Stakeholder Comments on Reliability Services – Issue Paper

Company	Date	Submitted By
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Opening Comments

The Alliance for Retail Energy Markets ("AReM") submits these comments on the *Reliability Services Issue Paper* posted by the California Independent System Operator ("CAISO") on January 28, 2014. The CAISO also held a meeting to discuss the paper on February 4th. The Issue Paper contains a number of questions on which the CAISO is seeking responses.2 Additional questions were raised at the February 4th meeting. Below, AReM provides responses to selected questions of most interest to the electric service providers ("ESPs") that AReM represents. First, however, AReM discusses its overarching concerns regarding overlap and integration of the CAISO initiative with other initiatives and proceedings underway at the CAISO and the California Public Utility Commission ("CPUC").

Overarching Concerns

Discussion at the February 4th meeting among market participants, CAISO staff, and staff of the CPUC identified significant overlap of this newest CAISO initiative with initiatives and proceedings already underway at the CPUC and CAISO. The manner in which these overlapping proceedings will be managed within the jurisdiction of each agency, the timeframe in which each agency concludes its work and enforces compliance obligations, and the extent to which the two agencies will implement complementary or conflicting market designs were disturbingly unclear.

For example, AReM has identified the following CAISO initiatives and CPUC proceedings that interrelate or overlap with the CAISO's Reliability Services Initiative:

- CPUC's Joint Reliability Plan: Rulemaking14-02-001), just initiated by the CPUC to consider a multi-year Resource Adequacy ("RA") requirement and policy positions to address the CAISO's Reliability Services Initiative, which was originally proposed in the Joint Reliability

Framework, released by the CAISO and the CPUC on July 10, 2013.

- CAISO's Flexible Resource Adequacy – Must Offer Obligations ("FRACMOO") –

The CAISO said at the Feb 4th meeting that the ongoing FRACMOO initiative would remain on track for a March 2014 Board of Governor's vote and would subsequently be fully incorporated into this Reliability Services Initiative.

However, several elements of the FRACMOO will only be addressed in a separate phase of this Reliability Services Initiative (or possible of the FRACMOO), and therefore will not be resolved at the time FRACMOO is put before the Board of Governors, including:

  - New availability incentive mechanism for flexible resources and
  - Incorporating FRACMOO into a standardized capacity product ("SCP")

- CAISO's "Non-Conventional Alternatives" for Local Needs in the Transmission Planning Process (part of the 2013-14 Transmission Planning Process): CAISO Staff reported at the February 4th meeting that this element would be incorporated into the Reliability Services Initiative and that the Staff's "thinking" on this issue has advanced since the September 2013 paper. Staff also suggested that the concept would/could be expanded and/or implemented though this Reliability Services Initiative, but the manner and timeframe in which that would take place has not been established.

- CPUC Resource Adequacy ("RA") Flexible Capacity rules and counting rules and requirements regarding Use-Limited Resources: Whether and how the rules being established by the CPUC in its RA Rulemaking 11-10-023 will be AReM requests that the CAISO's forthcoming straw proposal identify the specific CAISO initiatives and CPUC proceedings that interrelate with the Reliability Services Initiative and specify:

- The elements of each that interrelate;
- Which elements will be addressed in the Reliability Services Initiative and which elements will be developed in other CAISO or CPUC initiatives/proceedings and then

incorporated into the Reliability Services Initiative;

- Proposed CAISO/CPUC process for resolving common issues; and
- An integrated timeline for completing the Reliability Services Initiative as well as all interrelated proceedings and initiatives

ISO Response

Thank you, this is a good suggestion and we will incorporate into our draft straw proposal to the extent possible.

Comments on Selected Questions

AReM provides its initial response on certain questions posed in the Issue Paper that are particularly relevant to ESPs as well as several questions that arose during the February 4th meeting. The questions from the Issue Paper have been paraphrased for clarity and relevance and the questions that arose in the meeting are identified as such:

a. Should there be separate "market mechanisms" designed for the annual and multi-year requirements or one market mechanism that applies for both for the backstop procurement mechanism?

ANSWER: AReM does not see any reason a market-based backstop procurement mechanism for the annual RA requirements would be different from a market-based mechanism for a multi-year forward RA obligation.

b. Should the CAISO design a market mechanism for the backstop procurement mechanism that can optimize bids and offers for a period less than a month (to address outages)? If yes, what time period?

ANSWER: AReM remains unconvinced that there needs to be any form of backstop procurement for outages that are less than a month, because all LSE's procure a 15% planning reserve margin in large part to ensure reliability when units are forced out. Having said that, if replacement for outages less than a month is going to be required, a market mechanism to facilitate replacement transactions would be helpful.

ISO Response

The planning reserve margin is designed to accommodate forced outages, but because of the monthly nature of the RA requirements, it is not designed to cover planned outages. We were considering whether the market could work for a period for less than a month for planned outages, which may be required to replace. Forced outages (as you point out) do not have to be replaced, but would affect the availability calculations for resources under SCP unless a substitute resource is provided.

c. How can the CAISO reduce transaction costs for market participants related to outage replacement?

ANSWER: As noted above, the CAISO should re-evaluate the need for outage replacement obligations since the planning reserve margin, that all LSEs must procure, should serve to address most outages that occur. Absent that reevaluation, the CAISO could be prepared to run a voluntary auction for buyers and sellers that would operate the same as an auction that the CAISO designs for its backstop procurement.

ISO Response

The planning reserve margin only accounts for forced outages, not planned outages. Because of the monthly nature of the current RA requirements, LSEs must provide RA resources that are expected to be available (i.e., not on a planned outage) when the monthly RA showings are submitted. Consistent with the planning reserve margin in the monthly requirements, the ISO does not require replacement by LSEs for forced outages that occur during the RA month, only for planned outages know before the monthly showings. Planned outages and forced outages occurring after the monthly RA showings are the responsibility of the supplier after t-25, either to replace the resource, if required, or to provide substitute capacity to avoid potential SCP availability incentive charges.

d. What are market power concerns relative to an annual, monthly, or less than monthly auction for backstop procurement?

ANSWER: Because neither the CAISO nor CPUC are currently considering the implementation of a centralized clearing capacity market that would provide price transparency and facilitate transactions, market power concerns associated with concentrated ownership/control of resources by the investor-owned utilities will continue to need to be addressed.

e. If the CAISO adopts a market mechanism for backstop procurement, should it change the RA processes regarding the cure period?

ANSWER: AReM would like an explanation for why a market mechanism for backstop procurement would necessitate a change to the RA processes regarding the cure period. AReM also notes that any changes adopted by the CAISO would have to be similarly adopted by the CPUC.

ISO Response

The CPUC and ISO will have to closely coordinate; however, changes made to ISO processes will not have to be adopted by the CPUC. The CPUC may end up needing to adopt complementary processes to ensure a cohesive RA procurement framework for CPUC jurisdictional LSEs. This will depend on the ultimate market design adopted. Ideally, it would have limited if any effect on CPUC processes.

g. Should the CAISO implement a "voluntary market mechanism"? What are the benefits of this? What changes are needed to the replacement rule to allow this to work?

ANSWER: AReM has long-stated its strong preference for a centralized capacity market. Unfortunately, the CAISO and the CPUC have made it clear that implementation of a centralized capacity market is not on the table at this time. A "voluntary market mechanism" is a second-best choice, but still preferable compared to the current administrative, fixed-price approach. AReM recommends the CAISO pursue an auction mechanism that would operate over multiple time frames in concert with the RA showing requirements for loadserving entities (LSEs). In particular, if the CPUC adopts a multi-year RA requirement for LSEs, a voluntary auction process will provide ESPs with a way to manage the risks associated with such procurement that comes from load migration and market price fluctuations. The auction mechanism should be designed specifically to address this need.

With respect to whether a voluntary market mechanism would necessitate changes to the replacement rule, AReM believes that a voluntary market mechanism could and should facilitate replacement capacity obligations as well and other multi-year, annual, and monthly capacity compliance requirements.

ISO Response

Thank you for your response.

h. Would a "voluntary" market mechanism in addition to a "mandatory" market mechanism mitigate any market power concerns?

ANSWER: AReM does not believe that there is sufficient information available at this time about the design of the mandatory versus voluntary market mechanism to answer this question.

j. Should the CAISO develop a one-year or multi-year voluntary market mechanism? (Question raised at February 4th meeting.)

ANSWER: As noted in "g" above, AReM recommends that the CAISO develop a market-based auction mechanism that will work in concert with the RA compliance requirements imposed by the CAISO and CPUC, whether those are multi-year, annual, monthly, or otherwise.

k. What voluntary market mechanisms other than an auction should be considered? (Question raised at February 4th meeting.)

ANSWER: AReM believes that an auction is the optimal approach, but reserves the right to comment on other approaches that may be suggested.

Company	Date	Submitted By
California Energy Storage Alliance	2/18/14	Don Liddell, Douglass & Liddell liddell@energyattorney.com (619) 993-9096

The California Energy Storage Alliance (CESA) is pleased that the CAISO is considering energy storage juxtaposed with preferred resources in its Reliability Services Issue Paper posted on January 28, 2014 (Issue Paper). The CAISO's commitment to energy storage is greatly appreciated, and CESA looks forward to a continued active role in this stakeholder process, including participation at the Reliability Services Working Group Session scheduled on February 24, 2014. CESA certainly agrees, "there has been a general recognition that non-generation resources such as demand response, energy efficiency, *and storage* are valuable resources to meet state environmental policy goals and energy grid operational requirements. These necessitate increased coordination between agencies and a longer term planning horizon for all market participants." (p. 3).

CESA is also very pleased that the need for flexible capacity is being considered in the Issue Paper, as well as the CAISO's emphasis that energy storage, and preferred resources, will generate a greater share of the required capacity and displace traditional resources in the coming years. Specifically, CESA agrees that the Flexible Resource Adequacy Criteria and Must-Offer Obligation (FRAC-MOO) requirements should be included as an additional category as part of the capacity procurement mechanism (CPM), and allow backstop for flexibility requirements in addition to the current backstop for local and system requirements.

CESA certainly agrees that the CAISO should explore "use-limited resources" in more detail. As more of these resources come online and are procured and planned for "The rules must ensure that the ISO is getting the right resource capability at the right time and in the right location to efficiently operate the grid. Use-limited resources include resources with environmental or significant operational limits. As use-limited and preferred resources provide a greater share of the required capacity and displace traditional resources, it is imperative that these resources provide the operational characteristics needed to reliably operate the grid. It is equally important that proper incentives are introduced to induce these resources to provide the energy and operational characteristics required during the periods when they are most needed." (p. 4).

The CAISO should build upon the FRAC-MOO design with regard to the rules for the flexible capacity offer obligations. The current definitions, however, need to be further defined to better reflect where and how storage resources apply. The CAISO should consider energy storage's specific characteristics and added value as it pursues development of availability and performance mechanisms for flexible capacity and updating the existing resource adequacy program tariff requirements. These characteristics also need to be thoroughly considered as the CAISO plans to evaluate capacity types and establish minimum eligibility requirements for providing a suite of standard products.

Ongoing discussions among stakeholders reinforce the importance of unbundling treatment of system, local, and flexible capacity remaining a fundamental design principle. This key consideration highlights the importance of coordination of the rules for qualifying capacity (QC) and effective capacity (EFC) that are now being developed concurrently at the CPUC and CAISO.

ISO Response

Thank you for your comments.
The ISO will examine the role that various resource types can play in meeting operational needs of the system. The ISO will work with the CPUC and other LRAs to define the minimum technical and availability requirements for use preferred resources. Specifically, using preferred

resources as non-transmission alternatives will require additional collaboration with the CPUC to ensure local capacity products are clearly defined such that the ISO is able to address both peak and off-peak capacity needs.
The ISO will continue the work started in the FRAC-MOO initiative to develop both an availability incentive mechanism and backstop procurement price for flexible capacity.

Finally, the ISO will also continue to assess the costs and benefits of fully unbundling flexible capacity from generic capacity.

Company	Date	Submitted By
California Municipal Utilities Association (CMUA)		Tony Braun Braun Blaising McLaughlin & Smith, P.C. Counsel to CMUA (916) 326-4449 braun@braunlegal.com

Opening Comments

CMUA appreciates the opportunity to comment upon the CAISO's Reliability Services Issue Paper dated January 28, 2014.

As a framework, CMUA supports the Joint Reliability Plan ("Plan") developed by the CPUC and CAISO Staff members. CMUA generally supports the Order Instituting Rulemaking that scopes issues and proposes timelines for consideration and implementation of the Plan elements. With respect to the Issue Paper, however, there are elements that clearly need to be considered and decided to move forward wit the Plan. There are also proposals that appear unnecessary and afield of the core Plan elements. CMUA urges the CAISO to stick to the basics and not to "bite off more than it can chew."

Proposals to change the Resources Adequacy paradigm in California must start from the fundamental realization that the current RA rules have and continue to work well. They have

ensured adequacy of supply for approximately a decade and have evolved to include local requirements, deliverability assessments, and, soon, will include flexibility obligations with the implementation of FRAC MOO. The CAISO should be hesitant to tamper with the RA framework beyond what is necessary to implement the Plan.

The CAISO does not to be reminded that, in addition to RA changes, numerous other substantial market design initiatives are ongoing and proposed to be implemented in this general timeframe, including Order No. 764, Full Network Model expansion, and the Energy Imbalance Market. It could reasonably be argued that the plate is already too full. These Initiatives should be scaled to focus on elements necessary to implement the Plan only.

The CAISO appears to agree with the above point of view when it states that the initiative will focus on "necessary conforming changes, and "changes essential" to create a durable backstop mechanism." Yet there appear elements in the Issue Paper that do not meet these limiting statements.

ISO Response

We agree that the current RA rules have worked well; however, the integration of flexible RA requirements was implemented because of concerns that the current construct would be insufficient into the future. This initiative proposes to maintain the central structure of RA and to enhance the areas affected by future flexible requirements.

RA Replacement Rules

For example, the rule governing replacement of RA resources is proposing to be considered and possibly substantially modified. The CAISO describes a proposal (RSI Paper at 8) whereby a resource that may qualify for a local or flexible need, but is not identified as such but rather as a system resource, would be required to be replaced by the more granular RA requirement. CMUA will ask for further clarification as to why the CAISO believes this is an essential change. CMUA can envision many reasons why the asset owner might be hesitant to have a resource be

subject to local or flexible RA requirements, such as unit run time limitations or age. So long as the overall portfolio of the LSE meets the system, local, and flexible obligations, and the replacement does so as well, it would appear at first blush that this proposal would increase the overall RA obligations without any concomitant benefit. It is also not readily apparent why this is an essential change as part of Plan implementation.

ISO Response

The ISO is actually proposing the opposite of this. The current rules require the substitution of the higher quality resource even when the resource is shown as a lower quality RA resource. This initiative would address what it would take to change this rule where resources would be replaced for the quality they were shown for in the monthly RA process. The reason this is being addressed is because it was one of the top 5 items ranked by market participants in the stakeholder catalog process.

