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)

WOMEN'S ENERGY MATTERS COMMENTS ON LTPP - ENERGY STORAGE WORKSHOP

October 9, 2012

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WOMEN'S ENERGY MATTERS COMMENTS ON LTPP - ENERGY STORAGE WORKSHOP

Women's Energy Matters (WEM) appreciates this opportunity to comment on the September 7, 2012 workshop on Storage and LTPP issues, pursuant to the ALJ Ruling of 9-14-12 and the ALJ's Oct. 4, 2012 email clarifying deadlines.

It is gratifying to see the broad scope for these requested comments, though difficult to provide thorough answers, since we are currently in the midst of the Track 1 briefing process. WEM looks forward to further opportunities for parties to explore each of these issues in more detail as Track 2 progresses.

All the same, initial groundwork for the greater use of preferred resources in procurement was laid down in Track 1, and together with this round of comments on LTPP and energy storage, could form the basis for a pilot procurement process utilizing preferred resources to ensure reliability in Los Angeles and San Diego Local Capacity Areas (LCAs) as early as the summer of 2013. The San Onofre Nuclear Waste Generating Station (SONWGS) is likely to still be out of service then, and Edison's Huntington Beach Power Plant Units 3 and 4 will be shut down in order to transfer their air credits to SCE's new facilities in Walnut Creek.

WEM recommends moving forward with the pilot as quickly as possible, as described in our answer to Q. 1.

1. What changes should be made to the rules governing the Investor-owned Utilities (IOUs') procurement process that would allow all resources (natural gas combined cycle, combustion turbine, storage, demand response, combined heat and power, renewable, etc.) to compete fairly in meeting identified needs? Please provide specific proposals for structuring an all-source procurement process.

Requirements for preferred resource providers

The rules should include specific requirements that demand resources, small renewables, storage and transmission enhancements could meet in order to qualify to compete in procurement solicitations.¹ Requirements should be striated, with different levels for

¹ The Commission would also need to determine whether demand resources will compete in "demand solicitations," or supply-side solicitations. Unless there is a specific demand-side venue, they should be allowed to compete in any type of solicitation, whether RFOs, bilaterals, etc.

meeting load-serving tasks, vs. more stringent requirements, such as those needed for grid contingencies and "operating flexibility" (aka renewables integration).

The new rules would include specific requirements to make each demand-side resource appropriately accountable for delivering resources to the grid. Track 1 LTPP Exhibit WEM X ISO-1, the ISO-New England Manual for Measurement and Verification of Demand Reduction Value from Demand Resources, provides a good starting point for requirements to make demand resources eligible for various kinds of procurement duties.

For example, Section 9: Monitoring Parameters and Variables describes M&V methodology that is mostly absent from the Commission's current EM&V for energy efficiency. This section begins by taking note of various tasks for which demand resources are well-suited:

The Project Sponsor shall specify in its Measurement and Verification Plan compliance with requirements relative to the variables that will be measured, monitored, counted, recorded, collected, and maintained to determine the Project's Demand Reduction Value during Demand Resource On-Peak Hours, Demand Resource Seasonal Peak Hours, Real-Time Demand Response Event Hours, and Real-Time Emergency Generation Event Hours.²

The requirements should put forward equivalent characteristics of various preferred resources that would allow them to substitute for characteristics such as "ramping and dispatchable," that currently apply primarily to gas resources. Storage technologies combined with many types of renewables as well as some demand-side measures, have characteristics that can meet the most stringent requirements of grid contingencies and renewables integration.

The rules should reflect potential favorable interactions among preferred resources and storage (and create a process and venue for resource providers to get new combinations qualified). For example, efficient cooling equipment (EE measures) can be combined with thermal storage devices to offer demand response capabilities as well. This way, the load can be curtailed with no impact on the customer. Such a combination of storage with EE and DR, would be one way to eliminate the "frequency" and "durability" concerns that stumped ISO in regard to demand response.³

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² Exh. WEM X ISO-1, p. 9-1.

³ ISO's witness worried that customers would not be willing to have their load curtailed repeatedly, potentially for the whole summer.

