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California Energy Commission Docket Office, MS-4 Docket No. 08-IEP-1D 1516 Ninth Street Sacramento, CA 95814-5512 docket@energy.state.ca.us

> Re: California Energy Commission (Energy Commission) Docket No. 08-IEP-1D:

Written Comments of Southern California Edison Company (SCE) On August 18, 2008 Integrated Energy Policy Report (IEPR) Workshop

To Whom It May Concern:

In fulfilling its recommendations from the 2007 IEPR, the California Energy Commission (Energy Commission) is taking on the challenge of applying modern portfolio theory to the analysis processes in support of the California Public Utility Commission's (CPUC) Long Term Procurement Plan (LTPP).

The Energy Commission recommended changes to the LTPP process include:

- Using common planning assumptions
- Extending the period of analysis
- Focusing on the "efficient frontier" of procurement portfolios from a consumer perspective utilizing a cost based metric
- Discounting future fuel costs at the 3% social discount rate

At the August 18<sup>th</sup> Workshop, the Energy Commission staff discussed the current status of its efforts including decisions on common planning assumptions. Additionally staff presented the white paper *Discounting Future Fuel Costs at a Social Discount Rate* (Staff Paper). Accurate application of a risk-adjusted discount rate is critical to ensure that the utility is making the appropriate procurement decision on behalf of its ratepayers. SCE agrees that both utility and customer interests should be aligned<sup>1</sup> and that procurement decisions should be evaluated on that basis. SCE appreciates staff's thorough review of the applicable literature, but has significant concerns regarding some of the methods described in the Staff Paper. (SCE) is pleased to offer these comments in response to the Committee Workshop on Long Term Procurement Planning (LTPP) and Social Discount Rates.

<sup>&</sup>lt;sup>1</sup> 2007 California Energy Commission's Integrated Energy Policy Report, page 67;

#### 1. The collaboration efforts of the CPUC and CEC staffs is working well

The staff's of both the Energy Commission and the CPUC have collaborated well and made significant progress toward the selection of common assumptions for use by the Investor Owned Utilities' (IOU) for their LTPP reference case scenarios. These assumptions include the load forecast (including energy efficiency) and natural gas price forecasts. These assumptions form the foundation of the procurement analysis. Several other areas are still under consideration. The issue of extending the period of analysis is not yet resolved.

## 2. Regulators should incorporate environmental impacts as targets and analyze and compare their financial impacts

In the current regulatory environment, resource portfolios must meet environmental impact requirements. The cost impacts of these requirements become a consumer financial risk. In order to provide the opportunity to minimize the consumer risk, regulators should set targets for environmental requirements and allow utility planners to select the manner is which those targets are met. The less prescriptive the method is to meet the requirements, the greater the chance for a low financial risk solution.

SCE believes that a more effective way to develop efficient resource portfolios is through scenario analysis. SCE uses portfolio theory to assess natural gas price risk and then uses the results to develop a natural gas hedging strategy. Especially given the current constraints on resource portfolios, scenario analysis is an effective tool for resource portfolio development.

### 3. It is Appropriate to Use a Ratepayer Discount Rate to Evaluate Investment Decisions Made on Behalf of Ratepayers

When evaluating and comparing various long term procurement opportunities, a key challenge is to objectively compare resource options with larger initial expenditures and lower marginal fuel costs to those with lower initial expenditures and higher marginal fuel costs. The discount rate should create a common level of evaluation, in which the two procurement opportunities can be objectively and fairly compared. Because we are making procurement decisions on behalf of our customers, it is appropriate to use a risk-adjusted ratepayer discount rate of around 7% real. SCE's corporate incremental cost of capital is a reasonable proxy for a ratepayer discount rate and the private sector opportunity cost of capital for our ratepayers. Further, renewable generation involves the allocation of private capital, thus the application of a private, risk adjusted discount rate is appropriate. The literature cited in the staff report suggests our choice of discount rate. In particular:

"The 7 percent rate approximates the opportunity cost of capital, and it is the appropriate discount rate whenever the main effect of a regulation is to displace or alter the use of capital in the private sector."<sup>2</sup>

Using a corporate incremental cost of capital as a discount rate also aligns our economic decision making with the investment-related costs charged to our customers.

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<sup>&</sup>lt;sup>2</sup> Staff Paper at 3.

# 4. For Utility Procurement Decisions, a Risk Adjusted Rate of Return is the Appropriate Social Discount Rate

Some of the sources cited in staff's literature review indicate that A risk-free rate would be a reasonable social discount rate for purposes of utility procurement. However, as stated above, generation investment is characterized by private capital investment and thus the appropriate social discount rate is a ratepayer based, risk adjusted rate of return. For the reasons stated below, a risk-free rate of return is inappropriate for utility procurement and transmission investment decisions.

- Utility capital investments are inherently risky. It would be inappropriate to evaluate them using a risk-free rate of return. Doing so would incorrectly bias utility procurement decisions toward capital intensive projects, by not properly accounting for the risk of non-performance.
- Using a risk-free discount rate for economic evaluation of utility investments creates a disparity between the discount rate used for economic evaluation and the cost of capital used to charge utility customers for the investment.

• An investment may have a public goods nature, but this does not change the appropriate discount rate to be applied. The extent to which an investment can be characterized as a public good does not change the total risk of the investment.

There are a few instances where the use of a risk-free rate is appropriate. The most noteworthy is in options pricing. However, the option pricing model contains an explicit factor that is intended to fully capture all risks associated with owning the underlying asset. This is impractical in resource investment analysis of the form utilities typically perform.

### 5. A Customer Mortgage Interest Rate Is Not Appropriate for Evaluation of Utility Investment

The Staff Paper also suggests that an after tax, private mortgage interest rate could be used for utility generation investment. The home mortgage interest rate incorporates minimum equity requirements and as such offers a good proxy for investments made in homes. However, because the home mortgage market presents a much different risk profile than does utility grade investment, it is not appropriate to bring this into utility investment decision. Such a rate would not accurately represent the risk of utility investments made on behalf of ratepayers.

SCE looks forward to working with the Energy Commission, the CPUC, and other stakeholders to clarify the issues presented here. Thank you again for the opportunity to submit these comments. If you have any questions or need additional information about SCE's recommendations in these written comments, please contact me at 916-441-2369.

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## Very truly yours

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