Stakeholder Comments Template

Flexible Resource Adequacy Criteria and Must-Offer Obligation Fourth Revised Straw Proposal, Posted November 7, 2013

Submitted by	Company	Date Submitted
Gifford Jung 604-891-6040	Powerex Corp.	December 2, 2013

This template is for submission of stakeholder comments on the topics listed below, covered in the Flexible Resource Adequacy Criteria and Must-Offer Obligation fourth revised straw proposal on November 7, 2013, and issues discussed during the stakeholder meeting on November 13, 2013.

Please submit your comments below where indicated. Your comments on any aspect of this initiative are welcome. If you provide a preferred approach for a particular topic, your comments will be most useful if you provide the reasons and business case.

Please submit comments (in MS Word) to fcp@caiso.com no later than the close of business on November 27, 2013.

1. The ISO has outlined a methodology to allocate flexible capacity requirements to LRAs. As detailed in the fourth revised straw proposal[1] and at the 11/13 stakeholder meeting PG&E has put forward an alternative allocation methodology. Please provide comments for each of these proposals, particularly as they relate to cost causation. If your organization has a preference for one over the other, please state your preference and why.

Powerex will provide a general overarching comment on the cost allocation issue as it relates to the proposal to allocate all costs for required ramp to the LSEs as well as specific comments assessing the ISO versus PG&E proposals.

As an initial matter, Powerex has a fundamental conceptual concern with the ISO's proposal to allocate all costs for required ramp to the LSEs, since not all resources that precipitate the need for ramping service are contracted to LSEs. Moreover, the rationale that all energy eventually flows to load is insufficient to satisfy cost allocation principles that require customers benefiting from and causing the cost

[1] PG&E's specific proposal can be found at http://www.caiso.com/Documents/PG_E-Comments-FlexibleResourceAdequacyCriteriaMustOfferObligation-ThirdRevisedStrawProposal.pdf.

being incurred to pay for the service. Such a rationale is exceedingly broad and applying such an indirect application of cost causation would suggest that it is appropriate to allocate all CAISO costs to load (not just ramping costs) since all energy ultimately serves load. The overarching cost-causation principle as articulated by the Federal Energy Regulatory Commission and affirmed by the courts is that customers who receive the benefit of a service should pay the costs for that service, while non-benefiting customers should avoid liability for payment. *See Williston Basin Interstate Pipeline Co.*, 71 FERC ¶ 61,019 (1995); *ANR Pipeline Co.*, 92 FERC ¶ 61,284 (2000), *Alabama Elec. Coop., Inc. v. FERC*, 684 F.2d 20, 27 (D.C. Cir. 1982); *Tejas Power Corp. v. FERC*, 908 F.2d 998, 1005 (D.C. Cir. 1990). In its Cost Allocation Guiding Principles Draft Final Proposal issued on March 15, 2012, CAISO provided seven elements that it proposed to guide its cost allocation decisions: 1) causation, 2) comparable treatment, 3) accurate price signals, 4) incentivize behavior, 5) manageable, 6) synchronized, and 7) rational. Powerex will refer to these factors in assessing the consistency of the ISO and PG&E proposals with cost causation principles.

The proposal to assume that all ramping needs are associated with LSE purchases and thus that all ramping costs should be borne by LSEs fails to meet these cost causation principles. LSEs should be charged only for the costs that they caused to be incurred. The costs associated with the ramping needs of generating resources such as VERs – particularly those contracted to third parties - are not directly caused by LSEs and should not be paid for by LSEs or their customers. Doing so shifts costs from those that caused the incurrence of the costs to the LSEs inappropriately, creating a class of free riders. This discriminates against LSEs, is economically inefficient, and fails to incentivize appropriate behavior, among other problems. While the approach benefits from its simplicity, the assumption fails even the least rigorous cost causation inquiry. The ISO's approach to allocating those flexible ramping costs caused by generators to LSEs appears motivated by its misplaced views of "fairness", primarily as it relates to VERs, and perhaps simplicity – neither of which justifies such a direct and material violation of cost causation principles. In Powerex's view, the ISO's role is not to determine which entity ultimately funds flexible ramping costs. The ultimate funding entity must be determined via commercial agreements, in which the ISO has no role. The ISOs obligation is to develop a framework that applies these flexible ramping costs to scheduling coordinators based on the ISO's established cost allocation principles, while being agnostic to the ultimate payer of such costs. If fairness issues between VERs and LSEs arise as a result of this principled approach to cost allocation, then these issues are best addressed by the CPUC, not the ISO.