Standardized Rules

CMUA also urges the CAISO to be cautious when considering rules to "standardize" treatment of resources and must offer rules for different technology types "as feasible." (RSI Paper at 5). The fact is that the California market system is a hybrid, and the fleet has long been made up of a variety of resource types with varying operational characteristics and regulatory limitations. CMUA would surmise that the percentage of California resources with use limitations, for example, has always been well above 50%. We cannot pretend that these realities are not present, and attempts to aggressively homogenize all resources into one set of rules will not be successful. CMUA understands the benefits of more simplicity in this area, but at some point the reality of the fleet characteristics must be faced. CMUA welcomes further discussion on this matter.

ISO Response

The intent is not to homogenize resources, but to establish minimum capability and availability criteria amongst these different technologies to allow the ISO to assess resources' contribution to meeting the ISO's operational needs on a comparable basis. It is the growing diversity of the RA fleet that will make technologically neutral rules more beneficial compared to the previous approach of creating new individual rules for each new resource technology type. Rules based on operational needs, minimum criteria, and recognizing the diversity of resources, will ensure comparable amounts of reliability can be procured through very different generation

technologies.

Energy and A/S Market Participation and Incentives

Since start up, the mantra of the market designers has been to "get the prices right." In a properly designed market, it is the price signals that should incentivize and discipline market behavior, not purposefully constructed tools outside of market pricing.

By gathering anecdotal evidence from members, and also in discussions with other market participants, CMUA has found that some discussion of whether energy and A/S market prices properly reflect competitive outcomes and system requirements, or whether the various aspects of how prices are derived require some reconsideration. Certainly, energy market revenues and overall revenue adequacy are linked. CMUA is not certain, however, that exploring this issue is essential as part of this initiative, or belongs in a separate stakeholder process. CMUA believes this issue should be teed up for further stakeholder discussion.

ISO Response

The ISO agrees overall that energy market revenues and overall revenue adequacy for generators are linked and the ISO is undertaking several market design changes to ensure system requirements are reflected in energy market products; for example, the contingency modeling enhancements and flexible ramping product initiatives. A general review of this idea is not in the scope of the RSI.

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Calpine Corp.	2/18/14	Matt Barmack barmackm@calpine.com 925-557-2267

Opening Comments

Calpine appreciates the opportunity to comment on the Reliability Services issue paper.

Calpine's comments focus on market-based replacements for CPM.

As a threshold issue, the CAISO should decide whether it wants or needs to develop all of the potential markets contemplated in the issue paper. The issue paper envisions markets that are both voluntary and mandatory, with different degrees of forwardness, and for different delivery terms. Developing such markets would entail significant time and resources.

To the extent that the CAISO decides to develop markets, Calpine encourages the CAISO to focus on month- and year-ahead markets to both cure deficiencies in month- and year-ahead procurement and fulfill some fraction of normal LSE capacity procurement requirements. Such markets should borrow from existing designs to the extent possible. Markets for outage replacement, exceptional dispatch, and extraordinary event procurement would be qualitatively different or may not be feasible. (The need for risk-of-retirement backstop procurement may be obviated by the development of explicit multi-year forward procurement requirements in this initiative and R.14-02-001.)

Calpine believes that three features of capacity markets would be important:

First, the markets should utilize demand curves. Demand curves in capacity markets reflect the tradeoff between the reliability benefits of additional capacity and its price and are used in lieu of specific numeric procurement targets, e.g., a 15% planning reserve margin. When capacity is abundant and prices are low, a demand curve will lead to additional procurement of capacity beyond what is required to satisfy a specific numeric procurement target. Conversely, when capacity is scarce and prices are high, a demand curve will result in aggregate procurement of capacity below specific numeric procurement targets. Demand curves ensure that prices reflect supply and demand fundamentals and yield just and reasonable prices. In addition, demand curves dampen price volatility and mitigate market power. For these reasons, two of the three Eastern capacity markets, New York and PJM, utilize demand curves and the third, New England, is in the process of implementing them.

Demand curves could be particularly important in California in light of the oversupply of most types of capacity. Additional procurement of capacity above specific numeric procurement targets, could secure additional reliability at reasonable prices while assuring the continued viability of more resources (and potentially obviate the need for forward backstop mechanisms

such as FLRR).

Second, the markets should include buyer side market power mitigation measures such as minimum offer price rules (MOPRs). MOPRs require new resources to be offered into capacity markets at levels that reasonably reflect their costs. In the absence of MOPRs, it may be economic for load serving entities to exercise market power by procuring new capacity outside of the markets in order to depress prices in the markets. Calpine understands concerns in California about the application of MOPRs to preferred resources that might limit such resources from clearing markets and counting towards resource adequacy requirements. Consequently, to avoid the potential that a market might undermine policy preferences for preferred resources, Calpine recommends that MOPRs only apply to new gas-fired generation.

Third, some level of participation in the markets should be mandatory. Absent some level of mandatory participation, the benefits of demand curves and MOPRs would be limited, e.g., a MOPR could not be applied to a resource that is not offered into the markets. Calpine recommends that LSEs be required to fulfill some minimal fractions of their capacity procurement obligations through the markets.1 In addition, as indicated above, Calpine recommends that all new gas-fired generation be offered into the market and subject to MOPR.

In addition to the general proposal above, Calpine provides the following responses to the specific questions raised in the issue paper:

ISO Response

Thank you for your points 1 and 2- we will consider these suggestions as we move forward. We understand your third point; however, that goes beyond what the CPUC and ISO agreed to in the Joint Reliability Plan and therefore would need full CPUC support for the ISO to begin exploring this as an option.

[1] Some level of mandatory participation was a feature of CPUC Energy Division's Modified Centralized Market proposal. (See ftp://ftp.cpuc.ca.gov/puc/hottopics/1energy/r0512013MarketStructure.PDF.)

Given the interaction between the annual and multi-year market mechanism, should these be developed in conjunction or as completely separate mechanisms?

To the extent that the CAISO develops market mechanisms, they should be as similar as possible for annual and multi-year procurement, analogous to the relationship between the Base Residual Auctions (BRAs), the three year-forward capacity markets in PJM, and the reconfiguration auctions that occur between the BRAs and the associated delivery years, i.e., markets that account for changes in loads and resources and provide opportunities for some suppliers to buy out of their obligations and effectively replace their own capacity with cheaper capacity from the market

ISO Response

We likely will have to have an annual auction design in phase 1 and then expand it in phase 2 to add a reconfiguration component when we begin the multi-year design.

What interactions between the annual and multi-year market mechanism should the ISO consider when designing the mechanisms?

The focus on multi-year forward market mechanisms may be premature in light of the fact that they have been deferred until Phase 2. Nevertheless, the CAISO may want to consider some of the following questions:

(1) How often should forward markets for the same delivery period occur? For example, should markets occur annually beginning with a three-year forward market?

(2) Should the CAISO operate multi-year forward markets for individual delivery months as opposed to entire delivery years?

(3) Should the CAISO operate multi-year forward markets for all capacity products, i.e., system, local, and flexible, or only sub-set of the products?

ISO Response

Thank you, it is good to have these in the back of our mind as we move forward.

What are market power concerns specific to an annual auction?

Generally, market power might be exercised in a market to the extent that a buyer or seller has the opportunity to influence price through its behavior. For example, a buyer may be able to lower prices by attempting to fulfill less than its full demand through a market, perhaps by buying limited amounts of supply outside of the market at prices higher than it would pay in the market. Conversely, a seller might

attempt to raise prices in the market by withholding its supply from the market, either by refusing to sell or by offering at high prices. It is easier to exercise market power when supply and demand are both relatively inelastic as might be the case in a capacity market without a demand curve and/or in which the amount of available supply is close to the amount of supply that is required. In addition, supply is generally less elastic closer to the delivery period than further ahead of the delivery period, when suppliers may have more options, such as the option to add incremental capacity or operating characteristics to existing resources, potentially construct new resources, or enroll new customers in demand response programs.

ISO Response

Thank you for your insights. The discussion surrounding how timing impacts market power will be an important aspect of the design process as we move forward with the design.

Should the ISO consider a market mechanism design that can optimize bids and offers for less than a month? What time period should the ISO consider evaluating in a market mechanism?

Calpine has no view about whether a market for delivery terms of less than a month, presumably primarily for outage replacement, would be useful. Such a market would be qualitatively different and potentially more complex than the types of markets that could be used for procurement to fulfill month- and year-ahead procurement requirements as well as month- and year-ahead backstop procurement.

What could the ISO do to reduce market participant transaction costs related to outage replacement?

A market to trade individual days of capacity might reduce transaction costs for outage replacement. It is unclear how such a market could be structured. Would resources be offered for specific days? Would the outage replacement market occur after the monthly backstop market? If not, how would the market(s) determine which specific resources are used for individual days of replacement as opposed to backstop for the entire month?

If Calpine's proposal above for a market that utilizes a demand curve were implemented, presumably any resources procured for entire months in excess of the resources required to meet specific numeric reliability targets could be used for replacement and some portion of their cost could be allocated to the SC of any resource requiring replacement.

ISO Response

Originally the ISO envisioned a potential optimization that could clear bids for monthly demand concurrently based on the least-cost solution. Both a monthly and daily product would be optimized based on separate, mutually exclusive bids for each time period. The ISO currently though is proposing to move the monthly auction prior to compliance and therefore replacement requirement needs would not be included in the auction.

However, for clarification, it sounds like Calpine is proposing that an alternative to a complex bidding structure would be to develop a market that utilizes a demand curve and clear the auction sequentially. First the monthly requirements would be cleared and then any remaining capacity in excess of the requirement could be used for replacement. This would not entail separate bids for the excess, but rather be allocated to SC's who require replacement presumably based on some portion of the total monthly costs? This might simplify the monthly process and seems like an idea worth exploring if we move back toward the initial concept. Please let us know if you have any additional thoughts.

Given the ability of the ISO to optimize total backstop procurement through a market mechanism, should the ISO consider changing the RA processes surrounding the cure period length of time?

Calpine has no view at this time with respect to how a market mechanism to facilitate outage replacement might affect the timing of monthly RA showings and associated cure periods.

What are market power concerns specific to a monthly auction? How do these concerns change if the ISO uses a market mechanism for a shorter-time frame to account for outages?

See the discussion of market power issues related to an annual auction above. Market power could be more severe in monthly auctions than in annual auctions because supply is less elastic closer to the delivery period. On the other hand, given how RA capacity procurement requirements vary across months, there is generally abundant supply for certain months of certain types of RA capacity, e.g., system RA for non-summer months. In months with more than sufficient supply to satisfy demand, supplier market power would be less problematic.

The ability to transact easily for individual days of capacity might effectively increase supply and hence alleviate market power concerns. For example, because there is no easy way to transact for individual days of capacity, some PPAs essentially require replacement for an entire month of any resource that is scheduled out within a month regardless of the duration of the outage. These contractual

requirements, that are more extreme than what is required by CAISO rules, may encourage suppliers or LSEs with more than sufficient capacity for compliance to hold capacity in reserve that otherwise might be offered to other entities for their RA compliance.

ISO Response

Thank you for your comments.

Should the ISO consider shortening the length of time allowed in the market mechanism?

No. A full month's designation and compensation to fulfill a need of less than a full month is appropriate in light of the fact that operating resources entails some costs that are quasi-fixed and may not be reduced significantly to the extent that a designation is for less than a full month, e.g., the cost of additional staffing for a plant.

ISO Response

The issues here are obviously complex and will benefit from further discussion. We understand the point that it would be difficult to bid into the auction given you would not know whether 29 days or 1 day would be cleared and this would change your willingness to provide capacity (i.e. the offer price). Are there any simple solutions you see to this? Could the ISO add a "minimum number of days" constraint? Or allow different bid prices for different time blocks? For example, bid prices for 1-10 days, 10-20 days, 20- full month, or something similar.

Or perhaps an easier way would just be to clear the monthly auction and then allocate the full month based on both monthly and replacement requirement needs, regardless of whether the resource was actually used for the full month. These ideas will need more discussion and thought, but we see Calpine's overall concern.

What should the ISO take into consideration when issuing a CPM designation for an event that requires an immediate designation?

Calpine requests clarification of this question. Does the question pertain to considerations related to immediate designations other than the reliability criteria on which such designations are based?

ISO Response

The question is vague- a better question might be, should the ISO take capacity bids into account when issuing an unsystematic CPM? What other costs should the ISO consider?

How should the annual and monthly backstop capacity price relate to the backstop price for an unsystematic event?

It might be reasonable to link payments for backstop procurement to address unsystematic events to recent monthly or annual backstop capacity prices to the extent that such prices reflect compensation for capacity with similar attributes, e.g., location and operating characteristics. For example, it would not necessarily be reasonable to link compensation for an exceptional dispatch designation for a resource in a very precise location to a monthly or annual price for capacity in a broader geographic area.

ISO Response

The proposal to link the monthly and unsystematic price as proposed in the market mechanism workshop generally follows this principle. We propose to use the un-cleared supply stack from the backstop auction to determine the unsystematic event CPM price. The non-qualifying supply would be removed and the remaining supply would be cleared against the unsystematic CPM demand. This price would be the price paid to the CPM designated resource. This method would not end up linking the monthly or annual price for local to a broader geographic need.

What are market power concerns specific to an unsystematic market mechanism?

It is sometimes the case that only a limited number of resources can address an unsystematic event that requires backstop procurement. When potential supply consists of only one or a few resources, supply-side market power could be problematic. In addition, given the limited lead times and idiosyncratic delivery terms of backstop procurement for unsystematic events, it probably would be impractical for the CAISO to use market mechanisms for such procurement. Consequently, the CAISO should continue to rely on administrative mechanisms for such procurement and perhaps link the pricing to contemporaneous annual or monthly market prices to the extent that such prices reflect compensation for capacity with similar locational and other attributes to the resource that is designated due to an unsystematic event.

ISO Response

Given that some resources may not bid into the monthly auction, it likely will be necessary to develop some sort of administrative price in the event there is no available un-cleared supply stack.

There are currently 6 events that can occur for the ISO to use their CPM backstop authority. How should a market mechanism vary across events? How should these mechanisms and their prices interact?

As discussed above, Calpine believes that the CAISO should run month-ahead and year-ahead auctions to cure deficiencies in month- and year-ahead procurement as well as to fulfill some fraction of normal LSE capacity procurement requirements. These auctions will yield prices that might form the basis for compensation for some of the other types of CPM procurement, such as Exceptional Dispatch and Significant Event, to the extent that such prices reflect compensation for capacity with similar locational and other attributes to resources that are designated for unsystematic events.

ISO Response

Thank you for your comments.

Are there benefits to a voluntary market mechanism where both buyers and suppliers could provide bids?

