

May 7, 2015

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the matter of  
Pacific Gas and Electric Company  
Diablo Canyon Nuclear Power Plant  
Units 1 and 2

Docket Nos. 50-275-LR  
50-323-LR

**SAN LUIS OBISPO MOTHERS FOR PEACE'S  
REPLY TO OPPOSITIONS TO MOTION TO FILE NEW CONTENTIONS  
REGARDING ADEQUACY OF ENVIRONMENTAL REPORT  
FOR DIABLO CANYON LICENSE RENEWAL APPLICATION**

**I. INTRODUCTION**

Pursuant to 10 C.F.R. § 2.309(h), San Luis Obispo Mothers for Peace (“SLOMFP”) hereby replies to Pacific Gas & Electric Company’s Answer Opposing Proposed Energy Alternatives Contentions (May 1, 2015) (“PG&E’s Answer”) and NRC Staff Answer to San Luis Obispo Mothers for Peace’s Motion to File New Contentions Regarding the Adequacy of the Updated Environmental Report for Diablo Canyon (May 1, 2015) (“NRC Staff Answer”). Their objections to SLOMFP’s contentions are without merit, and therefore the contentions should be admitted.

**II. DISCUSSION**

**A. Inadequate Consideration of Energy Alternatives**

SLOMFP’s Contention A asserts:

Chapter 7 of PG&E’s Amended Environmental Report is inadequate to satisfy NEPA and 10 CFR § 51.53(c)(2) because it does not evaluate a reasonable array of energy alternatives that either currently are commercially viable or will become so in the near term (*i.e.*, within the next ten years). PG&E’s energy alternatives analysis is based on arbitrary and unreasonable assumptions about the necessary characteristics of replacement energy, the viability and availability of alternative energy sources, and what constitute[s] reasonable combinations of energy sources.

In the basis statement, SLOMFP also presents evidence that PG&E had arbitrarily restricted its consideration of combined energy alternatives, ignoring dramatic developments in solar, wind, battery storage, and information and control technologies that would allow a much more flexible approach to integrated supply and demand. This combination of renewables, battery storage, demand side management and supply side management could more than make up for the electricity generation capacity of Diablo Canyon. Cooper Declaration, pars. 10-17.

Both PG&E and the Staff argue that the only alternative PG&E is required to consider is “baseload generation,” *i.e.*, a single energy source that can provide power at the same 24-hour capacity as Diablo Canyon. PG&E Answer at 5, NRC Staff Answer at 8-10 (citing *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-05, 75 NRC 301, 339 (2012) (“*Seabrook*”); *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-08, 75 NRC 393 (2012) (“*Davis-Besse*”). But they misconstrue the Commission’s legal standard for the evaluation of energy alternatives. The requirement that an alternative energy analysis must be limited to “single, discrete electric generation sources” stemmed from the 1996 License Renewal GEIS, and was already giving way to a “somewhat broader analysis” in 2012 when *Seabrook* was decided. 75 NRC at 339.<sup>1</sup> In *FirstEnergy*, the Commission clarified that a

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<sup>1</sup> The stipulation of the 1996 License Renewal GEIS that alternative energy analyses must be limited to “discrete electric generation sources” has been eliminated from the 2013 GEIS. And the 2013 GEIS explicitly declines to make any binding generic determinations about energy alternatives, instead reserving those issues for case-by-case resolution. *Id.* at 2-18. As explained in the GEIS:

Should the need arise to replace the generating capacity of a nuclear reactor, power could be provided by a suite of alternatives and combinations of alternatives, including expanding the capacities of one or more existing power generating plants within a region, delaying the scheduled retirement of one more existing plants, or purchasing an equivalent amount of power. The number of possible combinations of alternatives that could replace the generating capacity of a nuclear power plant is potentially unlimited.

