



Decision on market enhancements for Summer 2021 readiness

Greg Cook

Executive Director, Market and Infrastructure Policy

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Management proposes enhancements to address concerns arising from last summer's heatwave

- Strengthen import offer incentives for hourly imports during tight supply conditions
- Provide stronger prices signals for enhanced supply incentives during tight supply conditions
- Enhance dispatch of reliability demand response resources through the market to provide more accurate pricing
- Enhance interconnection process changes to expedite new supply interconnections to the grid

Enhancements respond to ISO/CPUC/CEC Final Root Cause Analysis report and other analyses

- Proposed enhancements are limited to changes that can be implemented by this summer
 - Significant stakeholder input shaped proposals despite initiative's fast timeline
- Longer-term changes will be addressed in upcoming stakeholder initiatives
- Management is also finalizing proposal for additional summer 2021 enhancements addressing export and wheeling scheduling priorities

Management proposes an import bid price make-whole payment during tight system conditions to strengthen import supply incentives

- Hourly imports may have insufficient incentives to offer supply due to risk of being paid less than their offer price
- Real-time market clears hourly block economic import bids based on hour-ahead scheduling process prices but pays fifteen-minute market price
 - Risk is greater during tight system conditions because operator out-of-market actions can lower fifteen-minute prices relative to the hour-ahead scheduling process
 - Risk does not exist for fifteen-minute dispatchable imports

Hourly import make-whole payment would only apply under limited tight supply conditions

- Fifteen-minute market design has important benefits under most conditions
- Tight system conditions defined as
 - Day-ahead alert notice anticipating operating reserve deficiency, or
 - Real-time warning notice indicating operating reserve deficiency or emergency stages 1-3
- Would apply to real-time market hourly block imports:
 - Real-time market imports incremental to day-ahead schedules
 - Day-ahead scheduled exports reduced in the real-time market
- Allocate uplift costs to load and exports

Management proposes enhancement to improve price signals during very tight supply conditions

- New provision would apply when operators arm load to meet contingency reserve requirements
 - Arming load occurs when operators configure the system to be able to immediately perform controlled load shedding
 - Armed load can count for contingency reserves
 - Makes supply resources scheduled for contingency reserves available to serve load
- Current market rules can result in lower market prices when contingency reserves released to serve load
- Propose to price energy from resources released from contingency reserves to serve load at energy bid cap

Current process for dispatching reliability demand response resources can mute price signals during tight supply conditions

- Reliability demand response resources are dispatched pursuant to a settlement agreement
 - Only dispatched upon issuance of system condition warning notice
 - Resources must bid at \$950/MWh or higher
- Reliability demand response resources seldom set price because operators typically manually dispatch them
- Dispatch of reliability demand response resources can suppress market prices if not incorporated into load forecast

Management proposes to enhance reliability demand response resources dispatch to preserve price signals

- Provide ability to specify reliability demand response resources as hourly, fifteen-minute, or five-minute dispatchable
 - Fifteen- and five-minute dispatchable reliability demand response resource's ability to set fifteen-market prices will improve pricing
 - Use in the real-time pre-dispatch process of the real-time market will reduce manual dispatch
- Allow reliability demand response resources under “discrete dispatch” option to set market prices
- Automate reliability demand response resource dispatch into load forecast

Management proposes targeted interconnection process changes to expedite connection of additional supply for summer 2021

- Remove 100MW or 125% cap on behind-the-meter expansion requests
 - Since inception, the ISO has not found the cap to be critical
 - Majority of expansions are battery additions to variable energy resources, which do not present interconnection issues and help meet peak demand
- Allow the ISO to award available deliverability temporarily to online projects until earlier-queued project comes online
 - Allows temporary use of transmission upgrades to expedite new supply capacity

Stakeholders generally support management's proposals (slide 1 of 2)

- Stakeholder's generally support management's import make-whole payment proposal but IPC objected to allocating a portion of costs to EIM transfers
 - Management revised proposal remove transfers from allocation
- Most stakeholders support pricing energy at bid cap from contingency reserves released when arming load
 - CPUC and PG&E believe changes needs to be more comprehensively examined
 - SCE continues to advocate to couple scarcity pricing changes with implementing system market power mitigation
 - Management believes change accurately reflects system conditions and provides proper market incentives

Stakeholders generally support management's proposals (slide 2 of 2)

- Stakeholder's generally support management's proposal to improve reliability demand response resource dispatch and better reflect it in ISO market pricing
 - CLECA is concerned dispatches may not reflect resource start-up times and use limitations
 - Management notes changes will result in market better respecting these constraints
 - Calpine believes hourly dispatchable reliability demand response resources should be able to set fifteen-minute market prices
 - Management believes that they should not because they cannot respond with fifteen-minute granularity
- Stakeholder's support management's proposals to enhance the ISO's interconnection process as a way to expedite more capacity for summer 2021

Management requests the Board of Governors approve its market enhancements for summer 2021 proposals

- Strengthens incentives for suppliers to offer import supply
- Improves ISO market incentives under very tight supply conditions
- Better reflects using reliability demand response resources in ISO market pricing
- Expedites connecting additional supply for summer 2021