

Stakeholder Comments

Flexible Capacity Procurement Straw Paper

Submitted by	Company	Date Submitted
Jeffrey Nelson – (626) 302-4834 Alex J. Morris – (626) 664-9926	Southern California Edison	March 21, 2012

Please find Southern California Edison’s (SCE) comments on the California Independent System Operator’s (CAISO) Flexible Ramping Product (FRP) Third Revised Straw Proposal. SCE acknowledges and thanks the CAISO for slowing the timeline of this initiative to allow a more robust and contemplative design process.

In this third straw proposal, the CAISO has made commendable progress in designing critical small aspects of the products but has still insufficiently addressed a major concern raised by SCE.¹ The primary concern is that the product’s interaction with the IFM but not RUC may create very costly inefficiencies. SCE strongly recommends that additional time be used to assess SCE’s large concern and also further refine the products’ details. SCE recommends the CAISO host a technical workshop to revisit and discuss all product details with stakeholders.

1. The CAISO must consider the inefficiencies of the sequential RUC process now that FRP proposes to add another requirement for physical capacity procurement in the IFM.

SCE expressed concerns that the inefficiency of withholding flexible supply (attained through RUC) from the FRP (and Ancillary Services) selection in the IFM be significant. The CAISO should assess the size of this inefficiency before finalizing the FRP design.

SCE based this qualitative assessment off of calculations of a related “withholding” inefficiency documented in reports by the Market Surveillance Committee (MSC) and Department of Market Monitoring (DMM) on the late 1990s process whereby Reliability-Must-Run (RMR) capacity was excluded from the IFM-equivalent energy market at the time.²³ The 2009 “Limited Pool” discussions also considered similar inefficiencies in the form of withholding capacity from the optimization, even though it would ultimately be paid for and available.⁴ These structures caused millions of dollars in inefficiencies.

¹ SCE Comments on the Second Revised Straw Proposal, pp 2-3.

http://www.caiso.com/Documents/SCE_Comments-FlexibleRamping_Products_Second_RevisedStraw_Proposal.pdf

² “Report on Impacts of RMR Contracts on Market Performance”, Market Surveillance Unit, 1999, p. ii:

<http://www.caiso.com/docs/2000/09/27/200009271459565137.pdf> and

“Report on Redesign of California Real-Time Energy and Ancillary Services Markets”, Market Surveillance Committee of California Independent System Operator, 10/18/1999,

<http://www.caiso.com/Documents/ReportonRedesign-CaliforniaReal-TimeEnergyandAncillaryServicesMarkets.pdf>

“Predispatch and Scheduling of RMR Energy in the Day Ahead Market”,

³ “Predispatch and Scheduling of RMR Energy in the Day Ahead Market”, Department of Market Analysis, 1999.

<http://www.caiso.com/docs/2000/09/26/200009261423077369.pdf>

⁴ CAISO Stakeholder Initiative, 2009. <http://www1.caiso.com/23d8/23d8bb9a6ee20.html>

The CAISO has thus far failed to acknowledge SCE's concern. During the ISO's stakeholder call on 3/14/12, it appeared the CAISO may have misunderstood SCE's concern. Accordingly, SCE reiterates this concern and maintains that the prospect for an inefficiency this costly mandates address. SCE request the ISO explain why it may believe that such inefficiencies should remain unconsidered at this time.

Address of this inefficiency may involve a transition to a RUC process co-optimized with the IFM. Mechanically, the NYISO has developed a model that simulates such a process.⁵ The ISO should evaluate the costs of this type of transition compared to the benefits. SCE also requests that the DMM and MSC consider this inefficiency and provide input to the CAISO.

2. The CAISO should host a technical workshop to revisit and discuss product details with stakeholders.

FRP's design presents many new product rules and important details. An in-person "technical workshop" will allow a thorough review and understanding of the product by stakeholders. Such efforts will reduce the likelihood of unintended consequences and ensure that small details are robustly reviewed and vetted.

