BEFORE THE
PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long Term Procurement Plans	Rulemaking 12-03-014 (Filed March 22, 2012)

REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON WORKSHOP TOPICS

On September 7, 2012, the Commission held a joint workshop for this LTPP proceeding (R.12-03-014) and the energy storage proceeding (R.10-12-007) to explore possible participation by preferred resources in the LTPP Tracks 1 and 2 utility resource solicitations. By ruling of the Administrative Law Judge dated September 14, 2012, the Commission posed a series of questions about the workshop topics and solicited comments and reply comments. The California Independent System Operation Corporation ("ISO") attended the workshop, submitted opening comments on the workshop in accordance with the ruling, and also presented testimony in Track 1 on these subjects. The ISO submits these reply comments to the responses parties provided to the questions as well as comments on procurement procedures for Track I and Track II resources needs.

I. REPLY COMMENTS

A. RESPONSE TO ENERNOC

1. Set-asides for Preferred Resources Are Not Appropriate

In its opening comments, EnerNOC petitions the Commission to reduce the total local capacity need, as determined by the ISO's once-through-cooling study, by the expected growth in preferred resources over the planning period. In the alternative, EnerNOC recommends directing the investor-owned utilities to set aside a percentage of the total net local resource need

for preferred resources.[1]

EnerNOC's recommendation for a set aside aims to ensure that preferred resources, like demand response ("DR"), are taken off the top before other, potentially lower cost and better fit resources have an opportunity to compete. EnerNOC's recommendation should be denied as it undermines the Commission's "least-cost, best-fit" procurement principle. As other parties have commented, the Commission should authorize no new procurement set-asides given the number of prescriptive procurement proceedings that already exist for preferred resources.[2] Additionally, adopting EnerNOC's position would put the Commission in the difficult position of deciding how to optimally allocate the set aside among the categories of preferred resource types. It would be difficult to allocate capacity within a class of preferred resources, given the different configurations that exist within preferred resource classes, in particular if the Commission imprudently sets a procurement policy that a megawatt is a megawatt, with no distinction for cost, quality, and/or availability. To eliminate administrative burdens and to minimize subjectivity, the Commission should transition to more efficient and transparent, non-discriminatory solicitations for the least cost, best fit resources. All resource types can, and should, compete to help provide the operating characteristics needed to provide reliable energy service at the least cost.

2. DR Should Be Integrated as a Resource into the ISO Market to Qualify as a Capacity Resource

In its comments, EnerNOC states that:

> *It is critical to make clear that DR counts as a capacity resource when it is a dispatchable resource, whether that resource is provided under contract to the utility or participating directly in the wholesale market. In turn, the*

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1 EnerNOC comments at pgs. 1-2.
2 For instance, see SDG&E comments at pg. 2.

purchasing load-serving entity can count that DR capacity against its RA requirement.[3]

The ISO emphasizes that the key issue, which is not apparent in EnerNOC's comment, is that demand response procured as a supply resource through a utility request for offers must participate as a resource in the ISO market to ultimately count towards a load-serving entity's resource adequacy requirement. If this condition is met, then the ISO agrees with EnerNOC that it does not matter whether the DR resource is brought to the market via a contract with a load-serving entity or as a "market" resource sponsored solely by the resource developer. Either way, demand response procured as long or mid-term capacity must participate as a resource in the ISO market. However, EnerNOC's comments seem to suggest that a resource procured under a procurement contract could count for resource adequacy even if its dispatch is solely under the direction of the load-serving entity and it is not integrated into the ISO market as a participating resource. If that is what EnerNOC intended, then the ISO disagrees.

The ISO meets its reliability needs through the markets it operates for energy and ancillary services. To ensure DR resources have supply-side equivalent characteristics, it is important that DR 1) qualifies as a capacity resource, whether participating under contract with a load-serving entity or directly in the ISO market and 2) participates in the ISO market as a unique and identifiable supply-side resource with attributes recorded in the ISO's master file database. Just as a utility can contract with a third-party generator and then contractually direct the participation of that generator in the market, the same market participation arrangement should apply to demand response resources procured as capacity resources.

