California ISO

Attachment A

Stakeholder Process: Reliability Services

Summary of Submitted Comments

Stakeholders submitted a total of ten rounds of written comments to the ISO on the following dates:

- Comments on proposals: 02/20/14, 06/27/14, 09/08/14, 11/24/14, 02/17/15
- Comments on working groups: 03/10/14, 04/14/14, 05/05/14, 10/02/14, 12/29/14

Stakeholder comments were received from: California Department of Water Resources, California Energy Storage Alliance, California Public Utilities Commission, Calpine Corporation, California Large Energy Consumers Association (CLECA), Department of Market Monitoring, EnerNOC, Independent Energy Producers, Northern California Power Agency, NRG Energy, Olivine, Pacific Gas & Electric Company, San Diego Gas and Electric, Six Cities, Southern California Edison, TURN, VIASYN, and Western Power Trading Forum.

Stakeholder comments are posted at: http://www.caiso.com/informed/Pages/StakeholderProcesses/ReliabilityServices.aspx

Other stakeholder efforts include:

- Meetings: 02/04/14, 02/24/14, 03/27/14, 04/23/14, 06/12/14, 08/18/14, 09/16/14, 10/29/14
- Calls: 11/12/14, 12/10/14, 01/29/15, 02/06/15
- Numerous outreach calls and meetings

Stakeholder	Management proposal: Resource adequacy rules for proxy demand resources	Management response
Calpine Corporation	Opposes exemption for long-start proxy demand resources (PDR) from residual unit commitment (RUC) participation and believes ISO could develop opportunity cost methodology for long-start PDR to be able to fully participate. ISO should differentiate between combined heat and power resources based on contract type.	All dispatchable resource adequacy resources that can be available in real-time have an obligation to participate in RUC. Proxy demand resources that are also resource adequacy resources and able to respond with less than a 5 hour notification time to customers are able to participate in RUC under existing RUC functionality. Management acknowledges that further functionality could allow proxy demand resources to participate and not end up with frequent advisory notifications; however, advisory notifications are not binding dispatches and will have no financial or physical impact on the proxy demand resource. Management proposes to exempt any proxy demand resource that would require a binding dispatch. The CPUC has in an open proceeding to consider an option for certain CHP resources to base the resource adequacy (RA) capacity available on Pmax rather than historical performance. Based on the outcome of this proceeding the ISO may revisit the issue of CHP exemptions from the availability incentive mechanism.
EnerNOC	Does not agree that PDR should have to participate in RUC.	
Olivine, Inc	Does not agree with PDR participating in RUC due to likely frequent advisory notifications that could occur.	
Western Power Trading Forum	Prefers inclusion of the long-start PDR resources in the RUC process with commitment costs that reflect the energy and/or start limits on the resources and is willing to agree to a year-long delay to develop the policy.	

Stakeholder	Management proposal: Impose new availability assessment on resource adequacy resources	Management response
California Department of Water Resources	Supports ISO effort to accommodate pumping load into the availability assessment mechanism.	This initiative uses the must-offer requirements created in the approved flexible resource adequacy criteria and must offer obligation (FRACMOO) initiative as a basis to create an availability metric that is intended to (1) incent routine maintenance so that suppliers do not go out on an unforeseen level of forced outages and (2) ensure that resources that sell themselves as flexible, are in fact economically bidding into the market. This is a fundamental reliability need that will only increase
California Public Utilities Commission	Conditionally supports- availability price is aligned with a high resource adequacy contract price currently and therefore here should be a periodic review to ensure this connection in the future. Additionally they believe that there should be a review after a year to assess bidding under the new mechanism and consider if the mechanism is not having the desired outcome to link the price to observed RA prices in local areas. Also believes that the ISO should analyze the category obligations for a resource that falls under multiple flexible categories during the advisory period.	

<table>
<tr><th>Stakeholder</th><th>Management proposal: Impose new availability assessment on resource adequacy resources</th><th>Management response</th></tr>
<tr><td>Calpine Corporation</td><td>Does not oppose.</td><td rowspan="10">as the ISO integrates increasing amounts of variable energy resources. Without the ability of the availability incentive mechanism to assess economic bids a resource could sell itself as flexible, self-schedule, and never be penalized.

