

DOCKET

09-IEP-1L

DATE _____

RECD. 8/13/2009



In the matter of:
Preparation of the
2009 Integrated Energy Policy Report

Docket No. 09-IEP1L
Committee Data Request
Nuclear Power Plant-
Related Data

**Alliance for Nuclear Responsibility comments on responses of Southern California Edison (SCE) to the data requests related to California's Nuclear Plants sent by the California Energy Commission
June 26, 2009.**

The following are the comments of the Alliance for Nuclear Responsibility on SCE's responses to the California Energy Commission's (CEC) data requests. The Alliance comments follow SCE's format, which is a different format than the CEC Data Request format. SCE appears to have chosen not to respond to many of the CEC questions. At this time A4NR is unsure whether SCE has claimed this information is "privileged".

A4NR has yet to review the responses PG&E has provided. However, PG&E's format was the same as the CEC, and therefore easier to follow. However, A4NR is aware that SCE's responses total 38 pages (page 2-14 focused on responses solely relating to Palo Verde). In comparison PG&E devoted all 40 pages of responses to Diablo Canyon. A4NR comments and questions are underlined.

SCE Responses filed 7/22/09

Page 2-14 respond to questions related to Palo Verde.

As the Alliance for Nuclear Responsibility has not followed issues relating to the Palo Verde reactors in Arizona, we have not provided comments to SCE's responses. However, if the responses echo the responses for SONGS, the A4NR's comments for SONGS would likely apply.

SCE responses for SONGS begin on page 15

Page 15 SCE answers I-01 -A4NR does not have attachment cited

Page 16 SCE answers I-02 -A4NR does not have attachment cited

Page 17 SCE answers I-03 -no information provided, no studies done

Page 18 SCE partially answers I-05 for SONGS – A4NR finds SCE’s response incomplete.

Page 19 Question I.06: PLANT PERFORMANCE (Diablo Canyon; SONGS 2&3; Palo Verde)

Data Request (DR): Please describe plans for replacing power from the plant if an outage lasts longer than 90 days.

SCE’s response appears to indicate that the utility does not have plans in place other than it “may need to go to the wholesale energy markets to procure replacement power” in the event of an extended outage at SONGS. Going to wholesale energy markets during unplanned outages hasn’t worked out too well for SCE & SDG&E ratepayers in the past. If there are more concrete plans it is not clear in the SCE response.

Page 20 I-07 PLANT PERFORMANCE (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: If there is a prolonged outage (one year or more) at the plant, what are the contingency plans for replacement power?

SCE partially answers I-07 – A4NR’s repeats its comments for I-06 for SCE response to I-07, except we would add that the costs to ratepayers could result in major investments and possible rate shock

I-08 is skipped

Page 22-Question I.09: PLANT PERFORMANCE (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: How would portfolio needs and “best fit” criteria change in the absence of the nuclear facility for short-term (up to 90 days) and mid-term (91 days – five years) procurement?

SCE partially answers I-09. Yet SCE did not identify any contingency plans to replace SONGS at the end of its current license. SONGS is an aging reactor facility with onsite radioactive waste storage site on a seismically active and eroding coastal zone; therefore a partial response appears to have little value to future energy planning, unless SCE is implying that an approved license renewal is a foregone conclusion, in which case, this would appear to make a mockery of the entire federal procedure for analysis, investigation, public input as well as the state's own regulatory concerns as voiced through CPUC and CEC procedure.

Page 23 Question I.10: PLANT PERFORMANCE (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: What resources might be needed to provide grid stability to the system in the absence of the nuclear plants for an extended outage during the summer? Would replacement power purchased by the utility be likely to come from those resources?

In A4NR's opinion SCE's response to I-09 implies that there are few, if any, resources to replace SONGS in an extended outage. Efficiency appears not to be considered a resource by investor owned utilities--yet is acknowledged to be one by the current federal administration, DOE and the state. Why is this so?

Page 24 Question L.01: RELICENSING OR PLANT RETIREMENT (Diablo Canyon; SONGS 2&3)

DR: Please describe the current status and overall schedule for plant license renewal activities related to a license renewal application to the NRC. What is the current estimate for the amount of time needed to complete a license renewal application and submit it to the NRC? What studies for your plant are underway and are needed to support such an application to the NRC? What is the schedule and planned studies that will be completed for the license renewal feasibility studies for the CPUC and in response to the AB 1632 assessment recommendations? (Diablo Canyon, SONGS 2 and 3)

A4NR finds SCE's response to L-01 disconcerting: "SCE presently anticipates submitting an application to the California Public Utilities Commission (CPUC) requesting funding necessary to prepare and process an NRC License Renewal application in the third quarter of 2010. SCE anticipates filing a License Renewal application with the NRC in late 2012...plans are being developed to perform studies identified in the AB 1632 recommendations. In addition, as noted in the response to L.02, studies are also underway to address NRC requirements for license renewal...While all studies may not be complete when the CPUC application is submitted, sufficient information will be available for the CPUC to grant SCE's request."