petitioner is not required to identify a single source of baseload power, but rather must show that a “combination” of renewable energy sources “could satisfy the baseload *demand* in the region of interest” by the time the operating license expires. CLI-12-08, 75 NRC at 401 (emphasis added). SLOMFP has met the Commission’s standard for admission of Contention A by providing evidence, sufficient to demonstrate a material dispute with PG&E, of a large number of renewable resources that in combination “can meet the demand for electricity in a low-carbon environment.” Cooper Declaration, par. 9. *See also* par. 10 (“24-hour energy supply provid[ed] by Diablo Canyon could be replaced three times.”) Under that standard, SLOMFP is *not* required to identify a single source of electricity that can produce 2,285 megawatts of electricity on a 24-hour basis.<sup>2</sup>

PG&E also argues that Contention A is not admissible because it is not consistent with the License Renewal GEIS’ stated purpose of license renewal, which is to provide a source of baseload power.<sup>3</sup> But that assertion is only partially correct. There are two statements of

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Based on this, the NRC has only evaluated individual alternatives rather than combinations of alternatives in this GEIS. However, combinations of alternatives may be considered during plant-specific license renewal reviews.

*Id.* at 2-18.

<sup>2</sup> SLOMFP notes that many of PG&E’s and the Staff’s arguments to the effect that SLOMFP has failed to demonstrate the existence of a material dispute are based on the implicit assumption that SLOMFP must show that each alternative energy source, by itself, could replace the electricity generated by Diablo Canyon. *See, e.g.*, PG&E Answer at 8 (arguing that SLOMFP has failed to show that demand side management and energy efficiency could replace “baseload generation”); *id.* at 9 (arguing that SLOMFP has failed to show that geothermal resources, by themselves, could “replace the baseload output of Diablo Canyon”); NRC Staff Answer at 12 (claiming that Mr. Cooper fails to contradict PG&E’s conclusion that “photovoltaic power’s intermittency makes distributed generation unsuitable for *baseload applications* without sufficient energy storage systems, which are not yet available.”) (emphasis added).

<sup>3</sup> PG&E Answer at 6 (citing *Citizens Against Burlington v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991)). Oddly, PG&E quotes from the 1996 License Renewal GEIS’ statement of purpose and need (as quoted in the 1996 License Renewal Rule), despite the fact that they were superseded by the 2013 License Renewal GEIS and rule (78 Fed. Reg. 37,282 (June 20, 2013)).

purpose and need in the 2013 License Renewal GEIS, one broad and the other narrow. The broad statement of purpose and need is repeated twice in summary passages:

The purpose and need for NRC’s proposed action is to provide an option to continue plant operations beyond the current licensing term *to meet future system generating needs*, as such needs may be determined by State, utility, system, and, where authorized, Federal (other than NRC) decision-makers.

*Id.* at S-3 (emphasis added). *See also* text box in Section 1.2 of the GEIS (page 1-3). The narrower statement of purpose and need is presented in Section 1.3:

The purpose and need for the proposed action (issuance of a renewed license) is to provide an option that *allows for baseload power generation capability* beyond the term of the current nuclear power plant operating license to meet future system generating needs.

*Id.* at 1-3 (emphasis added).

These divergent statements of purpose and need must be interpreted in a manner that is consistent with the GEIS as a whole. Furthermore, the NRC must comply with the Court’s directive in *Citizens Against Burlington* that “an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained conclusion.” 938 F.2d at 196. To rely on the narrower statement of purpose and need, while ignoring the broader statement, would be inconsistent with the NRC’s recognition in the License Renewal GEIS that energy technologies are “rapidly evolving” and “will outpace information presented in the GEIS,” therefore precluding NRC from reaching generic conclusions in the GEIS.<sup>4</sup> The insistence on “baseload”

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<sup>4</sup> *Id.* at 1-30 – 1-31. As stated in the GEIS:

The NRC has updated the final GEIS to incorporate the latest information on replacement power alternatives, but it is inevitable that rapidly evolving technologies will outpace information presented in the GEIS. Incorporation of this information is more appropriately made in the context of plant-specific license renewal reviews, rather than in

electricity sources for meeting “future energy needs” would also preclude the consideration of viable and benign non-baseload alternatives, in violation of *Citizens Against Burlington*.<sup>5</sup>

