Transmission Services and Market Priorities Long-Term Framework

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Objectives

- Establish a forward transmission reservation process that allows open access to the CAISO controlled grid for both network and point-to-point services on a non-discriminatory and non-preferential basis that will align with open access principles and support the West-wide market on which CAISO relies.

- Develop principles and provisions for access to the CAISO grid for intertie transactions consistent with FERC's Open Access Transmission policy, including network service priority for native load requirements for energy that is from the equivalent of designated Network Resources.

Today's Topics

- Reserving of transmission in the forward timeframe

- Scheduling of transmission in the operating timeframe

- Curtailments of transmission in the operating timeframe

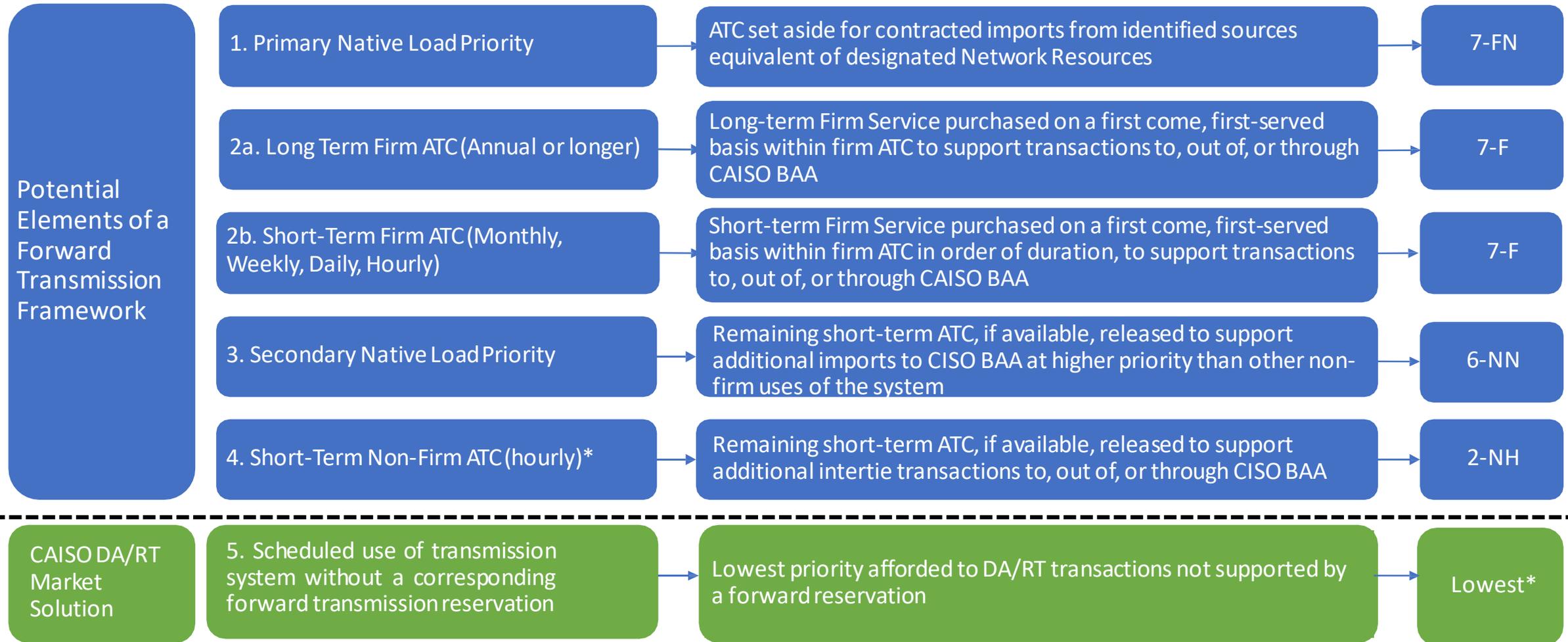# Reserving of Transmission In The Forward Timeframe

Context

- CAISO is a Transmission Provider that is required to maintain an Open Access Transmission Tariff that respects open access rules

- Participating in an ISO market should improve open access and competition, not restrict or limit it relative to the bilateral markets or contract path tagging

- Market benefits are maximized when the rules ensure open access to the transmission system to all types of entities outside the CISO BAA and inside the CISO BAA consistent with open access rules

- Rules and approaches external to the CAISO can be used to inform a framework that is consistent with open access, while ensuring combability with CAISO market processes

A Durable Framework Can Respect Key Open Access Rules

- Afford highest priority to self-schedules serving CAISO load that meet the equivalent of the requirements to be eligible to receive primary network service

- Afford the same priority as primary network service for self-schedules that are associated with firm point-to-point uses (either serving CAISO load, exports or wheel-throughs on successfully reserved firm point-to-point service).

