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February 5, 2015

Commissioner Andrew McAllister
California Energy Commission
1516 Ninth Street, MS-31
Sacramento, CA 95814

transmitted by email to docket@energy.ca.gov

Re: Public Comment on Draft 2015 IEPR Scoping Order
Docket No.15-IEPR-01

Dear Commissioner McAllister:

This is the wrong year for the Energy Commission's IEPR process to omit detailed consideration of current developments affecting the operation of PG&E's Diablo Canyon Nuclear Power Plant ("DCNPP").

Decisions made in early 2015 by the State Water Resources Control Board on whether to apply California's once-through-cooling policy to DCNPP will impact the economic viability of relicensing the plant. In late 2014, the CEC staff and CPUC staff representatives to the Water Board's Review Committee for Nuclear Fueled Power Plants joined in a report which concluded *"there is no basis for an exemption"* for DCNPP from the policy, observing,

> *While the costs for closed cycle cooling are highly uncertain, there is no doubt about the viability of closed cycle cooling in meeting the OTC policy. As a consequence, Diablo Canyon should be required to meet the same standards set forth in the OTC Policy for the other OTC plants underTrack 1.*[1]

Additionally, PG&E will submit the results of its post-Fukushima seismic assessment to the NRC next month. As the Energy Commission was told in its June 19, 2013 workshop by NRC seismologist Dr. Cliff Munson, the NRC expects that PG&E's results will show a violation of the plant's Safe Shutdown

[1] Subcommittee Comments on Bechtel's Assessment of Alternatives to Once-Through-Cooling for Diablo Canyon Power Plant, November 18, 2014, p. 12, accessible at http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/rcnfpp/docs/subbechcom_111314.pdf

Earthquake design basis.[2] The indifference with which California state agencies have, at least publicly, accepted this revelation has been alarming but the financial bottom line is undeniable: significant seismic retrofit requirements seem likely to be required. The severity of any such requirement is suggested by PG&E's 2012 submittal to the NRC of a 331-page list of DCNPP deviations from the "new plant" criteria Dr. Munson testified will be applied.[3]

Equally troublesome for a plant which does not meet its Safe Shutdown Earthquake design basis is the fact that the AB 1632 Seismic Studies, with which the CEC has been closely associated for many years, appear to have somehow been diverted away from the probabilistically most significant seismic hazards at the plant. This has been known since the CPUC's Independent Peer Review Committee ("IPRP") published its Report No. 6 in August 2013 criticizing PG&E's ground motion assumptions (and the paucity of data to support them), but the magnitude of this blindspot was only recently acknowledged by PG&E at the IPRP's January 8, 2015 meeting. Rather than repeat the concerns expressed in my January 15, 2015 letter to Chairman Weisenmiller and CPUC President Picker, I am simply attaching it.

The need for the CEC to carefully evaluate how a $64.25 million ratepayer-funded risk assessment could fail to contribute meaningful data to better constrain PG&E's ground motion modeling should be apparent from the December 3, 2014 testimony of Dr. Sam Blakeslee – the former Exxon geophysicist who served as Republican Minority Leader of the California State Assembly and authored AB 1632 – to the U.S. Senate Environment and Public Works Committee. As Dr. Blakeslee observed, since DCNPP's original licensing, PG&E has discovered more faults in close proximity to the plant, attributed greater capability to the faults which it has acknowledged, yet consistently proclaimed the seismic risk at the plant to be diminishing: *"The potential earthquakes affecting the plant have increased with each major study. But what's equally striking is that the shaking predicted by PG&E for these increasing threats has systematically decreased as PG&E adopted less and less conservative analytical methodologies..."*[4]

Dr. Blakeslee was especially critical of PG&E's so-called *"final"* AB 1632 Report, a document submitted to the DCNPP's NRC relicensing proceeding without the CPUC's required IPRP review:

> *... in a seeming contradiction, rather than finding that larger or closer faults produce greater shaking and therefore a greater threat, PG&E argues in the Report that ground motion will be lower than the levels previously estimated. In other words, these newly discovered and re-*

