

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Southern California Edison
Company (U 338-E) to Recover O&M Costs
Associated with the San Onofre Nuclear
Generating Station Units Nos. 2 and 3 On-going
Seismic Program, and New Seismic Research
Projects and Analyses

A. 11-04-006

**TESTIMONY OF ROCHELLE BECKER REPRESENTING THE ALLIANCE
FOR NUCLEAR RESPONSIBILITY (A4NR) IN RESPONSE TO THE
APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E)
TO RECOVER O&M COSTS ASSOCIATED WITH THE SAN ONOFRE
NUCLEAR GENERATING STATION UNITS NOS. 2 AND 3 ON-GOING
SEISMIC PROGRAM, AND NEW SEISMIC RESEARCH PROJECTS AND
ANALYSES**

Rochelle Becker,
Executive Director, Alliance for Nuclear Responsibility
PO Box 1328
San Luis Obispo, CA 93406
(858) 337-2703
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SUMMARY AND CONCLUSIONS:

On April 15, 2011, Southern California Edison (SCE) filed the following Testimony in support of Application 11-04-006:

As directed by the Commission, this application requests funding for the SONGS 2 & 3 on-going seismic program, seismic research projects originally requested in A.10-11-015, and additional seismic studies for SONGS 2 & 3. The SONGS 2 & 3 on-going seismic program and seismic research projects will allow SCE to increase the scientific understanding of seismic and tsunami conditions that could affect the plant. Environmental permitting of some of the proposed projects is likely to be time-intensive, so SCE intends to commence the permitting process as soon as practical.¹

The Alliance for Nuclear Responsibility has reviewed SCE's Application and Testimony in A.11-04-006, and, for purposes of comparison, similar documents associated with PG&E's A.10-01-014 and corresponding D.10-08-003.

While A4NR does not oppose funding for SCE/SDG&E's seismic studies, our review has raised several concerns over disparity in the funding requests, as well as noting omissions and lack of detail in the description, budget and oversight framework for the scope of work.

Absent complete answers and a more thorough description of the scope and costs of the planned seismic work, the Commission will be unable to make a reasonable and prudent decision regarding seismic funding.

¹ Testimony of Southern California Edison Company to Recover O&M Costs Associated with the San Onofre Nuclear Generating Station Units Nos. 2 and 3 On-Going Seismic Program, and new Seismic Research Projects and Analysis, p.1

1. The genesis of SCE’s application and testimony is found in AB 1632 and the AB 1632 recommendations issued by the California Energy Commission in 2008. With regard to SONGS, the CEC recommended:

SCE should develop an active seismic hazards research program for SONGS similar to PG&E’s LTSP to assess whether there are sufficient design margins at the nuclear plant to avoid major power disruptions. The research program should prioritize and include further investigations into the seismic setting at SONGS and should assess whether recent or current seismic, geologic, or ground motion research in the vicinity of SONGS has implications for the long_term seismic vulnerability of the plant....

The Energy Commission recommends that SCE should use three_dimensional seismic reflection mapping, other techniques, and a permanent GPS array for resolving seismic uncertainties for SONGS. SCE should report on their progress and their most recent seismic vulnerability assessment for SONGS in the 2009 IEPR....²

Issues of concern arise over SCE’s treatment of the above noted dual recommendations of the CEC: The latter are very specific technical and seismic recommendation, for which SCE provides reasonable detail in their Application and Testimony, which can be seen in “Table VIII-2 Cost Estimate”³ and “Seismic Workpapers rev1.xls”⁴ A4NR has questions about these estimates that will be dealt with subsequently. The former CEC recommendation, “SCE should develop an active seismic hazards research program for SONGS similar to PG&E’s LTSP...” is by far the more problematic challenge.

² An Assessment of California's Nuclear Power Plants, California Energy Commission Report, adopted November 20, 2008, page 9.

³ Testimony of Southern California Edison Company to Recover O&M Costs Associated with the San Onofre Nuclear Generating Station Units Nos. 2 and 3 On-Going Seismic Program, and new Seismic Research Projects and Analysis, p. 23

⁴ DATA REQUEST SET: SCE Songs Seismic App DRA-001, April 21, 2011

Historically, it should be recalled that “Long Term Seismic Program” (LTSP) at Diablo Canyon was a requirement imposed on PG&E by the NRC as a condition of their operating license. It had very specific requirements and received the oversight of the NRC staff and independent consultants.⁵ The NRC’s actions regarding the LTSP came as a consequence of the earlier failures by both the regulator and utility to certify the seismic certainty at the site. As a CPUC historical document reveals, it was a requirement imposed after over \$4 billion in seismic related cost-overruns and retrofits had accrued.⁶ As the co-author of this referenced document, CPUC Public Staff employee Edward O’Neill, commented during a California legislative oversight committee hearing, “The thing is, we relied, just like the NRC, on the information that PG&E gave us. We relied on PG&E’s representations that the area was an area of low seismicity and that there were no significant faults in the vicinity of the plant. And it turned out that that was incorrect.”⁷

The historical documents cited above illustrate how important it is for ratepayer interests to have regulatory and management oversight in order to insure that SCE’s proposed program does not repeat the costly (and ratepayer funded) earlier mistakes made by PG&E. Thus, when the CEC in their AB1632 recommendations asks SCE to develop a seismic program for SONGS “similar to” PG&E’s LTSP, the Alliance asks, “where is the oversight and regulatory framework that accompanied PG&E’s LTSP?”