- Afford a priority lower than that for primary network service and other firm point-to-point uses but higher than non-firm point-to-point uses for load being served by self-schedules from the equivalent of non-designated network resources eligible to receive equivalent of secondary network service

- Afford the lowest priority to self-schedules (either serving CAISO load, exports or wheel-throughs) that have no network service or confirmed reservations backing the offers

Potential Forward Transmission Elements

Potential Elements of a Forward Transmission Framework	1. Primary Native Load Priority	→	ATC set aside for contracted imports from identified sources equivalent of designated Network Resources	→	7-FN
	2a. Long Term Firm ATC (Annual or longer)	→	Long-term Firm Service purchased on a first come, first-served basis within firm ATC to support transactions to, out of, or through CAISO BAA	→	7-F
	2b. Short-Term Firm ATC (Monthly, Weekly, Daily, Hourly)	→	Short-term Firm Service purchased on a first come, first-served basis within firm ATC in order of duration, to support transactions to, out of, or through CAISO BAA	→	7-F
	3. Secondary Native Load Priority	→	Remaining short-term ATC, if available, released to support additional imports to CISO BAA at higher priority than other non-firm uses of the system	→	6-NN
	4. Short-Term Non-Firm ATC (hourly)*	→	Remaining short-term ATC, if available, released to support additional intertie transactions to, out of, or through CISO BAA	→	2-NH

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| CAISO DA/RT Market Solution | 5. Scheduled use of transmission system without a corresponding forward transmission reservation | → | Lowest priority afforded to DA/RT transactions not supported by a forward reservation | → | Lowest* |

Note: Further discussion is required of whether other (non-firm) products are necessary under a forward reservation approach

1. Primary Native Load Priority

- Under the pro forma OATT a Network Customer or a Transmission Provider can use Network Integration Transmission Service to serve its Network Load or Native Load Customers if it meets Network Load requirements

- To the extent Network Load is not served by designated Network Resources, the resource or contract that serves Network Load has a lower priority

- This ensures that Network and Native Load customers are only afforded priority rights when they make sufficiently firm arrangements

1. Primary Native Load Priority

- Rules should balance between the network customer or transmission provider's need to meet its native load obligations and the need of other entities to obtain service from the transmission provider to meet their own obligations.

- "Order No. 888 has long required that contracts be executed and imposed reasonable restrictions on the types of resources that may be designated as network resources" (Order 890, ordering paragraph 1494)

- "Congress did not require that LSEs be able to take transmission service without limitations of any kind in order to serve their native load, and nothing in section 217 suggests that LSEs should not be required to comply with reasonable requirements that are necessary to prevent undue discrimination and maintain a reliable transmission system" (Order 890, ordering paragraph 1493)

1. Primary Native Load Priority

- "The network customer [and Transmission Provider] must demonstrate that it owns or has committed to purchase generation pursuant to an executed contract in order to designate a generating resource as a network resource" (Order No. 890 P 1432)

- "The Transmission Provider, on behalf of its Native Load Customers, shall be required to designate resources and loads in the same manner as any Network Customer under Part III of this Tariff." (Pro Forma OATT, Sheet 96, Section 28.2)

- (Order No. 890 P 1475-76) For off-system purchases supporting eligibility for DNR, must:

  - Identify the resource as an off-system resource

  - Identify amount of power the customer has rights

  - Identify control area from which power will be sourced

  - Identify delivery point that the Network Customer will take possession

  - Identify transmission arranges on the external systems to the CISO border

1. Primary Native Load Priority

- Should strike an appropriate balance between native load requirements and open access for other parties

- Should ensure that primary native load priority is limited to sufficiently firm import supply from identified sources

- Should ensure entities, including wheel-through customers, can compete for ATC on highly desired paths and during highly desired periods

- Should avoid an approach that results in expansive hold back of transmission on key paths, especially at key times, such that third parties have no ability to compete for firm or non-firm* access

*Note: Further discussion is required of whether other (non-firm) products are necessary under a forward reservation approach

2a. Forward Reservations of <u>Long-Term</u> Firm Transmission

- Firm transmission service can be used to support imports, exports, or wheel-throughs across the CAISO transmission system

- Available on a first-come, first-served basis, i.e., in the chronological sequence in which each Transmission Customer has requested service, within firm ATC

- Entities can submit firm requests into the annual process for a term of a year or more and if awarded pay access charges for its term of service

- For requests longer than 13 months the CAISO may need to calculate ATC and study whether any upgrades are needed to accommodate

