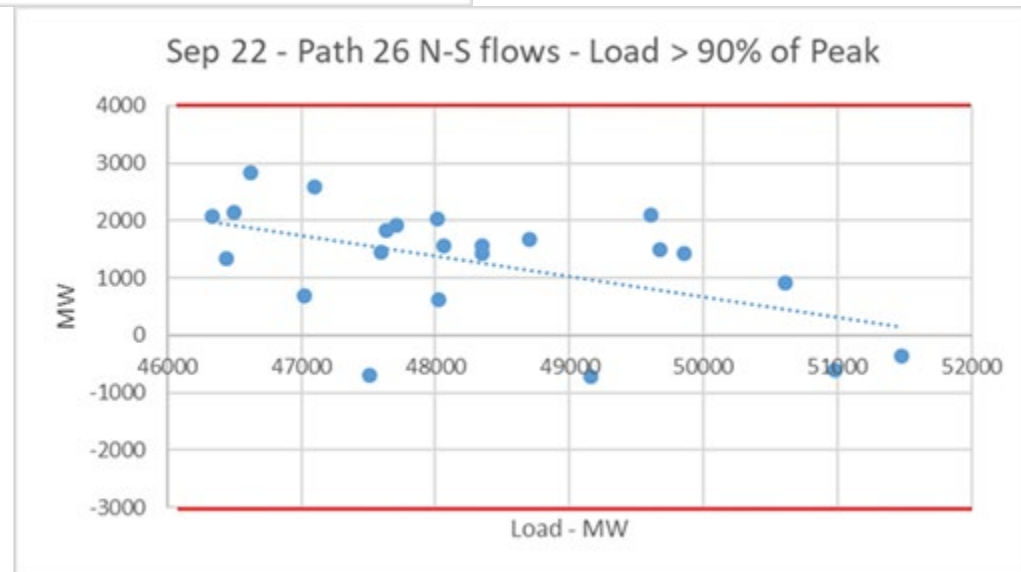
- The proposal focuses on the calculation of ATC on the interties, and not across internal paths.
- The ISO's assessment of internal transmission network constraints indicates that under stressed conditions wheels through the system generally do not trigger internal reliability constraints.
- The ISO will conduct an annual assessment to evaluate the robustness of the internal system to support different volumes of imports and wheels through the system.
 - Evaluates implications of resource retirements and additions.
- The ISO will continue to monitor internal network conditions.

Highest load – September 2022

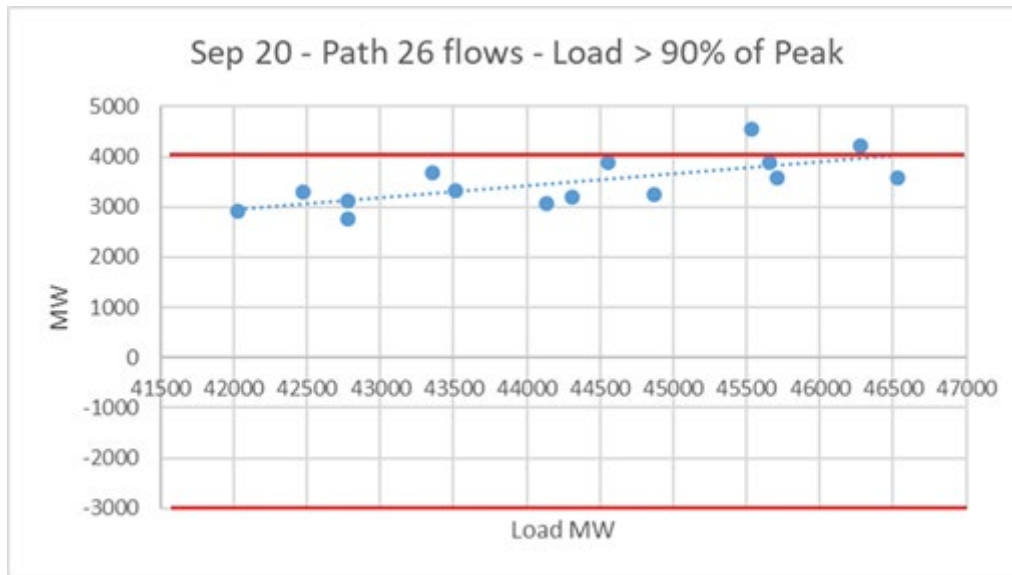


- The peak load condition, with sizable volume of imports and wheels through the system, did not result in internal system reliability constraints.

- Robust amount of resources in north and south of system allow for opportunity of system to re-dispatch to manage congestion.
- Generally, local resources are dispatched to manage local area congestion, reducing north to south flows and creating room through the middle of the system.