In its Testimony, SCE writes, “SCE is requesting funding for additional seismic studies that SCE believes are prudent to pursue in order to increase the scientific understanding

⁵ Nuclear Regulatory Commission, Diablo Canyon Unit 1 Operating License, DPR-80, Item 2.c.(7), NRC Operating License Condition, November 2, 1984, Seismic Design Bases Reevaluation Program.

⁶ Prehearing Brief of the Public Utilities Commission Division of Ratepayer Advocates, O’Neill, Edward, Weissman, Steven et al, June 20, 1988, pp. 47-48

⁷ California Legislature, Senate Committee on Energy and Public Utilities, Joint Hearing Subject: Diablo Canyon Public Utilities Commission Staff Report recommending \$4 billion disallowance. June 9, 1987, page 6.

of the seismic and tsunami conditions that could affect SONGS.”⁸ A4NR asks SCE to explain exactly *who* is determining what studies are “prudent.” Although the NRC was late in acknowledging its shortfalls regarding seismic assurances at Diablo Canyon, they mandated the creation of the LTSP and ultimately had *ten* NRC staff members reviewing the LTSP for PG&E in addition to USGS and outside academic consultants.⁹ Further, in SCE’s testimony they describe “...establishing an independent board of seismic experts to provide review of SONGS information and recommending use of new seismic information or need for additional research into SONGS’ seismic setting.”¹⁰ A4NR again asks, how exactly is “independence” determined for these experts?

As the mandate to create a program “similar” to the LTSP had its genesis in a state agency (CEC) and the state legislature (AB 1632), it seems logical that the oversight of this program should also fall to the state. The CPUC acknowledged this in D.10-08-003 with regard to PG&E’s Application A.10-01-014, wherein they prescribed the role of the “Independent Peer Review Panel” (IPRP) thusly:

Peer Review Panel

In addition to PG&E’s proposal to employ outside consultants and subject its seismic studies to peer review, this Commission will convene its own Independent Peer Review Panel (IPRP). The Commission will invite the CEC, the California Geologic Survey, the California Coastal Commission, and the California Seismic Safety Commission to participate on the panel. Under the auspices of the California Public Utilities Commission (CPUC), the panel will conduct a peer review of the seismic studies including independently reviewing and commenting on the study plan and completed study findings. Our order in this application will require PG&E to submit its study plans and completed study findings to the IPRP

⁸ Testimony of Southern California Edison Company to Recover O&M Costs Associated with the San Onofre Nuclear Generating Station Units Nos. 2 and 3 On-Going Seismic Program, and new Seismic Research Projects and Analysis, p.8.

⁹ Goutam Bagchi, “Diablo Canyon Seismic Review,” US NRC, Seismic Information Workshop, September 8-9, 2010, p. 9.

¹⁰ Testimony of Southern California Edison Company, p.8.

for review prior to implementation. Should a dispute arise it should be resolved informally but if that is not attainable the Commission has authority to halt the associated rate recovery.¹¹

Further evidence of the useful and necessary role of this IPRP is found in PG&E's recently filed "MOTION OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) TO RE-OPEN APPLICATION 10-01-014 AND TO RECOVER INCREASED COSTS OF SEISMIC STUDIES." For example, PG&E's application states:

As PG&E developed more detail around the seismic study plans through interactions with third party vendors and environmental agencies, **as well as through meetings with the IPRP, we gained important knowledge** regarding how to undertake the seismic studies to optimize the collection of information important to seismic safety at Diablo Canyon.¹² [emphasis added]

Another example from the same document:

Just after the Commission issued Decision 10-08-003, PG&E conducted a low energy shallow 3D survey of the northern segment of the Shoreline Fault Zone near Point Buchon during the winter of 2010/2011. **The IPRP noted that this activity was consistent with the AB1632 recommendations**, and focused on an area that was identified as having a high potential for being relevant and of great scientific interest (IPRP, 2010)¹³ [emphasis added]

And, on the following page:

With more detailed mapping, channel offsets have the potential to constrain the rate of fault slip, which in turn can reduce the uncertainty in PSHA calculations

¹¹ California Public Utilities Commission Decision 10-08-003, August 12, 2010, p.8

¹² Motion of Pacific Gas & Electric Company to reopen Application 10-01-014, September 23, 2011, p.3.

