Western Power Trading Forum on Day-Ahead Enhancements Revised Straw Proposal

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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's Revised Straw Proposal posted on April 11, 2018 and meeting held on April 18, 2018, and continues to support the CAISO moving forward with the proposed market design changes. WPTF understands that additional detail and data will be forthcoming and looks forward to reviewing the market design examples. WPTF specifically requests, if possible, examples for both a conventional resource and new resource, such as a storage plus solar resource.

WPTF is also particularly interested in LSEs' and the CAISO's ability to forecast load at a 15-minute granularity level. It seems that the benefits of moving to a 15-minute market significantly hinges on the ability to forecast 15-minute load with at least the same level of accuracy (or forecast error) as today's hourly forecast error. At the last meeting the CAISO stated they had not yet moved forward with 15-minute forecasting and WPTF asks that this be prioritized.

There is a significant amount of detailed material to comment on, and at this time, WPTF will focus these comments on the following three topics:

1. Resource Adequacy and Imbalance Reserve Product
2. Flexible Ramping Product and Imbalance Reserve Product
3. Clarification Requests

Detailed Comments

Foundational Differences between Flexible Resource Adequacy and the Imbalance Reserve Product

WPTF does not agree with the position of some stakeholders that the IRP should not be biddable on the premise that Flexible RA and the Imbalance Reserve Product (IRP) are the same thing or overlap significantly. The IRP is a new product, with a separate purpose and costs, which should be expressed by suppliers' willingness to provide via a market bid.

Fundamentally, Flexible RA is now clearly being defined as a way for the CAISO to ensure it has the capability needed to meet peak monthly flexibility needs. This is no different than system RA being defined as a way for the CAISO to ensure it has capacity needed to meet peak energy needs. After years of debate about the intent of Flexible RA, the DA Enhancements initiative has clarified exactly the intent of the Flexible RA product - to ensure sufficient flexible capability physically exists on the grid and is offered into the DA market.

Therefore, Flexible RA is foundationally different than the IRP. The IRP, in contrast to Flexible RA, is a reserve product that (1) ensures sufficient capacity is available in real-time to meet the CAISO Forecast of CAISO Demand and (2) ensures sufficient flexibility is available to meet systemic and predictable forecasted ramping errors between the DA market and RT market.

There are other differences too, but WPTF believes that the above description most clearly defines why, at a basic level, Flexible RA is *planning* capacity and the IRP is *operational* capacity.

Foundational Differences between the Flexible Ramping Product and Imbalance Reserve Product

WPTF respectfully disagrees with the statement made by Dr. Angelidis at the April 18 stakeholder meeting that the Flexible Ramping Product (FRP) and Imbalance Reserve Product (IRP) are the same, except for how the CAISO is setting the requirement. In WPTF's mind these are two fairly different products.

First, the high-level goal of the two products is different. The FRP is an additional constraint in the real-time market that sometimes procures supply so that a range of demand targets can be met in each optimization run. Essentially, the FRP is the CAISO buying insurance against the probability that the load forecast is wrong in the near-term. Furthermore, the CAISO only buys this insurance if it is inexpensive enough that they predict LSEs will pay less in the real-time market by buying this insurance than risking the potential market price spike or power balance constraint violation. This is completely different than the IRP, which in part ensures the CAISO has sufficient capacity to meet the actual forecasted demand target. That is, the FRP was created in case the CAISO's forecast is wrong. The IRP is needed (in part) in case the CAISO's forecast is right.

Second, the CAISO is calculating resources' ability to provide the Imbalance Reserve Product (IRP) differently than resources' ability to provide the Flexible Ramping Product (FRP). The IRP is being calculated as the ramping capability difference between period t-1 and t in DA and then saying in period t in real-time, a resource can be awarded for that entire capacity. (Red bar in figure 1 below.) This is different than the FRP in that period t+1[1] only awards the resource for the ramping difference between where the resource is in t and how much it can ramp down. (Green bar in figure 2.) The amount of ramping a resource is qualified for in time t/t+1 therefore differs between the two products, as current formulated.

Figure 1: IRP Slide 21

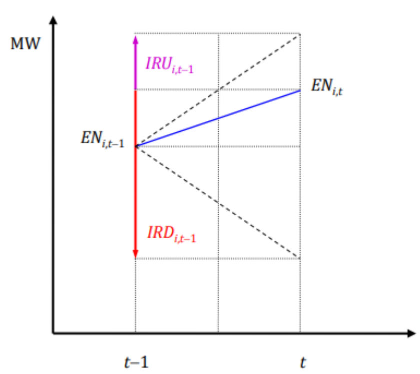
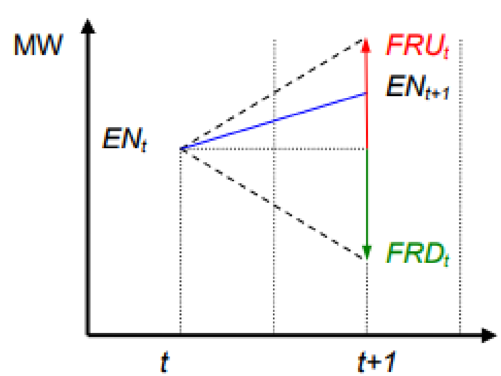