Demand response resources that are not configured to participate as a resource in the wholesale electricity market should not qualify as supply-side capacity resources or be eligible

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[3] Id., p. 6.

for procurement under utility RFOs. Without being integrated into the ISO market as a resource, demand response can only be known by the ISO second-hand through the load-serving entity, not first-hand through a market bid or schedule. And since it is not bid or scheduled through the ISO, its use and effectiveness cannot be efficiently optimized alongside all other resources. Thus, demand response that is not configured to participate in the wholesale market is best classified as a load modifier with its value stemming from its ability to reduce the underlying load forecast.[4]

3. The Market Structure for DR Resources is Not in Flux

EnerNOC comments state that:

> *It is unclear at this juncture as to whether DR resources will continue to be developed in response to IOU-issued RFOs or through participation directly in the wholesale market. How this issue is resolved will directly affect DR resource development in the future.*[5] (*emphasis added*)

DR participation through utility procurement contracts or directly in the wholesale electricity market is not mutually exclusive. Participation by resources in the wholesale electricity market, with or without a capacity contract, exists today for all resources types; it is not an either-or market structure. Going forward, the Commission can authorize non-discriminatory, competitive solicitations for all resource types that will enable resources, like DR, to compete for utility contracts. If a demand response resource does not have a contract, it is not precluded from participating in the market, or from selling energy, ancillary services, and soon, flexibility/ramping capability. Once the Commission's rules for wholesale market participation are finalized, demand response resources will be able to participate directly in the

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[4] The ISO supports categorizing persistent and durable energy efficiency as a supply-side capacity resource, even though it is not integrated into the ISO market. Energy efficiency equates to load that no longer has to be served, balanced, or backed by operating reserves. Thus, the Commission should pursue integrating committed, verifiable and durable energy efficiency into competitive long-term procurement processes.

[5] Id., p. 7.

wholesale market with or without a procurement contract. Thus, contrary to EnerNOC's comments, there is no policy concern for the Commission to resolve that will directly affect the future development of demand response.

4. Resource Operating Characteristics Are Defined Independent of Specific Resources Types or Technologies

EnerNOC asserts that:

> *SCE uses words like ramping and load following, which have not been applied by the Commission to DR resources" and "...that those definitions were not developed with DR resources in mind. They were developed for generators.* [6]

Operating characteristics describe the ability of a resource or device to balance supply and demand and provide reserves needed for reliable system operation. There is a common lexicon for describing how resources must perform to provide these services. These terms are not resource specific, but are terms the industry uses to generally describe the characteristics necessary to operate the system reliably. As SCE notes, among other things, the ISO requires sufficient resources that can ramp and follow load. Hopefully, the next generation of DR resources will similarly have the ability to ramp (by controllably curtailing or consuming load when and where needed inter-hour) and follow load (by consuming or curtailing load when and where needed intra-hour) based on ISO dispatch instructions. This is analogous to a generator that can increase or decrease its energy output based on dispatch instructions. It would be inappropriate to define different performance characteristics for different resource types, as this would complicate both the competitive evaluation of different resources offered into the procurement process and the assessment of how well each resource met the operating needs of the grid.

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[6] Id., p. 11.

B. RESPONSE TO CEJA

1. Phased Resource Procurement would Undermine the Competitive Evaluation of Different Resources and Resource Types

CEJA petitions the Commission to establish a phased procurement approach tied to the Loading Order. CEJA states that:

> *To accomplish this, the Commission could change the procurement design by requiring utilities to conduct a phased request for offers (RFO) process; starting with demand-side resources. After each phase, if there is still a need, then the utility would enter into another phase by moving down the line of preferred resources consistent with the prioritization in the loading order. The first phase of the RFO could evaluate energy efficiency (EE) and demand response (DR) resources side-by-side, with priority given to EE. If demand-side projects do not fill the need, the next phase could be to evaluate preferred resources including renewable and energy storage resources. Only after considering all preferred resources, if there is still a need, the utility could enter into a final phase and consider offers for fossil-fuel resources. Offers for increasing the capability of existing facilities through upgrades such as software upgrades should be given priority over new fossil-fuel resources.*[7]

The ISO believes that the state's loading order is best served by moving to a fully competitive procurement process in which all resource types participate. CEJA's proposal goes in the opposite direction. Moreover, the ISO expects that CEJA's proposal would be extremely complicated to implement, without offering any additional benefit over a fully competitive process. In particular, the Commission would need to specify potentially unique criteria for evaluating and accepting resource offers in each phase of the process that optimally balances cost and value. CEJA attempts to address this issue by suggesting a "concrete marker for cost-effectiveness" be developed for preferred resources.[8] As CEJA recognizes, the Loading Order outlines the prioritization of preferred resources, but the procurement of preferred resources must also be "cost-effective." As the EAP II states:

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[7] CEJA comments at pg. 2.
[8] Id., p. 3.