Historically California ratepayers have not been served well by the state's reliance on incomplete and often unverified information relating to nuclear power. Original estimates for SONGS were under \$400 million, the final price tag was \$4.7 billion. Large components that were designed to last the full forty-year design life of the reactors are being replaced today – at a cost of an additional billion or two. Highly radioactive waste that the federal government promised to remove from California's fragile coast under the 1982 Nuclear Waste Policy Act is now being stored in casks at the reactor site and the only proposed permanent offsite storage facility is no longer an option. In addition, a recent statement by

the Chair of the Nuclear Regulatory Commission (NRC) infers that removal of highly radioactive waste to a permanent offsite location is not “urgent.” How and why should the state grant any request to a utility based on incomplete studies, when all previous estimates on which promises were made have been exceeded or invalidated?

Page 25 L-02 Question L.02: RELICENSING OR PLANT RETIREMENT (Diablo Canyon; SONGS 2&3)

DR: Please describe the license renewal studies to be completed for the plant (for example, the general topics and areas of investigation) and provide a status report, including any results, of license renewal feasibility studies that are planned, are in progress or have been completed

In its response SCE states “The NRC requires an environmental review and a safety review. Work to assess the environmental impacts associated with the license renewal feasibility study began in January 2009. A draft of the environmental report will be prepared by the end of 2009.”

California should be aware that to date the NRC has approved license renewals for 54 reactors at 29 sites. They have approved all of these reactors without a current assessment of the environmental impacts associated with license renewals (HYPERLINK "<http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html>" <http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html>). It would benefit the state to actively follow and comment on the NRC's EIS rulemaking.

According to SCE's response “Also included in the environmental [NRC] review is an analysis of severe accident mitigation alternative (SAMA) strategies; this study will be started in 2010.

The absence of a current environmental review in an analysis of severe accident mitigation alternative (SAMA) strategies is a significant missing factor in NRC reviews and has already resulted in large expenditures of resources from state agencies and NGO's who have questioned the lack of severe accident mitigation. Over and over this issue has been introduced and denied, in license renewals and onsite storage challenges. California owes it to its SCE ratepayers and state residents to require all studies are completed, reviewed and adopted *before* license renewal applications can be filed with the NRC.

SCE also states “The earliest date for filing the NRC application for SONGS license renewal is in the fourth quarter 2012.” A4NR believes the state must determine the latest date possible for filing of license renewal to allow for a responsible energy transition or to determine the lifetime costs, benefits and risks of continued operation of aging reactors as well as to address the impacts of

continued production and storage of radioactive waste on the state's fragile coast if licenses are renewed.

Page 26 Question M.01: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: Please describe any major fires or safety related events occurring at the plant (2005-2009) that were reported to the NRC, for example, transformer fires. Please describe the cause of the event and corrective action taken. (Diablo Canyon, SONGS)

A4NR needs to further research SCE's response.

Page 27 Question M.02: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: Please provide updated information on the total revenue requirements for the power plant for each year, since an operating license for the facility was issued? Please indicate for each of these years whether the annual revenue requirements were determined through a cost-of-service or performance-based mechanism. Where possible, please break down these revenue requirements into fixed and variable operating costs, capital additions, return on equity, and return of equity (depreciation). (Diablo Canyon, SONGS)

A4NR finds SCE's response incomplete as the utility does not adequately provide for responsible energy planning.

Page 28 Question M.03: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: What are the current estimates for the projected total plant lifetime costs including costs for plant design and construction, operation, maintenance, fuel, repair and retrofit, emergency response planning, security, insurance, decommissioning, waste storage, transport, and disposal, with and without license renewal? (Diablo Canyon, SONGS)

SCE's response refers to pages in a CPUC document, rather than citing or attaching the document, making it difficult for the public to comment. It would be helpful for SCE to provide a link to the pages in the decision of its 2007 General Rate Case. Finally as SCE has stated it plans to pursue the next steps towards license renewal in 2010 and it is now eight months into 2009, it seems that SCE might be able to provide preliminary projected costs that would be useful for CEC planning.

Page 29 Question M.04: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: Operators of nuclear power plants are expected to face a critical shortage of plant workers in the coming years as the current labor force retires. Nearly half of all employees in the nuclear industry are over 47 years old. What is the estimated percent of the employees at Diablo Canyon and SONGS that will be eligible for retirement over the next five? Please update information provided on what PG&E and SCE are doing to recruit and train plant workers, for example, engineers, technical workers, and managers, to replace these retiring workers. (Diablo Canyon, SONGS, Palo Verde)

SCE states "The estimated percentage of employees at SONGS that may retire over the next five years is approximately 25%. The actual percentage of employees eligible to retire is higher than this, but is not deemed realistic." A4NR believes that the actual percentage would be useful for resource planning. In addition, SCE fails to explain why they do not deem the actual percentage to be "realistic".