Calpine does not support a separate voluntary market mechanism in addition to a mandatory backstop market mechanism. Instead, as described above, Calpine recommends that the CAISO combine backstop procurement with procurement to meet at least a minimum fraction of LSE capacity procurement. In addition, LSEs could rely on the market for additional procurement beyond the required minimum to the extent that they prefer the market to other means of acquiring capacity, such as bilateral contracting.

ISO Response

We will consider a combined auction design; however, a mandatory auction for non-deficiency needs would need the support of the CPUC to be worth exploring further.

It is useful to consider a voluntary market mechanism within a monthly market mechanism?

See previous answer

Could the use of a voluntary market mechanism in addition to a mandatory market mechanism mitigate any market power concerns?
Calpine sees no benefit to a separate voluntary mechanism in mitigating market power.
ISO Response
Thank you for your comment.

Company	Date	Submitted By
California Department of Water Resources (CDWR)	2/18/14	

Opening Comments

CDWR appreciates the opportunity to provide its comments on the CAISO's issue paper "Reliability Services" dated January 28, 2014, and respectfully submits following comments.

The CAISO views the Reliability Services Initiative (RSI) as primarily a backstop market mechanism to prevent systemic daily, monthly, or multi-year capacity shortfalls. The RSI Issue Paper also suggests a possible need for changes to some of the existing RA rules through a two phase process. In RSI Phase 1, the objective is to standardize generic Resource Adequacy (RA) products, and to enhance RA market participation incentives. In Phase 2, the objective is to update the Capacity Procurement Mechanism (CPM) to include multi-year backstop authority, and to again assess the risk of retirement of resources that CAISO deems to be necessary for maintaining future year RA. The impetus for this RSI initiative is the CPM expiration in February 2016, and the proposed Joint Reliability Plan (JRP) for multi-year RA.

Need for change in generic RA rules is not demonstrated:

CAISO has not demonstrated that a problem exists with the current SCP (other than the need for CPM renewal) or the RA provisions of the CAISO Tariff. The SCP was designed to create a robust tradable commodity that met the operational needs of CAISO. The various qualification and incentive processes ensure that the SCP resource characteristics are real and meet the needs of CAISO. It has been the general perception that the "generic" RA program is working well. CAISO should address flexibility needs and other features such as SCP III by adding new features onto a construct that is proven to work. CDWR understands that a need for non-

generic RA, also known as “flexible” RA, is developing. Indeed, the Flexible Resource Adequacy Criteria and Must Offer Obligation (FRAC MOO) initiative was created to address that gap. FRAC MOO has evolved as a viable mechanism to fill the gap not addressed by the generic RA construct, and that mechanism can be incorporated into existing RA requirements. The FRAC MOO process considers the existing generic RA construct to be sufficient for non-flexible RA needs. For the generic RA, apart from SCP III, any changes that may be required to the existing SCP have not been demonstrated. The current SCP design has adequately addressed incentives (excluding SCP III), and CDWR does not see a compelling reason to change it for the purposes of generic RA. Minor adjustments such as availability assessment hours may be changed within the existing tariff provisions.

CDWR also notes that the inclusion of highly ranked initiatives related to RA (SCP III for demand response) as a part of this initiative is appropriate to address demand response resources for their participation both in generic and flexible RA. As flexible RA rules will be imposed beginning 2015, it may be prudent to wait and see how those changes work before considering substantial changes to the existing generic RA rules.

ISO Response

SCP has been working well for non-use-limited conventional resources for which the ISO generates an energy bid if not submitted so consequently only forced outages limit the resources’ availability. There is an increasing amount of capacity for which this is not the case. This is because the SCP is a metric fundamentally based on a forced outage rate, which is not adaptable enough to easily extend to resources with monthly use-limitations, demand response, and other non-traditional generation.

Additionally, the development of flexible requirements will necessitate the creation of a Standard Flexible Capacity Product (SFCP). Given the significant interaction between the current SCP and any proposed SFCP and the increase in use-limited resources on the system; the ISO is proposing to look at the entire program holistically, rather than limiting the scope to simply adding onto the existing program.

Local Regulatory Authorities (LRA) rights should be honored:

The current RA provisions recognize and accommodate the rights of state and local regulatory

authorities (LRA) to establish the appropriate resource mix for their jurisdictional LSEs to address environmental priorities, fuel diversity and other ratepayer needs. Standardization of RA products should not lead to infringement on the rights of Local Regulatory Authorities (LRA) to make such decisions. LRAs have their own RA programs with provisions for satisfying their RA needs and these should be respected by CAISO. The current tariff allows the LRA to set provisions such as counting rules, and CAISO has presented no evidence that these provisions are not working.

ISO Response

The ISO proposes standardizing RA products in order to create a fungible product that can be procured in a residual optimization. Without having standard definitions for at the very least backstop procurement, the ISO will have no way to compare capacity MWs in a market setting. For example, if one LRA counts a resource as 100 MW and another LRA's counting conventions qualify that same resource for 150 MW, the ISO will have to make a decision on how to compare the resources when making backstop procurement decisions.

That said, the ISO recognizes and will accommodate to the extent possible the rights of state and local regulatory authorities to establish the right resource mix for their jurisdictional LSEs. The ISO is not telling LSEs or LRAs what types of resources must be procured, or how those resources should be procured. Rather, the ISO has determined the need to have certain amounts of operational characteristics available to the day-ahead and real-time markets to reliably operate the grid, and, in consultation with the LRAs, established requirements and allocations of those operational characteristics. Nothing in residual procurement will prevent LRAs from addressing environmental priorities, fuel diversity, ratepayer needs, or procurement strategies such as hedging. These goals are all achieved through primary procurement. The ISO's establishment of a residual market will enable any additional required capacity to be efficiently procured and optimized across LSEs participating in the residual auction.

Annual CPM designations

ISO question: Given the interaction between the annual and multi-year market mechanism, should these be developed in conjunction or as completely separate mechanisms?

Comments: They should be developed in conjunction to eliminate complexities or conflicts so that RA planning will have a smooth year to year transition.

ISO question: What are market power concerns specific to an annual auction?

Comments: Any market mechanism must have adequate protection against market power. Market power may be associated with scarce and unique characteristics found generally in local

and flexible RA capacity, or with location of a unit.

ISO Response

Thank you for your comments.

Monthly CPM designations

ISO question: Should the ISO consider a market mechanism design that can optimize bids and offers for less than a month?

Comments: Depending on the type of backstop mechanism CAISO adopts, it would be helpful for LSEs to have the ability to find replacement capacity for daily (including hourly) forced outages where an LSE may not have a suitable replacement or substitution resource. Such a mechanism could consist of a market or bulletin board of un-subscribed capacity (and the capacity attributes), which could help LSE's quickly find suitable replacement resources to help minimize exceptional dispatches and related CPM costs. Whether the mechanism takes the form of a market, or a bulletin board or some other market form, participation in such a process should be voluntary for resource owners and market participants.

ISO question: What time period should the ISO consider evaluating in a market mechanism?

Comments: As noted above, a market or the bulletin board or other mechanism should be able to address capacity needs even as granular as an hour. For example, if a RA resource undergoes a forced outage for an hour that counts against its SCP availability, the owner or Scheduling Coordinator for resource could use the market to substitute for that hour and avoid penalty which would ultimately enhance system reliability.

ISO question: What could the ISO do to reduce market participant transaction costs related to outage replacement?

Comments: The backstop market mechanism could address daily capacity needs including hourly needs such as for replacements and substitutions in order to minimize exceptional dispatches and related CPM costs, enhance reliability, and reduce overall costs to market participants. A voluntary market mechanism may allow a market participant to evaluate its outage and find a replacement that is more cost effective for the duration of the outage compared to incurring a daily backstop penalty rate.

ISO question: Given the ability of the ISO to optimize total backstop procurement through a market mechanism, should the ISO consider changing the RA processes surrounding the cure period length of time?

Comments: CAISO could help market participants with a cost effective cure by maintaining a market, or a bulletin board of unsubscribed capacity, or allowing suitable resources to bid on the

cure.

ISO Response

Thank you for your comments. The ISO will explore the idea of daily substitute capacity within the residual procurement holistic review. The idea of hourly replacement capacity is interesting, but there are complex issues surrounding whether hourly substitution is feasible from a pricing or process standpoint. Potentially hourly granularity would increase transaction costs beyond the benefits of gaining any efficiency from procuring to the exact requirement.

Unsystematic CPM designations

ISO question: What should the ISO take into consideration when issuing a CPM designation for an event that requires an immediate designation?

Comments: ISO should consider the actual duration of need, cost, effectiveness, and provide a technology agnostic approach in resource selection.

ISO question: Should the ISO consider shortening the length of time allowed in the market mechanism?

Comments: the designation period should be based on the actual duration of the need, rather than the minimum 30 days.

ISO question: How should the annual and monthly backstop capacity price relate to the backstop price for an unsystematic event?

Comments: a) In principle, capacity price should not be different than annual and monthly back stop price. b) If there were a market to address backstop procurement need, market price for such unsystematic event could be reflected in the market itself based on the demand and supply scenario.

ISO question: What are market power concerns specific to an unsystematic market mechanism?

Comments: A higher level of market power concern may be associated with unsystematic CPM. Given the unique characteristics of local and flexible capacity resources, there may be a higher level of market power during unsystematic events that can only be mitigated by relaxing some of the constraints that create the uniqueness.

ISO Response

Thank you for your comments.

Voluntary market mechanism

ISO question: Are there benefits to a voluntary market mechanism where both buyers and suppliers could provide bids?

Comments: Yes. The market should be developed for the products that are needed such as hourly, daily capacity needs (substitution and replacements) along with monthly, annual and multi-year range.

ISO question: It is useful to consider a voluntary market mechanism within a monthly market mechanism?

Comments: Yes. It will provide an opportunity to cure a within month shortfall, including unit substitutions and replacements.

ISO question: Could the use of a voluntary market mechanism in addition to a mandatory market mechanism mitigate any market power concerns?

Comments: It is not clear what mandatory market means in this context. Market participation should be voluntary. However, voluntary participation in a market may mitigate some market power risks.

ISO question: How could the replacement rule be altered to allow for a voluntary market mechanism?

Comments: Substitution and replacement requirements should be a part of a voluntary market. Rules should be designed in such a way that substitution and replacement to hourly granularity can be made through the market mechanism.

ISO question: Should the ISO evaluate the time allowed for load serving entities' to cure deficiencies given the market-based mechanism proposed construct?

Comment: Sufficient time should be allowed so as to allow a market participant to utilize a voluntary market or the bilateral market to make a cost effective cure decision.

ISO Response

Thank you for your comments.

By mandatory market, here we were specifically referring to a market for capacity that is required under CPM rules. An LSE can cure shortages during the cure period; however, if at the end of these two processes there is a still a shortage, the ISO must treat this as a requirement deficiency and mandate replacement. Therefore at this point the ISO could run a mandatory backstop auction.

Company	Date	Submitted By
California Public Utilities Commission	2/18/14	Meredith Younghein (415) 703-5953 meredith.younghein@cpuc.ca.gov Candace Morey (415) 703-3211 candace.morey@cpuc.ca.gov

Opening Comments

The Staff of the California Public Utilities Commission (CPUC) appreciates this opportunity to comment on the California ISO's (CAISO) Reliability Services Issue Paper, which lays out how CAISO plans to "look holistically at . . . backstop procurement authority to ensure sufficient resources with the right capabilities are offered into the ISO markets to meet local, flexible, and system capacity requirements." The CAISO proposes two phases for the RSI. The first proposed phase will focus on defining eligibility criteria, availability incentive mechanisms, and must offer requirements for local, system, and flexible Resource Adequacy, as well as creation of a market mechanism for the CAISO to procure backstop capacity if necessary. The second proposed phase will begin in 2015 and focus on implementation of the market mechanism developed in phase one and evaluation of CAISO's risk of retirement backstop procurement authority. The CPUC Staff look forward to continued close coordination and collaboration between our respective staff and management on the topics raised in this issue paper and in the OIR instituting the Joint Reliability Plan (R.14-02-001), which was adopted by the CPUC in February 2014. The CPUC Staff also offer the following comments on the RSI issue paper and February 4, 2014 Stakeholder Meeting:

ISO Response

No response required.

The CPUC Staff supports holding a workshop and requests that CAISO staff provide stakeholders with information in advance to allow for a more efficient use of stakeholder time and resources.

The CPUC Staff supports the CAISO's proposal to hold a public workshop to explore development of the market mechanism. The CPUC staff requests that in advance of the public

workshop on February 24th the CAISO should circulate a brief overview of the options it is considering for potential market mechanisms to replace the current backstop capacity procurement mechanism (CPM). These options could include alternative mechanisms for backstop procurement for each "type" of capacity—system, local or flexible—and/or different procurement timeframes—annual, monthly, or unexpected events. Presenting such an overview in advance will enable more meaningful stakeholder participation in the workshop and will ensure that the CAISO receives more efficacious feedback early in the RSI.

ISO Response

The ISO realizes it is beneficial to circulate materials in advance of meetings/working groups and strives to do so.

The CAISO should confirm that multi-year backstop procurement authority will be taken up in Phase 2, not Phase 1.

The issue paper lays out two phases for the Reliability Services Initiative, but is vague regarding the division of certain issues between the two. Any issues related to the consideration of a multi-year forward process for backstop procurement of the CPUC's Resource Adequacy program should only be discussed in Phase Two and should not overlap with issues discussed in phase 1b or 1c. An important aspect of the joint processes undertaken pursuant to the Joint Reliability Plan is to allow the CPUC OIR to proceed (as it is preliminarily scoped) by considering multi-year forward RA obligations first. Doing so before the CAISO considers any updates to the CPM to reflect the potential change in forward RA compliance requirements is critical to the success of this joint effort.

Further, in response to the CAISO's question, "[g]iven the interaction between the annual and multi-year market mechanism, should these be developed in conjunction or as completely separate mechanisms?" the CPUC Staff believes that the "annual" mechanism should be deferred to Phase 2 so that the CAISO can focus Phase 1 on developing the market mechanisms for the monthly and unsystematic CPM designations. During the February 4 stakeholder meeting the CAISO stated that it has never had to use its CPM authority to backstop procure for

an annual deficiency. Further, the CPUC maintains authority to impose penalties for LSE deficiencies in the annual showings. Rather than expending resources now to develop market approaches for at least three different procurement time frames (annual, monthly, and the various unsystematic CPM designations) the CAISO should focus Phase 1 on developing the mechanism for pricing monthly and unsystematic CPM designations. Once they are developed, then the CAISO can develop the "annual" mechanism in Phase 2 along with its consideration of the appropriate design for multi-year forward backstop procurement.

ISO Response

The ISO will continue to work with the CPUC to make sure the development of the multi-year requirement and potential market in the ISO space is coordinated with the development of the multi-year requirement for CPUC LSE's in the CPUC OIR.

