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.	R.12-03-014 (Filed March 22, 2012)

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) COMMENTS ON SEPTEMBER 7, 2012, WORKSHOP TOPICS

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Pursuant to the September 14, 2012, Administrative Law Judge's Ruling Seeking Comment On Workshop Topics and the October 4, 212, e-mail ruling of the administrative law judge, Pacific Gas and Electric Company (PG&E) files these comments addressing the six questions raised in the September 14 Ruling.

Q 1. ***What changes should be made to the rules governing the 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.***

PG&E understands the "identified needs" to include the specific operational characteristics that a *portfolio* of procured resources must exhibit. With the required operational characteristics specified for the *portfolio*, no changes are required to the rules governing the IOUs' procurement process to allow all resources to compete fairly in meeting needs identified in Tracks 1 or 2. PG&E has authority under its current Bundled Procurement Plan to conduct all-source solicitations for any procurement authorized in these Tracks.

Q 2. ***What amendments, if any, would be necessary to the most recent long-term Request for Offers issued by PG&E, SDG&E, and SCE to ensure that all resources are eligible to compete in meeting future RFOs? Are there any changes specific to meeting Local Capacity Requirements?***

In its last long-term RFO (LTRFO), PG&E sought to procure an authorized amount of new resources with a preference for dispatchability and operational flexibility. New renewable resources, new distributed generation, existing or new QFs, repowering of existing facilities, and new conventional generation were eligible to submit offers in the RFO. Though not explicitly called out in the RFO protocols, energy storage resources were eligible to and did offer into the RFO.

In order to ensure that demand response (including permanent load shifting) and energy efficiency resources are eligible to compete in a future solicitation, the protocols for PG&E's last LTRFO would need to be amended. The portions of the protocols that may need to be amended include eligibility requirements and contract options, both of which are dependent on the identified procurement needs for a future solicitation.

Once the parameters of the solicitation are established, PG&E's offer evaluation methodologies are capable of comparing all eligible offers with each other. For example, PG&E's 2004 LTRFO successfully filled a need for local capacity in the Humboldt area. Future solicitations should be specific regarding the operational characteristics that a *portfolio* of procured resources is required to have, as discussed in response to question 1.

Q 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?***

It is difficult to provide an answer to the question because of how broadly it is stated. In particular, "future procurement needs" might mean very different things. The needs identified in Track 1, for example may be very different from any needs identified in Track 2. Desired attributes will vary depending on the particular system needs at a particular time. In addition, rather than consider each resource on a stand-alone basis, it is more appropriate to consider the desired attributes of the overall *portfolio* of procured resources. Therefore, required attributes of

individual resources should not be fixed in time independent of the specific need being met.

Some resources will be more effective than others in contributing to an overall portfolio's ability to meet the identified needs. As a result, each resource can be thought of as having an effective capacity, or the amount of capacity that actually contributes to meeting the identified need, regardless of the resource's actual (e.g., program or nameplate) capacity.

The effective capacity of an offered resource might be a function of a particular system configuration and market conditions, rather than an immutable constant quantity. For example, in filling a given local capacity need, the effectiveness of each offered resource in meeting the local area need would vary depending on its operational characteristics and location within the transmission system according to the analysis that would be performed by the CAISO in its local capacity technical study. This effective capacity of each resource, rather than the actual capacity or some administratively determined capacity value, should be used in selecting the portfolio of cost-effective resources to meet the local area need.

The CAISO testimony in Track 1 indicates the need for resources to enable the CAISO to continue to be able to meet local reliability constraints in the face of the potential retirement of OTC resources. In a solicitation to satisfy the local reliability need determined in Track 1, physical location and ability to respond to system contingencies and operate during critical hours or conditions are key attributes of offered resources.

However, to satisfy any needs determined in Track 2, which are expected to be driven by the requirement to reliably incorporate increasing levels of intermittent renewable generation into the CAISO grid, fast start, high ramp rates, low minimum generation, and efficient use of fuel might be key attributes of offered resources.

As part of Track 2, there will be studies of how effective particular operating attributes of resources are in contributing to meeting specific operational flexibility needs. Again, effectiveness might be a function of a particular portfolio and system configuration rather than an immutable constant quantity. For example, a high ramp rate may be effective for some amount of MW of resource additions, but after the need for fast ramps is satisfied, other operating

attributes may be more effective in satisfying the overall system need for operational flexibility.

Therefore, to determine the effectiveness of a proposed resource to meet the identified need, it is preferable that resources be considered as a portfolio, rather than on an individual, stand-alone basis.

Q 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?

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

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.

Part A: Continuation of current practices.

There are several "pros" to the continuation of current practices. Current practices strive to evaluate resource alternatives consistently and result in cost-effective solutions given existing policies. PG&E recommends procurement practices (1) have no set asides other than those imposed by state law, (2) ensure consistent calculation of the costs and benefits for all resource alternatives equally regardless of whether resources are preferred or not, and (3) procure

resources with operating attributes useful to effectively satisfy the identified need.

There are also some "cons" in some current practices. Set asides within an LTRFO and inconsistent approaches to estimate costs and benefits can be costly, and may not provide the needed reliability and operational flexibility.

Part B: Allocation of flexible need to eligible resources prior to solicitation.

PG&E would not use the phrase "portfolio approach" to describe the approach outlined in this part of the question. PG&E would describe the approach outlined in this part of the question as a "pre-solicitation set-aside" approach. This approach is an inefficient and costly way to apportion need to resource alternatives. This approach does not consider how effective offered resources are in actually meeting the need. This approach does not consider the costs of those actual offered resources.