3. Alternative rules should be considered to ensure IFM FRP awards are optimal, given that providers may seek to change energy bids in real-time.

SCE sees merit in market design structures that ensure generators are held-whole for services directed by the CAISO, although rules should not allow exploitation or an inappropriate avoidance of normal or routine risks. For FRP, SCE supports efforts to prevent resources from changing energy bids in RT such that DA choices appear sub-optimal.

The CAISO seeks to develop this type of structure for FRP via its proposal to allow submittal of an IFM energy bid accompanied by a "range" for RT energy bids by which to both select resources in the IFM and allow energy bids changed between DA and RT (up to the cap). SCE is still assessing the merits of the CAISO's approach.

As SCE understand it, the current proposal essentially allows a resource to submit a Flexible Ramping Up (FRU) bid range of up to \$299 before the bid receives an energy dispatch "cost-adder" (for IFM optimization purposes only). The \$299 hinge-point thus creates a blocky rule where resources have potentially hundreds of dollars (per MWh) of room to address one day's worth of uncertainty. Such a rule may create potential for changing bids to levels well above marginal costs, the likes of which this rule should avoid.

SCE recommends consideration of alternate approaches in addition to the currently proposed approach, such as the "locking" of all DA bids, the locking only of energy bids on IFM FRP awards and the use of Bid Cost Recovery (BCR) if generators demonstrate *ex post* that circumstances, e.g. gas prices, caused insufficient cost-recovery. Another approach might use default energy bids as RT energy bids. As a final alternate idea, the ISO could consider a more stepped approach with its current rules, such as applying different energy "cost adders (exclusively for use in the IFM optimization) based on \$50 ranges, rather than the single pivot points of \$300 for FRU up and \$0 for Flexible Ramping Down (FRD). Such an approach may better mimic a stochastic optimization process, given that the ISO's current systems are not fully ready to incorporate an energy dispatch target (for FRP) into the optimization. Once the liquidity of the FRP market is better known, the ISO's proposed rule may seem sufficient.

4. Three aspects of FRP procurement targets require additional consideration.

⁵ http://www.nyiso.com/public/markets_operations/documents/technical_bulletins/index.jsp

SCE requests the CAISO use historical data to assess the amount (in MWs) that its 95% Confidence Interval (CI) target will change between DA and RT. If little change is observed, the ISO should evaluate a shift to procure more than the 60% CI target in the IFM. The CAISO should explain its selection of the 60% target. SCE understands the target to stem from concerns that the RT target is less clear in the IFM as much uncertainty still exists and thus that larger procurement in the IFM could create situations with excess FRP in real-time (which cannot be sold back). Data analysis should clarify the seriousness of this concern. It may be that an 80% CI target in the IFM is more prudent. In general, SCE supports greater procurement in the IFM as, aside from SCE's concerns about RUC flexibility withheld from the IFM, this market provides a "deeper" more liquid market that also ensures inter-tie resources can provide energy to replace foregone energy from 5-minute dispatchable resources now awarded FRP.

SCE also requests the CAISO consider a demand curve for DA procurement. Such a curve might tie the day-ahead target, e.g. 60%, 70%, 80%, or 90%, to a set of clearing prices. The ISO should consider how the use of a demand curve could avoid use of penalty prices proposed by the ISO. Refinements of the demand curve, if not done immediately, should occur as part of CAISO's tune-up. Additionally, the CAISO should consider linking the demand curve to RUC, such that, if RUC is required, some degree of DA FRP capacity could be procured in RUC, depending on the IFM prices and the demand elasticity.

Finally, SCE requests additional justification of the 95% CI. SCE supports the use of FRP for reliability, but remains unclear on the costs and benefits of the 95% CI when compared to, say, an 85% CI. Based on this analysis, trade-offs between procurement costs for FRP and the use of contingency products for flexibility may be warranted. The CAISO should clarify whether and when contingency products should be used to address flexibility insufficiencies. Ultimately, an 85% CI might save considerable costs with minimal risk, especially if the ISO continues to procure Regulation at levels required before implementation of the Flexible Ramping Constraint (FRC) or FRP, when Regulation was well-known to be used for trending.

