BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems.	Rulemaking 10-12-007 (Filed December 16, 2010)

OPENING COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) ON INTERIM STAFF REPORT

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I. INTRODUCTION

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission") and the Administrative law Judge's Ruling Entering Interim Staff Report Into Record and Seeking Comments (the "Ruling"), dated January 18, 2013, San Diego Gas & Electric Company ("SDG&E") hereby submits the following comments and responses in the above captioned proceeding addressing the issues identified in the Scoping Memo and Ruling ("Scoping Memo") issued on October 1, 2012 and the Energy Storage Phase 2 Interim Staff Report ("Staff Report") which was released on January 4, 2013.

II. GENERAL COMMENTS

5.2 Procurement Targets

The major issue for consideration in this proceeding is whether procurement targets for energy storage are appropriate and, if so, how much should be procured and in which applications. SDG&E respectfully submits the following comments related to the following procurement options identified by the Staff Report:

- *Procurement targets as a fixed percentage of load-serving entities' load, structured as a capacity (Megawatt) threshold, or for specific applications for storage.*

Response: SDG&E does not support establishing procurement targets for energy storage systems, for either capacity threshold or for specific applications for energy storage systems. SDG&E believes that procurement targets are not the most appropriate approach to achieve an efficient and effective deployment of energy storage systems in California. Some of the reasons supporting this position are the following:

- It is premature to determine the cost-effective deployment level of energy storage systems. The information and processes necessary for such a determination are not available or in place.
- Ratepayers should not be burdened with the cost of uneconomic energy storage systems installed simply to meet a mandated procurement target.
- Operational needs, which could differ by utility, are driving SDG&E to procure energy storage systems. These needs are driven by policy, existing equipment and customer choices.
- Energy storage technology is still nascent.
- Except for utility-scale hydroelectric pump/storage/generation facilities, utilities have limited experience operating energy storage systems.

SDG&E recommends continuing the deployment of energy storage systems on a case-by-case basis supporting different efforts including:

- Integration of utility-scale renewable energy resources added in compliance with Renewable Portfolio Standards.
- Mitigation of intermittency issues related to the installation of distribution-level photovoltaic systems by customers in support of existing state policy.
- Adoption of high levels of electric vehicles by customers while maintaining the reliability of the system.

- *Pilots or "Market Tests" focused on specific priority applications or end uses, to correspond with the expressed intent of further developing the tools for cost-effectiveness analysis.*

Response: As explained in response to the previous question, SDG&E supports the deployment of energy storage systems on a case-by-case basis. Conducting a "market test" could be an appropriate approach for some applications of energy storage systems. However, some of the current deployments of energy storage systems are a result of mitigating existing issues on the distribution and transmission systems. The decision of conducting a pilot or "market test" should be on a case-by-case basis.

- *Setting aside a dynamically adjusted portion of procurement for Local Capacity Requirements (LCR) or System need determination for "preferred" resources, specifically including storage (this could also be referred to as the "portfolio" approach).*

Response: As discussed in Procurement Option 1, SDG&E believes that setting aside a portion of procurement for Local Capacity Requirements is inappropriate. Parties can bid energy storage into existing RFO's and if energy storage meets all the requirements and is the most cost effective option, it will be procured. To the extent storage proves to be the low cost option for an identified need, it will successfully fill that need. It is worth noting no such set aside exists or is needed for EE or DR, but yet they find a place in the overall resource mix.

- *Also, as noted by legislative analysis of AB 2514, the Commission's determination could also result in a finding that no target level is appropriate.*

Response: As previously mentioned, SDG&E does not support establishing procurement targets for energy storage systems, either for a capacity threshold, or for specific applications for energy storage systems.

- *(Question posed by Energy Division during Workshop) What are the priorities for applying cost effectiveness tools to the use cases?*

Response: Please see SDG&E's responses to questions regarding "Cost-Effectiveness Methodologies" in Section 3.

III. RESPONSES TO QUESTIONS

The Staff Report sets forth specific question for Parties to answer in comments to this Staff Report, which refer to presentations made during the January 14, 2013, workshop. SDG&E respectfully submit the following responses to these questions as directed by the Commission.

1. Use Cases

- Do the Use Cases provide an adequate representation of the range of valuable applications that energy storage currently provides to the electric grid?

Response: SDG&E believes the use cases identified during Phase 1& 2 of the Energy Storage OIR provide a great baseline for the analysis of different applications for energy storage systems. The use cases recommended by the staff report cover the areas with most potential in the short term for energy storage systems. Significant progress has been achieved with the development of the use cases by all parties on this proceeding. It is important to leverage the efforts made to date on the development of the use cases. Further work within the scope of Phase 2 of this proceeding should only be focused on resolving pending issues related to the use cases already developed.

While SDG&E believes there are no significant elements missing from the use cases developed during Phase 2 of this proceeding, SDG&E recommends working towards finding solutions for the barriers identified in section 4.1 of the use cases. It is critical for further advancement of energy storage systems to establish a short-to-mid-term resolution to those

barriers. SDG&E recognizes that some of the solutions might be outside the purview of the Commission.

- Besides the section on cost-benefit analysis, which is still a work-in-progress, is there some critical element missing from the Use Cases?

Response: Please see SDG&E's response to the previous question.

2. Preferred Resources

- Why should Energy Storage be considered a "preferred resource?"