A4NR has discussed the impacts of aging workforce and possible reduction in safety margins with the Nuclear Regulatory Commission's Inspector General's (IG) office. The IG has found our concerns to be valid and has tentatively agreed to do an audit of the industries aging workforce, increased special oversight decisions and possible reductions in safety margins. SCE may or may not be aware of this proposed audit.

Finally "SCE commenced hiring in advance of expected retirements in 2003 and continues this effort today. A4NR is concerned that this hiring and training may not be adequate as the past three consecutive years of NRC end-of-cycle reports cite "human performance" and "problem identification and resolution" problems. The Alliance has requested a stay in the steam generator replacement project due to these precursors to safety problems and recommended to the NRC, Senator Boxer, Senator Kehoe and the CEC that SCE perform a minimum of two quarters without these "deficiencies".

SCE has not provided current or estimated future costs of training programs. Also missing are the costs of housing and living near SONGS. Both issues were discussed in the 2007 CPUC/SCE/GRC and should be provided by SCE. A4NR believes these costs create a challenge for retaining and hiring new workers.

SCE also mentions military hiring, a percentage of military hires since 9/11/01 by job classification, security, operators and maintenance, would be useful in CEC planning. Unlike conventional and renewable generation, security is required for nuclear plants during and post operation – until radioactive waste is removed from the site. A4NR believes SCE should provide the estimated lifetime costs (including all costs that will required long after last KW is produced).

Verde)

DR: Nuclear power plants also are expected to face shortages in key reactor materials and components for which the supply and production worldwide is limited. Please describe how these shortages might affect currently operating plants, if specialized reactor components need to be replaced through plant retirement. What is the lead time for delivery of key reactor components, for example, reactor vessel heads? (Diablo Canyon, SONGS, Palo Verde)

Although SCE responds that “SONGS does not foresee shortages in key reactor materials and components”, should a nuclear “renaissance” actually occur there could be delays, cost overruns, or other factors that could result in shortages. SCE did not “foresee” replacing steam generators, reactor vessel heads, turbine rotors, etc, when it estimated full lifetime costs for SONGS. Recently replacements for large steam generators were provided by Japan making these projects dependent on the foreign political and financial markets, the volatility of the U.S. Dollar on foreign markets, and subject to international competition for materials and components. A recent example would be the huge jump in uranium prices worldwide.

A4NR believes that a more transparent, complete and up-to-date record will benefit future decisions on the state’s dependence on aging reactors and for economic and reliable energy planning.

Page 32 Question M.06: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: To protect plant workers, plant assets, and equipment in an emergency, please describe recent reassessments of the adequacy of access roads to the plants and surrounding roadways for allowing emergency personnel to reach the plant and to allow local communities and plant workers to evacuate. (Diablo Canyon, SONGS)

A4NR has not followed emergency planning at SONGS as closely as we have at Diablo Canyon. However, the NRC is currently in the process of reviewing and updating it’s emergency planning criteria and SCE’s response should be re-evaluated when new rules are reviewed and adopted. A4NR recommends that California oversight agencies review and comment on the NRC’s draft criteria.

Page 34 Question M.07: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: Please describe the current status of worker recruitment and training programs (plant operation and maintenance manuals, etc.) to help ensure that knowledge and experience with the plant, particularly with respect to plant operation and maintenance and strong safety cultures are instilled in new

workers. (Diablo Canyon; SONGS, Palo Verde)

A4NR comments, like SCE's response is similar to M-04

An attachment is mentioned, but A4NR does not have this yet.

Page 35 M-08 (SCE refers to M-04, M-08 and M-09)

Again an attachment is mentioned, which A4NR does not have yet

Page 36 Question M.09: OTHER ISSUES (Diablo Canyon; SONGS 2&3; Palo Verde)

DR: Please describe safety culture issues that have arisen at SONGS, the NRC's response to the lapses in safety culture at SONGS and the NRC's concerns about plant performance. Please provide copies of NRC plant assessments and reports. Please describe SCE's overall plan and progress being made to address these safety culture issues at SONGS. (SONGS).

SCE discusses the recent NRC end-of-cycle report which identified "a cross-cutting theme in human performance was identified involving instances of failing to provide adequate procedures or work instructions. In the area of problem identification and resolution (also known as the Corrective Action Program), a cross-cutting theme was identified involving instances failing to thoroughly evaluate problems such that the resolutions address causes and extent of condition." SCE goes on to explain what the utility has done and plans to do to address these issues.

A4NR believes the utility when it states that it is making an effort to address their repeated precursors to safety problems; however this is the third year these issues have been identified by the NRC. Therefore, we believe it is prudent for SCE to demonstrate they have resolved these issues and can operate for two consecutive quarters under routine conditions before the workforce begins to cut a 28 by 28 foot hole in the containment of each reactor to replace steam generators. SONGS has seismically qualified domes and this a very expensive (close to a billion dollars) project. If SCE begins this project and encounters "human performance involving instances of failing to provide adequate procedures or work instructions", the result could be cost overruns (traditionally passed on to ratepayers), reliability concerns, and spot market prices to provide generation during peak periods.

Again an attachment is mentioned on page 37 which we do not have yet.