PREPARED DIRECT TESTIMONY OF DAVID ASHUCKIAN

ON BEHALF OF THE CALIFORNIA ENERGY COMMISSION

REGARDING THE ISSUE OF RETIREMENT OF AGING POWER PLANTS

AS ADDRESSED IN THE LONG-TERM PROCUREMENT PLANS

OF SOUTHERN CALIFORNIA EDISON

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Q1: Please state your name and business address.

A1: My name is David Ashuckian. My business address is California Energy Commission, 1516 9th Street, Sacramento, California 95814.

Q2: Please briefly describe your responsibilities at the California Energy Commission.

A2: I am employed as manager of the Electricity Analysis Office (EAO) of the Systems Assessment & Facilities Siting Division of the California Energy Commission (Energy Commission). In this capacity, my responsibilities include managing the work of professional staff engaged in conducting independent, objective analyses of California's electricity and natural gas systems, market, and operations.

Q3: Please summarize your educational and professional background.

A3: I am a Professional Engineer registered in the State of California. I obtained my Bachelor of Science degree in Mechanical Engineering in 1992 from California State University Sacramento, in addition to my Bachelors degree in Criminal Justice which was obtained in 1981 from California State University Sacramento. My employment at the Energy Commission began in 1998. My professional experience at the Energy Commission includes managing the activities of the EAO for the last 4 years. The

function of the EAO is to provide independent, objective analysis of the electricity market and electrical system operation. As manager of the EAO, I supervise 35 professionals who have expertise in the following subject matter areas: Electric Generation Systems Electrical Engineering Mechanical. In my capacity as Manager of the EAO, I am responsible for managing the development of the Summer Outlook Report, and a number of the electricity and natural gas reports that Energy Commission staff have been developed for the 2003, 2004, and 2005 Integrated Energy Policy Report (IEPR). I have also served as policy advisor to Commissioner Boyd, supervised the Commission's Transportation Technology Program and have served as the Energy Commission's spokesperson on electricity system need before the Governor's Office, Legislature, and the Joint Agency Energy Action Plan.

Q4: Please state the purpose of your testimony.

A4: The purpose of my testimony is to sponsor the position of the Energy Commission in this proceeding on the issue of the retirement of aging power plants by providing the California Public Utilities Commission (CPUC) with an evaluation of Southern California Edison's (SCE's) Long Term Procurement Plans (LTPPs) on that issue. The issue of the retirement of aging power plants is addressed by the IOUs in Section IV, C. *Supply Forecasts*, and Section IV, H., *Candidate Resource Plans* of their respective LTPPs. This testimony is intended to provide the CPUC with the Energy Commission's assessment of how the IOUs are planning to reduce their reliance on aging gas-fired plants through planning for long-term contracts with new, fuel efficient units, in order to reduce long-term financial risk to IOU ratepayers.

Specifically, the purpose of this testimony is to provide:

1. Identification of the requirements of the Assigned Commissioner's Ruling and Scoping Memo on the Long-term Procurement Phase of R.06-02-013, dated September 25, 2006 (Scoping Memo) that are applicable to IOUs with respect to aging power plants (APP);

2. Identification of the pertinent recommendations set forth in the Energy Commission's 2005 IEPR and associated report entitled "*Transmittal of 2005 Energy Report Range of Need and Policy Recommendations to the California Public Utilities Commission* (Transmittal Report) that are applicable to the APP requirements set forth in the Scoping Memo (item 1 above);

3. A description of the substance of the IOU's LTPP with respect to aging power plant issues;

4. An analysis of whether the IOU's LTPPs comply with the requirements of the Assigned Commissioner's Ruling and Scoping Memo on the Scoping Memo with respect to the APP issues identified in item 1 above;

5. An analysis of whether the IOUs' LTPPs comply with the requirements of the IEPR with respect to the aging power plant issues in item 2 above;

6. On behalf of the Energy Commission, present the Energy Commission's written recommendations concerning the course of action that CPUC should take in this

proceeding with respect to each IOU's LTPP as it relates to the issue of aging power plants.

I am authorized to present this written testimony on behalf of the Energy Commission.

Q5: What direction does the Scoping Memo give to IOUs regarding planning for the replacement of aging plants in IOU portfolios?

A5: The Scoping Memo states in relevant part:

> "The Commission will establish a new resource need determination that includes at a minimum: the range of need (e.g., 500-700 MW of new resources), the time frame of the need (e.g., 2010-2012), the location of the need (e.g., x% should be targeted within local areas), the type of resource needed (blackstart, quickstart, VAR support capacity, wind integration, baseload/shaping/peaking), and the timeframe of the IOU long-term RFO for new resources." [1]

The Scoping Memo further states that "[i]t is not sufficient for the 2006 LTPPs to assume that the resource will "show up . . ."[2].

Q6: What is the significance of the above guidance to the issue of how aging power plants are treated in the LTPP?

A6: The need for new resources is influenced by assumptions regarding the retirement of aging plants, many of which are more than 40 years old. This is acknowledged, for example, in SCE's LTPP which states that:

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[1] Scoping Order, at p. 22.

"[The] need for new resources before 2013 in the SP-26 geographical area…is influenced by the amount of retirements of existing generation that actually occurs."[3]

Just as the CPUC has established that it is not sufficient to assume that needed new resources will simply show up, it equally insufficient to assume that aging resources will simply continue indefinitely. It is therefore the recommendation of the Energy Commission that CPUC should not deem it sufficient for an IOU's LTPP to assume that aging power plants will not be retired.

It is the recommendation of the Energy Commission that the IOUs should directly address the issue of retirement of aging power plants in their LTPPs by identifying therein and using specific assumptions concerning the retirement of aging plants that reflect the policy directives set forth in the Energy Commission's IEPR and Transmittal Report.

