BOARD OF SUPERVISORS

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August 7, 2012

State Controller John Chiang, Chair
California State Lands Commission
100 Howe Ave. Sutie 100
South Sacramento, CA 95825-8202

RE: Permit for a 3-D high-energy offshore seismic reflection survey,
Central Coastal California Seismic Imaging Project (CCCSIP) near Diablo Canyon Power Plant, to be heard August 14, 2012

Dear Mr. Chiang:

The San Luis Obispo County Board of Supervisors appreciates the opportunity to comment on the high-energy offshore seismic survey referenced above, proposed by PG&E as part of a comprehensive evaluation of potential seismic hazards near the Diablo Canyon Power Plant.

In summary, our comments are these:

• Our Board endorses the execution a 3-D high-energy seismic survey (HESS) in the area generally outlined in PG&E's proposal, subject to conditions discussed below.

• We acknowledge that 3-D HESS at the scale necessary for this investigation will have significant environmental impacts that cannot be fully mitigated. We believe that, if the survey is properly designed and executed, the public benefit of enhanced knowledge of seismic hazards supports approval of such a survey, under the requirements of the California Environmental Quality Act (CEQA).

• We also acknowledge that the necessary survey will have significant economic impacts on ocean-dependent interests in this county, including commercial fishing, recreational fishing, other recreational activities (e.g., diving), and associated shore-based enterprises. The survey should be designed and executed to minimize these economic impacts, and the unavoidable economic impacts should be fully and fairly compensated.

• We are concerned that unresolved issues remain regarding the design of the proposed survey, specifically as to whether this proposal is consistent with industry state-of-the-art seismic reflection survey techniques (see discussion below and Attachments). The use of currently available industry technology could potentially reduce environmental impacts and improve the seismic image of important geologic targets.

Our Board believes that the State Lands Commission (CSLC) should only issue a permit for the Diablo Canyon HESS if the following conditions are met: 1) all environmental impacts are fully understood and mitigated to the maximum degree possible, understanding that mitigation to a level of insignificance may not be possible; 2) all unavoidable economic impacts are fully and fairly compensated; and 3) the technical details of the survey design have been subjected to independent third-party review by industry-qualified experts to confirm that the best available technology is applied to this crucial investigation.

DISCUSSION

Necessity of 3-D HESS. The threat of seismic hazards to the Diablo Canyon Power Plant (DCPP) has long concerned the County and its residents, other public agencies and PG&E. The most recent efforts to characterize seismic threats are driven by the requirements of Assembly Bill 1632 (Blakeslee, 2006), the discovery of the Shoreline fault immediately adjacent to DCPP (2008), and the tragic consequences of the Fukushima earthquake in 2011. The unexpectedly large earthquake at Fukushima, in particular, dictates that PG&E and all relevant public agencies meticulously re-examine every aspect of seismic hazard analysis and gather further information to expand and solidify our understanding of the seismic threat to DCPP.

High-resolution 3-D seismic reflection surveys are essential to reveal the details of geologic structures that relate directly to earthquake potential. Such surveys produce detailed images of fault location, size, connectivity and sense of movement; these are fundamental parameters in the analysis of potential earthquake magnitude. The importance of 3-D seismic reflection mapping was emphasized by the California Energy Commission in their 2008 assessment of seismic vulnerability at DCPP.

The geologic targets to be examined by the proposed survey have been reviewed by the Diablo Canyon Independent Peer Review Panel (IRPR, created by the California Public Utilities Commission). As stated in formal comments to CSLC, the IPRP found that "1) the proposed survey generally covers the appropriate geologic targets, although we believe one area of the survey can be eliminated without compromising the seismic hazard analysis, and 2) that minor adjustments to the survey track orientation and extent in certain areas would be prudent to assure the best coverage of certain targets."

Our Board concludes that the large scale of the proposed survey is necessary, acknowledging that some reduction may be possible, per the comment above.