2b. Forward Reservations of <u>Short-Term</u> Firm Transmission

- Firm transmission service can be used to support imports, exports, or wheel-throughs across the CAISO transmission system

- Available on a first-come, first-served basis, i.e., in the chronological sequence in which each Transmission Customer has requested service, within firm ATC

- Entities can submit firm requests with either monthly, weekly, daily, or hourly durations and if awarded pay access charges for its term of service (note, requests will have a deadline (e.g. 14 days prior for monthly, 7 days prior for weekly, and prior day for daily/hourly)

3. Secondary Native Load Priority

- In addition to offering forward firm transmission products, CAISO should consider enabling secondary native load priority for CAISO load

- Provides an opportunity for CAISO to release any remaining ATC not already sold as long-term or short-term firm to support imports to CAISO BAA at a higher priority than other short-term uses of the transmission system

  - Load being served by the equivalent of non-designated network resources is eligible to receive secondary network service at a priority lower than that for primary network service and other firm point-to-point uses but higher than non-firm point-to-point uses

- Would enable a higher priority for spot market imports, but may also include some RA import contracts if contracted source and external transmission cannot be identified

4. Short-Term Non-Firm ATC

- CAISO could release any remaining ATC not already sold as long-term firm, short-term firm, or for secondary native load priority to support intertie transactions to, out of, or through CAISO BAA at a lower priority than secondary native load priority (e.g., non-firm uses)

- Further discussion is required of whether longer duration non-firm products are necessary under a forward reservation approach

- Seems reasonable to consider whether to make available remaining ATC for reservation requests that can be confirmed prior to day-ahead market scheduling requirement for non-firm hourly requests (e.g., 2-NH)

5. Transmission Schedules Without a Forward Reservation

- Self-schedules referencing forward transmission reservations would receive corresponding priority through market processes

- Lowest priority afforded to all DA/RT self-schedules offered into market

- Self-schedules cleared in CAISO markets but not supported by a forward reservation will receive lower priority than those backed by forward reservations but higher priority than self-schedules not previously cleared

  - e.g., DA SS not backed with forward reservation, will have higher priority in real-time than new RT SS without forward reservation or DA reservation.

- Would other reservation types (e.g., other non-firm PTP) be useful or necessary?

Scheduling of Transmission in the Operating Timeframe (DA & RT)

Scheduling Requirements

- Scheduling requirements are needed to affirm and validate scheduling priority prior to market operations

- E-Tags that specify the forward transmission reservation should be submitted in advance of market run to gain the relevant priority

- Supports the necessary visibility to allow CAISO to assign appropriate priorities (via penalty prices) to valid schedules using forward transmission rights whether network or point-to-point rights

- CAISO can use e-tags to identify which transactions should be associated with the relevant penalty prices to respect its reservation priority

  - Penalty prices should also respect the relative curtailment priority levels of the different reservation services as described in the next section

Scheduling Requirements Cont.

- Ensures consistency with other TSPs that require a valid e-Tag from Source to Sink prior to considering a transmission segment as "used"

- Aligns CAISO e-Tag requirements with standard practice across West for scheduling forward and day-ahead transactions

- Improves visibility to CAISO operators of capability that will be used

- Ensures a consistent demonstration of supply and transmission access across the entire delivery path before CAISO will assign higher-priority (and potentially displace/curtail other schedules)

- Supports comparable treatment of both wheel-through and RA imports

- Supports ability of exports committed to other entities are able to successfully schedule and export energy during key periods

Curtailment Process in the Operating Timeframe (DA & RT)

Curtailment Priorities

- CAISO markets strive to the greatest extent possible to respect non-priced quantities in its optimization (e.g. self-schedules)

- In certain conditions the CAISO must make adjustments/curtailments to resolve any identified constraint violations

- Relative priority applied to load and intertie transactions in the CAISO markets should be consistent with reservation and curtailment priorities set by the North American Energy Standards Board (NAESB) and North American Electric Reliability Corporation (NERC)

- Curtailment priority level is aligned with reservation priority level, so the penalty factors can be used for both the prior scheduling priority and any adjustments/curtailment priority that is needed.

Curtailment Priorities

- Requires penalty prices for valid schedules to be aligned with NERC priorities

- Highest priority enforced with highest penalty price value for self-schedules associated with firm service (e.g., 7-FN/7-F)

  - Self-Schedules curtailed on a pro-rata basis between primary network/native load and firm point-to-point

- Second-highest priority for other imports arranged on equivalent of network economy (6-NN)

- Lower priority for other intertie self-schedules arranged on remaining ATC for non-firm uses*

- Lowest priority for other DA/RT schedules not using forward transmission service

*Note: Further discussion is required of whether other (non-firm) products are necessary under a forward reservation approach