Even by themselves (without storage enhancement), certain demand-side measures have characteristics that could substitute for gas resources. For example, air conditioning ramps up throughout the day, literally creating the peak, as the sun heats up the area and air conditioners work harder to provide cooling in higher temperatures. EE measures that reduce air conditioning load can therefore substitute for "ramping and dispatchable" peaker plants.

The new rules would supplement (or replace) the Net Qualifying Capacity (NQC) list, which would no longer be a threshold requirement for participation in procurement as it is now.

Requirements for LSEs to increase competence in handling preferred resources

An important part of the rules would cover the requirements for LSEs to become more competent in handling demand-side resources, CHP, small renewables, storage and transmission/ distribution enhancements.

Data management

LSEs will need to manage data better on both the supply and demand side. We discuss this further below in Answer #3.

The Commission should waste no more time before ordering utilities to compile lists of existing preferred resources, with all the parameters important to procurement filled in to the extent they are now known. The location of the resource in relation to distribution substations is one of the most important things to track. These lists should be updated annually at a minimum, preferably monthly or quarterly.

LSEs should also compile a database of *existing conventional and renewable resources* in their procurement portfolios, noting their capabilities to meet various levels of requirements. Existing conventional resources with more flexibility could provide valuable transitional capability in the years between now and a future portfolio of all preferred resources. (See the procurement process, below, for proposed goals.)

Rather than require all new resources to have the most stringent characteristics to meet grid contingencies and operational flexibility, WEM recommends considering what resources in LSEs' current portfolios can meet those requirements. Instead of using those resources to serve load, they should be held in reserve to provide flexible capacity in the

initial months and years. That would allow time to build combinations of storage and preferred resources that could also service those needs. Opening a long-term market for those resources would rapidly reduce costs. Meanwhile, other preferred resources that meet load-serving requirements (i.e., lower bars that operational flexibility and grid contingencies) could be built quickly to substitute for the load-serving function of conventional resources.

Improved communications for emergency situations

Better communications protocols for resource providers, LSEs and ISO will be necessary for handling grid contingencies and operational flexibility. Once again, the ISO-New England Manual offers a starting point for what we need to consider in Section 9.3 *Requirements for Real-Time Demand Response Resources and Real-Time Emergency Generation Resources*, in particular the Communications protocols for Real-Time Demand Response and Real-Time Emergency Generation Resources, discussed in Section 9.3.1.

Interface between LSEs and ISO regarding distribution resources

The hearings revealed excessive secrecy on the part of SCE regarding distribution resources, which leaves CAISO with little to no visibility of the distribution grid and the preferred resources, almost all of which are attached to distribution. This should no longer be tolerated. The Commission should order utilities to provide the lists described herein to ISO.

Procurement process

WEM recommends aiming for a working target of 50% preferred resources by 2020 and 100% preferred by 2030. Climate change is on a much faster track than most people anticipated, and California should waste no time cleaning up the electricity portfolios, especially in the Los Angeles-San Diego areas, where potential LCR need is more likely to exist. This would also finally be aligned with the S. Coast Air District's goals, as well as the Clean Water Act OTC goals.

New procurement would need to focus on preferred resources, in order to meet these goals (even to meet the state's existing goals). The procurement process should be competitive, with all resources allowed to compete in an auction process. WEM

recommends a minimum contract size of ~100 kW, which could include aggregations of smaller projects. Standardized contracts would be provided to the auction winners.

WEM has proposed for the Commission to move this new process forward quickly by approving a pilot process for 2013 procurement to meet the LCR needs of the LA Basin (and San Diego) for potentially the second summer without San Onofre. The needs would be clearly laid out, specifying the amounts requested in each effective location. The boundaries of effective locations would be mapped to specific streets. A draft of the new requirements should be published in November, 2012 and the auction should be held in December, with contracts awarded in January.

SCE witnesses have stated their unwillingness to participate in a public development process for preferred resource procurement. Their testimony also rejected the responsibility to procure for their bundled customers, unless their costs could be imposed on all customers.