The CPUC has brought up a very important point, in that the annual backstop mechanism will have to be addressed in both phase 1 and phase 2. The annual process will have to be taken up in phase 1; however, to ensure that in the event of an annual deficiency in 2016, the ISO still has the authority and process to issue a CPM designation and procure the required capacity. Even if this is a remote possibility, the ISO has to have the structure to maintain reliability if such an event did occur. For example, while the ISO appreciates that the CPUC maintains authority to impose penalties for LSE deficiencies in the annual showings, the ISO needs to consider the possibility of an LSE not jurisdictional to the CPUC having a shortfall the results in a system-level deficiency.

The CAISO's holistic review of resource adequacy rules should ensure consistency with the CPUC's RA program.

The draft straw proposal for Phase 1 should carefully address how the CAISO will, under phase 1a, develop standardized eligibility criteria for RA resources while ensuring that these criteria are consistent with the CPUC's RA decisions and resulting program. The proposal should also clarify what the CAISO intends as the scope for Phase 1c (during which it will consider "enhance[d] incentive mechanisms for RA resource market participation"). CAISO staff has indicated their intention to consider issues regarding the availability incentive mechanisms, which the CPUC Staff interprets as meaning that CAISO intends to re-asses the Standard Capacity Product (SCP) as well as to define incentive mechanisms for flexible capacity by

defining the Flexible Standard Capacity Product (FSCP). However, given that the issue paper does not define further the intention for Phase 1c, or the specific need to be addressed, CPUC Staff requests such clarification in the straw proposal.
Phase 1 of the RSI should also allow for discussion and consideration of the flexible capacity must offer obligations, and not categorically exclude these issues from Phase 1.

Although the CAISO is currently finalizing its proposal for flexible RA eligibility criteria and must offer obligations in the FRACMOO initiative, the CAISO significantly modified its proposed requirements very late in that process and without much time for vetting or analysis of the CAISO's data and proposed categories for must offer obligations. Further, because the CAISO proposes to undertake a holistic review of RA rules, flexible capacity should be included in the discussions in order to ensure consistency and an integrated approach to offer obligations (and other requirements) for all flavors of capacity (system, local, and flexible capacity) and different resource types/technologies (e.g., demand response, storage, etc). Rather than taking these issues off the table simply because the FRACMOO Initiative has been completed, the CAISO should expressly signal to stakeholders that it will provide a forum for achieving consistent and integrated rules for the whole suite of RA requirements.

As an alternative to considering the RA rules in Phase 1 of the RSI and due to the highly technical nature of RA rules and the need for precise definitions, the CAISO should consider commencing a new and separate stakeholder initiative to provide the forum for a holistic reevaluation of RA rules. This could provide a more efficient path forward and would allow the RSI to focus on developing the market-based backstop procurement mechanism. Although the CAISO will need to concurrently develop appropriate standardized product definitions for backstop capacity products, the consideration of product definitions, technical rules and potential tariff modifications related to RA resources do not necessarily need to be considered in the context of the RSI.

The scope of a new initiative could potentially include: (1) identified enhanced minimum eligibility criteria for system, local, and flexible RA capacity consistent with the CPUC RA decisions; (2) modifying must-offer rules for generic and local use-limited resources and for flexible resources to maintain consistent definitions across capacity and technology type, and (3) modifying the SCP and creating an FSCP to determine the incentive mechanisms for system, local, and flexible capacity. (The RSI should consider if the replacement and substation rules need to be modified or synchronized with a new CPM pricing mechanism).

ISO Response

The ISO will consider flexible eligibility criteria and must-offer requirements within this initiative for resources types not currently covered under the FRAC-MOO proposal. The ISO has, as part of FRAC-MOO, committed to a complete evaluation of the flexible capacity categories starting in the first quarter of 2016. The only intent of the straw proposal was to point out there is currently no tariff language regarding flexible criteria and requirements and these will be developed in FRAC MOO. The primary intent of the product standardization, however, is to fill gaps in the current tariff where there are no rules or discrepancies exist with CPUC criteria.

Additionally, standardized product definitions will have to be created in order for the ISO to move forward with a residual market. While the ISO acknowledges that looking at the resource adequacy rules involves many details that may make it desirable to do so through a separate initiative, the ISO also believes these rules are linked with the functioning of a market-based mechanism. A market implies that the ISO will optimize requirements and offers across LSEs (and LRAs). If one LRA values capacity different than another LRA, the ISO will not be able to optimize procurement. Therefore, the ISO must have default eligibility criteria and must-offer requirements not just in the event an LRA does not have criteria, but in the event LRAs have *different* criteria.

Company	Date	Submitted By
Independent Energy Producers Association (IEP)	2/18/14	Steven Kelly, Policy Director

Opening Comments

The Independent Energy Producers Association (IEP) offers the following comments on the CAISO Reliability Services Initiative Issue Paper released on January 28, 2014. The Initiative was

discussed at the stakeholder meeting on February 4, 2014. The Initiative is designed to provide a "Holistic look at the CAISO's backstop procurement authority to ensure sufficient resources with the right capabilities are offered into the ISO markets to meet local, flexible, and system capacity requirements." The Initiative is divided into three key areas of emphasis, namely, (1) market design changes to create an efficient market mechanism to procure backstop capacity, (2) conforming changes to various RA process rules, and (3) enhancements to rules specific to RA resources.

Below, IEP addresses in the two main aspects of the proposed Reliability Services Initiative.

ISO Response

No response required.

Market Design Changes to Create Market Mechanisms to Procure Backstop Capacity:

IEP views the current capacity procurement mechanism (CPM) as working well. It is rarely relied on by the CAISO for backstop procurement, which suggests that the current CPM backstop mechanism is serving its primary purpose of incenting forward RA procurement by LSEs in a manner that meets the needs of the CAISO. Furthermore, this suggests that the total costs associated with the current CPM are relatively low.

On the other hand, IEP has strong concerns with the underlying premise and primary objective of the CAISO Reliability Services Initiative: namely, replacing the existing CPM with a CAISO "market-based backstop procurement" mechanism. IEP's view is quite simple in this regard: either the CAISO has a capacity market, in which case a backstop CPM is not needed (except in limited exceptional circumstances, perhaps) or, alternatively, the CAISO has backstop procurement authority in which case the compensation mechanism by necessity must be set at an administratively determined rate since no market exists to set a price for this product. In light of this observation, the CAISO's proposed "market-based backstop procurement mechanism" seems illogical and non-sensical.

Rather than pursue the proposed path outlined in the Initiative, IEP recommends a far more

expedient and useful exercise: namely, simply seek FERC's approval to extend the existing CPM mechanism and clarify, if necessary, that the existing CPM will be employed in all situations in which the CAISO's determines system, local, and/or flexible RA resources are deficient including a multi-year forward framework as appropriate.

ISO Response

The ISO does not share IEP's "all or nothing" approach to RA procurement. Although a forward mandatory capacity market would have benefits, it is not the approach agreed to in the Joint Reliability Plan with the CPUC. However, we believe there are still reliability and efficiency benefits that can be gained by the creation of a residual procurement framework that includes a market-based mechanism.

State and local regulatory authorities have mandated procurement based on environmental policies, rate-payer considerations, and other issues unique to their jurisdictional LSEs. This procurement is achieved through the forward bilateral market. There is an opportunity; however, for the bilateral market to procure up to what is efficient on a year-ahead basis and then for any remaining year-ahead procurement as well as any procurement typically done throughout the year to be procured through the ISO's market mechanism. The ISO believes that a transparent and efficient market mechanism can enable an efficient mix of procurement done either in the forward bilateral market or through the residual procurement market mechanism.

The ISO expects that it will be more efficient for LSE's to procure small and/or more complex RA requirements through the market mechanism. In particular, flexible requirements will cause increased complexity for each LSE to individually transact for a mix of system and flexible capacity. It could increase over-all efficiency for the ISO to provide a forum for LSEs to optimize their residual procurement through a market process which would reduce transaction costs for LSEs wishing to exchange various types of capacity they have an excess of for other types of capacity they of which they are short.

Conforming Changes to Various RA Processes/Enhancement To Rules:

The current one-year RA obligation (system, local) is morphing into a multi-year RA obligation (system, local, and flexible). The CAISO proposes to standardize eligibility criteria and must-offer requirements related to RA, particularly for use-limited resources. This means defining what a standardized product means; determining the scope of eligibility; and, determining the RA capacity availability incentive mechanism rules and pricing. It goes without saying, hopefully, that the CPUC RA "counting" protocols should be aligned with the CAISO's operational needs in this context.

IEP agrees with the need to do this. We are frustrated, however, by yet another stakeholder process to achieve these ends. Recently, IEP raised concerns at the CPUC about the efficiency and apparent redundancy of stakeholder proceedings at the CPUC and the CAISO. [see attachment] The 2014 calendar already is loaded with a number of vitally important, time-consuming, complex proceedings that address capacity matters. These include two distinct Long-Term Procurement Proceedings (LTPPs); an on-going RA proceeding in which two critical issues are being addressed, namely integration of flexible capacity into the RA framework and consideration of a multi-year forward RA obligation; and, the myriad other issues addressed in the context of the Joint Reliability Plan. This raises the pertinent question: Is the proposed new Initiative necessary or can these issues be addressed in on-going proceedings?

IEP's observation is that the CAISO currently has a stakeholder process for addressing flexible capacity and an associated must-offer obligation (i.e. FRACMOO). In addition, we already have a protocol for system and local RA. This suggests that the remaining issues that need to be addressed are (a) whether to replace the current one-year RA obligation with a multi-year forward RA obligation, and (b) determine whether any substantive changes in eligibility and must-offer rules are necessary in light of these changes. As to eligibility and the counting of RA resources, the CPUC (and the CAISO) have agreed to protocols related to most resources except for so-called preferred resources and "use limited" resources. To address this issue, the CPUC has an on-going proceeding to use Effective Load Carrying Capacity (ELCC) analysis to determine Qualifying Capacity (QC) for wind, solar, supply-side demand response and storage resources (R. 11-10-023). This raises another pertinent question: Can this CPUC proceeding be expanded to address QC for any remaining preferred resources and/or use-limited resources?

Prior to moving forward on this new Initiative, IEP requests that the CAISO delineate, in coordination with the CPUC, exactly what issues are to be addressed in the proposed new Initiative that are not (and cannot) be addressed elsewhere. IEP's concern is that redundant and overlapping processes create inefficiencies that are a burden for stakeholders to bear, and foster disconnected policies and/or market rules.

We appreciate the CAISO's attention to our concerns.

ISO Response
The ISO agrees there are many overlapping processes at the CPUC and ISO. This is necessary because the CPUC is not the only LRA in the ISO's footprint. The ISO's footprint includes both non-CPUC jurisdictional LSEs inside California and LSE's from outside California. Additionally many of the ISO's obligations are on the supplier. The CPUC does not have jurisdiction over suppliers of RA capacity that are not also CPUC-jurisdictional LSEs. Therefore it is impossible for issues related to ISO reliability to be addressed elsewhere. To the extent possible the ISO will coordinate with the CPUC and other LRAs and we will present and highlight coordination efforts with the CPUC throughout this initiative.

Company	Date	Submitted By
Northern California Power Agency	2/18/14	
COMMENTS ON SCOPE		
CAISO notes that the RSI is intended to "look holistically at the ISO's backstop procurement authority to ensure sufficient resources with the right capabilities are offered into the ISO markets to meet local, flexible and system capacity requirements." 1 NCPA agrees with CAISO that the goal is to ensure reliability through the right mix of capacity resources. However, a careful analysis of the problem based on a return to first principles demonstrates that the scope of the undertaking CAISO proposes is overly disposed toward an unnecessary system overhaul while at the same time overlooking reforms of important market elements outside the capacity markets that would take the pressure off of capacity markets as the guarantor of reliability. The guiding principles, of course, are that the chosen mechanism must assure California ratepayers of the reliability that they have come to expect, while preserving the jurisdiction of the state of California and its Cities and other governing authorities to meet state and local objectives with respect to environmental protection, minimization of the emissions of greenhouse gases and fuel diversity, through their decisions on appropriate power supply (including demand response and other loadreducing resources).		

ISO Response

State and local regulatory authorities have mandated procurement based on environmental policies, rate-payer considerations, and other issues unique to their jurisdictional LSEs. This procurement is achieved through the forward bilateral market. The ISO must, however, ensure that the grid remains reliable. There is an opportunity; however, for the bilateral market to procure up to what is efficient on a year-ahead basis and then for any remaining year-ahead procurement as well as any procurement typically done throughout the year to be procured through the ISO's market mechanism. The ISO believes that a transparent and efficient market mechanism can enable an efficient mix of procurement done either in the forward bilateral market or through a market mechanism.

A) The current Resource Adequacy framework has served California well

The CAISO's existing Resource Adequacy (RA) framework was introduced in 2004. The existing framework provides a mechanism for ensuring that RA needs are met by requiring loadserving entities (LSE) to make annual and monthly showings demonstrating that they have procured sufficient capacity resources to meet their loads plus a reserve margin. NCPA points out that this system had worked well for California, which has not suffered outages or emergencies related to lack of supply since the system was put in place, and which currently enjoys a reserve margin in excess of 30%. In addition to assuring reliability, the current framework respects the resource determinations of state and local government agencies charged with meeting California's various environmental goals through mechanisms that allow state and local regulatory authorities (LRA) to set procurement priorities best suited to the needs and values of stakeholders and ratepayers, and to address necessary procurement though the long term contracts necessary to encourage the development of new resources.

While NCPA agrees that certain new developments require that additional measures be taken, these developments do not require the sacrifice or wholesale overhaul of a system that has served California well. It is true that California will need increasing amounts of "flexible" capacity in coming years to better integrate the large number of intermittent renewable resources expected to come online in future years. Additionally, a multi-year forward procurement obligation would allow better integration of long term grid planning

considerations, both by incentivizing new resources and by providing long-term contracts for existing resources that will be needed for reliability in future years. It is also necessary to replace the current backstop Capacity Procurement Mechanism (CPM) in the CAISO Tariff, presently slated to expire in 2016 (subject to Commission approval).

Nevertheless, the need for these program improvements is not an occasion to throw the baby out with the bathwater. California can implement all of these changes by crafting incremental improvements to the existing RA framework, which is already proven to work. Indeed, efforts already underway demonstrate this fact. The ongoing CAISO stakeholder process for an interim flexible capacity mechanism (Flexible Resource Adequacy Capacity Must Offer Obligation or FRAC-MOO) had gone some ways toward identifying needed flexible products and mechanisms by which LSEs can demonstrate their compliance. The final mechanism can build on this progress.

Meanwhile, the CPUC has initiated proceedings to consider expanding RA obligations to require forward multi-year procurement for RA showings[2], which should establish longer term capacity obligations for existing CPUC-jurisdictional entities. Although NCPA is not CPUC-jurisdictional, it has long evaluated its resource needs based on long term planning elements, and it would not expect to have difficulty in making the showings eventually required by CAISO. In short, much can be accomplished in terms of updating the existing RA program without doing violence to the important jurisdictional demarcations that underlie it, and which allow Californians to make critical decisions about their resource mix.

