

December 11, 2013

California Energy Commission  
Docket Office, MS-4  
Re: Docket No. 13-IEP-1C  
1516 Ninth Street  
Sacramento, CA 95814-5512  
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California Energy Commission

**DOCKETED**

**13-IEP-1C**

**TN 72401**

**DEC 11 2013**

Re: *Southern California Edison Company's (SCE's) Comments on the California Energy Commission Docket No. 13-IEP-1C California Energy Demand 2014-2024 Final Forecast*

To Whom It May Concern:

On December 3, 2013, in support of the California Energy Commission's (Energy Commission's) 2013 Integrated Energy Policy Report (2013 IEPR), the Energy Commission released the California Energy Demand 2014-2024 Final Forecast, Final Staff Report ("the Demand Forecast"). Southern California Edison (SCE) has been an active participant in the development of the Demand Forecast and appreciates the opportunity to provide these written comments.

Despite the incorporation of some of SCE's recommendations from previous written and public comments, the Demand Forecast continues to have significant shortcomings, which SCE believes must be satisfactorily addressed given the importance of the Demand Forecast and its implications for long-term resource and transmission planning activities. In particular, the Energy Commission's Final Forecast will be used by the California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO) for resource planning and commitment decisions. Accordingly, the Energy Commission's Demand Forecast must either be fully supported by all impacted parties, or, be the product of a process in which all parties concerns are fully vetted. SCE therefore respectfully requests that the Energy Commission update its forecast to address the concerns and shortcomings discussed in detail below.

**A. Problematic Changes to the Weather Normalization Methodology for Deriving SCE's Weather Normalized Actual 2013 Peak Estimate**

Although the Energy Commission staff included SCE's recommendation to use 2013 actual peak load data in the Demand Forecast, the Energy Commission's changes to its weather normalization modeling methodology for calculating peak load are problematic and were not first vetted with SCE or other stakeholders. In previous comments, SCE identified several

fundamental issues with the Energy Commission's weather normalization process.<sup>1</sup> Given the significant differences between SCE and Energy Commission methods and weather normalized results, SCE recommends that the Energy Commission revisit its current weather normalization modeling methodology and fully vet it with all interested stakeholders to ensure the reasonableness of its adjusted peak Demand Forecast. SCE understands that the internal deadline pressures associated with the considerable undertaking of the IEPR may have prevented SCE's original comments from being fully incorporated into the Demand Forecast. But given the importance of the Demand Forecast, SCE recommends that the Energy Commission provide adequate time to fully review and address all identified concerns with the new weather normalization.

SCE's two specific concerns with the Energy Commission's weather normalization modeling are as follows.

- 1. The Changes to the Energy Commission's Weather Normalization Modeling Methodology Produce Abnormal and Unrepresentative Peak Temperatures for SCE's Service Area**

The Energy Commission's new weather normalization methodology results in the normal peak temperature for SCE's area being defined as a minimum temperature above 71°F. But a minimum of 71°F would in fact represent an extreme—not a normal or representative—peak weather condition for SCE's service area. This temperature range thus set the wrong basis for weather normalization and peak adjustment for SCE's 2013 actual peak.

- 2. The Energy Commission's Weather Normalization Modeling Methodology is Based on Regression Data that Does Not Accurately Reflect the Relationship Between Weather and Load**

The weather normalization methodology attempts to simulate the 54-year peak load by using 54 years of historical temperatures and then applying an econometric model fitted exclusively with 2013 summer data. The weather and load relationship established by the Energy Commission's regression model, however, is not sufficiently representative to produce a reasonable series of simulated peak loads. Given that CEC's methodology defines the normal peak temperatures as those associated with the median simulated peak load, such a modeling approach yields inaccurate and unreasonable results for normal peak temperatures for SCE. For instance, based on SCE's weather normalized results, the weather adjusted 2013 peak would be more than 700 MW higher than the actual 2013 SCE peak<sup>2</sup>. Given the importance of this forecast, the substantial difference in SCE's and the Energy Commission's forecast results must be addressed and reconciled.

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<sup>1</sup> SCE Comments on the California Energy Commission Docket No. 13-IEP-1C Lead Commissioner Workshop on Revised Electricity and Natural Gas Demand Forecasts 2014-2024. See page 3, Section C. [http://www.energy.ca.gov/2013\\_energypolicy/documents/2013-10-01\\_workshop/comments/Southern\\_California\\_Edison\\_Comments\\_2013-10-15\\_TN-72075.pdf](http://www.energy.ca.gov/2013_energypolicy/documents/2013-10-01_workshop/comments/Southern_California_Edison_Comments_2013-10-15_TN-72075.pdf)

<sup>2</sup> This refers to the actual 2013 SCE peak assumed in CEC's current draft final forecast.