> *The loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications.* [9]

The concept of a phased solicitation may sound attractive as a means to emphasize preferred resources in the procurement process, but it would quickly run up against capacity pricing and value concerns. Without looking at a pool consisting of all eligible resources that can fulfill the procurement needs, including operating characteristics, at what cost and capability should the utility stop procurement of a higher priority preferred resource and begin procuring a lower priority preferred resource? Such decisions become subjective and discriminatory, and would involve drawing cost comparisons between dissimilar resources. Without an all-source solicitation that is non-discriminatory, pricing and value decisions will have to be made administratively, as CEJA suggests using a "concrete marker." CEJA's phased procurement approach will lead to an inefficient and ineffective procurement process. The Commission should decline to adopt CEJA's suggested approach as impractical, and subject to drawn-out disagreements over the appropriate "concrete cost-effectiveness marker" for the myriad of preferred resource types.

C. RESPONSE TO SCE

1. SCE's "Flexible Procurement" Approach May be Appropriate for Local Capacity Procurement, but should not be applied to System and Flexible Capacity Procurement

SCE's comments state that:

> *Recent all-source solicitations are not an appropriate model for LCR procurement. The LCR need in SCE's service territory requires a collective set of resources that can meet numerous operational requirements, including specified response periods, specific operation*

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[9] Energy Action Plan II, September 21, 2005, at pg. 2 (emphasis added).

> *times, rapid and precise response times, preferred locations, and the provision of ancillary services, ramping, load following, voltage support, and inertia. Even when a resource has specific, useful characteristics that can help to meet LCR need, whether it can effectively do so depends on the portfolio of other resources under consideration and its location in SCE's service territory. SCE's LCR procurement proposals allow SCE to consider these unique attributes to meet this need.*[10]

The ISO agrees with SCE regarding the reliance placed on local capacity resources embedded in the import-limited local capacity areas to provide the many operating characteristics needed to reliably serve a local capacity area. As an over-arching principle, the ISO supports non-discriminatory, all-source solicitations. However, the ISO acknowledges that all-source solicitations may be more practical for system and flexible capacity than for local capacity, given the many operating characteristics under consideration when procuring local resources and the potential for a limited supply of competitive resources in a specific geographic area. In order to satisfy local capacity needs, the Commission may need to provide more procurement leeway to enable the development of resources that have robust operating attributes that can be located in very specific areas, including load pockets within local capacity areas. In this regard, the ISO is willing to consider support for procurement flexibility within a local area as SCE has outlined, given proper CPUC and peer oversight and technical review.

Compared to the "flexible procurement" option, the less subjective all-source procurement method outlined by SCE is the "objective selection criteria" alternative. The ISO supports this option as more aligned with its preference for non-discriminatory, all-source solicitations. The all-source solicitation based on objective local area needs criteria could produce an efficient result if, as SCE states, it can "select the lowest-cost set of offers that meet

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[10] SCE at pgs. 2-3.

all portfolio local capacity requirement through a cost minimization selection process."[11] The emphasis is on the needs met by the portfolio of resources procured. It is a portfolio of resources that is best suited to satisfy the myriad of operating and reliability needs in local capacity areas; however, having multiple competitive bids that satisfy the necessary operating characteristic in a local area or within a specific load-pocket may be unachievable. Thus, procurement flexibility as favored by SCE may be the only practical procurement approach in all or certain instances for local capacity areas.

