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California Energy Commission
Docket Office, MS-4
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Re: California Energy Commission Docket No. 12-IEP-1D Lead Commissioner Workshop on Renewable Energy Costs

To Whom It May Concern:

On May 22, 2012, the California Energy Commission ("Energy Commission") held a Lead Commissioner Workshop on Renewable Energy Costs (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") participated in the Workshop and appreciates the opportunity to provide these written comments.

SCE appreciates the Energy Commission's effort to increase its understanding of the costs associated with renewable energy and their impact on customer electricity bills in California. In an environment where electricity rates are expected to increase substantially, an understanding of rate-cost trends is essential to limiting cost impacts on customers while simultaneously working toward meeting the State's policy goals safely and reliably. In addition to achieving 33% renewables, other major policy initiatives are designed to increase procurement of distributed generation, combined heat and power, and demand response and eliminate once-through cooling at coastal power plants potentially reducing the availability of flexible resources. The Energy Commission should minimize neither the direct impact of renewable energy policies on increasing costs nor the potential for losing customers' support for these policies going forward. Approximately $44 billion of additional investment in renewable resources is needed system-wide[1] to meet the Renewables Portfolio Standard ("RPS") goal.[2] Further, current renewable energy policies will require adding substantial amounts of new generating resources to the electricity system over the next ten years. As a result, mandates for procurement will require SCE to purchase capacity that its customers do not need. SCE will likely not have a need for new resources to meet our customers' peak load until after 2020.

[1] Representing the service territories of the three IOUs, including municipal utilities and community choice aggregators ("CCA").
[2] This number calculated by multiplying the incremental installed capacity from 2011 assumed in the 2010 Long-Term Procurement Plan Joint Investor Owned Utility case for each renewable technology and 2010 LTPP assumed capital costs for each renewable technology.

In recognition of this environment, SCE recommends that the Energy Commission focus on ensuring that efficient policies are developed in the long-term. To support this, SCE offers the following recommendations:

1. Maintain or reduce existing policies and programs;

2. Rely on competition where possible; and

3. Support policies consistent with the principle of cost-causation.

These recommendations are discussed in more detail below followed by general comments on renewable energy costs and rate design issues.

1. Maintain or reduce existing policies and programs

The dramatic acceleration of renewable development over the past years has placed tremendous strain on State planning processes (e.g., interconnection) as discussed at Energy Commission workshops and addressed in the Energy Commission's report, "Renewable Power in California: Status and Issues."[3] While the State has made progress in redesigning these processes, significant effort and resources have been expended to accommodate the State's aggressive renewable goals. SCE believes that a more reasoned approach to promoting renewable development would have smoothed this policy implementation. Further, many of the updates to these processes are only partially implemented and cannot be evaluated for full effectiveness at this time. SCE suggests that the Energy Commission allow for sufficient evaluation of these updated processes and avoid dramatic changes to the current policy landscape.

The Energy Commission should also holistically evaluate the numerous procurement programs currently in place and consider how these programs could be combined and simplified. For instance, most renewable energy project types and technologies have at least five separate SCE procurement programs from which to choose for participation. These programs are not only duplicative, but are also administratively burdensome to maintain, thereby increasing total program costs. Additionally, the presence of multiple procurement options allows developers to strategically participate in those programs that offer the highest price. A well-reasoned consolidation of these many programs will lead to lower costs for the State's electricity customers.

2. Rely on competition where possible

Competitive pricing mechanisms provide the greatest cost-saving opportunities for the State's electricity customers. Unlike administratively set prices, competitive processes allow the cost-savings realized by lower cost projects to translate into direct savings for customers through lower priced contracts. Further, utility solicitation processes are best-suited for evaluating the costs and benefits associated with different generating technologies and projects. Utilities can therefore select the most cost-effective resource portfolio to meet the State's energy policies goals. In response to its 2011 RPS solicitation, SCE received

[3] http://energy.ca.gov/2011publications/CEC-150-2011-002/CEC-150-2011-002-LCF-REV1.pdf

more than 1,400 offers. Such a robust response allows SCE to select only the best projects to serve its customers. This high solicitation response also demonstrates that competitive pricing mechanisms are more than sufficient for supporting development. The Energy Commission should therefore support broad competitive markets that allow many potential generators to compete and utilities to select the most cost effective resources to serve the State's electricity customers.

Additionally, the Energy Commission should leverage technology-neutral solutions to renewable integration and to encourage least-cost market or grid transformation. This can only be accomplished through reliance on broad, technology-neutral market mechanisms that allow for many different technologies to compete on an equal basis. In this environment, decision makers can assess total value on a project-by-project basis and ensure that only those solutions with the greatest net customer benefit are developed. As such, the Energy Commission should be concerned primarily with market failures and barriers to entry and not with determining *a priori* which solutions the state should pursue.

