INDEPENDENT
ENERGY
PRODUCERS

August 25, 2006

Mr. Tom Gorin
California Energy Commission
1516 Ninth Street, MS-4
Sacramento, California 95814-5512

Re: Committee Workshop on July 2006 California Heat Storm

The Independent Energy Producers Association ("IEP") commends the California Energy Commission for conducting the above referenced Workshop. While not a detailed response to all of the discussion questions posed in the Workshop Notice, IEP appreciates the opportunity to offer the following observations and recommendations.

The recent heat wave that occurred in California was met with unprecedented cooperation and coordination among all sectors of the energy market. Consumers rose to the occasion with strong conservation; grid operators, including the CAISO and transmission providers responded with expert management of the power delivery systems; suppliers largely scheduled energy to meet their loads, and generators achieved capacity availability rates that reflected about half the expected forced outage rates. Even Mother Nature provided an ample supply of future hydro energy during the past winter, and spared the state the widespread fires that interrupt transmission service. All of these factors combined to help California "weather" the recent peak demands with minimal disruption of electric service to California residents and businesses. As Commissioner Peevey's recent ACR[1] recognizes, the fortunate outcome of the last month could have been different, and California policymakers and market participants should not be complacent about the readiness to "weather" such an event again this year, or in 2007 and beyond.

The summer's heat wave provided an opportunity to evaluate, based on actual experience, what is working and which elements of the State's planning require adjustment. In the spirit of the cooperation and coordination that we currently enjoy, and in an effort to assure a reliable grid in the future, IEP shares the following observations and recommendations with respect to load forecasting criteria and methodologies and the planning reserve margin:

[1] See *Assigned Commissioner's Ruling Addressing Electric Reliability Needs in Southern California for Summer 2007,* issued August 15, 2006.

(916) 448-9499 / Office
(916) 448-0182 / Fax
iep@iepa.com / E-Mail

1215 K Street • Suite 900 • Sacramento, CA 95814

1. The recent record high temperatures are said to have been "higher than anything in the 30-year history of our temperature models." (From CAISO CEO Yakout Mansour's Prepared Statement on August 9, 2006 to the State Senate Committee Government Organizations). Furthermore, as Mr. Mansour pointed out in that same statement: "This summer's assessment was based on forecast for the peak demand based on average 1 in 2 temperature of just over 46,000 MW." While a knee jerk reaction to the extremes of this summer is not warranted or recommended, it appears that utilizing a 1 in 2 temperature criteria for the load forecast, which, by its own design will be violated, on average every other year, may be insufficient to ensure reliable service to customers. Thus, IEP recommends that future resource adequacy planning cycles, including 2007, use a 1 in 10 temperature criteria, rather than a 1 in 2 criteria. The attached chart shows that actual demand exceeded the CEC's 1 in 10 demand forecast only on two days during the recent heat wave, while actual demand exceeded the CEC's 1 in 2 demand forecast eight of nine days over that same period.

2. The record peaks (for both demand and energy consumption) that were set during the heat wave, particularly the records set on the weekend days, exceeded all CAISO- and CEC-produced estimates, even after adjusting for the abnormal temperatures. The CEC modeling conventions and assumptions determining peak demand estimates are in need of revision. A thorough reexamination of energy usage assumptions and demands may reveal that the median forecasts are reasonable in terms of load growth estimates. However, other factors, including: increased humidity, geographic microclimate definitions, residential load growth in hotter inland areas, increased appliance load and increased energy intensity from the use of electronic devices that require recharging or draw power even when they are "off," and other issues could be significantly increasing the variability of actual demand around the baseline forecasts. Should this analysis reveal increased variability in energy usage patterns, the continued reliance on a 15-17% reserve margin – which must account for load forecast, weather and hydro power variability – should be re-evaluated using empirical analysis of load and resource variability to determine an appropriate planning reserve margin. Finally, it should be recognized that so long as the State continues to plan for 1 in 2 (average) weather, much of the reserve margin will be used to meet above average weather conditions, leaving little reserve to compensate for the demand and hydro variability, and forecast error described above, further contributing to the need to more rigorously evaluate the appropriate planning reserve margin.

3. On the supply side, generation assets remained available at exceptional levels during the recent heat wave. However, each hour of peak demand (including the establishment of record high off-peak demands) created additional stress on these units, raising the possibility of future forced outages. The duration of a heat wave and the time of summer when a heat wave occurs affect the probability of forced

outages, and these factors should be considered when establishing estimates for prudent planning reserves.

4. More than most other regions of the country, California relies on a broad array of generation of resources to satisfy its growing demand for energy. The performance of all generation resources, both during the heat wave, and at other times of peak demand, should be evaluated in light of the capacity valuations established resource adequacy determinations. If necessary, appropriate modifications to the counting or crediting rules should be considered.