¹³ Ibid. pp 9-10.

for the Shoreline fault zone. PG&E **presented a proposal to conduct a low energy 3D survey of this channel and the surrounding region during the fall of 2011 to the IPRP on July 20, 2011.**¹⁴ [emphasis added]

In its Motion to reopen A. 10-01-014 PG&E even references the funding of the IPRP:

The revised budget includes estimated costs to support activities of the IPRP. In Decision 10-08-003 the CPUC **established the IPRP**, whose members include the California Energy Commission, California Geological Survey, California Coastal Commission, and the California Seismic Safety Commission.¹⁵

These examples show the extent to which PG&E has incorporated the findings and sought the recommendations of the CPUC's IPRP panel as authorized in D.10-08-003. This panel is comprised of state oversight agencies including the California Coastal Commission, the California Energy Commission, the California Geologic Survey and the State Seismic Safety Commission. It concerns A4NR that the presence of the IPRP is absent in SCE's Application and Testimony. SCE has been a party to all PG&E's recent seismic and relicensing applications before the CPUC. They should be aware of the need for and presence of the IPRP. Whether by oversight or negligence, this important safeguard of state and ratepayer interests cannot be ignored. SCE's application is deficient without the creation and funding of the IPRP to assure objective oversight of the proposed seismic studies.

2. There are several instances in SCE's Testimony where budget categories seem either absent or incomplete when compared to PG&E's similar seismic work, already in progress. As noted above, SCE has been a party to all of PG&E's work to date, and should be pro-active in anticipating or acknowledging costs and delays that could possibly affect their work in the way that such exigencies have affected PG&E.

¹⁴ Ibid. p. 10.

¹⁵ Ibid. p. 14.

Examples of such omissions include the following:

- a) PG&E acknowledges that “mitigation” is necessary for the marine environment in order to address the affects of high-energy sonar on wildlife and has asked for \$2.2 million for this mitigation.¹⁶ SCE does not have this as a category in its budget, yet it is inevitable that, facing the California State Lands and Coastal Commissions for permitting, it may need the same resources.
- b) PG&E plans to undertake “infrastructure mapping” at a cost of \$0.64 million as a necessary item for obtaining permits for certain types of onshore seismic testing. It is inevitable that SCE will require the same, but there is no line item for this in their budget.¹⁷
- c) PG&E has implemented a “Nuclear Quality Assurance” program for both the 3D and 2D seismic surveys. SCE has yet to initiate the same.¹⁸

CONCLUSION:

A4NR supports in principle the need for seismic studies at SONGS, particularly as a precursor to any application for license renewal funding. However, in their Application and Testimony, SCE has blended the original twin recommendation of the CEC—to complete the 2D and 3D seismic studies, and to create a long-term seismic program. Thus, the proposed budgets provided by SCE melds the two tasks in a way that makes it difficult to separate the costs of each. A4NR supports the funding for the 2D and 3D seismic studies, upon clarification and inclusion of those items we have questioned. However, with regard to a “long-term seismic program,” ratepayers should not be asked to approve as such without the appropriate regulatory oversight, guidance and accountability—as may be achieved through the IPRP or such oversight as the CEC

¹⁶ Motion of Pacific Gas & Electric Company to reopen Application 10-01-014, September 23, 2011, p.8.

¹⁷ Ibid p. 13.

¹⁸ Ibid.

should deem acceptable for the fulfillment of its recommendation. Absent these clarification and inclusions, this application is incomplete.

STATEMENT OF QUALIFICATIONS

Q. Please state your name and business address.

A. Rochelle Becker, Executive Director of the Alliance for Nuclear Responsibility,
PO 1328, San Luis Obispo, Ca 93406.

Q. Please summarize your recent work experience.

A. In 2005, I co-founded and have since been the Executive Director of the Alliance for Nuclear Responsibility. From 1980 through 2005 I was a spokesperson for the San Luis Obispo Mothers for Peace.

Since the early 1980's, I have represented the San Luis Obispo ratepayer community before the California Public Utilities Commission, the California Energy Commission (CEC), the California Coastal Commission, the State Regional Water Quality Control Board, the legislature, the Nuclear Regulatory Commission and Congress. Since the latter 1970's, I have consistently, but not regularly, attended and given a local public stakeholder perspective to local, state, and federal legislative bodies and oversight agencies regarding energy policies and nuclear power.

Since 2005 I have participated in virtually all CEC proceedings related to California's operating reactors, including filing comments, testifying and providing update information for the Commission to consider. In 2005, as the Alliance Executive Director, I also met periodically with state and federal legislators to share concerns about the foreseeable relicensing of California's aging reactors.

In 2010 I shared our state and local seismic concerns with Nuclear Regulatory Commission Chairman Gregory Jaczko and NRC Commissioner Svinicki, the California congressional representative delegation and Deputy Secretary of Energy, Dr. Peter Lyons. I have also met with local community and union representatives, renewable and seismic experts.

Q. What is the purpose of your testimony?

A. The purpose of my Testimony is to sponsor the collection of past and recent historical documents, judgments, decisions and letters from elected and appointed officials and regulatory oversight agencies referenced in the Testimony of A4NR with regard to the scope, cost and oversight of SCE/SDG&E's proposed seismic studies.