Environmental impacts. CEQA obviously provides the appropriate framework for analysis of environmental impacts. We understand that CSLC staff has received numerous comments on the Draft Environmental Impact Report (DEIR) prepared for this project. In preparing the Final EIR (FEIR), and considering its certification, our Board urges the CSLC to be certain that, a) all relevant impacts have been identified, b) an appropriate range of alternative projects has been analyzed, and c) that the most extensive level of feasible mitigation has been applied, especially to impacts that are deemed significant and unavoidable (Class I).

As discussed below, issues of detailed survey design remain unresolved: the capability of the survey vessel directly relates to the time required for data acquisition and thus has bearing on the degree of impact to marine biological resources. Full examination of this issue may appropriately require the formal analysis of another alternative project.

Economic impacts. The FEIR identifies significant and unavoidable impacts to commercial fishing and recreational interests (Section 4.13) due to the preclusion of fishing during survey operations and damage to fish stocks. Environmental impact mitigations are centered on seasonal timing of the survey and communication with affected parties. While the FIER contains discussion of the value of fish landings, the unavoidable economic losses to these parties will also be significant and compensation for these impacts is not considered.

Our Board believes that this survey should not be permitted until full and fair compensation for expected economic losses to fishing and recreational enterprises (including those based on shore, such as processors and distributors of local seafood) has been established. Guidance for this effort might be provided by previous trans-oceanic cable laying projects, which had impacts due to the preclusion of fishing.

Seismic data acquisition, processing and interpretation specifications. In the IPRP's technical review of the proposed survey, SLO County's representative (Supervisor Bruce Gibson) has raised questions and requested public discussion regarding the specifics of data acquisition, processing and interpretation within the survey footprint. These issues are discussed at length in a letter from Sup. Gibson to PG&E (dated June 20, 2012, Attachment 1) and PG&E's response (dated July 13, 2012, Attachment 2).

While PG&E has provided considerable detail on a wide variety of issues, unresolved issues remain as to whether the proposed survey is consistent with the seismic exploration industry state of the art (see Attachment 3). As noted below, the appropriate resolution of these issues would be independent peer review by qualified industry experts, having expertise beyond that of the IPRP membership.

One of these issues is relatively easy to describe. The proposed survey vessel would tow 4 laterally-separated streamers of hydrophones, covering a swath of 300-400 m of ocean surface with each pass of the survey vessel. In contrast, industry vessels can tow 10 or more streamers similarly spaced, resulting in a swath about 1000 m wide. As noted in

PG&E's response (Attachment 2), the greater number of streamers "can reduce data collection time by a factor of 2 or 3."

PG&E contends, but has not demonstrated, that operation of a 10-streamer boat is not feasible in this survey area. The question should be settled by an industrial-level survey design review, which would model data acquisition geometry based on state-of-the-art streamer positioning technology. While the issue of data collection efficiency is certainly important because reduced survey time would reduce impacts to marine life, the larger streamer numbers and other industrial survey technologies could also improve the image quality of geologic targets.

CONCLUSION

Our Board believes that the high-energy 3-D offshore survey of geologic structures near Diablo Canyon Power Plant should be designed with the greatest care and conducted with industry state-of-the-art technology. The residents of San Luis Obispo County deserve to know that every effort has been made to design and execute a survey that provides the highest-quality image of the potential geologic hazards in this area. Given the significant environmental and economic impacts, we realistically have only one opportunity to do a survey of this magnitude -- this survey must be done right.

In conclusion, we believe the information to be gained from this survey is crucial to public safety. We urge the State Lands Commission to issue permits for it only if the environmental and economic impacts have been properly addressed and the proposed survey design meets the highest scientific and technical standards.

Thank you for your consideration,

Sincerely,

JIM PATTERSON, Chair
San Luis Obispo, Board of Supervisors

Attachment 1 Letter from Supervisor Gibson to PG&E, June 20, 2012
Attachment 2 Letter from PG&E to Supervisor Gibson, July 13, 2012
Attachment 3 Summary of Unresolved Technical Issues