Powerex recommends that the ISO allocate costs at a scheduling coordinator level based on each SCs aggregate ramping needs, including generation and load contributions. Powerex further recommends that the ISO provide a framework for the assignment of this ramping requirement from one SC to another, based on mutual agreement. This transferability framework would allow, for example, a VER that had an existing commercial agreement specifying that an LSE is required to pay

for any integration costs to transfer its aggregate ramping requirement to the respective LSE. This would also allow VERs that are currently responsible for their own integration costs to enter into new commercial agreements with LSEs to transfer their aggregate ramping needs to an LSE. This would enable VERs to leverage an LSE's geographical diversity as well as its processes for flexible resource adequacy procurement, while leaving the VERs with the option to procure their own flexible resource adequacy requirements if they choose to do so.

The ISO asserts in the Fourth Revised Straw Proposal on the Flexible Resource Adequacy Criteria and Must-Offer Obligation (FRACMOO) that "the equitable way to allocate monthly flexible capacity procurement requirements to each LRA under the interim requirements is in proportion to their jurisdictional LSEs' contribution to the 3-hour net-load ramp." One component of the formula ISO proposes to use to allocate the 3-hour net load ramp is change in load, which it proposes to calculate based on the LSE's average contribution to load change during the top five daily maximum three-hour net-load ramps within a given month from the previous year times the total change in ISO load. Without further explanation, and certainly without reference to the seven principles Powerex has highlighted above, ISO asserts this method "reasonably reflects general cost causation principles". It acknowledges that stakeholder consensus has not been reached for the allocation of the change in load component.

In the October 13 presentation and in its comments on the Third Revised FRACMOO Straw Proposal PG&E took issue with two aspects of the ISO's proposal, explaining that both the monthly averaging of the maximum peak ramps and the use of coincident peak ramps are inappropriate. As to the use of the average of the peak load contributions over the month versus the actual peak ramp, PG&E asserts that ISO will procure system flexibility to meet the expected peak ramp, not the average ramp, and the use of an average unfairly would charge an LSE with stable load ramp more than one with the same maximum ramp but a lower average ramp. PG&E provided as an example two LSEs with a maximum load ramp of 1,000 MW each month in which one, LSE A, has the same maximum ramp each day, and the second, LSE B, has a maximum ramp of 1,000 MW on one day of the month but 500 MW of ramp on other days of the month. PG&E explained that ISO would have to procure 2,000 MW of ramp regardless of the flexibility averages and thus it is inappropriate to charge LSE B less based on the averaging approach that ISO has proposed.

As to the use of the coincident peak (CP) versus the non-coincident peak, PG&E asserts that use of the CP results in a free ridership problem and is inconsistent with cost causation principles. PG&E gave an example in which LSE A has a 1,000 MW ramp on one day and 0 ramp the rest of the month, while LSE B has a 950 ramp occurring on a different day than LSE A's 1,000 MW ramp and 0 ramp the rest of the month. Using the CP method, LSE A is allocated the entirety of the flexibility requirement and LSE B is a free rider. To address its concerns, PG&E proposed an alternative in which ISO would use a non-coincident peak-ramp ratio share based

upon the LSE's maximum historic load change over a month to allocate the change in load requirement. In response, ISO defended its approach and indicated that PG&E's proposal would not reflect the value of an LSE that is mitigating the ramp needs of another LSE during the monthly peak 3-hour net-load ramp.

ISO has asked for comments that provide the basis for a preference as between its proposed approach and PG&E's, with a focus on the consistency of each with cost causation principles. With a modification to address the concern ISO raised, Powerex believes that PG&E's proposal is most consistent with these cost causation principles. The modification is that any LSE that has a positive impact on the worse coincident peak ramp for the CAISO grid should have its own worse ramp offset by the amount of its positive impact during this coincident peak ramp and charges assessed reflecting such credit.

Powerex strongly opposes the CAISO's approach since it creates a free-rider concern for those entities which have large ramps in periods outside of the coincidental peak. It is also important to note that the coincidental peak ramp period may not always be the most difficult one for the CAISO to manage. For example, a large ramp during periods when most flexible units are online (i.e. evening peak) may be easier to manage and place less operational and economic challenges to the grid than a slightly smaller ramp when many units are not online (i.e. off-peak or early morning ramps). This further provides support for the PG&E approach.

Since flexibility procurement will be based on expected peak ramp needs and not average ramp needs, PG&E's proposal to eliminate averaging is consistent with cost causation principles, while ISO's averaging approach is not.