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2 Order Instituting Rulemaking to Consider Electric Procurement Policy Refinements pursuant to the Joint Reliability Plan, R.14-02-001, available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M087/K779/87779434.PDF.

ISO Response

The ISO appreciates the concern that a holistic approach may be unnecessary given the current RA procurement appears to be working well. First, a holistic review may mean we move forward

with incremental improvements. That is certainly a solution that the ISO will consider. The addition of the replacement rule and flexible requirements has significantly increased the complexity of primary RA procurement that may quickly become untenable due to the rapid increase in renewable, preferred, and use-limited RA resources. The ISO believes that integrating flexible requirements into a framework that did not anticipate additional complex requirements nor significant amounts of non-traditional generation as RA capacity requires a holistic review rather than simply moving forward with the status quo.

We look forward to an ongoing discussion regarding where we see future complexity and why the current framework cannot be easily adopted to meet these needs.

B) The scope of the RSI ignores other market improvements that could increase the amount of flexible capacity available to the CAISO

Despite the stated intention of undertaking a holistic review, the Issue Paper fails to address other market elements in need of improvement or modification, which could increase the supply of flexible attributes, such as Regulation, offered in the CAISO energy markets. Greater access to services such as Regulation would take some of the pressure off of capacity markets, which the Federal Energy Regulatory Commission (FERC) has struggled to get right, and provide greater revenue to generation resources capable of providing the services CAISO needs now.

However, as NCPA has noted in previous comments in related proceedings, there are certain enhancements and improvements that can be made to the existing CAISO markets that will improve incentives for resources to supply flexibility, and will improve a resource's ability to earn fair compensation for the services provided.

For example, NCPA has observed a troubling settlement outcome associated with the provision of Regulation Up and Regulation Down services that creates an inequitable balance of risks and rewards that may create disincentives for resources to supply regulation services. This is particularly concerning because regulation service is the most flexible product currently available to CAISO to manage the grid in real-time. NCPA's observations are described in the simplified example below:

While this example is equally applicable to Regulation Up, NCPA's focuses on the provision of

Regulation Down service. NCPA has observed a number of instances where it was financially harmed for supplying Regulation Down service to CAISO when NCPA fully complied with CAISO dispatch instructions. The following is a proxy example of the issue and the troubling settlement that can result.

Basic Assumptions:

Resource PMax – 100 MW

Certified Regulation Down Capacity – 40 MW

DA LMP - $30.00

RT LMP - $500.00

A resource Bids to supply energy up to 100 MW and Regulation Down for an amount up to 40 MW. The resource is awarded 100 MW of energy and 40 MW of Regulation Down in the dayahead market. As a result, the resource is paid for 100 MW of energy at the DA LMP, and for 40 MW of Regulation Down at the DA capacity rate. In real-time the resource delivers 100 MW of energy as instructed by CAISO. During certain 5-min. intervals the CAISO dispatches the resource into the Regulation Down capacity range. For simplicity we will assume the full 40 MW was dispatched by CAISO. As a result of such dispatch the resource will effective be required to buy back 40 MW of energy from the CAISO at the RT LMP. This “buy back” is made in the form of instructed imbalance energy. NCPA has observed situations where the RT LMP during the intervals in which it buys back energy has greatly exceeded the DA LMP received by the resource even though the resource is fully complying with dispatch instructions. For example, this resource would receive DA compensation at $30.00/MWh, but be forced to buy back energy from CAISO at $500.00/MWh. This negative settlement can result in significant financial harm to the resource, even though the resource is following CAISO’s dispatch instructions to the letter and supplying a product CAISO has argued is vitally important to grid reliability.

This is a simple example of an inequitable balance of risk and reward, and may provide a strong disincentive for resources that are capable of providing regulation service to offer such service to CAISO due to the significant risk of financial harm, particularly when there are other markets

in which the resource could bid that would not carry such a risk. This particular issue could be resolved by a rule that prevents the resources from having to "buy back" energy in real-time at a price that is greater than what it received in the day-ahead market, so that the resource is indifferent as between supplying this flexible product to CAISO and bidding in other, less risky markets.

CAISO has argued in the past that this risk can be factored into the capacity price offered by the resource, but such strategy is an apple to oranges relationship and does not address the underlying problem of providing proper incentives for the services requested. If the CAISO wants to incent resources to supply valuable services, the structure for settlement must be designed to properly incent the provision of such services, including an equitable balance of risk and reward. This is just one example of how certain aspects of the current market design could be improved to incent the provision of flexible capacity, and ensure resources receive fair compensation for the services they provide. On some level it makes no sense to create entire new structures while failing to correct existing market flaws that actually discourage flexible resources from providing that flexibility in the current markets. The CAISO should be paying some attention to addressing known problems that could bring more flexibility into the daily markets as soon as possible.

The CAISO's own Market Surveillance Committee ("MSC") prefers that CAISO obtain its flexible attributes through properly designed short-run markets as opposed to capacity markets:[3]

> Finally, we conclude by stating our general preference for rewarding generating unit flexibility through revenues from short run markets for energy and ancillary services rather than through capacity (resource adequacy) payments. In the absence of an obvious market flaw that results in short run markets failing to give appropriately higher revenues to flexible capacity than to inflexible capacity, there is no argument for fragmenting resource adequacy markets into submarkets for flexible and inflexible capacity. Designing such markets would also be complicated, and it is uncertain whether

it would give effective incentives to provide the needed flexibility when actually needed by market operations.

As has been noted in the past, short-run markets that run many times a day are a much easier target for market reforms than are capacity markets, which may only run once a year, or once a month. It is possible for regulators and CAISO to discern much more quickly whether a new market design is having its intended effect. Further, to the extent that the flaws in the CAISO's regulation market can be addressed, and more flexible attributes made available now, the change could affect both the need for flexible capacity (taking some pressure off of the new capacity mechanism) and the amount of money available through the markets for generation resources that can provide the necessary flexibility CAISO seeks.

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3 California Independent System Operator Corporation Flexible Capacity and Local Reliability Resource Retention Proposal, Attachment I: ISO's Market Surveillance Committee Opinion on Flexible Capacity Procurement: Risk of Retirement, Sept. 7, 2012 11, Dec. 12, 2012, Docket No. ER13-550-000, eLibrary No. 20121212-5123.

ISO Response

Thank you for your comments. We understand regulation has continued to be a concern for NCPA, but this is outside the scope for RSI. Resource Adequacy is not a substitute for correctly functioning day ahead and real time markets for energy and ancillary services, but is designed to ensure that sufficient resources are available to bid into those markets. Increasing the requirements for regulation will not resolve reliability issues unless there are sufficient resources able to provide regulation services.

II. OTHER OBSERVATIONS

To the extent that the RSI does move in the direction of centralized capacity markets, NCPA emphasizes that in order to continue to respect state and local generation mix priorities, such markets must remain backstop markets in which market participants are free to choose to transact, or not, as they wish. The bilateral contract market currently in place is still a market, which has served California's needs to date**.**

ISO Response

The ISO is not proposing to move toward a mandatory capacity market and will continue to respect state and local authority to mandate their individual priorities on their jurisdictional LSEs.

Company	Date	Submitted By
NRG Energy, Inc.	2/18/14	Brian Theaker

Phase 1 Activities. NRG supports clarifying and standardizing:

1. The nature of the offering obligation that attaches to capacity that satisfies system, local and flexible obligations.

2. How CAISO standard capacity product rules apply to resources that meet system, local and flexible capacity requirements.

3. The rules for how various kinds of resources count for meeting system, local and flexible capacity requirements.

NRG's comments on specific activities within this initiative follow.

ISO Response

No response required.

Applying SCP rules to demand response.

In 2009, FERC granted the CAISO what was intended to be a temporary exemption from applying SCP rules to certain resources, including demand response. In the same order, FERC directed the CAISO and its stakeholders to "…diligently work toward a sunset [of the exemption] in a timely manner."[2]

At the February 4 meeting, the CAISO indicated that it intends to work to apply SCP rules only to supply side demand response resources in this initiative. NRG opposes this limited application of the SCP rules to demand response. Nothing in FERC's June 26, 2009 order on SCP could be taken to limit the application of SCP rules only to supply-side demand response. Further, such a limited application would be inconsistent with the "comparable treatment" principle on which the Reliability Services effort is founded.[3] Finally, given (1) that approximately 3,000 MW of demand response counts towards meeting RA requirements, and

(2) the frequently lackluster performance of some DR programs as noted in the CPUC's May 1, 2013 Commission Staff Report on Lessons Learned From Summer 2012 Southern California Investor Owned Utilities' Demand Response Programs, [4] NRG would expect the CAISO to seek to apply SCP rules to all DR programs to ensure those programs are performing their RA duties as required.

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2 127 FERC ¶ 61,298 at P. 58 (emphasis added).

3 Issue paper at 11.

4 Available at http://www.cpuc.ca.gov/NR/rdonlyres/523B9D94-ABC4-4AF6-AA09-DD9ED8C81AAD/0/StaffReport_2012DRLessonsLearned.pdf

ISO Response

SCP rules apply to how resources participating in ISO markets meet the requirements of availability. Supply-side demand response, which will participate in ISO markets and respond to ISO instructions, should be included in SCP availability rules. However, because demand-side demand response is not directly in the ISO markets, or under ISO control, it is not possible for these resources to be included in SCP availability calculations.

Requiring system capacity within a local area to be replaced with capacity within the same local area.

NRG strongly supports eliminating the practice that system capacity within a local area must be replaced with capacity within that same local area. This practice effectively turns system capacity into higher quality local capacity without the seller deriving any of the benefits of that conversion.

ISO Response

The ISO will explore the possibility of changing this rule within this initiative. The initial difficulty is that the ISO evaluates aggregate shortages based on the higher quality capacity rather than what the capacity is shown as. Therefore if we allowed the capacity to be replaced at the lower quality there is the possibility the ISO would then have an aggregate shortage. These processes will have to be evaluated together to make sure the ISO retains reliability.

Clarifying the rules around the amount of capacity given a CPM designation

NRG expected that the 2011 CPM Settlement would provide greater transparency with regards to the amount of capacity that the CAISO was relying on when providing an Exceptional Dispatch (ED) CPM designation. For example, while the CAISO may ED a non-RA unit to its min

load level, if the CAISO is doing so to position that unit to be able to ramp above its minimum load level following a contingency, the CAISO is relying not just on the unit's minimum load amount, but on the greater amount of response capability, and, correspondingly, is relying on a greater amount of capacity than just the minimum load level. However, in 2013, NRG experienced several situations in which the CAISO EDed a unit to its minimum load level and appeared to be relying on non-RA capacity above that minimum load level to be able to respond to a contingency, but provided no CPM designation to the affected units. Such events are, to NRG, completely inconsistent with the principles underlying the 2011 CPM settlement. This initiative must include a discussion of specific rules that deal with identifying the amount of capacity that the CAISO is relying on – not just dispatching energy from - that could give rise to a CPM designation. Such an effort would be completely consistent with the "transparency" principle that this initiative is founded upon.[5]

[5] Issue Paper at 10.

ISO Response

The ISO will include this discussion within the scope and agrees there must be clear rules defining backstop designated capacity amounts.

Development of a "market-based" capacity backstop mechanism.

Noting the February 16, 2016 expiration date for the CPM, the CAISO proposes, as part of Phase 1 of this initiative, to develop a mechanism to replace CPM. The CAISO has, at various times, used the adjectives "durable" and "market-based" to describe the qualities of this mechanism to replace CPM.

At the February 4 meeting, the CAISO made clear that a mandatory centralized market to replace the CPM was completely "off the table". While the CAISO asserted that a voluntary market might still be on the table, and could serve as the replacement for CPM, NRG does not support a voluntary market as the replacement for CPM. Load's participation in such a market would be highly controlled by the CPUC, and the value of any price signal that such a voluntary

market might provide would be dubious at best.

As NRG notes in a November 25, 2013 reply brief submitted in ER11-4081, dealing with proposed buyer-side market power mitigation rules for the Midcontinent Independent System

Operator's RA program:
In the first Planning Resource Auction ("PRA") for the 2013-2014 Planning Year, 96% of offers were part of a Fixed Resource Adequacy Plan ("FRAP") or Self- Scheduled into the auction at $0.00 MW/Day; i.e., offered into the market as price-takers. While these resources are likely recovering their full levelized cost of new entry from ratepayers, the price they showed the auction was $0. This resulted in a clearing price of $1.05 MW/Day for the 2014-2014 PRA. More recently, the Transitional Planning Resource Auction ("TPRA") for the MISO Southern Region produced an Auction Clearing Price of $0.00 MW/Day. So long as the Commission requires generators to participate in the auction, but does not impose symmetrical purchasing requirements on buyers, this type of uneconomic behavior will continue.[6]
Given NRG's skepticism about the value of such a voluntary market, it is not clear that engaging in what will certainly prove to be a long and difficult process to develop a design for such a highly controlled voluntary market is the best use of the CAISO's and stakeholders' time and resources.
As the CAISO notes, it can engage in backstop procurement for these reasons:[7]
1. Insufficient local capacity in a load serving entities' annual or monthly resource2. Collective deficiency of capacity in a Local area
3. Insufficient system capacity in a load serving entities' annual or monthly resource plan
4. Significant event
5. A reliability or operational need for an Exceptional Dispatch
6. Risk of retirement
7. Insufficient flexible in annual or monthly resource plan (pending)
8. Multi-year insufficiencies[8]

To NRG's knowledge, the CAISO has only issued CPM designations for reasons (4) and (5). The nature of these two reasons, along with (1), (2) and (6), points to the need to issue a CPM designation to a specific resource, or at least to issue a designation within a limited subset of resources. As such, these reasons do not lend themselves to a "market-based" solution. Additionally, reasons (4) and (5) happen in real time, and for that reason do not lend themselves to designations being developed through some sort of "market-based" mechanism.

Reasons (3) and (7) better lend themselves to being satisfied through some sort of marketbased mechanism; however, if that mechanism is a voluntary market in which load's participation is carefully controlled, it does not seem likely those markets will yield meaningful, repeatable or even compensatory prices.

Multi-year forward insufficiencies would lend themselves very well to some sort of auction process; however, as the CAISO noted at the February 4 meeting, it would not be prudent to move forward to design some multi-year forward CAISO process until it is clear where the CPUC is moving with regards to its rulemaking considering multi-year forward RA obligations.

For all of these reasons, NRG is skeptical about whether investing vast amounts of time and resources to explore a voluntary market mechanism is a useful and efficient exercise.

The CAISO has scheduled a market design workshop to February 24. NRG looks forward to participating in that workshop. Nevertheless, NRG remains skeptical that CPM replacement mechanisms that focus on "voluntary" participation will serve much useful purpose.

6 Reply Brief of the NRG Companies, submitted November 25, 2013 in ER11-4081 at page 12.
7 Issue Paper at 13.
8 Presentation at 19.

