

June 18, 2012

California Energy Commission
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DOCKET	
12-IEP-1D	
DATE	JUN 18 2012
RECD.	JUN 18 2012

Re: California Energy Commission Docket No. 12-IEP-1D Lead Commissioner Workshop on Renewable Integration Costs, Requirements, and Technologies

To Whom It May Concern:

On June 11, 2012, the California Energy Commission (“Energy Commission”) held a Lead Commissioner Workshop on Renewable Integration Costs, Requirements, and Technologies (“the Workshop”). The Workshop was part of the Energy Commission’s 2012 Integrated Energy Policy Report Update (“2012 IEPR Update”) process. Southern California Edison Company (“SCE”) appreciates the opportunity to provide these written comments.

Implementing the State’s renewable energy policy goals has and will continue to have a dramatic impact on grid operations and planning. Increasing amounts of intermittent renewable generation will require additional balancing resources to maintain system reliability. The California Independent System Operator (“CAISO”) is currently engaged in a stakeholder process, in which SCE is an active participant, to design the market products necessary to address the need for additional balancing resources. However, as the CAISO stated at the Workshop, these reforms alone will not be enough to ensure that sufficient physical capacity will be available to meet these additional balancing requirements and as such, new capital investments in flexible resources will be necessary. Studies conducted in support of the 2010 Long-Term Procurement Plan (“2010 LTPP”) forecasted a range of new flexible capacity need from 0 to 3,900 MW in likely cases (driven by differences in thermal generation retirements and additions assumptions and in treatment of day-ahead forecast uncertainty) and up to 8,200 MW (based on 1-in-10 load conditions).¹ At the CAISO, work is on-going to determine more precisely the size and timing of the need for flexible capacity.

SCE is currently engaged in a number of activities to investigate the readiness and value of a number of advanced technologies that may provide flexible products and is supporting efforts to transition current or planned utility demand response programs to enable participation in the CAISO’s ancillary service markets. As industry knowledge is developed on these topics, SCE recommends that the Energy Commission support foundational changes that create a framework for ensuring that the State’s utilities invest in only the most cost-effective solutions for managing renewable integration. These changes are outlined below.

¹ This information was submitted jointly by SCE, Pacific Gas and Electric Company, and San Diego Gas and Electric Company in CPUC Docket R.10-05-006 (Track I LTPP) on July 1, 2010.

Support Forward Capacity Markets for Integration Products and Traditional Capacity Products

SCE encourages the Energy Commission to support a CAISO-administered forward capacity market. In August 2007, SCE submitted comments to the California Public Utilities Commission (“CPUC”) in Rulemaking 05-12-013 as part of a coalition supporting a CAISO-administered forward capacity market that would secure generation and other needed capacity three to five years ahead of actual delivery. That filing argued that a market-oriented approach, relying on a centralized auction for forward capacity, would provide significant benefits as compared to the current Resource Adequacy program, which relies exclusively on bilateral contracting and only contains a prompt-year obligation.

The CAISO’s recently articulated need for “flexible capacity”² and the issues related to the retirement of generating facilities further strengthen SCE’s conclusion that a forward, centrally-run capacity market mechanism presents a clearly superior solution to market issues when compared to the current bilateral Resource Adequacy program. Further, such a market represents the most-viable long-term solution to the State’s resource planning issues, such as the need to ensure adequate flexibility, driving a rational capacity expansion that creates the greatest value for electricity customers. The proposed forward capacity market provides the following benefits.

- Greater certainty to market participants - A forward auction allows generators to make informed decisions as to whether they should continue operations, make additional investments, or retire a facility at some point in the future. Further, this framework creates a regulated, transparent and rational process for ensuring adequate capacity that also provides the CAISO with years to develop alternative ways to sure up needed capacity if the auction mechanism does not produce sufficient supply. This will ensure that the CAISO has the right amount of resources at the right locations in the grid to provide reliable system operation.
- Broad participation in a flexible environment - The forward capacity market allows for the consideration of other technologies in addition to generation (such as demand response and transmission enhancements). Further, both existing resources as well as new resources, could participate in the process. The mechanism is robust enough to easily accommodate other attributes or requirements in addition to “local” and “system” capacity, such as “flexible” and “inflexible.”
- Fair and efficient cost allocation - In an environment in which load has the ability to move among service providers and Load Serving Entities’ (LSE) do not have certainty regarding their long-term Resource Adequacy requirements, the centralized capacity market ensures a fair capacity cost allocation to all market participants irrespective of migration of customers among energy providers by allocating costs based on metered load.