Resource planning includes a planning reserve margin in the resource adequacy requirements. This margin accounts for a certain percentage of resources ~7% to be on outage even on the peak day of each month. The availability incentive mechanism does not need to incent that resources provide capacity each and every time they go on outage, just most of the time. Therefore, Management linked the price to a high resource adequacy contract price using current CPUC data. Management believes that this will incent necessary participation without being overly punitive which could discourage resources from providing flexible RA capacity. Management agrees with the CPUC and proposes to review this mechanism after a year and periodically to ensure there remains a connection between the availability price and actual prices paid for resource adequacy contracts.

Because the price has been lowered from today, Management believes that it will not be overly punitive to limit exemptions as much as practical. For proxy demand response resources, these resources already have reduced must offer obligations, so it is important that they have limited outage exemptions so can fully participate.</td></tr>
<tr><td>EnerNOC</td><td>Conditionally supports – mechanism is ok, but the ISO should allow a longer outage exemption period for proxy demand resources have been dispatched for three consecutive days.</td></tr>
<tr><td>Northern California Power Agency</td><td>Supports.</td></tr>
<tr><td>NRG Energy</td><td>Conditionally supports – is ok with using submitting bids as the metric for measuring availability but remains concerned about penalizing flexible resource adequacy resources that self-schedule. Additionally, believes all funds in availability pool should go to suppliers and not roll over to load at the end of the year.</td></tr>
<tr><td>Pacific Gas & Electric Company</td><td>Conditionally supports – supports availability proposal and link to capacity procurement mechanism (CPM) price, but is concerned that the price will be too low and could result in reliability issues due to decreased availability. Also, believes that any additional penalties in the availability account after all payments are made to available suppliers should be paid to load and not go into a roll over account and that that this issue should be considered in phase two of the initiative.</td></tr>
<tr><td>San Diego Gas & Electric</td><td>Conditionally supports – mechanism ok, but believes that outages due to fuel shortages during system emergencies should be exempted from availability penalties. Additionally, oppose any automatic exemptions for specific resource types.</td></tr>
<tr><td>Six Cities</td><td>Supports.</td></tr>
<tr><td>Southern California Edison</td><td>Does not support the differentiation in must offer obligations based on capacity type, but rather believes all capacity types are needed on the system to maintain reliability and should be treated with the same must offer obligations into the market, i.e. there should not be an economic must-offer for flexible resources.</td></tr>
<tr><td>Western Power Trading Forum</td><td>Does not oppose.</td></tr>
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Stakeholder	Management proposal: Proposal for Reliability Services phase two scope	Management response
California Department of Water Resources	Supports - believes increasing the resource pool with import resources that can meet certain criteria for flexibility is beneficial to reliability and therefore supports the consideration of a different category for imports.	The scope for reliability services phase two will address the design of a durable flexible capacity product and the changes that are required to implement that project. This effort will encompass efforts to allow for flexible capacity from intertie resources. The ISO will assess the ability for block dispatchable pumped hydro resources this year as part of an initiative designed to enhance the opportunities for all storage resources in the ISO market.
Powerex Corp.	Supports continuing to assess how 15-minute dispatchable resources could participate as flexible resource adequacy resources.	
NRG Energy	Supports prioritization of separating local and system requirements so that a resource in a local area may be shown only as a system resource and have system obligations.	
Pacific Gas & Electric Company	Supports prioritization of block dispatchable pumping load and reexamine the requirements placed on all storage technologies receiving RA credits. Would like the ISO to revisit whether all wind, solar, and CHP ought to be exempt from the RA availability incentive mechanism or generic RA.	
San Diego Gas & Electric	Supports the continued discussion on intertie capacity and ability to contribute flexibility. Additionally would like the ISO to consider whether it is appropriate for flexible RAAIM incentives to be funded by penalties from intertie capacity while generic incentives are funded by penalties from internal and intertie capacity?	

Stakeholder	Management proposal: New flexible capacity requirements for MSS load following LSEs	Management response
Northern California Power Agency	Supports.	The proposal put forward is designed to address a gap in the original flexible resource adequacy criteria and must offer obligation (FRACMOO) proposal. In its ruling conditionally accepting the ISO's FRACMOO tariff revisions, FERC ordered the ISO to report on the contribution of variable energy resources to the need for flexible capacity. The ISO will provide that report to FERC at the end of 2015.
Six Cities	Generally supports the ISO proposal, but believes it would be unjust, unreasonable, and unduly discriminatory to limit this requirement to VERs contracted to load following metered sub-systems that are not included in the load following resource portfolio while failing to apply such a requirement to VERs that are contracted to serve load outside the ISO's balancing authority area.	