ISO Response

The current RA mechanism in California is based on bilateral procurement, with the ISO having

a backstop procurement authority through CPM. The JRF agreed to by the ISO and the CPUC establishes the parameters of RA in the near future, and does not discuss mandatory ISO capacity markets. The ISO recognizes the potential problems with voluntary markets, especially if they are voluntary on one side only, but is attempting to offer a useful procurement tool to the electricity markets in California with the hope that once established, both buyers and sellers will recognize the usefulness of such a trading platform and it would grow into a robust market that could also provide pricing information and a potential platform for the ISO backstop procurement. The ISO looks forward to NRG's continued participation in this initiative.

Modifying incentive mechanisms for system, local and flexible capacity.

It is clear that the same metrics that the CAISO used to assess and encourage the availability of system and local RA capacity will not prove useful to assess and encourage the availability of flexible capacity.

Further, as NRG has asserted before, using the CPM backstop price as the penalty rate for nonavailability in all months often exposes suppliers of RA capacity to penalties that are completely disconnected from the commercial value of that capacity. NRG supports re-examining the incentive mechanisms for resources as part of this initiative.

ISO Response

Thank you for your comment.

Eligibility criteria/Standardized products.

The CAISO indicates that, as part of the effort to move towards more standardized products, it will examine the criteria that resources must satisfy (things like hours of availability, energy limitations, operational characteristics) in order to provide standard RA products (presumably, system, local and flexible RA capacity). The effort to standardize products and develop clear eligibility criteria is critical in light of the Joint Reliability Plan's proposal to rely on preferred resources to meet half of the post-SONGS local reliability needs.

ISO Response

Thank you for your comment.

Coordinating with R.14-02-001
The CPUC has just released its rulemaking which contemplates three tracks: (1) considering multi-year forward resource adequacy obligations; (2) considering a long-term planning assessment that would focus on the period between RA procurement and LTPP; and (3) considering a policy position with respect to a CAISO marketbased capacity backstop procurement mechanism to replace the CPM. This proceeding is so intertwined with the CAISO's Reliability Services Initiative that all involved parties, the CAISO, CPUC, CEC and market participants, would be well served by the CAISO and CPUC staffs developing a coordinated schedule for the two initiatives.
ISO Response
We are currently coordinating with the CPUC and will involve the CEC as well in order to create a unified schedule as much as possible given the February 16, 2016 CPM expiration date.

Company	Date	Submitted By

Office of Ratepayer Advocates – California Public Utilities Commission	2/18/14	Radu Ciupagea Analyst Office of Ratepayer Advocates California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102 Phone: (415) 703-5235 Email: Radu.Ciupagea@cpuc.ca.gov Yakov Lasko Analyst Office of Ratepayer Advocates California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102 Phone: (415) 703-2287 Email: Yakov.Lasko@cpuc.ca.gov

I. Issues within scope of Reliability Services Issue Paper – Concerns

1. Both the development process for, and the substantive features of, a CAISO-administered market mechanism for the procurement of backstop capacity should complement, but not potentially displace, the California Public Utilities Commission (CPUC) adopted Resource Adequacy (RA) rules, processes, and eventual revised RA procurement mechanism.

The Joint Reliability Plan (JRP) agreement between the CPUC and California Independent System Operator (CAISO) determined that "[p]articipation in a Reliability Services Auction [RSA] will be subject to all existing laws and regulations that govern existing procurement obligations on LSEs. For the CPUC jurisdictional utilities, participation would be subject to any limitations or authority provided through the CPUC-approved bundled procurement plans or otherwise applicable decisions that issue from the CPUC."1 The CAISO's development of the market-based backstop mechanism should be consistent with existing CPUC RA rules so that the final product is effective, durable, and promotes certainty rather than confusion. Notably, the CPUC's process for revising those RA rules and regulations is well underway; while it is not premature for CAISO to begin designing a new backstop procurement mechanism to replace the backstop Capacity Procurement Mechanism (CPM) that will expire in 2016, care must be taken so that the development of such a mechanism does not undermine the CPUC-driven process for

revising the RA program or the RA reforms developed in the CPUC's RA and JRP proceedings. Any modifications to the RA rules and regulations necessary to support a market mechanism for the procurement of backstop capacity should first be considered in the CPUC's RA proceeding and recently instituted JRP proceeding.[2] These modifications should be justified by data and analysis, and subject to vetting and validation from parties.

[2] *Order Instituting Rulemaking* (JRP OIR), R.14-02-001, issued February 13, 2014, available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M087/K779/87779434.PDF

ISO Response

The JRP set up a coordination process for the ISO and CPUC regarding RA procurement. This outlined a plan for the ISO to design the ISO market-based mechanism through a stakeholder process. This is necessary because the ISO's footprint includes non-CPUC jurisdictional LSEs as well as other market participants such as independent suppliers that are not under CPUC jurisdiction. The ISO will continue to coordinate with the CPUC as appropriate and highlight this coordination to all market participants throughout the RSI process.

2. By design, a "backstop" mechanism should recognize the primacy of any multi-step forward RA procurement mechanism – per the forthcoming CPUC revised RA structure – and not serve as a parallel forward procurement path for needed resources.

It should not be presumed that a market-based backstop mechanism to replace the CPM must necessarily serve as a forward capacity procurement mechanism. The JRP agreement, approved by the CAISO board, states that "[a]ny CPM replacement mechanism should also not be designed to be or become the primary forward capacity procurement mechanism for LSE's."[3] The proposed market mechanism does not necessarily need to, and perhaps should not, recommend backstop capacity procurement at each temporal phase of the CPUC's RA procurement (i.e., multi-year, annual, and monthly), and the proposal should not result in a redundant or a competing forward procurement mechanism.

The CAISO process should allow for stakeholder comment on the various forms a CPM could take. While there may be disagreement on the extent to which the backstop procurement should be completed in forward time frames, it should not be predetermined at the outset of the CAISO process that the new backstop CPM should operate in the same forward timeframes

that the revised CPUC RA mechanism will address. In fact, a successful RA program that may be extended farther forward should minimize the need for backstop procurement to cure near-term deficiencies. For example, a reasonable complementary backstop mechanism may primarily serve to secure intra-monthly capacity to meet system, local and flexibility needs, in a competitive manner, along with its current role in securing capacity in short time frames for exceptional dispatch, in response to exceptional events.

"Risk of retirement" considerations, which are forward in nature, may be best addressed solely through the CPUC's RA mechanisms to prevent "venue shopping" by owners of resources looking to secure contracts for multi-year periods, particularly for resources capable of providing flexibility. Developers of the market-based backstop mechanism should presume that the CPUC-driven RA / JRP process will effectively determine flexibility needs, and that the revised process will result in sufficient flexible resources under contract to support forward-year reliability concerns.

[3] JRP, p. 10.

ISO Response

The existing CPM serves several purposes, not just providing backstop to the RA program. As the operator of California's electric transmission grid it is critical that the ISO have available to it tools necessary to ensure the reliable operation of that grid. The ISO must have a method to procure resources required to operate grid and ensure that those resources will be available when needed. The grid that the ISO operates includes market participants that not subject to the CPUC's jurisdiction and that are not even California entities. Thus, while the ISO may rely on the market participants as being primarily responsible for procuring RA and other reliability needs, the ISO believes that in order to be able to fulfill its responsibility for ensuring the reliability of the grid it must have a method, such as CPM, to maintain reliability. This includes all the existing categories of CPM, including dealing with needed resources which might retire before they are needed. The expiration of CPM creates a requirement for the ISO to develop a replacement, and it is the ISO's intention to develop the best and most efficient process for this procurement. Further, as described in the JRP it is the ISO's intent with respect to multi-year forward procurement, is that this would be developed to align with multi-year forward RA requirements developed jointly with the CPUC and other LRAs. This will be scoped out more fully in phase 2.

3. The Flexible Resource Adequacy Criteria and Must-Offer Obligation (FRAC MOO) framework should be consistent with the CPUC's June 2013 RA decision.

The CAISO's Reliability Services Issue Paper notes that the FRAC MOO initiative will add an

additional category to the CPM and allow the CAISO to backstop for flexibility requirements.[4] In its June 2013 RA decision, the CPUC defined the flexibility capacity need as the quantity or resources needed by the CAISO to manage grid reliability during the greatest three-hour continuous ramp in each month.[5] Resources are considered "flexible capacity" if they can sustain or increase output, or reduce ramping needs, during the hours of the ramping period of "flexible need."[6] According to this definition, a resource that provides six hours of energy should be able to count as flexible capacity.7 ORA agrees with PG&E's observation that the four flexible capacity procurement categories proposed in CAISO's FRAC MOO Fifth Revised Straw Proposal are inconsistent with the flexibility requirement adopted in the June 2013 RA decision.8 Furthermore, ORA agrees that minimum and maximum procurement targets and different must offer obligations (MOO) for each of the four flexible capacity procurement categories infringe upon the jurisdiction of the CPUC and other local regulatory authorities (LRAs) by developing prescriptive requirements for the counting of resources.[9] Any modifications to the CAISO and CPUC jointly-defined flexibility requirement should be considered in the CPUC's RA proceeding, justified by data and analysis, and allow for vetting and validation by stakeholders.

[4] Reliability Services Issue Paper, p. 4.
[5] CPUC Decision (D).13-06-024, p. 2, available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M070/K423/70423172.PDF
[6] Id.
[7] ORA acknowledges that CAISO's FRAC MOO Draft Final Proposal, posted February 7, 2014, has consolidated the four flexible capacity categories it previously proposed into three categories. This change also allows resources that can provide the equivalent of six hours of energy at the full effective flexible capacity (EFC) to be included in all flexible capacity categories.
[8] PG&E comments on Flexible Resource Adequacy Criteria and Must-Offer Obligation Fifth Revised Straw Proposal, p. 2.
[9] PG&E comments on Flexible Resource Adequacy Criteria and Must-Offer Obligation Fifth Revised Straw Proposal, p. 2.

ISO Response

This comment is more appropriate in FRAC MOO space, although the ISO notes that flexible RA requirements adopted by the CPUC and in FRACMOO are interim requirements.

4. The Reliability Services Initiative correctly identifies market power concerns within the scope of issues for designing a market-based backstop mechanism.

ORA is concerned about the potential for the abuse of market power in transmission-constrained local capacity areas and agrees that the design of a market-based backstop mechanism should incorporate market power mitigation measures. In addition to implementing new strategies for market power mitigation, some of the current market power mitigation measures should be retained.[10] Proposed market power mitigation measures should be studied by stakeholders, the CAISO's Market Surveillance Committee (MSC) and Department of Market Monitoring (DMM) to determine their effect on ratepayer costs. In the absence of effective market power mitigation strategies, generators with a large concentration of resources in a particular Local Capacity Area could withhold resources to extract more revenue, thereby raising costs to ratepayers. A fundamental question, which should be added to the scope of the Reliability Services Initiative, is whether market power mitigation measures have the potential to minimize or eliminate the benefits of any change in the backstop mechanism design. A proposed market-based backstop mechanism may require market power mitigation measures that, when taken together, may not advance the JRP's "goal of improving and enhancing the existing reliability framework's procurement requirements and processes."[11]

[10] The Commission established the Resource Adequacy bilateral capacity market, which limited market power abuse by, among other things, maintaining the confidentiality of the utilities' compliance with RA requirements and the capacity prices secured in IOUs' RFOs and bilateral contracts. Therefore, market participants are not aware of how much residual capacity the IOUs need when negotiating with generators.

[11] JRP, p. 3

ISO Response

Market power that occurs in the bilateral market may also arise in the residual procurement market mechanism. The mechanism itself will not create market power. Bilateral contracting and market mechanisms fundamentally have different methods of mitigating market power, and the ISO will work with the MSC and DMM to identify and mitigate market power concerns. If there is market power, a transparent market that reflects and then mitigates this should be preferable to rate-payers than a bilateral market that hides market power and does not signal to the market the value of short-term investment decisions that could mitigate the high prices.

We look forward to discussing this further.

II. Issues that should be added to the scope of Reliability Services initiative
1. The Reliability Services initiative should consider the impact on ratepayer costs of adopting a market-based backstop mechanism to replace the existing CPM.

Since 2009, the CAISO has spent $32 million for short-term capacity backstop via the CPM; $28 million of this total was due to the extended outage at the now closed San Onofre Nuclear Generating Station (SONGS), which was taken out of service unexpectedly in January 2012. The CPM was used only twice in 2013, at a total cost of approximately $3 million dollars.[12] These amounts are an infinitesimal portion of the various payments customers have made for capacity over the past several years. One of the issues that should be added to the scope of the Reliability Service initiative is how a market-based backstop mechanism will impact ratepayer costs. The impact on ratepayer costs would be particularly significant if CAISO's proposal for a market-based backstop mechanism will add "insufficient flexible in annual or monthly resource plan"[13] and "insufficient multi-year forward capacity"[14] CPM backstop events. Given that the CPM expenses under the status quo have been relatively small, it is prudent to examine how these expenses are likely to change and how ratepayers should be protected from increasing costs under a market-based backstop mechanism. ORA supports consideration of ways to reduce ratepayer costs, including lowering transaction costs and eliminating the current month-long payment to resources that might only be required to provide backstop capacity for weekly timeframes.

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[12] See CAISO presentation, available at http://www.ferc.gov/EventCalendar/Files/20110428065914-CAISO%20CPM%20presentation%204-28-11.pdf; 2013 capacity procurement mechanism reports, available at http://www.caiso.com/Documents/Capacity%20procurement%20mechanism/2013%20capacity%20procurement%20mechanism%20reports; and Capacity procurement mechanism reports archive, available at http://www.caiso.com/Documents/Capacity%20procurement%20mechanism%20reports%20archive

[13] Reliability Services Issue Paper, p. 13.

[14] *Id*.

ISO Response

The ISO encourages ORA to assess how ratepayers may be impacted by different market designs for residual procurement. It is important to note that CPM costs are just one small piece of ratepayer costs that occur in RA space and that the ISO's backstop mechanism design

impacts not only the actual price paid for CPM, but overall procurement costs. Currently the CPM price acts as an anchor price and the price for capacity is compared to the CPM price. One significant concern with this is that the CPM price is not reflective of actual market conditions and therefore transactions are being anchored to an artificial price.

The ISO is mandated to maintain grid reliability and therefore will put forth market designs that maintain reliability. Part of reliability is ensuring that the ISO has put in place the correct incentives and cost allocation to ensure that market participants are incented to develop the right capacity in the right location with the attributes required by the ISO to operate the grid. One way to do this is to lower transaction costs, which the ISO believes can be done through a market mechanism. That said; it should be noted that the ISO will not create a market design with the specific goal to minimize costs for specific classes of ratepayers, or ratepayers of specific LRAs. As the Independent System Operator the ISO must consider costs and benefits to all market participants.

2. The economic and legal viability of a proposed market-based backstop mechanism should be within scope and explicitly addressed in CAISO's forthcoming market design Straw Proposal.