Q7. What do the 2005 IEPR and Transmittal Report recommend that the CPUC should direct IOUs to do in their 2006 procurement plans?

A7. The Energy Commission's *Transmittal of 2005 Energy Report: Range of Need and Policy Recommendations to the California Public Utilities Commission* (the "Transmittal Report") called for "an orderly transition to the retirement of [aging] plants by 2012," as

[2] Scoping Order, page 21.
[3] SCE 2007 – 2016 Long-term Procurement Plan, Vol. 1B, p. 33.

"continued reliance on these plants is not in the economic interest of IOU customers[;]... it would be imprudent for the IOUs to contract with the aging units beyond that time."[4]

The reason this policy is important is that virtually all of the state's aging power plants operate at high heat rate capacities that would typically not be sufficiently dispatched in the open market to cover their fixed costs and justify their continued operation. While it is likely true that operation of some of these aging plants is necessary to meet local reliability, it is the position of the Energy Commission that the state is best served by repowering the plants that are in locations critical to the state's electricity system. Maintaining many older plants on life support at low capacity factors has the negative effect of deterring or preventing construction of more efficient plants.

The *Transmittal Report states:*

> "As noted in the 2004 Energy Report Update, aging power plants currently play an important role in the state's electricity system, including 'provid[ing] local reliability services . . . ; contribut[ing] to regional and statewide reliability . . . ; and help[ing] alleviate transmission system congestion. . . .' While these [aging] plants have provided needed resources during the last several years and will unavoidably play a role in the near term, the state cannot afford to rely indefinitely on power plants that are 30 years old or older. Instead, the state must begin an orderly process to retire them."[5]

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[4] *Transmittal Report*, p. 57.
[5] *Transmittal Report* at page 14.

"The Energy Commission is reporting the aging plant replacement energy and capacity amounts in this manner to emphasize the need for IOU planning and procurement activities in the 2006 procurement cycle to accommodate the recommended replacement of all of these aging plants. Because continued reliance on these plants is not in the economic interest of IOU customers, it would be imprudent for the IOUs to contract with the aging units beyond that time."[6]

The *Transmittal Report* asserts that to the extent that these plants can be replaced by demand response programs, efficiency programs, renewable resources, combined heat and power (CHP), and an appropriate level of conventional power plants, the state will see significant benefits in terms of reliability, reduced reliance on natural gas, reduced greenhouse gas emissions, and other environmental benefits.[7]

To facilitate an orderly transition to the retirement of these plants by 2012, the *Transmittal Report* included a four-year ramp-up of this increment, starting with 25 percent of the utilities' share of energy or capacity in 2009, and increasing to 50 percent, 75 percent, and the full share in 2010, 2011, and 2012, respectively.[8]

The *Transmittal Report* contains the following recommendation to ensure long-term contracts are signed that provide adequate electricity supplies for IOUs:

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[6] *Transmittal Report* at page 58.
[7] *Transmittal Report*, at p. 56.
[8] *Transmittal Report*, at p. 57.

"The CPUC should require that IOUs procure enough capacity from long-term contracts to both meet their net short positions and allow for the orderly retirement or repowering of aging plants, by 2012."[9]

Q8. Does SCE's LTPP set forth a plan to cease reliance on aging gas-fired plants by 2012?

A8. No. In its assessment of new capacity needed in SP26, SCE assumes the retirement of 2,150 MW of unspecified aging generation during 2011-2013 (1,150 MW in 2011, 500 MW in each of 2012 and 2013).[10] In addition, SCE assumes the retirement of South Bay (700 MW, 2009).[11]

The *Transmittal Report* calls for "an orderly retirement of [aging] plants by 2012," facilitated by a gradually reduced reliance on these plants by the IOUs over the 2009 – 2012 timeframe.

In its filing, SCE fails to consider the potential implications of ceasing to contract with the remaining aging capacity in its service area. The Energy Commission has identified more than 7,500 MW of still-operating capacity in the SCE service area that should not be relied upon indefinitely due to advanced age.[12] More than 5,400 MW of this capacity is thus assumed by SCE to still be available to meet bundled customer needs and contribute to zonal and local area reliability in 2016.

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[9] *Transmittal Report*, at p. 69.
[10] SP26 Capacity Resource Need tables, Appendix A.
[11] Id.
[12] *Transmittal Report*, Appendix A, p. A-2. The total amount of capacity indicated (8,088 MW) is reduced by 530 MW as Long Beach 8-9 are being repowered or have shut down.

Q9: Does the Energy Commission have a recommendation about whether or how the CPUC should direct SCE to amend its treatment of the retirement of aging power plants in the LTPP?

A9: Yes.

Q10: What is that recommendation?

A10: The Energy Commission recommends that the CPUC should direct SCE to file an assessment of regional need that assumes the phased retirement through 2012 of the aging plants identified in the Transmittal Report.

The Energy Commission further recommends that the CPUC direct SCE to either issue Requests for Offers to obtain replacement of this aging capacity and energy or propose transmission, demand response, energy efficiency or renewables that could be used to replace the remainder of this generation.

Q11: Does this conclude your testimony?

A11: Yes.

Docket Optical System - Fwd: Re: Can you docket the staff testimony in the CPUC's LTPP here at the Commission under 06-IEP-

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From: David Vidaver
To: Docket Optical System
Date: 6/19/2007 4:26 PM
Subject: Fwd: Re: Can you docket the staff testimony in the CPUC's LTPP here at the Commission under 06-IEP-
CC: Michael Doughton
Attachments: Michael Doughton

DOS,

Can you Please docket the attached electronic files in 06-IEP-1J?

thanks.