Stakeholder	Management proposal: Cap LSE's monthly local resource adequacy requirement at the system requirement	Management response
California Department of Water Resources	Supports.	Management's proposal will create a liquid pool of resources to provide replacement capacity in the event a resource goes on forced outage. There is

Stakeholder	Management proposal: Cap LSE's monthly local resource adequacy requirement at the system requirement	Management response
California Public Utilities Commission	Supports – believes that this proposal will provide cost savings to rate payers while accommodating the ISO's planned outage rules. Appreciates coordination with CPUC and notes the proposal is also being considered in the current CPUC RA proceeding.	limited additional local reliability benefits derived requiring additional local capacity beyond the peak demand and reserve margin requirements. Applying the cap at the system requirement level will ensure that neither an LSE nor a resource, under the applicable replacement provisions in the ISO's tariff, will be required to replace capacity beyond what is needed for grid reliability.
Calpine Corporation	Does not support- ISO did not address concerns previously expressed by the ISO about varying local capacity requirements by season or month and has not explained how reliability will be maintained in the event that procurement of local capacity falls local capacity requirements or alternatively exactly what levels of local capacity procurement deficiency would lead to tolerable levels of reliability.	
NRG Energy	Ramifications are not yet clear, does not support at this time.	
Pacific Gas & Electric Company	Does not support – is concerned that the proposal would unfairly relax local RA requirements for some LSEs and not others and that the ISO has not demonstrated that reliability would not be compromised under this proposal. Would like this to be addressed in phase two of the initiative.	
San Diego Gas & Electric	Conditionally supports – support is dependent on the CPUC adopting the same provisions.	

Stakeholder	Management proposal: Enhance substitution rules	Management response
California Department of Water Resources	Supports- believes implementation of real-time substitution of system resources, relaxing the same bus requirement for local RA resources and releasing substitution capacity if an approved outage is moved will help enhance reliability and optimize the resource portfolio.	Management had wide support for these changes which only addressed generation outages and not transmission outages. To address NRGs concern, currently transmission and generation outages are allowed on a first come, first serve basis. If a generation outage is put in prior to a transmission outage then the generation outage has priority and vice versa.
Calpine Corporation	Supports.	
NRG Energy	Conditionally supports – appreciates new rule that does not require substitution or replacement if ISO removes an outage, but would like additional clarity on how transmission and generation outages are jointly considered.	
Pacific Gas & Electric Company	Supports.	
San Diego Gas & Electric	Supports.	
Six Cities	Supports.	
Southern California Edison	Supports.	
Western Power Trading Forum	Supports.	

Stakeholder	Management proposal: Revise RA process timeline and move outage coordination obligation to the supplier	Management response
California Department of Water Resources	Supports.	Management proposes to move the planned outage coordination obligation onto the supplier. Today 85% of outage coordination is already on the supplier and only 15% is on the LSE. While for certain contracts it is easier for the LSE if they are the outage coordinator, for the majority of contracts, it is easier for the supplier to have the outage coordination obligation. In order to accommodate both the LSE and supplier providing outage information to the ISO, the ISO has had to develop a complex and unwieldy set of rules and systems that often leads to over-procurement of resource adequacy resources. Additionally, this process cannot accommodate flexible resource outage processing. Therefore it is simply not practical nor in the best interest of all ratepayers to continue accommodating a process that allows LSEs to provide outage coordination when the only benefit is that it somewhat simplifies things some of the time for certain LSEs.
Calpine Corporation	Does not oppose.	
Northern California Power Agency	Does not oppose.	
NRG Energy	Does not oppose.	
Pacific Gas & Electric Company	Does not support- is concerned that while the proposal will simplify the process for the ISO, it will not simplify the coordination for LSEs and suppliers in the event the contractual obligation to provide replacement capacity is with the LSE.	
San Diego Gas & Electric	Supports.	
Six Cities	Conditionally supports – is considering the ramifications of the ISO not taking into account the LSE position during the assessment of planned outages.	
Southern California Edison	Supports.	

Stakeholder	Management proposal: Non-generator resources will not be default use-limited and will not be subject to bid insertion	Management response
Pacific Gas & Electric Company	Supports the ISO's proposal to exempt NGR resources from bid insertion rules	At this time, Management believes it is appropriate to continue to examine how non-generator resources participate in the ISO market. Management's proposal allows for a review of the need for bid insertion rules for non-generator resources in the future should the need arise.