For these reasons, the procurement process should be removed from SCE's control. The Commission should administer the auction process (potentially with SDG&E as consultant), and order SCE and SDG&E to contract with the winners.⁴

There is some doubt about the viability of Edison as a procurement entity. Its testimony indicated concerns about its credit rating if it were required to procure power for its bundled customers. There are also concerns about the financial health of the utility and its parent company, due to expenses related to the San Onofre outage, questions about who will pay for its failed steam generators plus investigations, possible repairs, and replacement resources — and potential bankruptcies of Edison's unregulated subsidiaries.⁵

The smaller price tag for preferred resources resulting from the auction would pose less of a challenge to SCE's credit rating. If concerns persist, the Commission should consider other options.

⁴ There is precedent for such a procedure, in the energy efficiency rulemaking R0108028 in 200102, when the Commission held a solicitation, selected the winners, and ordered utilities to contract with them.

⁵ Edison's unregulated subsidiaries are facing potential bankruptcy due to their over-reliance on coal resources.

2. What amendments, if any, would be necessary to the most recent long-term Request for Offers issued by Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Edison (SCE) to ensure that all resources are eligible to compete in meeting future Request for Offers (RFO)? Are there any changes specific to meeting Local Capacity Requirements (LCR)?

SCE's 2012 All-Source RFO is clearly oriented towards gas power plants. For example, the "heat rate" chart, under *D.1. Price shapes for UC Energy Only Toll.* SCE 2012 All-Source RFO Instructions, P. 7.

SCE Instructions tacked-on a tepid invitation for Demand Response:

E.5. Demand Response

SCE is willing to consider offers for Demand Response products <u>for negotiation on a bilateral basis</u>. Any market participant or supply source interested in offering Demand Response products to SCE should contact SCE. Any offer of Demand Response products to SCE <u>will be considered outside of the All Source RFO</u> process and be subject to documentation outside of the documents related to the <u>All Source RFO</u> and be subject to negotiations on a bilateral basis. Please email SCE at RFO@sce.com for further information. Ibid, p. 10 (emphasis added).

DR resources are relegated to an anteroom to await bilateral negotiation as a "special case" rather than being considered a fully eligible resource, as it would be if it were able to meet *published criteria*. There is potential for excessive subjectivity — or simply for applicants to be ignored. Other than the email for more information, there might even be no written record of their interest, as this paragraph tells them to bypass the documentation required of other applicants. It says they'll be subject to some other documentation — but does not provide those documents.

Energy efficiency, CHP, local solar and storage are not mentioned. The "Products Solicited" are listed in a table in the instructions (p. 3), starting with Dispatchable Unit Contingent Energy Only Toll which is clearly a gas power plant. Beneath that is "Non-Dispatchable QF Resource" which may include CHP but none of the others. Next is "Resource Adequacy Capacity." We could not view what SCE had in mind there because that link is broken and a note on the RFO webpage indicates that the RA Capacity requirements are being revised and won't be available til 2013.

⁶ Pursuant to Section J.7 in the All Source RFO Instructions, Southern California Edison (SCE) hereby announces the removal of <u>Resource Adequacy Capacity</u> (SCE to Buy and Sell) (RA) from the 2012 All Source Request for Offers (RFO). SCE made this decision due to the uncertainty associated with CAISO

tariff updates for RA replacement requirements for scheduled generation outages and the CPUC's

The All-Source RFO is for all resources, *not just for Local Capacity Requirements (LCRs)*. The murky status of Demand Response and exclusion of other demand resources and CHP indicate that Edison's RFO process needs a thorough overhaul.

It is unacceptable for demand resources to languish on the sidelines in California, trying to get some unknown person to respond to emails and listen to their case.

Meanwhile on the East Coast demand resources that can meet published criteria are allowed to bid into annual auctions to win real procurement contracts from LSEs.⁷

The importance of location

The first place in SCE's RFO that we saw a reference to the location of a resource was in the description of the valuation and selection process in the All-Source RFO Instructions – in other words, it didn't seem to be requested on the forms submitted by the applicant. (See footnote 8 section on Best Fit.)

Resource costs

WEM's Opening Brief in Track 1 discussed the lack of cost estimates or cost data for preferred resources in ISO or SCE's testimony. Hearing testimony and SCE's RFO indicates that the company will use subjective information to evaluate preferred resources.⁸

consideration of flexible capacity procurement requirements for RA. Given this uncertainty, SCE believes attempting to contract for RA products on a multi-year forward basis is impractical at this time. However, SCE will consider bilateral transactions to both buy and sell RA in 2013, and requests that interested paties contact SCE.