PG&E and the NRC Staff also argue that SLOMFP has not raised a genuine dispute with PG&E because PG&E considered the alternative energy sources of distributed generation, efficiency, and renewable energy sources listed in SLOMFP’s contention. PG&E Answer at 10, NRC Staff Answer at 11. But PG&E’s alternative energy analysis combines renewables with natural gas, a source of carbon emissions and other airborne pollutants. *Id.* at 10. Furthermore, PG&E rejects non-gas alternatives a “speculative.” PG&E Answer at 14-15. In light of the paramount importance to the state and federal government of reducing carbon emissions, as witnessed by the U.S. Environmental Protection Agency’s Clean Power Plan and the State of California’s rigorous standards for carbon emission reductions, it hardly speculative for SLOMFP to seek consideration of viable non-natural-gas alternatives, including distributed generation, efficiency, storage and geothermal. The combined alternatives proposed by SLOMFP fall squarely within the “rule of reason.” *Citizens Against Burlington*,

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the GEIS. As with renewable energy technologies, energy policies are evolving rapidly. While the NRC acknowledges that legislation, technological advancements, and public policy can underlie a fundamental paradigm shift in energy portfolios, the NRC cannot make decisions based on anticipated or speculative changes. Instead, the NRC considers the status of alternatives and energy policies when conducting plant-specific environmental reviews.

<sup>5</sup> PG&E also argues that its own preference for baseload power must be given “substantial weight.” PG&E Answer at 6 (citing *Seabrook; Hydro Resources, Inc.* (P.O. Box 15910 Rio Rancho, NM 87174), CLI-01-04, 55 NRC 31, 55 (2001)). The NRC’s deference to an applicant’s choice of preferred alternatives, however, “does not equate to complete deference.” *Pa’ina Hawaii, L.L.C.*, CLI-10-08, 72 NRC 56, 78 (2010) (“*Pa’ina*”) (holding that the applicant’s statement of its preferred technology for irradiating food should not preclude consideration of other reasonable technologies). As in *Pa’ina*, PG&E’s preference for baseload power sources does not deserve “complete” deference in light of the availability of other reasonable alternatives for meeting “future system generating needs.” License Renewal GEIS at S-3 and 103.

938 F.2d at 195.<sup>6</sup>

Finally, PG&E and the Staff argue that Contention A's discussion of the costs of energy alternatives is outside the scope of this proceeding. PG&E Answer at 16, NRC Staff Answer at 15. As discussed in the contention, however, the cost of renewables is the "primary determinant of their availability," and thus is relevant to the issue of their viability. SLOMFP Motion at 6.

**B. Failure to Conduct Cost-Benefit Analysis of Energy Alternatives**

SLOMFP's Contention B states:

The Environmental Report is inadequate to satisfy NEPA and 10 C.F.R. § 51.53(c)(2) because it presents a distorted and inaccurate comparison between the environmental impacts of continued operation of Diablo Canyon nuclear power plant and the environmental impacts of energy alternatives. PG&E arbitrarily excludes from its comparisons of environmental impacts (Tables 8-1 and Table 8-2) energy alternatives with small impacts, and misrepresents some of the impacts of renewing Diablo Canyon's license as small. As a result, PG&E fails to consider evidence that the adverse environmental impacts of renewing the Diablo Canyon operating license are "so great, compared with the set of alternatives, that preserving the option of license renewal for future decision-makers would be unreasonable." Final Rule, Environmental Review for Renewal of Nuclear Power Plant Licenses, 61 Fed. Reg. 28,467, 28,468 (June 5, 1996) ("1996 License Renewal Rule").