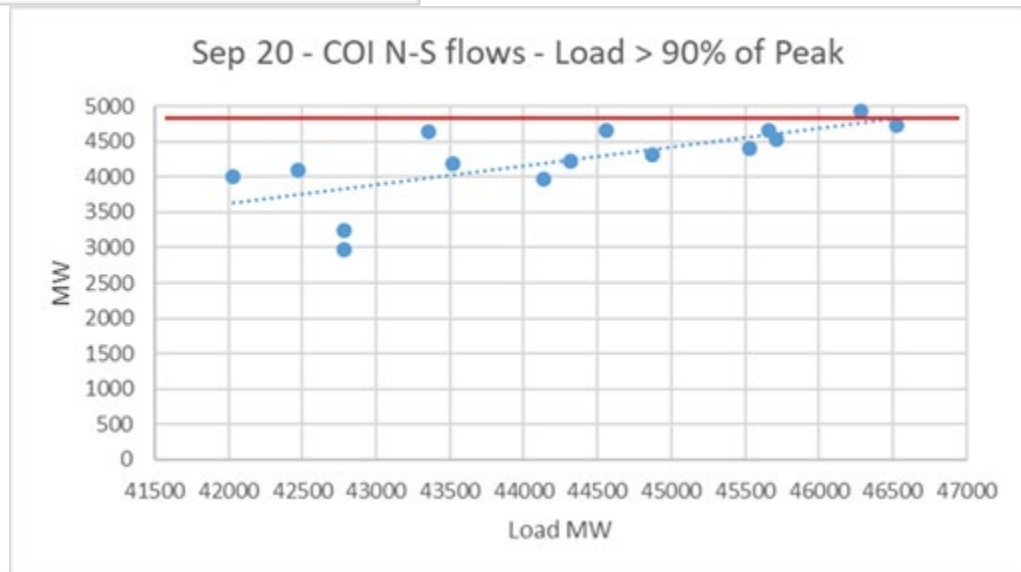


September 2020 Conditions



- In addition to peak load conditions, and heat wave affecting southern California and southwest (but cooler in northwest).
- Path 26 and COI trend upward, with COI reaching its limit.

- Path 26 reached high flows while supporting wheels through and imports, but did not reach its limit.
- ISO monitors post-contingency loading and flows on Path 26, and these are managed in relation to loading and flows on other paths.





Accessing ATC

Accessing ATC – Contractual Requirement

- In accessing ATC, proposal retains the power supply contract requirement to establish wheeling through scheduling priority.
- Demonstration of an executed firm power supply contract to serve external load, a contract contingent upon securing wheeling through scheduling priority, or resource ownership.
- Design seeks to ensure load serving entities that have a demonstrated need for the scheduling priority are able to access the limited ATC.
- No longer proposing requirement to pre-pay transmission.

Accessing ATC – Reservation Windows

- Introduction of reservation windows in accessing ATC.
- *Monthly horizon*: two week window each month where requests for ATC are received.
 - Example: June 16-30 ability to submit requests seeking ATC for any of the months where ATC calculated.
- *Daily horizon*: five hour period each day where requests for ATC are received.
 - Example: On Friday, 7am to noon, submission of requests for ATC for next days where ATC calculated (7-days).

Accessing ATC – Competition for Limited ATC

- If there is sufficient ATC to accommodate all request at an intertie, the ATC is granted as requested.
- To the extent there are more requests than ATC at an intertie, requests may compete for limited ATC based upon the hours of the underlying supply contract supporting the priority request.
- Competition is based on total hours of request and underlying number of hours supported by a supply contract.
 - Example: a 2-month 6x16 priority request outcompetes a 1-month, 6x16 request.
 - Example: a 1-month 6x16 request outcompetes a 2-month 6x4 request due to higher number of hours.
- Once ATC is granted coming out of the window, wheeling through customer has certainty that it has the ATC and wheeling through priority (cannot be outcompeted later).

Resales of Wheeling Through Scheduling Priority

- Entities holding wheeling through scheduling priority may resell wheeling through scheduling priority during the term they have established priority.
- Reporting resales and associated terms such as duration, amount, and price to be posted and provide broader visibility and transparency.
- If contract supporting priority terminates before the start date of the period of established priority, must notify the ISO to release the reserved ATC.



California ISO

Application of Scheduling Priorities

Applying Scheduling Priorities

- Scheduling priorities are applied through the market to adjust or curtail self-scheduled transactions.
- To the extent there are constraints affecting individual interties such that these trigger a market infeasibility, and all schedules cannot be accommodated, scheduling priorities become relevant.
- In the Hour Ahead Scheduling Process (HASP), the market will seek to adjust economic schedules and low priority self-schedules.
- If additional relief is needed, through the post-HASP process the market will seek to adjust high priority wheeling through transactions and transactions serving ISO load on a pro-rata basis.
 - Effectively, an allocation of limited transmission capacity on an intertie between high priority wheels and ISO load transactions.