Referring back to PG&E's LSE A and LSE B example, and the ISO's own cost allocation guiding principles document, Powerex will explain why cost causation principles dictate the use of the expected ramp versus the average ramp.

1) causation requires that those that drive the costs should pay the costs: As PG&E aptly explained, ISO would have to procure 2,000 MW of ramp regardless of the flexibility averages. As such, each of LSE A and LSE B precipitate the purchase of 1,000 MW of ramp and thus it is inappropriate to charge LSE B less than LSE A based on the averaging approach.

2) comparable treatment requires non-discrimination as between similarly situated customers: it would be discriminatory to charge LSE B less than LSE A (as would occur in the ISO proposal) when 1,000 MW of ramp is being procured for each LSE.

3) accurate price signals will support state and federal policy goals, economic efficiency is achieved through accurate allocation of costs: when 1,000 MW of

ramp are required and acquired for each respective LSE, it is economically efficient for each LSE to pay for its share as would occur in the PG&E proposal.

4) incentivize behavior involves encouraging customers to reduce costs. Reducing peak ramp needs would reduce the amount of ramp that ISO must procure. The ISO proposal does not encourage the reduction of the CP ramp.

5) manageable means that market participants should be able to manage the exposure to the allocation. Ramp needs are generally caused by variations in load and variable resource output. With Powerex's modification to the PG&E proposal, market participants will be able lower their cost allocations by reducing their own peak ramps and by providing positive contributions to the coincidental peak ramp.

6) synchronized means that over a period of time the outcome should align with expectations: ISO's proposal is not true to this principle because ISO will not be procuring the average of the flexibility needs over time but will continue to obtain the maximum monthly flexibility needs while charging LSE A more than LSE B. PG&E's proposal, on the other hand, would synchronize the cost with the amount of product purchased for each LSE.

7) rational means the proposal is justified based on weighing implementation costs and complexities with benefits. Neither proposal suffers from undue complexity in relation to its benefits.

<u>ISO's CP approach creates free riders that may have significant ramp but that will not be charged to the extent the ramp is not coincident with the peak. This is inconsistent with cost causation principles</u>.

Referring back to PG&E's LSE A and LSE B example, and the ISO's own cost allocation guiding principles document, Powerex will explain why cost causation principles require elimination of the free ridership problem created by ISO's consideration of coincident peak ramping needs.

1) causation: LSE B has ramping needs but would not be charged for them if its needs are not coincident with the peak per the ISO proposal. This free rider status for LSE B is inconsistent with cost causation principles. LSE B is receiving the benefit of ramping supply and should pay the costs for that service. While non-benefiting customers should avoid liability for payment pursuant to cost-causation theory, LSE B is a benefiting customer of ramping service and should not be permitted to shirk payment responsibility.

2) comparable treatment: PG&E's proposal is true to the comparability principle because all contributors to ramping needs would be allocated costs for ramping service; obligations would not be avoided simply because the needs occur during a time not-coincident with the peak, since ramping service is required both during peak and non-peak times. ISO has criticized the PG&E proposal because an LSE may be reducing ramp needs during the peak ramp but would not receive any credit for its beneficial activity if only the non-coincident demands are considered. While it is unclear the extent to which the issue ISO raises actually will occur, a simple modification can be implemented to the PG&E proposal to address the ISO's concern. That is, any LSE that has a positive impact on the worse coincident peak ramp can receive a credit against its own worse ramp equal to its positive impact on the CP ramp.

3) accurate price signals: ramp procured during non-coincident peak times is not without value and thus it does not send an accurate price signal to permit acquirers of ramping service during such times to avoid payment obligations.

4) incentivize behavior: free ridership is not behavior that should be encouraged, yet ISO's proposal would create the opportunity for users of a service to avoid payment for that service based upon a temporal factor that is not tied to cost.

5) manageable: Ramp needs are caused and increased by the state's renewable mandates and neither proposal is designed to minimize these needs.

6) synchronized: ISO's proposal is not true to this principle because ISO will not be procuring ramp only during the time of the coincident peak but will acquire it during all hours when needed, whether or not coincident with the system peak. Thus, the LSE requiring ramp during non-coincident periods of time should be required to pay for it. PG&E's proposal accomplishes this comity while the ISO proposal does not.

7) rational: Neither proposal suffers from undue complexity in relation to its benefits.

2. The ISO believes that demand response resources should have the opportunity to provide flexible capacity. The ISO has proposed how demand response resources could do so. Please provide comments on the ISO's proposal. Specifically, please identify concerns with the ISO's proposal and offer potential solutions to these concerns. Additionally, please comment on the proper forum (ISO, CPUC, etc.) where these concerns should be addressed.

   Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

3. Please provide comments and recommendations (including requested clarifications) regarding the ISO's proposed must-offer obligations for the following resources types:

    a. Dispatchable gas-fired use-limited resources

        1. Please provide comments regarding the ISO's proposal that would allow resources with use- limitations to include the opportunity costs in the resource's default energy bid, start-up cost, and minimum load cost.

        2. Please provide information on any use-limitations that have not been addressed and how the ISO could account for them.

    b. Specialized must-offer obligations:

        1. Demand response resources

        2. Storage resources

        3. Variable energy resources

    Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

4. At the 11/13 stakeholder meeting there a significant amount of discussion regarding the appropriate method for setting the price for the proposed flexible capacity availability incentive mechanism. Please provide comments about how this issue might be resolved.

    Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

5. The ISO has proposed an SFCP evaluation mechanism/formula that weights compliance with the real-time must offer obligation heavier than the day-ahead must offer obligation. Please comment on:

    a. The merits of using such a weighting mechanism relative to the "lesser of" proposal from the previous proposal

    b. The relative weights between the real-time and day-ahead markets

Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

6. There were several clarifying questions asked at the 11/13 stakeholder meeting regarding substitution of flexible capacity that is on forced outage. Please provide comments and / or questions (and potential answers) regarding any additional clarifications the ISO should make in the next revision to clarify this aspect of the proposal.

   Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

7. Please provide comments regarding how, or if, the SFCP adder price and the flexible capacity backstop price should be related.

   Powerex has no comments on this aspect of the Fourth Revised Straw Proposal at this time.

8. Are there any additional comments your organization wishes to make at this time?

   Yes, Powerex wishes to comment on two issues relating to the interties as well as provide an overall comment relating to the multitude of stakeholder processes that are proceeding simultaneously.

   Intertie Concerns that must be addressed include eliminating the restriction that would preclude suppliers at the interties from provide ramping service and restricting external transactions that contribute to ramping needs during ramp constrained periods.

   Powerex understands that the FRACMOO effort is considered an interim step while the ISO, CPUC and others cooperate to endorse the mechanism that will provide a longer term resource adequacy construct and alleviate the missing money problem that has caused the Department of Market Monitoring to conclude that "net operating revenues earned by typical new gas units from the ISO energy market continue to fall well short of the fixed costs of new capacity". (See Slide 5 of the May 15, 2013 DMM Briefing on 2012 Annual Report on Market Issues and Performance). However, even as an interim approach, FRACMOO suffers from substantial and avoidable flaws as it pertains to the interties. It should be modified to avoid these flaws prior to its implementation.

   First, even though ramping needs occur over a multi-hour period, ISO initially has proposed artificially and discriminatorily to limit those who can provide the service

to participants in the five minute market. It has dictated that flexible capacity must be able to respond to five minute dispatch instructions, but has not justified this requirement. As the interties will generally participate in the fifteen minute market but not the five minute market, in one fell swoop this restriction has eliminated approximately 25% of the resources that otherwise might assist in meeting ISO's needs by providing ramping service. Casting these resources aside, ISO has stated "intertie resources and imports that are not pseudo-tied or dynamically scheduled into the ISO are not eligible to provide flexible capacity at this time." (p. 28). ISO has indicated that it will assess the ability of imports to provide flexible capacity after having some experience with the fifteen minute market. (n.21). However, there is no need for experience with the fifteen minute market to conclude that imports scheduled on a fifteen minute basis should be permitted to provide ramping service. ISO is making a distinction without any rational justification and thus unduly discriminating against imports, which it may lean on to provide energy that satisfies ramping needs without providing the same compensation opportunity that is provided to internal resources.

The ramping needs of the CAISO grid are not a five minute problem. ISO knows its historical ramping requirements and understands that the ramping service it requires is generally needed across a multi-hour period. This is clear from a review of the balance of ISO's ramping criteria, all of which are multi-hour criteria: ISO looks to the contribution to the "3-hour net load ramp" in allocating procurement requirements, requires economic energy bids to be submitted by flexible resources for the 15 hour period between 5 a.m. and 10 p.m., requires demand response resources to bid for a minimum five hour period and to provide a minimum of three hours of energy, and imposes a six hour requirement on hydro-electric resources. Put simply, fifteen minute resources at the interties are undeniably able to meet ISO's needs for ramping service and should be permitted to provide the service.