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⁷ See ISO-New England Forward Capacity Market, http://www.iso-ne.com/markets/othrmkts data/fcm/index.html

⁸ From 2 2 SCE 2577 Pce 2 2 RFO 2 2 Postruct 2018:

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Both SCE and ISO claimed (without evidence) that preferred resource providers would not want to bid against supplies. Nothing could be further from the truth. ISO-New England's Forward Capacity Auction for Demand Resources provides ample evidence that demand-side bidders are extremely interested in participating in procurement — approximately 1000 MW of both energy efficiency and demand response were chosen in the first auction in 2009. Local solar costs are half what they were at that time, and are now comparable to desert solar projects (as explained in WEM's Opening Brief in Track 1). These too would be likely to want to bid. Solar energy costs far less than new peaker plants or CCGTs running as peakers.

3. What specific characteristics or attributes must any resource -- including demand-side, energy storage, or distributed -- provide in order to meet future procurement needs? In the absence of a Net Qualifying Capacity, what methodology should be used to determine a proxy capacity value for resources lacking a Net Qualifying Capacity for use in LCR capacity accounting? How can these characteristics or criteria be turned into criteria to evaluate resources bid into a Request for Offers to meet LCR or other needs? How should those criteria be weighted?

WEM extracted the following list of characteristics from discussions in the Track 1 hearings in this proceeding, as well as testimony and briefs. We also include elements from the ISO-New England Manual for Measurement & Verification of Demand Resources (Exhibit WEM X SCE 1).

Characteristics criteria are not "one-size-fits-all." We divide them into the following broad categories: (1) all resources, system-wide, (2) all resources, local capacity areas, (3) RA capacity, (4) grid contingencies, and (5) flexibility. (#4 and #5 have the most "stringent" requirements). There are also certain criteria that apply to specific resources —EE, DR, DG and storage.

Accountability

The resource provider must be accountable for ensuring that the resource meets the criteria at the level required by the specified category. While the stringency may vary in

different categories, the LSE must have appropriate policies in place to impose penalties (or provide bonuses), to make sure the resource "shows up" when needed.

Reciprocal criteria — requirements for the LSE as well as the resource

Some criteria are reciprocal — there is a need for the procurement entity to have

procedures that match or respond to the resource. For example, the communications

protocol to enable demand response to serve in categories #4 and #5 has requirements for
the LSE as well as the DR resource provider.

Data management.

More broadly, the LSE must keep detailed records of what resources exist in its system, correlated by transmission and distribution substation. The inventory should include particulars such as those provided in the NQC list, along with the additional characteristics discussed here. It should be straightforward to aggregate data on the resources available in any Local Capacity Area.

Telemetry is one way to provide real-time measurement of resource output, but there are other ways, including the EM&V data that is already collected for EE and DR resources. (See telemetry issues, below.)

The LSE must have data management systems to accommodate collecting, storing, retrieving and using this data. The system we propose would be far simpler than the massive one envisioned to utilize data dumps from Smart Meters (occurring every 15-minutes), and could be ready much sooner. Procurement data management systems should not be delayed pending that project's completion.

This information should be updated on a regular basis (monthly or quarterly) and provided to the ISO and CPUC. This is essential in order to avoid over- or under-procurement, especially for small resources that are easily lost (or invisible).

Telemetry should be used to improve the visibility of small renewables, CHP, DG (and

some DR and EE), to the extent that the Commission determines the price of telemetry is

Telemetry issues

feasible compared to the earnings potential of the resource.

⁹ The IOUs want to work with Livermore Labs to develop data management systems for the avalanche of data from Smart Meters.

WEM issued a data request to ISO and SCE which elicited some contradictory responses. They disagreed as to what telemetry was and was not already installed and available. The Commission should determine what telemetry requirements should be, in a public process where ISO, IOUs and LSEs participate, as well as resource providers.

Existing resources in Local Capacity Areas that can meet the most stringent criteria All existing resources in the Local Capacity Areas, regardless of the size of the resource, should be included in the inventory so they can be counted. WEM recommends reshuffling the view of the resource portfolio, so that the most flexible resources can rise to the top. Rather than assume that all of the new resources must be capable of meeting the most stringent requirements, we should first look at the capabilities of what's already there.