[2] Lead Commissioner Workshop on California Nuclear Power Plant Issues, Docket No.13-IEP-1J, June 19, 2013, Transcript, p. 89, accessible at http://www.energy.ca.gov/2013_energypolicy/documents/2013-06-19_workshop/2013-06-19_nuclear_workshop_transcript.pdf

[3] *Id.,* p. 81: *"The thing I want to emphasize is that the hazard evaluations are based on current practices for new reactors."* PG&E's 331-page list of deviations is accessible at http://pbadupws.nrc.gov/docs/ML1134/ML11342A238.pdf

[4] Written Statement by Sam Blakeslee, Ph.D, to the Senate Committee on Environment and Public Works, December 3, 2014, p. 3. Dr. Blakeslee's complete statement is accessible at http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=42d07682-cad9-49f4-bbf1-fc9757f624c9

interpreted faults are capable of producing shaking that exceeds the shaking from the Hosgri, yet that shaking threat would be much reduced from prior estimates.

Though discussed only in passing in the Report, the reason for this seeming contradiction is quite important when assessing whether or not the plant is safe or whether it is operating within its license conditions. The reason the earthquake threat purportedly went down when new faults were discovered is because the utility adopted significant changes to the methodology utilized for converting earthquakes (which occur at the fault) into ground motion (which occurs at the facility). This new methodology, which is less-conservative than the prior methodology, essentially "de-amplifies" the shaking estimated from any given earthquake relative to the prior methodology used during the licensing process.[5]

At a minimum, the CEC should assure that the 2015 IEPR contain an apples-to-apples comparison, and require that PG&E produce an evaluation of its current knowledge of the DCNPP seismic setting using the same ground motion prediction methodology by which the plant was licensed. How else can the contribution of PG&E's new methodology to this purported reduction in risk be identified?

Finally, the 2015 IEPR should define the appropriate follow-up to the long-suppressed assessment of tsunami risk at DCNPP performed by Dr. Robert Sewell for the NRC in 2003.[6] Thanks to a Freedom of Information Act request by the Diablo Canyon Independent Safety Committee and the San Luis Obispo Mothers for Peace, this report was finally released in November 2014. It concludes that in 11 of 13 offshore landslide scenarios evaluated, the DCNPP tsunami design basis would be exceeded.

From a larger standpoint, however, the 2015 IEPR needs to candidly assess the impact on California's electricity system if DCNPP ceases to operate: whether in 2024/25, when the existing licenses expire; or in 2022, when the Water Board's OTC policy is applied; or sooner, when the magnitude of retrofits required to comply with the Safe Shutdown Earthquake design basis is understood. A 2013 report from the Cal ISO identified a much more benign impact on grid stability than occurred with the demise of San Onofre.[7] And a 2014 Cal ISO report determined that curtailments of California's rapidly growing renewable energy generation will be materially greater in 2024 with DCNPP's operation than without.[8] Is Governor Brown's recently announced 50%-in-2030 renewables objective commercially feasible, given the even higher level of curtailments attributable to DCNPP in an expanded renewables scenario?

These are among the higher profile DCNPP issues which the 2015 IEPR should address.

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[5] *Id.,* p. 5.
[6] Dr. Sewell's report and other documents simultaneously released by the NRC can be accessed at http://pbadupws.nrc.gov/docs/ML1427/ML14276A548.html
[7] Cal ISO, 2012-2013 Transmission Plan, March 20, 2013, pp. 162 – 169, accessible at http://www.caiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf
[8] Review of the ISO 2014 LTPP System Flexibility Study, August 26, 2014, pp. 45 – 46, accessible at http://www.caiso.com/Documents/Presentation_2014LTPPSystemFlexibilityStudy_SHcall.pdf

Sincerely,

Rochelle Becker
Executive Director

cc: CEC Commissioners, CPUC President Michael Picker, CPUC Commissioner Michel Peter Florio