

**Western Power Trading Forum on Day-Ahead Enhancements Phase 2 Working Group**  
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## The Western Power Trading Forum

The Western Power Trading Forum (WPTF) is a California nonprofit, public benefit corporation. It is a broad-based membership organization dedicated to enhancing competition in Western electric markets while maintaining the current high level of system reliability. WPTF supports uniform rules and transparency to facilitate transactions among market participants. The membership of WPTF and the WPTF CAISO Committee responsible for providing these comments include CAISO and EIM entities, load serving entities, energy service providers, scheduling coordinators, generators, power marketers, financial institutions, and public utilities that are active participants in the California market, other regions in the West, and across the country.

## Summary

WPTF appreciates the CAISO moving forward with Phase 2 of the initiative in a Working Group prior to formalizing the proposal. While this format makes it challenging for the CAISO to present all details, the Working Group serves an important purpose as it allows the CAISO to informally vet ideas with stakeholders in advance of significant CAISO effort. The CAISO staff did an excellent job presenting possible options and facilitating a robust discussion. Our detailed comments below elaborate on the following themes.

1. **Updated Metrics and Defined Goals.** WPTF asks that the CAISO provide updated metrics on how well the current IFM/RUC construct is working and provide defined goals for the day-ahead market design. Based on evidence provided thus far in this initiative and at Market Performance and Planning Forum meetings, WPTF believes that the current day-ahead process works reasonably well. The key needed changes to the day-ahead market seem to be due to (1) the need for a day-ahead biddable flexible product and (2) the issue with how to price RA within RUC in a regional day-ahead market. It would be helpful to know if there are additional important considerations that stakeholders should be considering when evaluating the options.
2. **Alternative two is impractical.** WPTF appreciates the CAISO's out-of-the-box thinking but does not support moving forward with the day-ahead market optimization alternative 2. The solution is very ambitious and does not seem the right fit given the CAISO's reliability and regional design needs. While WPTF typically would express a desire for more information rather than simply express non-support for a CAISO proposal this early in the process, the reality is that this initiative is scoped to move incredibly quickly, and as such, we believe time should be better spent on more viable designs.
3. **Additional alternatives are needed.** At the Working Group meeting and subsequent discussion during the MSC meeting, several other promising day-ahead market alternatives were discussed. WPTF supports the CAISO investigating whether the most promising changes to RUC would work with the CAISO's goals. These alternatives include a RUC Reserve Price, RUC de-commitment, and NYISO's iterative IFM/RUC design.

## Detailed Comments

### Updated Metrics and Defined Goals

The CAISO's initial rationale for moving forward with an integrated day-ahead market that combined the Integrated Forward Market (IFM) and Residual Unit Commitment (RUC) was twofold. First, the CAISO stated there were some efficiency losses in that unit commitment was done to meet both the IFM market and RUC reliability constraints; and second, that at times the RUC ended up over-committing resources going into real-time. Since then the CAISO has added a third issue that relates specifically to extending the day-ahead market to EIM entities, and that is with RA incremental capacity being priced at \$0/MW in the RUC run.

WPTF seeks additional discussion on all three issues, including giving stakeholders some idea as to the degree of inefficiency and over-commitment either with data or perhaps showing an example day. WPTF also asks if there are any other issues in the day-ahead market design that stakeholders should consider when evaluating the proposed options.

Clearly identifying the existing inefficiencies, and current magnitude of those inefficiencies, that this policy is trying to address will help the CAISO and stakeholders as they move forward with considering various design options. In other stakeholder initiatives, WPTF found it extremely helpful when the CAISO clearly linked each design feature to a pre-determined goal/objective, and thus encourages the CAISO to consider providing a similar mapping within this process.

### Alternative Two

The proposal to change the current day-ahead market application sequence is intriguing. At the most basic level, the CAISO will solve for reliability and then allow the market to adjust energy schedules. That is, the CAISO would commit resources, schedule ancillary services, and price energy based on the CAISO forecast of CAISO demand, and then market supply and demand would be incrementally adjusted and this energy would be resettled at the IFM price. While the IFM optimization formulation would not change from today, the resource-level constraints (and thus offer curves) would significantly change due to resources' RUC commitment, ancillary service awards, and energy schedules.

While there are many pros and cons to this radical proposal, WPTF believes the CAISO should focus on whether it meets the intended goals of the day-ahead market enhancement and is a "right-size" solution. Based on the CAISO's initial description of the goals, WPTF does not believe the CAISO should continue with alternative two.

#### **Goal 1: Resolve efficiency loss due to sequential commitment**

The CAISO is not necessarily improving commitment efficiency. In this proposal, the CAISO will commit units based on the CAISO forecast of CAISO demand. If physical and virtual load is higher than this RUC demand constraint, then the CAISO will still do sequential commitment. Additionally, the proposal introduces other efficiency losses that are not in our current design.

For example, currently if the CAISO forecast of CAISO demand is too high and RUC over-commits resources, typically this does not over-commit the CAISO going into real-time as most of the additional commitments are short-start resources with RA energy that do not have a binding commitment. Under our current RUC paradigm short-start resources are cheaper than long-start resources because their energy is priced the same, but long-start resources have a binding commitment cost. Under the new

proposal, the economics of short-start to long-start resources would change, and long-start resources will look more economic compared to short-start resources. This would exacerbate the CAISO potential to go into the real-time market over-committed.

A second example of an additional inefficiency introduced is that generators will not be guaranteed to receive their co-optimized opportunity cost between ancillary service offer and their energy offer. As there seemed to be some confusion during the Working Group, WPTF would like to clarify that while generator energy and ancillary offers today are not maximized (Lagrangian duality does not mean that market cost minimization yields individual generator profit maximization), a generator is guaranteed to be paid the opportunity cost of all co-optimized product offers. The proposal breaks this guarantee, which will lead to perverse bidding incentives.

### **Goal 2: Reduce the potential for RUC over-commitment**

WPTF does not believe this proposal will necessarily reduce over-commitment as the CAISO will still run sequential commitment. Additionally, as described above, there appears to be the potential for additional over-commitment due to the shift in how short-start and long-start resources are valued.

### **Goal 3: Price Resource Adequacy (RA) in RUC**

Alternative two resolves the \$0/MW Resource Adequacy in RUC issue. As the CAISO extends the day-ahead market to EIM entities, “reliability energy” will be settled at a marginal price. WPTF believes however, that the CAISO really intends this goal to mean, “workable with extending the day-ahead market to EIM entities.” If that is really the goal, then there appear to be several other design possibilities that both price RA in RUC and are more workable from a new entrant perspective.

### **Additional day-ahead market design features**

WPTF asks that the CAISO more fully explore the ideas put forth by the MSC, notably the idea of a RUC reserve price, and at a minimum RUC de-commitment, both of which could be considered enhancements to Alternative 1. While WPTF appreciates the CAISO coming forward with two alternatives for consideration, as previously noted, we encourage the CAISO to remain open to additional structures/alternatives. Focusing efforts solely on the two proposed alternatives at this point may result in “tunnel vision” and a sub-optimal market design, especially under the extended day-ahead market. Ideally, the resultant market design will be able to be extended to the EIM without additional modifications. The CAISO could also provide a survey of day-ahead market features from other ISOs as it may help identify other alternatives or features to include in the CAISO’s day-ahead market.

WPTF thanks the CAISO for consideration of our comments.