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)

RESPONSE OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) ON ADMINISTRATIVE LAW JUDGE'S RULING ENTERING DOCUMENTS INTO RECORD AND SEEKING COMMENTS

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I. INTRODUCTION AND BACKGROUND

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission") and the *Administrative Law Judges' Ruling Entering Documents into Record and Seeking Comments* (the "Ruling"), dated July 21, 2011, San Diego Gas & Electric Company ("SDG&E") hereby submits the following responses to the issues and questions posed by the Ruling.

On December 21, 2010, the Commission adopted its *Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems* (the "OIR").[1/] The Assigned Commissioner and Administrative Law Judge (ALJ) issued their Scoping Memo and Ruling (Scoping Memo) on May 31, 2011. The Scoping Memo indicated that the rulemaking would be split into two

[1/] The Commission opened Rulemaking (R.) 10-12-007 to implement the provisions of Assembly Bill (AB) 2514 (Stats. 2010, ch. 469). AB 2514 directs the Commission to determine appropriate targets, if any, for each load-serving entity as defined by California Public Utilities Code Section 380(j) to procure viable and cost-effective energy storage systems (ESS) and sets dates for any targets deemed appropriate to be achieved.

phases.[2] In Phase I of the rulemaking, the Commission will consider threshold issues related to the development of overall policies and guidelines for energy storage systems (ESS), including where and how ESS could be deployed to provide maximum benefits to the electric system.[3] Phase II will focus on the costs and benefits for ESS and establish how they should be allocated.[4] Because Phase I focuses upon development of guidelines, the Scoping Memo anticipated that Phase 1 may be resolved through a series of workshops, along with written comments and replies.[5]

The Ruling enters the formal and party presentations made at the June 28, 2011, workshop, held to consider ESS currently in use and the barriers and impediments to further widespread use of storage, into the record of this proceeding.[6] The Ruling invites parties to offer comments on whether they agree or disagree with these presentations.[7] Additionally, the Ruling sets forth the following questions to be addressed, which focus specifically on barriers that impede the usage or development of energy storage.[8]

1. Which barrier(s), either identified by the presenters or the CPUC, do you believe present the greatest impediment to more widespread usage of energy storage and development of ESS in California?

2. Are there other barriers that were not identified during the workshop? Please explain how these other barriers impede the usage or development of energy storage and whether they need to be resolved at the Commission or other forums. To what extent can the Commission assist in removing these barriers?

3. In your opinion, are there certain barriers that need to be resolved first, and therefore have higher priority?

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[2] Scoping Memo, at p. 3.
[3] *Id.*
[4] *Id.*
[5] *Id*, at p. 4.
[6] *Id.* at p. 2.
[7] *Id.*
[8] *Id.*

SDG&E supports implementing energy storage in the most efficient and effective manner that allows the State to achieve its desired goals, while minimizing any barriers that could impede the usage and development of EES, and ultimately increase cost to the customer. To best achieve these objectives the point of regulation for AB 2514 must balance legal, regulatory, market, and operational issues.

II.
DISCUSSION

SDG&E applauds the efforts of the Commission in addressing the objectives established for Phase 1 of this rulemaking. SDG&E also congratulates the several parties for their presentations made during the workshop held on June 28, 2011.

As previously mentioned in the above-captioned matter, SDG&E does not believe adoption of a mandatory energy storage system procurement target is appropriate at this time.[9/] SDG&E believes the adoption of a mandatory procurement target is not practical or productive. A mandate of this kind could be a likely barrier for a cost-effective development of energy storage systems. Instead, the focus should be in addressing the issues to minimize barriers by empowering and encouraging the marketplace to consider energy storage systems as one of many potential solutions to a wide range of grid issues including the integration of cleaner energy sources in California.

1. Which barrier(s), either identified by the presenters or the CPUC, do you believe present the greatest impediment to more widespread usage of energy storage and development of ESS in California?

Several barriers were identified by different parties during these presentations that could impede a widespread use of energy storage systems. SDG&E believes the following two barriers

[9/] *See* Comments of San Diego Gas & Electric on Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems, dated January, 21, 2011.

present the greatest impediment: a) lack of accurate price signals and b) inadequate markets under existing regulatory jurisdictions.