Post-HASP Process

- Current pro-rata post-HASP allocation process compares high priority wheel through and RA real-time energy bid or based on the shown RA capacity.
- Under the proposal, the native load would be measured based upon shown RA imports and non-RA contracted imports as derived at the T-30 timeframe, as a representation of contracted imports to serve load .
- Consideration of actually designated Capacity Procurement Mechanism (CPM) imports should also be reflected in the ratio of ISO load.



California ISO

Study and Expansion Process – Establishing Long-Term Wheeling Through Scheduling Priority

Establishing Scheduling Priority on a Long-Term Basis

- Entities seeking a higher level of certainty for their wheeling through transactions can request to establish scheduling priority on a long-term basis (a year or longer).
- Seeking to leverage the transmission deliverability studies in the Generator Interconnection and Deliverability Allocation Procedures (GIDAP).
- Annual cluster study consisting of requests for deliverability and including wheeling through requests.

Study Process for Long-Term Requests

- Wheeling transactions across the ISO transmission system can adversely affect the deliverability of internal generation and imported generation that is serving ISO load.
- Therefore the ISO will study long term scheduling priority requests and generation deliverability requests together.
 - 1-year or longer
 - wheeling through or wheeling in
 - annual cluster study
- An additional assessment will also be performed to assess the impact of the long term wheeling requests on Path 26 during resource shortage conditions.

Study Process for Long-Term Requests

- The ISO will provide the initial study results – whether a transmission upgrade is needed or whether the ISO can accommodate the request without an upgrade:
 - 90 to 120 days--for requests for the following year ($n + 1$)
 - 180 days—for requests for the years ($n + 2$) through ($n + 10$)
- If transmission constraints are identified in the initial results, then the request cannot be accommodated without further analysis.

Study Process for Long-Term Requests

- The study process consists of a Phase I study, a Phase II study, and a deliverability allocation process.
- The Phase I study will identify whether any transmission system upgrades are needed to accommodate requests within years $(n + 3)$ through $(n + 10)$.
 - The operational deliverability assessment in the Phase II study from the preceding cluster will be utilized to study years $(n + 1)$ and $(n + 2)$
- If an upgrade is needed, the Phase I study will preliminarily identify the estimated costs of the identified upgrades.

Study Process for Long-Term Requests

- The customer will be required to submit a financial posting consistent with the GIDAP process in order to proceed to the Phase II study.
- In addition, the customer it will be required to select either Option A or Option B
 - Option A – will compete with other requests to receive deliverability across major constraints in the deliverability allocation process
 - Option B – the transmission upgrades and their costs needed to accommodate the request will be identified in the Phase II study

Transmission Credits and CRRs

- To the extent a wheeling through customer pursues a transmission upgrade, it will be required to fund the total cost of the upgrade.
- After completion of the upgrade, a lingering question is whether the wheeling through customer should receive transmission credits as they take service.
 - Transmission credits until it recovers the up-front funded cost of upgrades.
- Alternatively, whether the wheeling through customer should receive an allocation of congestion revenue rights (CRR).
- Participating Transmission Owner (PTO) could also fund the upgrades and mutually agree with the wheeling through customer as to the payment of transmission charges over a specified period of time until the cost of upgrade is paid off.



California ISO

Compensation for Wheeling Through Scheduling Priority

Current Wheeling Through Priority Compensation

- Under the current design, high and low priority wheeling through transactions pay the same for utilization of the transmission system.
- Transmission charge – currently the Wheeling Access Charge (WAC) – is assessed only when high priority wheeling through transaction is actually scheduled.
- Current compensation framework for high wheeling through priority transactions does not reflect the value it provides.

Proposed Wheeling Through Priority Compensation

- The proposal continues to be that wheeling through customers pay for transmission – the WAC – based upon the hours of underlying supply contract supporting the wheel through the ISO system.
- The WAC would be assessed once priority is established whether or not the transaction was scheduled.
 - Paying for the establishment of priority across a particular horizon.
- The WAC would be assessed through the regular settlement intervals, and would NOT need to be pre-paid at the time that the ATC is reserved.
 - Modification from straw proposal based on stakeholder comments.



Next Steps

Initiative Schedule

Date	Milestone
12/9/2022	Draft Final Proposal posted
12/16/2022	Stakeholder call
1/04/2023	Comments due
1/11/2023	Final proposal posted
December — March 2023	Development of initial draft tariff language and business requirement specifications
February 2023	ISO Board of Governors meeting



Next Steps

- Draft final proposal and this presentation are posted on the initiative web page:
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Transmission-service-and-market-scheduling-priorities>
- Stakeholder comments are due January 4. Please submit comments using the template available on the initiative webpage.