

July 29, 2011

California Energy Commission  
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<b>DOCKET</b>	
<b>11-IEP-1F</b>	
DATE	JUL 29 2011
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Re: California Energy Commission Docket No. 11-IEP-1F: Comments on Draft Staff Report on Achieving Energy Savings in California Buildings

To Whom It May Concern:

On July 20, 2011, the California Energy Commission (“Energy Commission”) held a staff workshop on Achieving Energy Savings in California Buildings (“the Workshop”). The Workshop was held as part of the Energy Commission’s 2011 Integrated Energy Resource Policy Report proceeding (“2011 IEPR”). Southern California Edison Company (“SCE”) participated in the Workshop and appreciates the opportunity to provide these written comments on the Workshop and on the Draft Staff Report entitled “Achieving Energy Savings in California Buildings” (“Report”).

### **SCE Supports Increasing Energy Efficiency and Demand Response in Buildings**

SCE supports the policy goal of achieving a cleaner energy future by cost effectively reducing building energy use in California. As an administrator of one of the nation’s largest, most successful, and cost-effective energy efficiency and demand response portfolios, SCE continues to support California’s Clean Energy Future through the policy goals as outlined in the California Long Term Energy Efficiency Strategic Plan.<sup>1</sup> These ambitious goals are manifested in the “big bold strategies” referenced in that plan. Further, meeting the goals of Assembly Bill 32 (“AB 32”), California’s Global Warming Solutions Act, will require continued, aggressive energy efficiency efforts.

Currently, SCE is exploring an approach to energy efficiency in buildings that provides customers with a set of solutions that considers the least cost over the useful life of the systems not just the simple payback of the initial investment. SCE believes that this approach offers the best path to achieving deep energy reductions in California buildings because it considers the customer-specific attributes and economics. Designing for zero net energy (“ZNE”) may not be appropriate for every building. Therefore, a building that is able to achieve significant reductions but lacks the characteristics necessary for cost effective on-site renewable generation should

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<sup>1</sup> Available at: <http://www.cpuc.ca.gov/PUC?energy/energy+efficiency/eesp/eesp.htm> and follow link to Energy Efficiency Strategic Plan.

not be considered a failure. For example, a building may be heavily shaded by trees preventing the use of on-site solar generation. In other words, the ZNE program should recognize that ZNE should be the goal, only where it is economically and technically feasible to achieve ZNE.

### **The Loading Order Should Always be Maintained**

SCE also supports the state's ZNE buildings program goals, but believes that ZNE should be the result of a demand side management solution that is consistent with State's preferred loading order as prescribed in the State's Energy Action Plan.<sup>2</sup> This means that cost effective energy efficiency measures would be pursued first, followed by demand response (if appropriate), and, only then, would renewable distributed generation be used. An emphasis should be placed on maximizing cost-effective demand side management, namely energy efficiency and demand response.

### **ZNE Should Tailor Goals to Each Market Segment**

The most cost-effective way to approach ZNE is to focus on designing programs tailored to each market segment or building type, i.e., warehouses, big box stores, industrial facilities, retail buildings, office buildings. This is because each market segment will have different priorities and load profiles. For example, big box stores may be more amenable to lighting and air conditioning changes than a small jewelry store whereas office buildings may be able to make more adjustments to computer infrastructure than big box stores who rely heavily on their computers for customer transactions. Portfolios should be designed to help the customer make the appropriate trade-offs necessary to achieve deep energy reductions. This is the best path towards ZNE.

SCE believes that the Energy Commission should work to develop a better understanding of the economic potential that exists within each market segment considering the impact of the current economic climate.

### **Building Codes and Standards**

The draft report recommends the Energy Commission pursue 20-30% efficiency improvements in each 3 year revision cycle for Title 24. This is inconsistent with the Long-Term Energy Efficiency Strategic Plan. SCE encourages the Energy Commission to identify the long-term goals when considering recommendations for code efficiency improvements.

When focusing on executing a strategy for successfully achieving significant energy reductions through the use of codes and standards, SCE suggests that the Energy Commission consider the impacts of the legal and practical barriers that exist.

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<sup>2</sup> "Energy Action Plan II, Implementation Roadmap for Energy Policies." California Energy Commission and California Public Utilities Commission, Sept 21, 2005

Both Title 20 (the Appliance Standard) and Title 24 (the Building Standard) are limited in their ability to meet aggressive energy efficiency goals because they cannot include specific measures of higher efficiency than the applicable federal standards. The following are examples of federally regulated efficiency levels.

- Air conditioning, which typically makes up 10% of building electricity consumption.
- Space heating and water heating equipment, which is typically 83% of natural gas consumption and
- Plug loads, which are typically responsible for 54% of building electricity consumption.

Any additional energy efficiency savings from these appliances through codes and standards require changes at the federal level. Moreover, state building efficiency codes must be based on minimum federal efficiency levels, which could prevent California from reaching energy efficiency, ZNE and GHG goals in a cost-effective manner. SCE encourages the pursuit of legislative or administrative relief so the federal appliance efficiency regulations become the floor not the ceiling for California building and appliance efficiency standards.

As a result of the abovementioned preemption issues, the state needs a comprehensive regulatory approach which accounts for these preemptions. Furthermore, a plan with projected energy savings of each component of the plan is needed so that resources can be appropriately allocated and activities can be structured to produce the desired outcomes.

A successful building retrofit effort is essential to achieving California's energy efficiency goals. For any given year, new construction accounts for only 1-2% of existing building stock. SCE recommends that the state take several additional actions to eliminate existing barriers to achieving significant energy savings through the retrofit of existing buildings.

1. Revisit CPUC rules that require retrofit savings be based on code baselines; this limits the breadth and scope of utility retrofit programs.<sup>3</sup>
2. Develop and maintain an electronic repository with sophisticated data analysis tools and with user friendly interfaces to simplify code compliance and code enforcement. As building standards become more stringent they often become more complex, thus rendering them more difficult and more costly to enforce. Electronic record-keeping, error checking and scheduling can simplify the tasks for building departments and reduce their costs.

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<sup>3</sup> McHugh, J., Mahone, D., Bruceri, M., and Eilert, P. *A New Class of Retrofits: "Repair Indefinitely"* Proceedings of the 2010 ACEEE Summer Study of Energy Efficiency in Buildings.

3. Develop an implementation plan for rating all homes and buildings over the next 10 years and require this data for posting on the multiple listing service (“MLS”) databases. Rating of all homes prior to sale would result in a transparent market for homes where purchasers can make rational cost decisions based on the total cost of ownership including energy costs. This will help motivate property owners to make efficiency improvements.

As always, SCE appreciates the opportunity to submit its comments for your consideration. Please feel free to contact me regarding any questions or concerns.

Sincerely,

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