SCE recommends that Energy Commission establish the “normal peak” temperature using an alternative approach based on more recent (e.g. most recent 30-year) weather history itself rather than the simulated peak load. This approach would not only simplify the Energy Commission’s weather normalization process, but also provide more intuitive and reasonable results.

## **B. Problematic Forecast Inputs**

In addition to the issues that SCE has identified with the Energy Commission’s changes to its weather normalization modeling methodology, SCE identifies the following unresolved issues, most of which SCE has previously raised in written and public comments.

First, SCE recommends that the Energy Commission use the most recent 30 years rather than a 54-year historical period when attempting to capture the impacts of climate change. Relying on data more than 30 years old may introduce bias into the Energy Commission’s weather normalized results because relatively recent weather patterns are more indicative of future weather compared to the 1960s and 1970s given observed rising global temperatures due to climate change.

Second, the Energy Commission’s choices of weather stations and station weights may not accurately represent conditions in the SCE area, and can thus significantly affect weather normalization results of historical loads. Such results impact future peak demand forecast results, particularly on the relationship between weather and load. SCE’s prior comments also noted that the weather station data relied upon by the Energy Commission did not accurately represent the climatology of SCE’s various service territory areas. For instance, inland station data does not accurately reflect coastal service territory conditions. Accordingly, strategic selection and weighting of weather station data is critical for accurate results. SCE is concerned about the selections made by the Energy Commission in calculating normal peak temperatures in SCE’s service territory. SCE has made its weather station data available to the Energy Commission.

Third, in order to more reasonably model the peak weather-to-load relationship, the Energy Commission should reconsider how it weighs daily maximum and minimum temperatures and how to account for the “heat carry over” effect in the summer. SCE recommends that the Energy Commission utilize its previous 60-30-10 methodology with daily effective temperatures (which is weighted daily maximum and minimum temperatures) as being more representative than what appears to be used in the current Demand Forecast. The method used to define peak temperatures significantly influences peak weather condition assessments and a reasonable representation is important.

Fourth, SCE is concerned that inclusion of additional non-event based demand response (DR) programs in the overall peak demand forecast will result in “double counting.” DR programs such as Critical Peak Pricing (CPP) and Peak Time Rebate (PTR) have been treated as dispatchable supply-side resources in the past. As a result, these programs have been counted toward meeting resource adequacy requirements for load serving entities. Double counting could result if Energy Commission deducts such energy from its final demand forecast. SCE therefore

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believes that these DR resources are best represented as supply-side resources based on the manner in which they will be dispatched. SCE recommends that Energy Commission exclude both the CPP and PTR program impacts in the peak demand forecast.

Fifth, SCE also identified significant discrepancy between the actual 2013 peak data used by the Energy Commission and SCE. In order to fully address this issue, SCE recommends that the Energy Commission engage both SCE and CAISO in reconciling the difference of the data. Using consistent and accurate historical data is essential for ensuring the forecast reasonableness.

In conclusion, SCE believes that the fundamental issues in the Energy Commission's current weather normalization modeling methodology and updated 2013 peak estimate must be addressed. The use of unsound estimates as the starting point for the Energy Commission's long-term peak forecast for the SCE area creates a biased forecast that likely significantly understates the peak demand for SCE over the forecasting horizon.

SCE strongly encourages the Energy Commission to allow sufficient time for its staff to consider making the appropriate adjustments to its peak demand forecast before considering the adoption of a final forecast. If the Energy Commission cannot change the current adoption timeline, SCE recommends that the Energy Commission adopt the "high-base demand and low AAE" scenario reflected in the current draft Demand Forecast for resource planning purposes at the CPUC and CAISO. Although that scenario also understates SCE's expected peak demand prior to 2018, it is the only scenario that yields a long-term peak demand forecast that is consistent with SCE's "most likely" scenario.

SCE appreciates the Energy Commission's consideration of these comments and looks forward to its continuing collaboration with the Energy Commission. Please do not hesitate to contact me at (916) 441-2369 with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

*/s/ Manuel Alvarez*

Manuel Alvarez