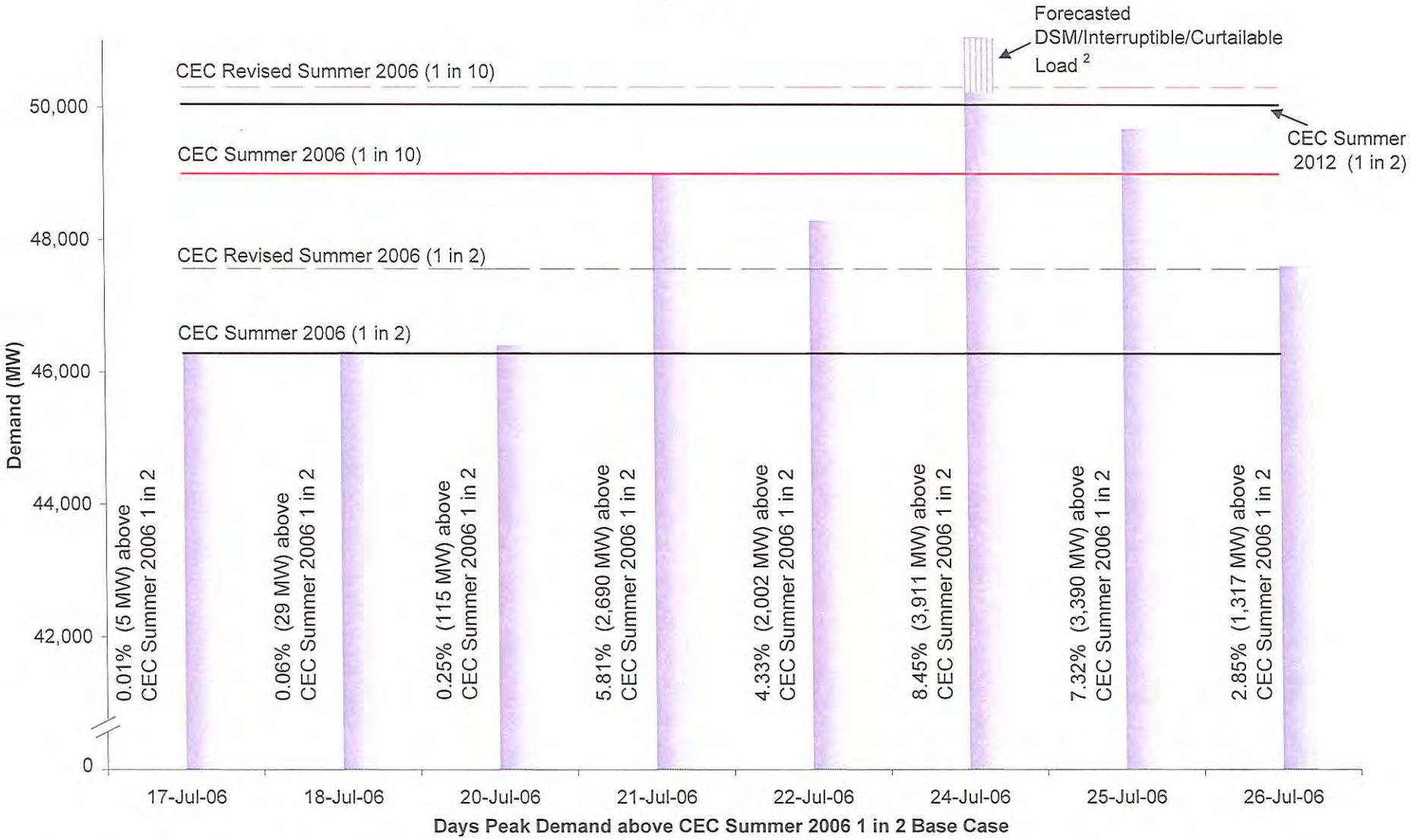
IEP members look forward to participating in the Workshop and working with the CEC, California Public Utilities Commission, and California Independent System Operator to make continued improvements in the California energy markets that will support competitive new investment in California's energy infrastructure. IEP's recommendations herein are intended to support and enhance the strong market performance that was achieved during the recent heat wave.

Sincerely,

Jan Smutny-Jones
Executive Director

Cc: Commissioner Jeffrey D. Byron, Commissioner and Presiding Member, Electricity Committee
Commissioner John L. Geesman, Commissioner and Associate Member, Electricity Committee
California Public Utilities Commission President Michael R. Peevey
California Public Utilities Commissioner Geoffrey F. Brown
California Public Utilities Commissioner Dian M. Grueneich
California Public Utilities Commissioner John Bohn
California Public Utilities Commissioner Rachelle Chong
Mr. Yakout Mansour, Chief Executive Officer, California Independent System Operator

CAISO CONTROL AREA FORECASTED PEAK DEMAND vs. ACTUAL PEAK DEMANDS
July 2006



Note: 1) Forecasted summer peak demands are actually assumed to occur during the month of August.
2) On July 24 the CAISO called a Stage 2 Emergency which triggers load reductions that reduced actual demand by potentially up to 1,927 MW.

Sources: CAISO website; CEC, "Summer 2006 Electricity Supply and Demand Outlook," April 21, 2006; "Summer 2006 Electricity Supply and Demand Outlook," June 29, 2006; "California Energy Demand 2006-2016 Staff Energy Demand Forecast".