DMM has commented on this issue as follows: "At the last two stakeholder meetings, market participants have brought up the possibility of counting imports toward meeting the flexible RA requirement. However, the proposal does not include discussion of this issue. The volume of imports that would potentially be eligible to count against a flexible requirement (presumably in the context of the 15-minute market per FERC Order 764) is significant and could have a very pronounced impact on procurement and pricing of flexible capacity from internal resources. DMM suggests clarification be provided regarding the role of imports in meeting the flexible capacity requirements and whether or not resources that can be dispatched in the 15-minute market but not in the 5-minute market are eligible to provide flexible capacity." In its response to comments on the Third Revised Straw Proposal, ISO stated that any resource that is able to address flexibility needs can do so. Imports at the interties are able to address these needs and should be permitted to do so. The artificial restriction that eliminates participation by resources at the interties should be removed.

Second, to potential peril, FRACMOO short-sightedly has ignored the effect of scheduling imports and exports on ISO's ramping requirements. Unlike traditional resource adequacy constructs which are protected from free-ridership by external participants via the ability to curtail or not award exports when system resource adequacy needs dictate, this interim construct contains no such protection from intertie participants consuming the flexible ramping capabilities of the ISO grid. For example, ISO may project a need for 10,000 MW of ramp over a three hour period, but if importers decrease their imports by 5,000 MW during this period (or exporters increases their exports by 5,000 MW during this period), ISO's actual ramping needs may be 15,000 MW. The ISO has not addressed this potential free-riding issue on the interties which has the potential to cause both reliability challenges as well as to undermine the economic efficiency of the FRACMOO program via free-ridership.

Importantly, this intertie free-ridership concern is not merely speculative, but a very plausible outcome. While ISO and the west in the past have benefited from seasonal diversity in their overall energy needs, the ramping needs in the Pacific Northwest - particularly in the winter months - coincide directly with the peak ramping needs identified on the ISO grid in the coming years. Accordingly, it is very possible that increased exports from California to the Pacific Northwest and decreased imports to California from the Pacific Northwest may occur at the precise time that ISO is experiencing a need for ramping service resulting in a very meaningful impact on the overall amount of service that is needed.

ISO should eliminate this flaw. Otherwise, externalities not factored into ISO's projections and left outside of its control will contribute to the FRACMOO framework falling short of meeting ramping needs, while creating a significant free-ridership issue. ISO could address this gap by requiring block or "ramp beneficial" awards during those hours that are contemporaneous with its ramping needs such that an importer providing 5,000 MW of imports in hour one, must maintain or increase that level for the three hour ramp period rather than reducing its imports in the second or third hour. In New England, Operating Procedure 9 (Scheduling and Dispatch of External Transactions) addresses ramp constraints that must be mitigated during the Scheduling process. OP 9 requires reductions to External Transactions contributing to the ramping constraint on all selected external interfaces simultaneously to reduce the ramp constraint. ISO similarly should take steps to address external transactions that contribute to ramping needs. The developed framework will not work effectively in the absence of a mechanism that eliminates free ridership on the interties during times when ramping constraints exist.

ISO's ambitious program of market rule changes occurring on concurrent timeframes is taxing market participant resources to the detriment of robust stakeholder input.

Powerex understands that certain ongoing initiatives such as the development of the fifteen minute market have mandatory timeframes for development and must proceed swiftly to meet required deadlines. Others, however, such as the Full Network Model overhaul of the interties, need not imminently be pursued (beyond the required reliability requirements), but fall in the realm of initiatives that could be addressed in the longer term. Powerex has become increasingly concerned that the number of concurrent stakeholder initiatives (Full Network Model, Fifteen Minute Market, Energy Imbalance Market, and Flexible Resource Adequacy Criteria and Must-Offer Obligation to name those currently at issue) and the timing between the issuance of straw proposals and the comment due dates is such that most, if not all, market participants are unable to follow the multitude of initiatives and provide meaningful input to all the stakeholder processes based on the sheer volume of initiatives. Powerex urges the ISO to recognize that the contemporaneous pursuit of these initiatives is taxing its market participants' resources to the detriment of ISO's receipt of robust and thoughtful stakeholder comments. Powerex is not alone in this concern as it notes that several other participants have raised similar concerns in these ISO stakeholder processes. As to initiatives whose implementation timeframes are not mandatory, ISO should consider less aggressive comment timelines and pursuing certain initiatives consecutively rather than concurrently.

Powerex notes that for the above reasons, it has not been able to follow this FRACMOO initiative in sufficient detail and may have further comments at a later date.