From PG&E's perspective, a "portfolio approach" would consider the attributes of a candidate set of resource alternatives, rather than each candidate resource on an individual, stand-alone basis. A portfolio approach would use quantitative metrics to indicate how well a candidate resource contributes to a particular candidate portfolio.

Part C: Minimum criteria for operational flexibility.

PG&E interprets the minimum criteria to mean that only offered resources that are reasonably effective in meeting the need will be considered further, and offered resources that are not reasonably effective in meeting the need will be dismissed quickly. For example, in meeting the local capacity need, a resource that has a minor effect in reducing the need because of its location within a local capacity area would be quickly dismissed from a competitive solicitation to meet the local capacity need. Incorporating such minimum criteria into a solicitation can provide significant benefits. It allows for the quick screening of offers, provides quick and clear guidance to solicitation participants, and efficiently focuses time and effort of the utility, the Independent Evaluator, the Procurement Review Group, Energy Division staff, and

interveners.

Part D: Strong showing.

There could be substantial debate over what an adequate "strong showing" is, and thus a broad requirement that the portfolio choice be defended by a "strong showing" could lead to substantial controversy. This could lead to more litigious and lengthy proceedings, thereby slowing down actually meeting the identified need. The requirements of a showing should be carefully defined and should not require the utility to disclose confidential information to market participants about the offers received and about the market values and models used to evaluate and select "least-cost, best-fit" alternatives.

Part E: Adjusting existing procurement mechanisms to focus on locations where physical needs can be met via programmatic resources

From PG&E's perspective, this type of approach is similar to the "pre-solicitation set-aside" approach identified in Part B. It is inefficient and costly to use this approach to meet resource needs. To the extent programmatic resources can meet the identified need, such resources should compete with other alternatives on an equal footing.

Q5. ***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?***

In the last LTRFO in 2008, IOUs sought to procure an authorized amount of new resources. PG&E's solicitation protocol precluded offers from existing capacity resources unless the offer was from a repowered facility. PG&E considers a repowered facility to be fundamentally different from an existing resource which has been retrofitted. A repowered facility is, in essence, a new facility on a site where a different facility had previously been located. More specifically, a "repowered facility" is a generation facility where substantial replacement of old equipment has occurred, such that the facility's performance and economic life are similar to that of a new facility of like technology.

In the 2008 LTRFO protocol, PG&E further clarified that conforming offers from repowered facilities must be newly repowered and provide at least 25 MW. Such repowers should continue to be considered conforming offers in long-term solicitations.

However, PG&E recommends against the inclusion of retrofits to existing facilities that have a remaining useful life of less than 30 years. Long-term contracts of ten years or more are driven by the economics to incentivize construction of new resources. The investment and risk criteria for a retrofit to an existing resource are driven by the short to intermediate-term procurement market. Incremental capacity resulting from such retrofits to existing facilities is more applicable to procurement under the authorized Bundled Procurement Plan procedures.

If offers for incremental capacity from a retrofit are considered as part of a long-term solicitation, several concerns need to be addressed, including the following:

- What types of retrofits would be considered conforming offers to meet a need for new resources?
- What types of improvements to the facility would be necessary for conforming offers?
    - How would an IOU separate a conforming retrofit from a minor change resulting from ongoing maintenance?
- How would the contract for the retrofit be structured? It may be impractical to separate the incremental, retrofit capacity from the rest of the existing plant. The likely result would be the need to structure a contract for the full facility, which might result in over-procurement.
- How would older, less efficient technologies from a retrofit be compared to new, up-to-date technologies found in new resources or repowered facilities? Contracting with older, existing units may support less efficient and higher GHG-emitting resources.
- How would the life of the retrofitted resource be compared to the expected longer life of a new or repowered resource?

Q6. ***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?***

The extended duration of long-term procurement contracts for new supply-side generation is generally driven by the need for the project owner to obtain financing for construction. However, demand-side response resources have different investment profile characteristics. Because of this, demand response resources can operate under shorter payback periods than those associated with new generation.

In fact, making demand response resource commitments the same length of time as may be required for new generation, without modification, may not be sound public policy. Advances are being made to demand response-enabling technologies, and costs may be reduced as time goes on. If the economics of demand response-enabling technologies improves over time, then the cost of demand response resources can be expected to fall, as well. To the extent that a longer term contract is not necessary to ensure demand response commitments in the first place, it may make more sense to use shorter term contracts, so that entities are not locked into a longer term contract if prices do fall.

One of the strengths of demand-side response resources is their ability to be deployed relatively quickly. This benefit should not be forgone simply to have all resources committed and implemented several years before the resources will be needed. Once a future resource need has been identified, to the extent that an IOU intends to meet some or all of that need with demand response resources, the Commission could require the IOU to present a plan and schedule for procuring these resources to ensure that they will be available to meet the need and throughout the duration of the need. With this in mind, it would be appropriate to execute multi-year contracts for a duration that provides a sufficient amount of certainty for both the

contracting utility while ensuring that the demand-side response resource provider can recover its costs and make a profit. If it is determined that a duration of certainty longer than the duration of the contract is necessary, then each contract can include a mechanism to re-open, rebid, extend or renegotiate during the period leading up to the expiration of the contract.

The Commission's resource adequacy rules currently allow demand response resources to meet local capacity requirements, in addition to system resource adequacy requirements. This is appropriate and should continue to be the case. Other competitive wholesale markets in the U.S. (e.g. PJM and NY-ISO) recognize the reliability value of demand response as well by treating it comparably to other capacity resources, including in local capacity zones.

Respectfully Submitted,

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