a) Lack of Accurate Price Signals

Pricing signals derived by demand and supply forces are a key element for the development of an effective market for existing and new products. Energy storage could play different roles in the market place due to its multifunctional characteristics. However, not all of these roles operate in markets that have accurate or efficient price signals. This lack of accurate price signals could generate barriers to users and providers of energy storage services. As previously mentioned by SDG&E, "the Commission's most constructive path forward towards a constructive dialogue and consensus on adoption of cost-effective energy storage systems would be to work, when possible, to ensure that markets exist so that potential applications can be judged against accurate prices, and thus the use of energy storage solutions will emerge as mission-oriented, applied research activities are expanded in the future in direct response to the natural progression of industry benefits that meet or exceed the capital costs associated with energy storage and conversion equipment."[10/] By allowing markets to exist where possible and ensuring that all parties face the actual costs, the Commission will be contributing to the efficient adoption of storage. Ensuring that parties see the actual costs and prices for storage will allow parties to determine the appropriate values for case specific energy storage applications.

b) Inadequate Markets Under Existing Regulatory Jurisdictions

SDG&E believes that the function that energy storage would fulfill in any given situation should continue to determine the regulatory jurisdiction as well as market opportunities that should be available for any particular storage project. As a result, energy storage systems can be classified as generation, transmission or distribution. However, the different functions storage

[10/] *Id.*

may provide are not mutually exclusive, and may come under different regulatory structures, including CPUC, FERC, CAISO, etc. The existing inadequate markets under these jurisdictions for these projects could impede realizing the value for all the services that cost-effective energy storage systems are capable of achieving.

For example, the Net Energy Metering program provides customers access to free storage services from their host utility. This free service diminishes the likelihood of investing in energy storage systems beyond the meter in order to capture the full value of PV systems and mitigate the intermittent nature of this generation source. This creates a complete barrier to entry for retail markets that otherwise might be available.

2. Are there other barriers that were not identified during the workshop? Please explain how these other barriers impede the usage or development of energy storage and whether they need to be resolved at the Commission or other forums. To what extent can the Commission assist in removing these barriers?

As SDG&E has stated and described earlier, "storage is not an end unto itself. Storage is one possible technology that can be employed to address issues facing the electric grid. These issues range from behind the meter customer applications, to the distribution and transmission system, to the wholesale generation market. Some applications may be very specific to a particular location, while some may be suitable for utilization in a wide range of locations and at different spatial scales."[11/]

This multi-functionality limits the ability of establishing a single process for "how to evaluate energy storage infrastructure."[12/] Energy storage should be evaluated on a case by case basis. This approach should provide the best resources to analyze energy storage proposals based on the specific issues or problems to be resolved or avoided. Establishing a generic approach could mislead the evaluation process or stall the investment on this type of

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[11/] *Id.*
[12/] *Id.*

infrastructure. The evaluation process should take into account different elements such as function, technology, location and size, among other factors. As was also mentioned in previous comments, "SDG&E believes that from an engineering, operations and cost-effectiveness model standpoint, California Investor-Owned Utilities' (IOUs) should be allowed to make any technical or operational decisions about whether their specific energy storage projects best meet the utility's territory-specific and diverse needs, developed to fully address future infrastructure planning goals, both long and short term, based on the analysis and alignment to the overall mission of the system providing reliable power to consumers."[13/]

3. **In your opinion, are there certain barriers that need to be resolved first, and therefore have higher priority?**

It is difficult to establish a particular order to resolve the barriers identified or potential barriers which may arise in the future. However, the highest priority barrier could be the lack of accurate price signals. Accordingly, SDG&E recommends the commission take the following two steps as soon as possible:

a) Focus on addressing those barriers that are clearly under the CPUCs jurisdiction during Phase 1 of this proceeding; and

b) Continue the dialogue on different forums to resolve those barriers that potentially cross over different jurisdictions such as FERC and CAISO.

III.
CONCLUSION

The multifunctional characteristics of energy storage systems add complexities for effective market development due to existing market designs and regulatory jurisdictional structures in the electric energy industry. However, existing energy storage systems provide different solutions and risks compared to other emerging technologies. SDG&E continues to support the implementation of energy storage systems as needed. From an engineering,

[13/] *Id.*

operations and cost effectiveness standpoint, electric energy storage is likely to be an important element in the mix of resources that the CAISO, electric utilities, LSE's, generators and other market participants will need for the integration of increased amounts of renewable energy resources. It is important to note that the Commission should not put a stop to the deployment of storage applications while this rulemaking is underway. Instead the Commission should address these applications on a case-by-case basis as previously recommended. Much can be learned about the cost and effectiveness of storage in addressing the needs of the electric system by pursuing targeted applications.

In addition, it is very important that deployments, pilots and RD&D have a continued or increased level of support particularly for emerging technologies of energy storage systems. The future prospects for energy storage are tremendous due to its multifunctional characteristics. It is more important is to capture this value proposition in California within all levels of the supplier-user value chain.

Respectfully submitted,

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