² <http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleCapacityProcurement.aspx>

- Greater transparency - The proposed approach creates a transparent price signal for the value of various resource attributes, such as location near load or flexibility. Additionally, the approach allows for formal market power mitigation and market monitoring rules to help ensure just and reasonable market results.

Design Markets and Policies Consistent with the Cost Causation Principle

During the public comment portion of the Workshop, SCE reaffirmed the importance of designing markets and policies such that costs imposed on the utility system are borne by the actor(s) responsible for those costs. Doing so will provide the greatest flexibility for market participants to find least-cost solutions. For instance, owners of intermittent generators may choose to balance the facility's generation through locating balancing technologies, such as energy storage, on-site or by relying on the wholesale markets. Additionally, assigning costs directly to those who cause them will prevent a number of unfair cost-allocation scenarios. For instance, California electricity customers would currently pay for balancing intermittent generators located in California but exporting electricity out-of-state. This is also an issue for California non-CAISO balancing authorities (e.g. Sacramento Municipal Utility District) with resources located within CAISO. Within CAISO, LSEs with relatively less intermittent renewable portfolios pay some of the costs to balance LSEs with relatively more intermittent renewable portfolios.

For further information, please refer to SCE's comments filed on the Lead Commissioner Workshop on Renewable Energy Costs.³

Promote Technology Neutrality with Regard to Energy Storage

SCE supports and emphasizes several of the themes raised during the presentations on energy storage. The principal policy goal for energy storage should be to create a level playing field such that storage (and other emerging technologies) can fairly participate in markets and competitive solicitations. SCE has been active in the energy storage rulemaking at the CPUC to identify the regulatory barriers currently preventing storage technologies from competing on an equal footing. Many of these barriers relate directly to other themes addressed in the Workshop. For example, the inability of utilities to factor integration costs into procurement decisions is a significant regulatory barrier to energy storage development.

SCE also supports analyzing the economics and regulatory issues of storage using an "application-specific" approach consistent with the description presented by the CPUC in its presentation at the Workshop.⁴ This approach recognizes the diversity of storage products and the fact that a single global policy for storage is inappropriate. This approach focuses on specific needs and requirements of the grid, and then considers technologies that can best satisfy those needs. With this methodology, utilities can identify the solution offering the

³ http://www.energy.ca.gov/2012_energy_policy/documents/2012-05-22_workshop/comments/Southern_California_Edison_Company_Comments_2012-06-05_TN-65615.pdf

⁴ http://www.energy.ca.gov/2012_energy_policy/documents/2012-06-11_workshop/presentations/21_ODonnell_CPUC_Final_IEPR_061112.pdf

greatest customer value for solving a given grid problem, whether that solution is storage, another emerging technology, or conventional resources.

In addition, SCE recommends the following guiding principles in the development of energy storage policy:

- Storage may provide a means for solving particular grid challenges, but it is not a solution in and of itself,
- Whether energy storage is an appropriate approach to addressing a particular problem and which energy storage technologies should be selected should be based on an evaluation of the specific needs of the transmission system as opposed to any preconceived or structural bias toward a particular technology, and
- Options to deploy energy storage systems in the future should be maintained.

In conclusion, SCE recognizes that there will be a number of approaches, technologies, and investments that can be deployed to help minimize the costs and impacts of intermittent renewable generation. The Energy Commission can therefore best support optimal expansion and development of these resources by supporting a policy and market framework that promotes broad technology-neutral competition, is flexible enough to incorporate unforeseen changes and advances, and creates accurate, fair prices to signal appropriate development where needed.

As always, SCE appreciates the Energy Commission's consideration of SCE's comments. Please do not hesitate to contact me at (916) 411-2369 regarding any questions or concerns you may have.

Very truly yours,

/s/ Manuel Alvarez

Manuel Alvarez