A CAISO stakeholder process established to design a market-based replacement backstop mechanism to cure deficiencies, which might also include the development of a voluntary forward capacity market, must address the economic and legal viability of whatever mechanism is proposed by the CAISO in its forthcoming Straw Proposal. Moreover, any mechanism designed and proposed by the CAISO should anticipate and incorporate specific proposals to mitigate potential economic and legal viability risks. The CPUC's recently issued JRP Order Instituting Rulemaking (OIR) includes relevant questions for consideration. For example, regarding economic viability, the JRP OIR states:[15]

- Would resources opt out of the bilateral capacity market in favor of the backstop procurement method, and if so, are there risks that the backstop market would be become a de facto primary procurement market?
- If the backstop market becomes a de facto primary procurement market, what are the risks to the state's preferred resources policies?

Regarding legal viability of maintaining a limited role for a proposed backstop procurement mechanism, the JRP OIR posed these questions:[16]

- Would [CPUC] support for the proposed backstop procurement mechanism create risks

that FERC or the courts will overturn rules limiting the amount or type o[f] procurement that may be conducted using the proposed mechanism?

- How should a proposed tariff amendment for a market-based backstop procurement mechanism be structured in order to prevent material design modifications or rule changes in the future, either by FERC or in response to legal challenges initiated by third parties?

The JRP OIR emphasizes that the Commission "will not revisit our decision rejecting a centralized capacity market in this proceeding" but "will, however, consider alternative proposals…such as supporting a limited form of an organized capacity auction to fulfill CAISO backstop procurement."[17] In an amicus brief recently filed in the United States Court of Appeals for the Third Circuit, the CPUC reiterated its concern regarding potential federal preemption of a "limited" backstop capacity auction, stating that the New Jersey U.S. District Court's decision, "if upheld on appeal, has the potential to negatively impact California's support for such a market."[18] These are critical questions and issues to be addressed in the CAISO's design of any proposed market mechanism, particularly in light of several decisions casting uncertainty over the preemptive impact of organized markets. Several of these decisions are currently pending rehearing and appeal before FERC and the federal courts.

For example, pending rehearing at FERC are decisions concerning the New England ISO (ISO-NE) and Midwest Independent Transmission System Operator, Inc. (MISO). FERC determinations in these cases will inform both the CAISO and the CPUC as to how FERC will seek to accommodate states' pursuit of legitimate policy objectives such as development of renewable resources while fulfilling its statutory obligation to ensure just and reasonable wholesale prices and grid reliability. The ISO-NE case is a good example of how FERC's concerns over efficient wholesale prices may trump states' policy concerns over the types of resources to be procured.[19] ISO-NE administers a forward market for capacity (FCM), in which resources compete in an annual Forward Capacity Auction (FCA) to provide capacity on a three-year forward basis. Due to its concerns over mitigating buyer market power, FERC approved a request for a buyer-side floor

mitigation mechanism (Minimum Offer Price Rule or MOPR) without granting an exemption for state sponsored renewable resources. State entities argued that if FERC did not grant an exemption from a MOPR for renewable resources, then state policy goals related to renewable resource development would be undermined.[20] In denying the state entities' complaint, FERC found that "exempting renewables whose costs exceed the market price would result in the uneconomic entry of renewables and thereby reduce capacity prices."[21]

These issues are now before FERC on rehearing, where it is expected to again consider whether to exempt wind and solar resources from the MOPR, among other issues.

In the MISO case currently on rehearing, MISO originally had received approval of a voluntary capacity auction, resulting from a stakeholder settlement agreement.[22] Three years later, MISO unilaterally proposed a new Resource Adequacy Construct, one with a mandatory capacity auction for deficiencies. FERC denied this proposal, stating that MISO had not justified the need for a mandatory auction and that FERC did not consider the voluntary auction which it had earlier approved to be a precursor to a mandatory auction.[23] However, in response to applications for rehearing claiming buyer market power, FERC agreed to reconsider whether an MOPR is necessary to prevent buyer market power. It is possible that FERC in its decision on rehearing will make major changes to MISO's resource adequacy construct. It may, among other things, make the voluntary market mandatory by removing the opt-out provision, and add a MOPR to the forward capacity auction. Given the similarities between MISO and California resource adequacy paradigms, FERC's treatment of these issues on rehearing will inform our assessments of the viability and durability of the market mechanism that CAISO designs. Moreover, the outcomes of the MISO and ISO-NE cases will likely influence the CPUC's determination of whether to support or oppose that market mechanism.

Regarding the uncertainty of these cases, there is a timing problem. It makes little sense to expend much time or effort in designing a voluntary residual forward capacity auction through a stakeholder process when we have no clear idea of whether FERC will respect such a stakeholder settlement a few years later or instead decide to make participation in the auction

mandatory. It would also be helpful to know whether FERC will require mitigation such as a Minimum Offer Price Rule later on, and if so, whether it will exempt wind and solar resources from application of the rule and under what circumstances. As noted, these issues are currently awaiting resolution by FERC in the MISO and ISO-NE cases. In the best case scenario, we would have final FERC disposition of these cases before designing the market based mechanism.

At a minimum, ORA encourages the CAISO to include the issues of economic and legal viability within scope, and provide a Straw Proposal market design that clearly acknowledges these issues and addresses them with specific recommendations for risk mitigation. How will the CAISO's proposed market design and stakeholder process address concerns that the market be kept "limited" or "residual," and not become the "de facto" market, a "mandatory" market, or fully centralized market through FERC intervention or third party court challenge? How will CAISO's proposed market design and stakeholder process ensure that California's commitment to preferred resources is not undermined by subsequent changes to the market?

These critical questions regarding economic and legal viability must be addressed early in the CAISO's design of any proposed market mechanism. The CPUC and CAISO jointly committed that "[a]ny CPM replacement mechanism should not inappropriately distort the prices or volume of bilaterally-negotiated capacity contracts or fail to fully recognize resources (preferred or new conventional) that have been procured as a result of or through state policy mandated programs[,]" that "[a]ny CPM replacement mechanism should also not be designed to be or become the primary forward capacity procurement mechanism for LSEs[,]" and that the CAISO and CPUC will "ensure that the format of a backstop procurement market mechanism is durable"[24] Since the JRP makes clear that the CAISO, not the CPUC, will develop the design details of the proposed backstop (and possibly forward) procurement mechanism, the CAISO should anticipate the risks and concerns identified above and address these issues with concrete risk mitigation proposals for stakeholder consideration. This will not be time wasted since the JRP emphasizes that "[t]he details of the proposed design will, however, be significant to any CPUC decisions to modify the existing reliability framework, including supporting or opposing the ultimate form of the backstop as it is designed by the ISO, and the

CPUC expressly reserves the right to oppose an ISO filing seeking FERC authority to institute a Reliability Services Auction."[25] If the CAISO does not address these issues through its stakeholder process, it will simply slow down CPUC's consideration of the proposal when it comes before it, since the CPUC's JRP OIR makes clear that the jurisdictional and economic impacts of the RSA are paramount concerns for the CPUC.

[15] JRP OIR, p, 14.
[16] *Id.*, p.15.

[17] *Id.*, pp. 4, 5 (emphasis added).
[18] PPL Energyplus, LLC, *et al*, v. Solomon, Nos. 13-4330, 13-4394 & 13-4501 (consolidated) 3rd Cir.), (Appeal from Judgment of the U.S. District Court for the District of New Jersey, No.3:11-cv-00745-PGS), Brief for the Connecticut Public Utilities Regulatory Authority *et al*, as Amici Curiae in Support of Appellants, at 8.
[19] *NESCOE v. ISO-NE*, 142 FERC ¶ 61,108, Order Denying Complaint, rehearing granted, Apr. 15, 2013.
[20] *Id.*, p. 8.
[21] *Id.*, p. 35.

[22] In 2008, FERC accepted MISO's voluntary construct because "[t]he voluntary auction will afford LSEs with an additional mechanism to procure needed capacity and increase transparency in the procurement of capacity." Midwest Indep. Transmission Sys. Operator, Inc., 122 FERC ¶ 61,283 (March 2008 Order), rehearing denied, 125 FERC ¶ 61,061 (Oct. 20, 2008).
[23] *In re MISO Order on Resource Adequacy Proposal*, 139 FERC ¶ 61,199 at p. 3.

[24] Joint Reliability Plan, pp. 10-11, emphasis added.
[25] *Id.* at Appendix A, p. 10.

ISO Response

In summary, it appears ORA's concern is that there is the potential for FERC to not accommodate California's pursuit of policy objectives, such as development of renewable resources, in the mandate to approve just and reasonable market design. The ISO appreciates this concern and in any market design for a forward residual market-mechanism will not create rules that conflict with the ability of an LRA to pursue policy-based procurement. A voluntary market will fully and completely accommodate policy objectives as no supplier or LSE will be required to participate. All policy objectives can be achieved outside the auction and any remaining need can be achieved within the auction.

There is also a the major difference between the MISO and ISO-NE capacity markets and what the ISO, under the JRP is considering in this initiative Both MISO and the ISO-NE's capacity market run are the mandated method for the RTOs to ensure that LSEs have procured sufficient resource adequacy. The ISO is only proposing an auction for residual procurement. The residual auction would take place after procurement directed by LRAs and therefore would not be affected by any environmental policies directing specific procurement. In the ISO's proposed construct the LRA would be able to completely direct primary procurement how they saw fit. The ISO would then fill-in any gaps needed to reliably operate the grid. There are many potential market designs that could be inserted here, but in all cases the LRA retains autonomy to pursue specific policy objectives.

The discussions in this initiative will include the specifics of resource adequacy mechanisms

and markets in both ISO-NE and MISO, as well as in other markets. Because of the specific differences of those markets from the CAISO, as well the pressing need to replace CPM and address upcoming issues, it would be difficult to delay this initiative to see the outcome other cases at FERC or in the courts.

Company	Date	Submitted By
PG&E	2/18/14	Alex Morris (415) 973-9054 Maureen Quinlan (415) 973-4958

Opening Comments

Pacific Gas and Electric Company (PG&E) offers the following comments in the stakeholder process for the California Independent System Operator's (CAISO) Reliability Services Initiative (RSI) Issue Paper.1

PG&E's primary comments are:

1) PG&E agrees that the Capacity Procurement Mechanism (CPM) replacement needs to be addressed now.

2) The CAISO should clarify how its schedule and plan aligns with the related California Public Utilities Commission (CPUC) proceedings and milestones.

3) The CAISO should work with stakeholders to define the reliability problem it should solve to ensure this initiative's scope addresses the correct issues.

4) CAISO should allow stakeholders to vet all reasonable market design alternatives; approaches from other ISOs should inform the RSI.

5) The Phase 1 scope is likely too aggressive for the CAISO's proposed timeframe.

ISO Response

No response required.

1. PG&E agrees that the CPM replacement needs to be addressed now.

It is appropriate for the CAISO to have a backstop reliability tool like the CPM. CPM deliberations alone will likely be complex and time-consuming. Past CPM discussions have

involved settlement discussions and lengthy Federal Energy Regulatory Commission (FERC) approval periods. PG&E recommends CAISO prioritize a plan to replace or extend existing core reliability functions that could be lost with the expiration of the CPM in February 2016.

ISO Response

Thank you for your comment.

2. The CAISO's plans should align with related CPUC proceedings and milestones as well as address the planning processes of all Local Regulatory Authorities (LRAs).

PG&E believes that CAISO's consideration of the CPUC proceedings is consistent with the general spirit of the Joint Reliability Plan (JRP) and supports the CAISO's proposed principle of LRA alignment.

The CPUC holds an important role in capacity planning. To ensure reliability at lowest cost and reduce regulatory complexity, the CPUC and CAISO rules for capacity planning should be consistent. For example, if CPUC-directed procurement fails to satisfy the CAISO's reliability needs (under reasonable circumstances), ratepayers may face additional procurement costs. PG&E seeks to avoid this excessive cost by aligning CPUC and CAISO rules to the extent possible. PG&E anticipates that CAISO-CPUC alignment will be critical for the following CPUC proceedings: the JRP Rulemaking[2] Tracks 1 and 3, and the ongoing Resource Adequacy (RA) Rulemaking.[3]

In the CPUC's JRP Order Instituting Rulemaking (OIR) Track 3, the Commission will develop a formal policy position on the CAISO's proposal for a market-based mechanism to replace or augment CPM. This CPUC decision could also be accompanied by specific rules informing CPUC-jurisdictional Load Serving Entities' (LSEs) participation in CAISO's market mechanism, to the extent possible under CPUC's jurisdiction. Given this dynamic, the CAISO should include in its Phase1 timeline more detail on how it plans to coordinate the RSI Phase 1 schedule with CPUC's JPR OIR Track 3 schedule. A formal commitment to CPUC-CAISO workshops, for example, would lay the foundation for stronger alignment with LRAs.

Regarding JRP Track 1, which will consider multi-year RA procurement requirements, a CPUC decision is expected in February 2015.[4] The CAISO should align its RSI Phase 2 schedule to the expected CPUC schedule. For example, does the CAISO intend to wait to begin Phase 2 until after CPUC makes a final a decision on multi-year RA? What are the CPUC milestones that will initiate the RSI Phase 2?

[2] The Order Instituting Rulemaking (R.14-02-001) To Consider Electric Procurement Policy Refinements Pursuant To The Joint Reliability Plan was approved by the Commission on February 5, 2014.
[3] R.11-10-023.
[4] R.14-02-001, p. 20.

ISO Response

The ISO will produce an expected coordination schedule with the CPUC in the draft straw proposal.

3. The CAISO should first work with stakeholders to define the reliability problem to ensure this initiative's scope addresses the correct issues.

At a high level, the CAISO lays out the continuing energy landscape transformation, more use-limited resources coming online, and the displacement of traditional resources as necessitating durable backstop procurement capabilities. The CAISO should provide more details about the specific reliability needs underlying each of the six items that the CAISO defines as in scope for the RSI. [5]

Without fully laying out the CAISO needs and the scope of the issues, we find it difficult to address exactly what elements are needed and how complex a solution should be developed to address the CAISO's reliability needs. During the Flexible Resource Adequacy Criteria and Must Offer Obligation (FRAC-MOO) initiative, a critical assessment of the flexible capacity needs[6] emerged late in the stakeholder process, dramatically re-routing and better informing the design efforts. This outcome highlighted how a more rigorous review of the CAISO's challenges yielded a more appropriate consideration of solutions. PG&E looks forward to working with the CAISO to detail the specific problems associated with standardization, CPM replacements, and incentives that the CAISO seeks to resolve.

Such information would help address questions including:

Why does the CAISO seek to further standardize capacity products? What reliability needs would be addressed by each of the standardized products?

Is a voluntary market mechanism (VMM) necessary to address this potential problem?

Can CPUC adjustments to the RA program adequately mitigate some of the CAISO's reliability concerns?

