

July 6, 2011

California Energy Commission  
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**11-IEP-1G**

**DOCKET**

**11-IEP-1H**

DATE	JUL 06 2011
RECD.	JUL 06 2011

Re: Southern California Edison Company ("SCE")'s Comments in Docket #11-IEP-1G and #11-IEP-1H Regarding Distribution Infrastructure and Smart Grid

To Whom It May Concern:

On June 22, 2011, the California Energy Commission ("Energy Commission") held a Committee Workshop on Distribution Infrastructure Challenges and Smart Grid Solutions to Advance 12,000 Megawatts of Distributed Generation (the "Workshop") in connection with the 2011 Integrated Energy Policy Report ("2011 IEPR"). SCE appreciates the opportunity to provide its comments on the Workshop. Below, SCE provides an overview of the general distribution challenges associated with the Governor's plan to install 12,000 megawatts ("MW") of localized energy resources ("LERs") onto the electricity grid by 2020 and the role Smart Grid technology may play in this plan. SCE will provide direct responses to the questions raised by the Energy Commission in its Workshop notice attachment in a follow-up filing.

## **I. Distribution Challenges Associated with High Penetrations of LERs & The Role of Smart Grid**

The Governor's plan of integrating 12,000 MW of LERs into California's distribution infrastructure raises several major concerns for SCE. These include both the definition of "localized energy resource" for purposes of meeting the Governor's plan as well as the impact of these additional LERs on system reliability and customer electricity rates.

### **A. LERs Defined**

SCE prefers to use Governor Brown's original term "localized energy resources" (or "LERs"). The term "distributed generation" or "DG" is often misunderstood and is subject to a variety of different meanings. SCE recommends that a clear definition of the term LERs be established before any formal LERs policy is adopted. Without a clear definition of LERs, there will be no way to determine whether the Governor's plan of 12,000 MW can be met. Additionally, this definition must be broad enough to ensure that the 12,000 MW plan can be achieved without sacrificing grid reliability or placing upward pressure on customer rates.

## **B. System Reliability**

System reliability must be a matter of paramount concern when considering approaches to adding large amounts of LERs to the electricity grid. Any LERs program would require studies of the potential system impacts of such a program on the electricity grid. The results of these studies must be relied upon in determining how to define and accommodate increased LERs through system redesign and deployment of new system hardware. New control systems and compliance standards need to be developed in conjunction with this redesign and system hardware deployment.

SCE is currently active in several forums that are investigating methods to prepare the electricity grid for a potential increase in penetrations of LERs. Some of the modifications being considered in these forums are currently untested and some require changes to existing standards and operating protocols that are likely to take several months to several years to develop and implement. All of these proactive efforts, while time-consuming and costly, are essential to adopting solutions that will enable SCE to accommodate increasing levels of LERS, while maintaining system reliability and safety. As will be detailed in SCE's follow-up filing, some work is already underway to understand the impact high penetrations of LERs will have on the transmission and distribution network. As part of its ongoing Smart Grid efforts, SCE plans to identify and eliminate barriers and develop the technologies necessary to advance the energy and voltage control systems that are necessary to ensure the future grid will be capable of receiving higher numbers of LER interconnections without compromising reliability or safety.

## **C. Costs of Implementation**

SCE is also concerned about the impact of additional environmental policy requirements, including policies designed to increase LER penetration, on utility operating costs. The capital investment to the transmission and distribution system and operating costs required to integrate a significant number of LERs on the electricity grid will put upward pressure on customer rates. When these cost increases are combined with cost increases caused by other initiatives – e.g., the California Air Resources Board's ("CARB") pending cap and trade program, the 33% Renewables Portfolio Standard ("RPS") and procurement of Combined Heat and Power ("CHP") resources – the cumulative upward pressure on customer rates may be significant. In addition, providing monetary incentives for LER system owners would only exacerbate this cost impact by transferring the net system cost burden from those receiving the incentives to non-participating customers.

For all of the abovementioned reasons, SCE urges the Energy Commission and the Governor's office to consider various flexible options in developing the timeline and strategy for implementing the Governor's plan.

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If you have any questions or need additional information about these written comments, please contact Manuel Alvarez at (916) 441-2369.

Very truly yours,

/s/ Manuel Alvarez ..

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