5. The CAISO should clarify the benefit of "holding" FRP capacity within a 15-minute RTUC period.

For a given RTUC interval, the available set of units is essentially fixed. Can the ISO's optimization simply work with expected RTD energy targets to dispatch energy and FRP capacity in the least cost manner while ensuring sufficient FRP for variability and uncertainty? Why won't the CAISO release all of its FRP every five-minute RTD interval (within an RTUC commitment set)? Essentially, these questions target the interaction of real-time energy, day-ahead FRP, and real-time FRP. Although the CAISO detailed its thinking in this regard, SCE requests extra clarification on the basis for withholding FRP (either DA or RT) in RTD intervals and how this approach is the most workable and efficient means to mimic a stochastic optimization. This topic should be addressed in the technical workshop recommended by SCE.

6. Settlement rules for non-deliveries of HASP awards should experience the full cost impacts of the non-delivery, including Real-Time costs that may reflect higher FRP costs in RT.

Non-deliveries on HASP awards force the CAISO to use more CAISO-controlled (internal) resources for energy, likely spiking real-time FRP costs. Although these rules may change through the Intertie Pricing and Settlement initiative,⁶ SCE requests this initiative also consider the need for HASP declines to experience the full impact of their decline. Assuming the RT energy price reflects the need to procure excess energy and related impacts to FRP costs, HASP declines should receive these price signals. Moreover, a rule where HASP declines settle at the worse of HASP or RT may be appropriate to ensure HASP awards are not declined if RT prices are anticipated to be below HA prices.

⁶ http://www.caiso.com/informed/Pages/StakeholderProcesses/IntertiePricing_Settlement.aspx

This role, as well as the integration needs associated with inter-tie deliveries show that intertie transactions can drive both FRP costs and need. The CAISO should continue to identify the FRP procurement driven by intertie transactions and allocate costs for this procurement based on causation principles.⁷

The ISO should also monitor for market behaviors that decline inter-tie awards in order to boost RT FRP costs. Although these situations may be difficult to create (and monitor), SCE requests the CAISO consider how such behaviors could impact FRP prices, and how to monitor for such occurrences. These connections also reveal how multiple intertie prices, such as in the discussed “Option A” solutions for the dual-constraint problem in the Intertie Pricing and Settlement initiative,⁸ can potentially create unintended consequences.

7. The CAISO should anticipate the need for further changes and build in a “fail-safe” option to suspend the product if serious problems arise.

SCE supports the ISO’s proposed “tune-up” for FRP, anticipated to occur at some point after the product implements.

SCE also recommends that the CAISO establish protocols by which FRP can be suspended. With such a new market product, unforeseen or problematic outcomes could occur. The CAISO should develop a “fail-safe” protocol to suspend the product temporarily if gaming problems or serious inefficiencies result. With some discussion, criteria for a fail-safe could be developed such that the CAISO has the ability to temporarily suspend the product while petitioning FERC for approval for changes.

8. Additional details on the uses of “relaxation prices” are needed.

SCE request clarification on whether the relaxation prices will apply in either the scheduling and pricing optimization runs or just the scheduling run. To protect against excessively high prices, FRP design should use the same relaxation prices in both the pricing and scheduling runs. If relaxation prices differ, prices can exceed the appropriate administrative prices. With the FRC, for instance, prices routinely spike above the \$247 penalty price in the pricing run because the penalty price in the scheduling run is \$500.

⁷ <http://www.caiso.com/Documents/CostAllocationStrawProposal-FlexibleRampingProduct.pdf>

⁸ http://www.caiso.com/informed/Pages/StakeholderProcesses/IntertiePricing_Settlement.aspx