Finally, SCE offered a third procurement option. The ISO cannot support this third alternative where:

> *…the CAISO could establish a set of minimum operating characteristics for any eligible resource. ... This approach would require each resource that bids in SCE's LCR solicitation to meet all operating characteristics specified by the CAISO."* [12]

The ISO does not believe that all resources must provide a single set of operating characteristics to be considered in the solicitation process. As the ISO discussed in its opening comments in this proceeding:

> *Establishing minimum flexibility characteristics for all acquired resources is not necessary since not every resource in a portfolio must be flexible. ... Certainly a fair number of resources must be flexible and the overall fleet, in aggregate, must be capable of satisfying flexible capacity requirements, which the ISO has defined as the ability of the fleet to provide regulation, load following, and maximum continuous ramping. Thus, resource procurement should consider the range of operating needs and the right mix of resources that can fulfill these needs.*[13]

Finally, the ISO agrees with SCE that:

> *Imposing any form of prescriptive procurement rules on SCE's LCR authorization may result in an inefficient and potentially higher-cost solution. This would be due to the complexity of satisfying numerous*

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[11] Id., p. 7.
[12] Id., p. 8.
[13] ISO Comments at pgs. 7-8.

operating requirements as well as the unique competitive situation that exists with today's grid configuration."[14]

Set asides and other forms of prescriptive procurement will likely result in inefficient and higher cost portfolios that may not provide the set of operating characteristics actually needed in the overall fleet of local capacity resources. In fact, administratively-set procurement targets for preferred resources should not be needed since resources like DR and EE have already proven their competitiveness in eastern capacity markets. Based on this evidence, there is every reason to believe that DR that participates in the ISO market and durable and persistent EE could realistically compete for procurement contracts as supply-side capacity resources in California.

D. RESPONSE TO CLEAN COALITION

1. Co-location is not Acceptable for Local Capacity Resources

The Clean Coalition comments state that:

> *For example, variable resources combined with storage and or DR can provide a broad set of attributes that cannot be achieved individually; however, these resources need not be co-located or participating in a joint offer for their combined value to be realized by the grid operator, and as such they should be able to participate as complementary products."*[15]

It is important to clarify Clean Coalition's point about "co-location." The ISO would agree that co-location is not as critical for system resources, especially if they are co-located wholly within SP15 or NP15 given the Path 26 counting constraint concerns. In contrast, co-location is essential in counting as a local capacity resource. The local capacity areas are typically characterized by complex interactions of local transmission constraints, which could be impacted differently if a variable resource and a firming device, like storage, are co-located, rather than situated at different locations within the same local capacity area. The variable

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[14] SCE at pg. 18.
[15] Clean Coalition, Section II- Responses To Questions Posed, answer to question #3. (emphasis added)

resource and the firming device must, at minimum, be within the same local area if not the same load-pocket to provide the operating characteristics needed in the import limited local capacity area. For transmission contingency planning purposes, the security and stability of a local capacity area cannot depend on a resource that is configured as partly in and partly out of the local capacity area, or on different sides of a critical constraint within the local area.

E. RESPONSE TO SDG&E

1. The Commission should consolidate procurement activities and transition to competitive, all-source solicitations

SDG&E observes that "[t]he current procurement framework requires the IOUs to undertake separate, resource-specific RFOs to fill total resource needs."[16] SDG&E goes on to explain the plethora of separate procurement proceedings for different energy resources, including DR, EE, CHP, renewables, etc. SDG&E raises a point worth Commission consideration, stating:

> *If the Commission intends to consider broadening the RFO process to include all sources, the Commission should simultaneously assess how this type of RFO will fit within its existing procurement framework and the dedicated processes described above. Issues the Commission would need to consider include, but are not limited to, whether all EE and DR would be required to bid into the all-source RFO or whether the all-source RFO would just reassess any EE and DR that failed previous cost-effectiveness tests in the dedicated proceedings.*[17]

The ISO encourages the Commission to consider the ineffectiveness of running multiple procurement proceedings relative to the efficiency of non-discriminatory, all-source solicitations. Siloed procurement proceedings that ultimately strive to fulfill the same procurement goals will likely result in higher cost and the misalignment of resource needs and attributes. As SDG&E describes, running all-source solicitations, while simultaneously allowing administratively-

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16 SDG&E at pg. 2.
17 Id at p. 2-3.

established, programmatic resource procurement, will "cause confusion in the market and cannibalize dedicated preferred resource RFOs."[18] SDG&E's point is that running both competitive and administratively-set procurement processes do not necessarily add any new incremental capacity. As an overarching procurement goal, the Commission should begin consolidating procurement activities and transitioning to competitive, all-source solicitations, particularly for system and flexible capacity, to avoid the inefficiencies and forum shopping as SDG&E describes in its comments.

Respectfully submitted,

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[18] Id., p. 4.