3. Support policies consistent with the principle of cost-causation

To encourage economically efficient investments in electricity infrastructure, the Energy Commission should only support policies that are consistent with the cost causation principle, whereby costs imposed on the utility system are borne by the actor responsible for those costs. This principle impacts a number of topics discussed at the Workshop.

First, the cost of resolving renewable intermittency should be borne by intermittent generators, thereby encouraging developers of intermittent generation to seek efficient solutions for mitigating that intermittency. Cost-causation practices yield price signals that give technologies that can potentially mitigate these costs a chance to become viable in the marketplace. Such signals do not exist when costs are socialized across all electricity customers. Additionally, abiding by the principle of cost causation will allow utilities to understand the total cost of intermittent renewable resources and better compare these resources to the total cost of dispatchable or baseload renewable resources. The Energy Commission should support efforts to include this cost in all solicitations for renewable generation as a bid-cost adder.

Second, customer electricity rates should also be designed based on cost-to-serve principles. Such a practice exposes customers to the costs of their actions, reducing cross-subsidies and empowering customers to more responsibly evaluate grid-related behaviors or actions. For instance, net energy metering ("NEM") does not support efficient investment in distributed renewable generation because NEM customers can avoid costs that they are still imposing on the electricity system, thereby creating an inconsistency between private and social costs and benefits. Without accurate pricing, the most efficient investments will not be made to minimize renewable energy costs in the future.

General Comments on Renewable Energy Costs and the Comparative Cost of Generation Report

Levelized cost estimates, such as those produced by the Energy Commission's Comparative Cost of Generation Report, cannot be used to compare the relative value of different generating technologies. SCE agrees with Aspen's presentation provided at the Workshop for two main reasons. First, most levelized cost estimates do not capture the relative value of the energy produced by different resources. For example, wind and solar resources tend to produce energy at different times during the day. This means that the total value of each resource will be different for the same amount of generation. Capturing these differences requires an estimate of market marginal energy and capacity costs. One way to accomplish this is to use production simulation software as was done in the 2010 Long-Term Procurement Plan. Second, the market price for contracting with a particular resource will depend on the current market and regulatory environments. The Energy Commission's Comparative Cost of Generation Report has great value as a public source for technology cost estimates but should not be used to inform the State's renewable energy policies.

Impacts Resulting from Rate Design Issues and Other Cost Drivers May Exacerbate Renewable Energy Driven Cost Increases

SCE appreciates the Energy Commission's efforts to understand the impact of rate design on the allocation of renewable energy costs. Rising electricity rates will not affect all customers equally. This is especially true for residential customers. The energy-only, tiered rate structure and the California Alternative Rates for Energy ("CARE") program place most cost increases on higher-usage, non-CARE customers, whose rates are already substantially greater than their marginal cost of service. This trend further distorts the prices that customers face, discouraging otherwise economic investments in energy efficiency and encouraging uneconomic investments in distributed generation. For instance, NEM customers avoid electricity costs at a rate of 24 cents/kilowatt-hour[4] for the same renewable energy from a central station that costs at most half of that. The cost of these uneconomic decisions is borne by customers not receiving the benefits of such subsidies. SCE is concerned that these customers will be unfairly burdened with absorbing the bulk of cost increases going forward, whether driven by policies or other factors. The Energy Commission should therefore support efforts to reform rate design consistent with the cost-causation principle and recognize that system average rate forecasts present an incomplete picture of relative customer impacts.

Over the next 10 years, SCE expects a steady increase in rates resulting from efforts to meet its RPS goals. In addition to the costs of renewable energy, SCE notes that a number of other factors will impact rate increases going forward, making it difficult to forecast how and when renewable costs will impact customers. For instance, while SCE's rates have benefited from low natural gas prices and will benefit in the near term from the expiration of purchase power contracts with the California Department of Water Resources at the end of 2011, these benefits should not be expected to continue indefinitely. Additionally, SCE recognizes that it is often difficult to determine which costs directly result from renewable

[4] http://www.energy.ca.gov/2012_energypolicy/documents/2012-05-22_workshop/presentations/09_Garwacki_SCE-Retail_Rate_2012-05-22.pdf

energy policies. For example, resources needed to meet local reliability needs may also be used to balance intermittent renewable resources and thereby mitigate the total perceived cost of intermittent renewable energy.

In conclusion, the State is making significant progress toward meeting its renewable energy goals. As such, the Energy Commission should support incremental policy changes that will allow utilities to most efficiently meet the State's energy policy goals and allow time to evaluate the effectiveness of current policies. SCE believes that doing so will ensure that California's electricity customers can continue to support the State's energy policy goals.

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
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