[5] 1) Enhance the minimum eligibility criteria for system, local, and flexible RA capacity where needed. 2) Modify must-offer rules where required, in particular for use-limited resources, in order to standardize must-offer requirements for different technology types, as is feasible. 3) Create a durable CPM pricing market mechanism that would replace the current administrative price when it expires in February 2016. 4) Synchronize replacement and substitution rules with the new CPM pricing market mechanism as required. 5) Modify or create new incentive mechanisms for energy market participation for system, local, and flexible capacity. 6) Update the CPM to include multi-year backstop authority as well as evaluate the risk-of-retirement designation in the context of a multi-year forward RA procurement requirement.

[6] In the CAISO's Fifth Revised Straw Proposal, the CAISO officially introduced the idea of categories of must-offer obligations and capability requirements. An analysis of the CAISO's needs proved useful and is referenced in these comments to emphasize the value of fully breaking down the problem, when feasible, prior to pursuing a market design.

ISO Response

Ultimately this initiative is intended to create durable ISO resource adequacy rules and processes that will ensure the ISO has sufficient resources to reliably operate the grid through California's rapidly changing energy landscape. The ISO agrees that it would be useful to know what this landscape will look like into the future and will present an analysis showing future expected ISO operational requirements in late April. Eventually these requirements will be translated into RA procurement needs and whatever backstop framework is designed in the RSI will have to accommodate this future. The ISO believes the current framework to be inadequate for several reasons:

- There are gaps in the ISO's eligibility criteria, must-offer requirements and availability incentive mechanism. For an increasing proportion of RA resources the ISO does not have must-offer rules or an applicable incentive mechanism that incents resources to participate when they are most needed. As the ISO grows increasingly dependent on these resources to maintain reliability, having the right incentives in place for energy market participation will be even more important. Additionally, the ISO has an obligation to ensure the equitable treatment of all resource types and has allowed certain resources a "free pass" for too long.
- The current replacement and substitution rules become unwieldy and overly complex when integrating flexible requirements. The replacement of multiple attributes due to

planned outages will require additional transition costs to the point that the ISO is concerned that any incentive mechanism designed to insure replacement would have to become overly punitive in order to ensure that all required attributes are replaced. This also applied to forced outages and is amplified by the shorter time a supplier has to substitute in a similar resource.

- Finally, the ISO believes a multi-year forward framework will mitigate the risk of disorderly retirement that it has on numerous occasions outlined its concern over.

4. CAISO should avoid a full design effort on a single solution or idea until stakeholders have had the opportunity to understand system needs and consider all reasonable options. Ideas and approaches from other markets should inform the RSI.

PG&E appreciates the CAISO's continued efforts to put forth design ideas for stakeholder review. As previously stated, given the large scope of the RSI and array of solutions, PG&E believes the CAISO should first focus on simple solutions to address the core needs of the CPM expiration. In this phase, the CAISO should expand the number of potential solutions it identifies to address various topics to allow for review and input by stakeholders prior to detailing a specific design concept.

This approach will allow for discussion, analyses, and assessments of possible approaches, so that stakeholders can consider the most reasonable path after a CPM replacement has been developed. For example, the CAISO has mentioned that a VMM will likely be part of its design. PG&E does not understand the benefits of a voluntary market combined with a subsequent mandatory market. There should be more of a robust discussion of the merits of having both mechanisms in place prior to moving forward with a design that includes both. The ISO notes that the VMM could provide a means for soliciting capacity bids subsequently used for a mandatory "cure" auction. Even with the voluntary bid submission, the mandatory auction may still require market power controls, such as the use of proxy capacity bids. Since these items will be developed with or without a VMM, stakeholders might just prioritize these latter aspects and consider the role of VMM at a later date. Stakeholders should compare the VMM approach with other approaches that meet the same reliability objectives before focusing exclusively on a design that includes a VMM.

Likewise, multiple capacity auction designs should be considered, including an annual-only auction, before contemplating a full suite of annual, monthly, and intra-month auctions using

the same market mechanism. An array of market power solutions should also be considered. If a preliminary assessment of certain approaches appears unreasonably complex and unwieldy, stakeholders may prefer simpler solutions. Additionally, if the CAISO and stakeholders encounter complex design issues deep into the design process for a particular approach, knowledge of the alternative pathways will inform parties on whether to abandon a design effort in pursuit of an alternative path or to instead strive to work through the difficult design aspects.

Additionally, CAISO should not reinvent the wheel in the RSI. Several different iterations and methods of capacity planning have been conducted in the different RTO markets, including PJM, MISO, ISO-NE, and NYISO. MISO originally adopted a purely voluntary market with penalties for noncompliance, while the eastern markets all adopted various shades of mandatory markets, with mandatory participation both by loads and generators, with tight market power rules on both the load and generation side. An evaluation of the capacity procurement methods used in these areas and identification of lessons learned would provide information to guide us going forward.

ISO Response

The ISO agrees that there are many potential market design solutions that one should not be settled on too quickly. With this in mind, the ISO will not move immediately forward with a draft straw proposal and instead continue to explore multiple market design options for residual procurement.

While the ISO agrees that there are other frameworks that could inform the residual procurement market mechanism, we are cautious of the comparisons between the ISO's market design and other RTO market capacity constructs. There are significant differences between those markets, and the situation and issues facing them, and the ISO. Further, the JRP, under which this initiative is being conducted, has essentially ruled out any type of mandatory ISO capacity market. This initiative must recognize the differences between a primary market, as in eastern markets, and residual market, which we are considering here, in regards to both regulatory risk and optimal procurement.

5. The Phase 1 scope is likely too aggressive for the CAISO's proposed timeframe and the CAISO should focus first on narrow reforms around the CPM deadline.

While PG&E supports the CAISO's phasing idea for the RSI, the Phase 1 scope is ambitious given

the proposed timeframe.[7] The CAISO should either develop a longer timeframe or preferably reduce the Phase 1 scope to only consider the essential issues and simple solutions.

The CAISO may have an ability to pursue non market-based pricing mechanisms for the CPM. Upon review of FERC's Order on the Flexible and Local Reliability Retention mechanism – a tool proposed by the CAISO to manage risk-of-retirement concerns for resources deemed to be "needed" between two and five years into the future – FERC's desire for a market-based pricing mechanism for planning capacity does not constitute a mandate.[8] Stakeholders should consider whether it would be preferable to have a near-term extension for the CPM (or equivalently simple measure) to address the reliability needs the CAISO will likely face while the RSI explores more widely-scoped solutions to capacity tools and rules. CAISO data shows the CPM has been used very infrequently and complex market solutions may be unnecessary given the scope of such a tool.[9] Also, the costs associated with CPMs may not warrant a complex solution.[10] Given the planned timeframe and small scope of the problem, the CAISO and stakeholders should consider a simple plan to replace the CPM.

[7] The RSI issue paper identifies an expected Board of Governors decision on phase 1 in December 2014 or Q1 2015. See p. 9.

[8] FERC's order states: "…we encourage CAISO and its stakeholders to focus on the development of a durable, market-based mechanism that provides incentives to ensure that resources with the adequacy and operational needs CAISO requires are available to meet system needs". FERC Docket ER13-550-000, "Order On Tariff Revisions", March 29, 2013, p. 68.

[9] Based on PG&E analysis of CAISO CPM designation reports, the CPM was used only twice in 2013.

[10] PG&E notes that the Department of Market Monitoring's Market Performance Reports routinely highlight the millions of dollars of costs associated with congestion uplift as a market issue. Perhaps a prioritization based on cost-impacts is more appropriate for prioritizing stakeholder efforts.

http://www.caiso.com/Documents/2012AnnualReport-MarketIssue-Performance.pdf

ISO Response

The ISO encourages PGE to think of the RSI as three separate initiatives that are highly coordinated. It is a large scope for a single initiative, but this is necessitated by the close connection between the different elements.

Company	Date	Submitted By

Six Cities	2/18/14	Bonnie S. Blair Thompson Coburn LLP 1909 K Street N.W., Suite 600 Washington, D.C. 20006-1167 bblair@thompsoncoburn.com 202-585-6905

Less Is More

In the coming eighteen months, the ISO plans to implement at least four major revisions to market structures and processes, i.e., 15-Minute Scheduling, the Full Network Model Expansion, the Energy Imbalance Market, and Flexible Resource Adequacy requirements. Individually, each of these initiatives could have a significant impact on market economics and operational characteristics; the collective effects of these market changes could be profound. Rather than embarking on yet another expansive initiative to revise RA requirements and processes, the Six Cities urge the ISO to approach the Reliability Services review with a more limited set of objectives than suggested in the Issue Paper. Specifically, the ISO should defer consideration of significant changes to the RA framework until there has been at least a full year of experience with the collective effects of the market design changes about to be implemented. For the near term, the ISO should focus solely on revisions to RA requirements that are essential to maintain operational reliability as the effects of the market design changes evolve.

ISO Response

Thank you for your comment. Due to the expiration of the existing CPM in early 2016 the ISO must move forward with this initiative. The ISO believes that both changes to the energy market and changes to the capacity market will be necessary to fully integrate renewable resources and reliably operate the grid. FERC order 764, FNM, EIM and the flexible ramping product will potentially increase flexibility in the energy market. FRAC MOO was the first step in creating flexible requirements, but the bulk of the obligation was moved to the RSI. This is where the ISO will ensure it has sufficient resources to bid into the energy market.

Comments on Specific Elements of the Issue Paper

To the extent the Issue Paper suggests modifications to RA requirements or processes the ISO is considering, the Six Cities offer the following reactions:

Modification of Resource Adequacy Replacement Rules - - The Six Cities oppose the ISO's suggestion (Issue Paper at 8) that RA replacement rules should be modified to require local or flexible capacity shown as generic system capacity to be replaced at the higher quality level during an outage rather than with an alternative generic system capacity resource. This modification would increase the burden of replacing generic system capacity and effectively would constitute an expansion of local and flexible capacity requirements. The ISO has not demonstrated that imposing such an expanded obligation is justified or necessary to maintain reliability.

Modification of the Cure Period for RA Deficiencies - - Whether or not the ISO develops a monthly market mechanism to address RA deficiencies due to planned and long-term forced outages (*see* Issue Paper at 14 and 16), the Six Cities oppose any reduction in the time period allowed for LSEs to cure any deficiencies in monthly RA showings. For the reasons discussed above, the ISO should defer implementation of market mechanisms for RA backstop procurement pending experience with the effects of the impending market design changes. If, however, the ISO proceeds with market mechanisms for backstop RA procurement, any such mechanisms should be strictly voluntary and should supplement, not reduce or supplant, LSE options for curing deficiencies in RA showings. Reducing the time allowed to cure RA deficiencies effectively would make use of the market mechanism mandatory, which the Six Cities strongly oppose.

Backstop Procurement for Multi-Year RA Procurements - - The Six Cities previously have indicated that they support establishment of reasonable multi-year forward RA requirements, which should be accompanied by development of parallel multi-year RA import allocations. The Cities would support extension of the ISO's backstop procurement authority to address aggregate deficiencies in multi-year RA showings, subject to a reasonable time for LSEs to cure deficiencies prior to procurement by the ISO.

ISO Response

1. The ISO is actually proposing the opposite of this. The current rules require the replacement of the higher quality resource even when the resource is shown as a lower quality RA resource. This initiative would address what it would take to change this rule where resources would be replaced for the quality they were shown for in the monthly RA process. The reason this is being addressed is because it was one of the top 5 items ranked by market participants in the stakeholder catalog process.
2. Thank you for your comment.
3. Thank you for your comment; we agree import allocations should be included in the scope.

Company	Date	Submitted By
Western Power Trading Forum	2/18/14	Ellen Wolfe Resero Consulting for WPTF ewolfe@resero.com 916 791-4533

The CAISO should determine in the short run the extent to which it intends to apply a market-based solution to replace CPM.

WPTF understands that the ISO wishes to pursue a market-based solution to replace the CPM backstop mechanism. However, doing so will require a strong commitment, and it is not clear to WPTF that a quasi-market based solution is workable. That is, if the ISO is to pursue a capacity market, it will need to do so fully and address all the issues that other capacity markets have encountered, including the quantities of procurement that will drive the demand curve and any administrative pricing mechanism (e.g., price floor).

For instance, while year-ahead and month-ahead auctions for system capacity seem consistent with other Eastern ISO capacity markets, it is unclear how workable a capacity market will be for short-run, local backstop needs – the kind of needs the ISO has procured through CPM. We ask the ISO to address this aspect sooner rather than later, and if the type of CPM needs the ISO has cannot be met through an auction all parties should reevaluate the extent to which an auction is pursued for this purpose. If an auction is deemed not appropriate than another administrative pricing mechanisms will be required, be it a reference price to the annual or monthly auction or a CPM-type price similar to what we have today.

Pursuing a mechanism that is only partially market-based for backstop CPM will likely

not work nor will pursuing a market for monthly and annual needs if there are no buyers in that market. The ISO should focus and recommend the extent to which it is committed to pursuing such a market-based auction.

ISO Response

The ISO intends to pursue a fully market-based mechanism; however, it may only optimize a portion of the market. We agree that liquidity is absolutely necessary for the mechanism to produce any meaningful prices or inform procurement. We hope to explore the feasibility of a residual procurement auction as the RSI evolves.

Any capacity market should not discriminate between sellers or technology types

Any capacity market that seeks to procure only one segment of supply (e.g., preferred resources) or that does not bring onto a level playing field existing generation with new build (utility owned or merchant) will not result in any overall improvements to the transparency or competiveness of the California energy and capacity markets, and should not be pursued by the ISO. As the CAISO has proposed with the FRAC MOO, technology-independent needs defined where the market can then fill the needs efficiently will aid the markets. Discriminatory eligibility will harm the markets.

ISO Response

Thank you for your comment. We believe that any residual procurement mechanism should be technology agnostic and fairly compensate all resources.

WPTF offers the following input on other design questions raised by the CAISO

Herein we provide feedback (albeit high-level at this stage) feedback to some of the questions raised by the ISO in its issue paper.

- Annual and monthly auctions should align as much as possible.
- Interactions are likely many and include consideration of procurement periods (e.g., monthly forward products for the same period) as well as which services can be auctioned and which are not conducive for an auction.
- The ISO should expand as much as possible buyer and seller participation in the auction in order to minimize market power.
- Outage replacement in the monthly time frame may be workable, but it is unclear how outage

replacement for short intervals would be workable through an auction mechanism. In the same sense it may be unworkable to shorten the auction period to less than one month.

• Ideally the value of backstop capacity procured through CPM and for forward requirements would align, but that will only be the case if the forward markets are designed carefully – including careful consideration to the demand curve design, price floors, and ceilings (as appropriate). In any event without robust participation on the supply and demand side it likely will take careful administrative design elements to ensure the prices align properly.

• There are benefits to voluntary participation but WPTF advises against a separate voluntary auction. Rather we strongly urge the ISO to advocate for auctions with a substantial level of buyer participation.

ISO Response

Thank you for your comments. We will consider these as we move forward.