The NRC Staff argues that Contention B is not admissible, because only the NRC – and not a license renewal applicant – is required to determine "whether the environmental impacts of license renewal are so great that preserving the option of license renewal for future decisionmakers would be unreasonable." NRC Answer at 18 (citing 68 Fed. Reg. at 28,471). Whether or not this is correct, PG&E's Amended Environmental Report provides information that is relevant, and may be used by NRC, to make its ultimate determination. As discussed in Contention B, Tables 8.1 and 8.2 "appear to be designed to demonstrate that no such cost-benefit

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<sup>6</sup> PG&E also contends that SLOMFP fails to demonstrate that the impacts of renewable alternatives are smaller than the impacts of continuing to operate Diablo Canyon, and therefore the contention should not be admitted. PG&E Answer at 15. This is simply incorrect. The comparatively greater impacts of operating Diablo Canyon are the subject of Contention B.

analysis is necessary.” SLOMFP Motion at 9. Thus, SLOMFP respectfully submits that therefore the information provided in these tables constitutes a legitimate subject of Contention B. SLOMFP has provided ample evidence to place the reasonableness and accuracy of the tables in dispute.

The Staff also argues that SLOMFP has challenged the regulations by discussing the significance of the environmental impacts of spent fuel storage and disposal, or by claiming that PG&E must independently evaluate environmental impacts that NRC has addressed in generic documents. NRC Staff Answer at 19. But the Staff is incorrect. SLOMFP relies entirely on the characterization of environmental impacts provided by the NRC in generic analyses of environmental impacts. SLOMFP has not challenged any of the NRC’s conclusions.<sup>7</sup>

### **III. THE CONTENTIONS ARE TIMELY PURSUANT TO 10 C.F.R. §§ 2.309(c) and 2.309(f)(2)**

The NRC Staff does not dispute the timeliness of SLOMFP’s contentions. NRC Staff Answer at 5. But PG&E argues that the information on which SLOMFP relies was available “long ago.” PG&E Answer at 17. While this may be true for some details of PG&E’s energy alternatives analysis, PG&E’s analysis of energy alternatives as a whole was substantially revised in the Amended Environmental Report. As stated by the Staff, “SLOMFP’s contentions

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<sup>7</sup> In response to SLOMFP’s argument that the NRC has not determined the significance of the environmental impacts of spent fuel disposal, PG&E argues that the NRC’s regulations themselves establish that “the impacts [of spent fuel disposal] would not be sufficiently large to require the NEPA conclusion, for any plant, that the options of extended operation under 10 C.F.R. Part 54 should be eliminated.” PG&E Answer at 20 (quoting 10 C.F.R. Part 51, Table B-1 (as set forth in Continued Spent Fuel Storage Rule, 79 Fed. Reg. 56,238, 56,263 (Sept. 19, 2014)). Contrary to PG&E’s argument, this statement is not dispositive of the concerns raised in Contention B. While the NRC may have determined that *by themselves*, the impacts of spent fuel disposal would not be significant enough to change a license renewal decision, that is not the issue here. The issue here is whether, taken together, the impacts of renewing the Diablo Canyon operating license significantly exceed the impacts of alternative energy sources. With respect to one element of those impacts – the impacts of disposing of spent fuel – the NRC has not concluded that those impacts are insignificant.

concern portions of the alternatives analysis in the ER, which are either new or significantly updated.” NRC Staff Answer at 5. In addition, as discussed above, the standard for the alternative energy analysis changed between the 1996 License Renewal GEIS (which was in effect when PG&E submitted its original Environmental Report) and the 2013 License Renewal GEIS (which now governs PG&E’s license renewal application). Therefore, SLOMFP had good cause for the timing of its contention.

### **III. CONCLUSION**

For the foregoing reasons, the ASLB should admit SLOMFP’s contentions.

Respectfully submitted,

*[Electronically signed by]*

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**SAN LUIS OBISPO MOTHERS FOR PEACE  
CERTIFICATE OF SERVICE**

I certify that on May 7, 2015, I posted on the NRC's Electronic Information Exchange SAN LUIS OBISPO MOTHERS FOR PEACE'S REPLY TO OPPOSITIONS TO MOTION TO FILE NEW CONTENTIONS REGARDING ADEQUACY OF ENVIRONMENTAL REPORT FOR DIABLO CANYON LICENSE RENEWAL APPLICATION. It is my understanding that as a result, the NRC Commissioners, Atomic Safety and Licensing Board, and parties to this proceeding were served.

Respectfully submitted,

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