Figure 2: FRP Page 4



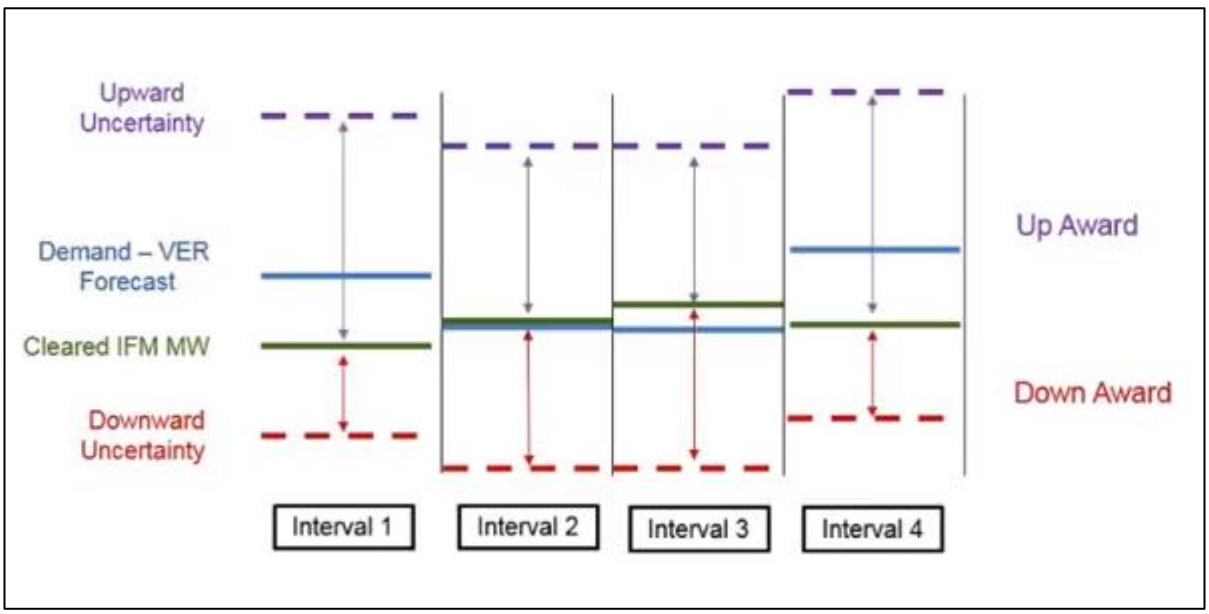
[1] In this example t in IRP and t+1 in FRP are referencing the same time-interval.

Because of these formulation differences in the product, WPTF is concerned with some of the ideas floated at the April 18 stakeholder meeting regarding "buying back" the FRP product or other such financial connections. If the CAISO wants to proceed with such a concept that explicitly connects the products, the products need to be more aligned or resources will end up trying to buy back IRP awards that do not exist in the FRP construct.

Lastly, a resource's opportunity cost of providing the IRP is different than the opportunity cost of providing the FRP, and therefore the payments to resources must be different. It is intuitive that the opportunity cost, for example, of an import getting an FRP award in one hour is different than an import getting an IRP award a day in advance. This difference should be accounted for in the product design.

Clarifying Request

WPTF asks that the CAISO more carefully consider the labels used on charts and descriptions of the market design during meetings as it may be causing unnecessary confusion. For example, the below picture seems to show that "upward uncertainty" is from Cleared IFM MW to the Upward Uncertainty Limit. This is illustrated in interval 1 by the purple arrow as the difference between bid-in demand and CAISO Forecast of CAISO Demand (adjusted for VER forecast) and is labeled in a way that seems to indicate the amount of "uncertain" needed supply.



It is confusing to include supply needed to meet the difference between Cleared IFM and the CAISO forecast as "uncertain" when in fact it's a known difference. It may be more useful to put the chart in terms of today and note that currently the Residual Unit Commitment process ensures there is sufficient capacity to meet any amount of Demand – VER Forecast[2] that is above Cleared IFM MW. This therefore has a separate "certainty" level than the Upward Uncertainty the CAISO is proposing to add to the market design, which is the amount between Demand – VER Forecast (blue bar) and Upward Uncertainty (dotted purple bar).

[2] WPTF believes by VER Forecast the CAISO means "VER Forecast Adjustment"

This confusion was further compounded by the CAISO frequently describing that the market would be "procuring imbalance reserves to address uncertainty." We understand that the CAISO is using uncertainty as shorthand to refer to the entire range for which the market would be procuring, or perhaps this was simply a misstatement, but WPTF wanted to note the potential confusion the terminology may be creating. This distinction and clarification is important because WPTF believes that any market design should ensure that, at a minimum, the CAISO has procured sufficient capacity to meet the CAISO Forecast of CAISO Demand adjusted for the VER forecast.

WPTF thanks the CAISO for consideration of our comments.