Response: Energy storage should not be considered a "preferred resource." Energy Storage should compete on the same basis as other resources in the markets that energy storage systems could participate. Considering energy storage as a "preferred resource" tilts the playing field in a way that is not economically efficient and may harm consumers. Efficient market outcomes are possible only where all resources and demand response options are considered on a level playing field. Granting a "preferred resource" status to energy storage could be an unfair practice for all resources and detrimental to the development of cost-effective products, especially given the very early stages that storage technology is in. If other technologies later are shown to be just as effective in addressing the problems that storage is targeting, would these other technologies also need to be identified as preferred resources?

Further, some parties are advocating for a "preferred resource" treatment for energy storage systems based on the assumption that energy storage systems are emissions free. SDG&E does not agree with that position. The emissions profile of energy storage systems would be dependent on the storage technology (the amount of losses involved in the charging/storage/discharge cycle) and the supply mix during charging periods. Except during the likely infrequent time periods when the output of renewable energy resources are being

curtailed, emission-producing gas-fired generation is usually the marginal source of charging power.

Accordingly, SDG&E believes that it is inappropriate and premature to assign a "preferred resource" treatment to energy storage systems. As previously indicated by the Commission in Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge *"The second phase will develop the costs and benefits for ESS and establish how they should be allocated. Since the costs and benefits for ESS are important considerations in the deployment of ESS, we will not make any final determinations on how and the extent to which ESS should be included in utility resources until both phases are completed"*[1] There are many other elements in the electric system that carry out specific roles and they are used cost effectively without the need for a special designation.

- Does the Commission need to work with Joint Agencies to modify the Loading Order or will a Commission policy statement suffice?

Response: SDG&E does not believe storage deserves special recognition in the loading order. SDG&E believes Commission policies and directions are sufficient for the near term. Thus the issue of how and when to engage with Joint Agencies on this topic, if needed, can be deferred.

- What are the implications of designating Energy Storage as a "preferred resource" in this Proceeding and for other procurement proceedings?

Response: The designation of energy storage as a "preferred resource" could be viewed by some as conferring on storage an unfair advantage compared to other options in the markets in which energy storage systems could participate. In addition, a "preferred resource" designation of energy storage systems could contribute to the selection of less cost-effective

[1] See page 3 of Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge

products in each of the markets where energy storage systems can participate. This could result in higher cost to ratepayers. It should be noted that the highest priority items in terms of the loading order--energy efficiency and demand response--still undergo a rigorous cost-benefit test before being implemented. Additionally, energy storage technologies for grid applications are nascent and will take time to mature. This creates a risk for large scale deployments.

3. Cost-Effectiveness Methodologies

- What models should be pursued for running the cost-effectiveness test?

Response: SDG&E agrees with the recommendation in the staff report to continue the analysis of cost-effectiveness using the Energy Storage Valuation Tool (ESVT) developed by the Electric Power Research (EPRI)/E3 and Energy Storage Select (ES Select) developed by DNV KEMA/Navigant. These tools may provide useful insights for the development of cost-effectiveness methodologies for energy storage systems.

- Is there a significant approach to cost-effectiveness that would meet the Commission needs?

Response: SDG&E recommends continuing the analysis of energy storage systems on a least-cost/best-fit (LCBF) approach consistent with existing CPUC policies governing Investor Owned Utility resource procurement. For energy storage systems not analyzed on a LCBF approach, SDG&E recommends using a Societal Total Resource Cost test methodology.

- To address Staff's concern that it may not be the best use of resources to run all of the Use Cases through cost-effectiveness models, is there a priority criteria or prioritized list of Use Cases that can be utilized?

Response: SDG&E recommends the use cases be run through the cost-effectiveness models indicated above in two steps. In step 1, a use case should be selected from the set of seven use cases prepared and listed in Appendix A of the staff report. SDG&E believes that any

of the use cases from the three areas (transmission-connected storage, distribution-level storage, and demand-side or customer-sited applications) is a good example to use for this task. After significant lessons learned and experience have been obtained from step 1, the Commission and interested parties should move to step 2. During step 2, the remaining 6 use cases or a portion of them should be run through the cost-effectiveness models.

- If not, how can we ensure that the analysis gets done for all the Use Cases in a timely manner?

Response: SDG&E believes that the analysis can be completed as outlined in SDG&E's response to the previous question, and within the timeframe indicated in Section 9.1 of the staff report.

4. Policy Options

- Does Staff's priority listing of Policy Options accurately represent the most important issues facing storage in the identified proceedings?

Response: SDG&E believes that the policy options identified and described in the staff report capture the most important issues facing storage within and outside the scope of this proceeding.

- Are suggested actions for resolution of barriers the best approach to advancing energy storage deployment?

Response: SDG&E agrees with the suggested actions for resolving those barriers that are within the scope of the energy storage OIR.

5. Related Proceedings

- Does the list of issues in related proceedings capture the work being done in the other proceedings described?

Response: It is critical that the issues related to other proceedings involving energy storage be discussed jointly among all interested parties. No resolution that could affect other

proceedings should be decided in the energy storage OIR. The outcome of an issue should be decided in the appropriate proceeding.

- Is there more that should be done in the identified proceedings to advance energy storage deployment, aside from establishing procurement targets?

Response: As previously indicated, it is critical that the issues related to other proceedings involving energy storage be discussed jointly among all interested parties. No resolution that could affect another proceeding should be decided in the energy storage OIR. SDG&E has identified specific uses for energy storage that provide potential solutions for identified needs. Unless new needs are identified, no additional efforts need to occur.

Respectfully submitted,

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