Proxy values for resources lacking NQC

WEM has found areas of discussion of proxy values, from Commissioner Florio's cross-examination of Mr. Millar and other testimony and hearing discussions. We would welcome an opportunity to flesh these out, in workshops devoted to this effort. They would become the basis for a published set of criteria, similar to the ISO-New England's Manual.

Elsewhere in this filing we discuss some of the ways that Demand Response could meet the quick response times needed for contingencies. These include improved communications protocols.

Quick start (aka ramping and dispatchable) varies depending on the specific need: 10, 20 30 mins. or 1 hr., respectively for "ancillary services," "load following," LCR grid contingencies, and "inter-hour energy changes." ¹⁰

The process to be considered for procurement based on proxy values could be similar to how to get on the NQC list:

Full deliverability status. During interconnection process a resource must specify if it wants to be considered for or receive the status of full deliverability. That status is reviewed annually. "An entity can also ask to take advantage of any available deliverability on a year-by-year basis." [It's not clear what is meant by "available deliverability" – it suggests limitations which aren't explained.]

¹⁰ ISO Renewable Integration Study in Support of CARB for meeting AB 1318, p. 3.

- 4. What are the pros and cons of the following procurement methods with regard to: 1) local procurement considered in Track 1 of LTPP, and 2) operational flexibility and general system procurement considered in Track 2 of LTPP?
 - A. Continuation of current practices for procurement with minor clarifications;
 - B. A "portfolio approach" that allocates, based on strategic/portfolio considerations, the total quantity of new flexible resources among various eligible resources (for example, how could/should the allocations be adjusted periodically based on current or expected conditions?).
 - a. SCE provided two proposed alternatives to filling any LCR need at the September 7, 2012 workshop, one with flexibility for SCE in procuring resources via two separate tracks, and another approach using an all-source RFO. Is there some way to blend these approaches? If so, how, and should the Commission attempt to do so?

WEM urges the Commission to hold an auction for all sources, including preferred resources, on a level playing field, to find out what is really available from the preferred resources markets. This could take place very soon, in the next few months, as part of a pilot process to acquire replacement resources during the expected continuation of the SONWGS outage in 2013.

Waiting until 2017-18 for SCE to determine costs of preferred resources (all by itself, in the backroom), as Mr. Cushnie proposed, would result in a massive over-procurement of gas resources, because those would be procured now – and only crumbs would be left in 2017 for preferred resource providers to fight over.

C. Establishing a set of minimum criteria for operational flexibility characteristics for all acquired resources;

See #1, above. New resources should not necessarily be required to have operational flexibility, because they can replace the load-serving functions of current resources, to make them available for use in contingencies and operational flexibility needs.

- D. A "strong showing" requirement that the utility must demonstrate that its procurement process was substantially open to all resource types and appropriately considered all of the values discussed above and that the resulting portfolio of resources is an optimal solution.
- E. Adjusting existing procurement mechanisms, such as the Renewable Auction Mechanism, to focus on the physical locations with needs that can be met by that programmatic resource.
- 5. At the September 7th workshop, some parties discussed retrofits to existing generation assets as a potential source of incremental capacity. What, if any, changes would need to be made to the most recent long term RFO issued by PG&E, SDG&E, and SCE to allow for incremental capacity associated with retrofits to existing generation to compete to meet Local Capacity Requirements? Are there any differences in payment streams that should be given for existing capacity, as opposed to upgraded capacity?
- 6. At the September 7th workshop, both SCE and Enernoc raised concerns that it would be difficult to procure demand response resources that match the online dates (2017 to 2020) and duration (e.g., 20 years) of the conventional generation that is being contemplated as a source of LCR capacity. How could a demand side program be authorized through this LCR procurement process that delivers an on-line date and a duration that is comparable to conventional generation? What additional values are currently attributed to demand response resources in other markets that are currently not accounted for in California, and that might be taken into account as part of an LCR procurement process?

A pilot program for 2013 procurement would allow a much earlier date for a learning process for improved demand response resources. Following this test drive, the Commission would be able to assume that demand response will be there when it's needed, and the market would develop accordingly.

Dated: October 9, 2012 Respectfully Submitted,

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