

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

**In the Matter of
South Texas Project Nuclear Operating Co.
Application for the South Texas Project
Units 3 and 4
Combined Operating License**

Docket Nos. 52-012, 52-013

June 21, 2010

**INTERVENORS' CONSOLIDATED RESPONSE TO THE APPLICANT'S AND STAFF'S
ANSWERS IN OPPOSITION TO THE INTERVENORS' PROPOSED CONTENTIONS BASED
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

The Intervenor offer the following in response to the Answers of Applicant and Staff to the Intervenor's proposed DEIS contentions.

The proposed DEIS contentions are not untimely because they were filed within the time specified under the scheduling order.

The Panel's October 20, 2009, Initial Scheduling Order states that DEIS contentions are considered timely for purposes of 10 CFR 2.309(f)(2)(iii) if such are filed within the time limits specified therein.¹ Neither the Applicant nor Staff argue that the contentions were filed outside the time specified in the Initial Scheduling Order.² The Initial Scheduling Order directs Intervenor to address the factors in 10 CFR 2.309(c) if their proposed contentions are filed outside the time specified in the scheduling order. Since the time limit for filing the DEIS contentions was met the requirement to address 10 CFR 2.309(c) was obviated.

¹ Initial Scheduling Order, p. 8, §E.2.

² The Panel extended the time by fourteen days for filing DEIS contentions in an Order dated April 22, 2010.

The proposed DEIS contentions are material.

The proposed DEIS contentions are material because each is derived from a specific requirement.³ Accordingly, each DEIS Contention has the potential to influence the licensing decision.⁴

The four recent documents in the Power Report differ significantly from earlier documentation.

Applicant argues certain documents that support the contentions are either not new or do not differ significantly from previous information.⁵

The first document is the Nextant “Measurement and Verification of CPS Energy’s 2009 DSM Program Offerings” (April 26, 2010). Applicant contends this document is not materially different from a similar document from November 2008.⁶ The November 2008 document discussed the possibility of reducing demand through DSM. The May 2010 document verified that such has been achieved. Therefore, the May 2010 document is materially different from the November 2008 version.

The second document is ERCOT’s most recent load forecast and reserve margin update. Applicant argues, on the one hand, that the projected 2.2% reduced peak demand is insignificant while, on the other hand, inferring that the reduction of 2.3% in reserve margin is significant.⁷ Intervenors contend that if the reduction in reserve margin is significant so too is the reduction in peak demand.

³ See Proposed DEIS Contentions, pp. 1-2.

⁴ 10 CFR 2.309(f)(1)(iv).

⁵ Applicant’s Answer, pp. 11-15

⁶ Applicant’s Answer, p. 12.

⁷ Applicant’s Answer, p. 13.

The third document is the EPA's "Climate Change Indicators in the United States". The Intervenor's cite this document to counter the DEIS conclusion that cumulative effects of greenhouse gases (GHG) will not cause destabilizing environmental effects.⁸ The EPA report is based, at least in part, on data that are from 2007-2009. However, the EPA acknowledges that in the past its climate change indicators were inadequate to chart trends.

As a regulatory agency, such indicators help form the evidence base for justifying regulatory action and for demonstrating the effectiveness of those actions. Previously, the EPA lacked firmly established indicators specifically for climate change. As a consequence, if one examines the *2008 Report on the Environment: Highlights of National Trends*, one finds that climate change gets little treatment, and there are very few indicators that provide any measure of climate trends. With 24 climate change indicators now available, the EPA is presumably better equipped to monitor and, more importantly, report on U.S. climate change trends.⁹

The EPA's recognition that its prior shortcomings regarding trend analysis is new and material information upon which the Intervenor's rely. The DEIS conclusion that discounts destabilizing effects from greenhouse gas emissions is contradicted by the April 26, 2010, EPA report's conclusions.

The fourth document deals with the recent announcement that the governing body of Corpus Christi directed that negotiations proceed to sell water rights it holds to provide water for the proposed Las Brisas coal plant.¹⁰ While there have been prior considerations of such a sale, the decision to actually negotiate a contract for such is new information as of May 11, 2010, and is material to the extent it bears on water availability for the proposed STP Units 3 & 4.

Accordingly, these documents should be considered as both new and materially different from prior information under the requirements of 10 CFR 2.309(f)(2).

⁸ Proposed DEIS Contentions, p. 5.

⁹ <http://adaptationonline.blogspot.com/2010/05/climate-change-indicators-in-united.html>

¹⁰ Power Report, p. 11.

DEIS Contention 1

This contention argues that the DEIS need for power discussion suffers from fundamental omissions of factors that both reduce anticipated growth in demand and understate future available generation capacity.¹¹

Contention 2 includes the assertion that funds from the American Recovery and Reinvestment Act (ARRA) for energy efficiency/conservation should be included in the determinations for the need for the power from STP Units 3&4. Staff argues that the subject ARRA funds for energy efficiency/conservation need not be considered because Intervenors do not show how such expenditures may affect the need for power.¹² This argument ignores the obvious purpose of the subject funds, i.e. demand reduction. Under Staff's reasoning these funds effectively do not exist and will have no relationship to the need for power and therefore, ignoring such in the DEIS is permissible. The DEIS Review Team's disregard of these funds and their explicit purpose means that its need for power quantifications are materially flawed and incomplete because the ARRA funds for conservation/efficiency will have the effect of reducing demand for the power from STP Units 3&4.

The availability of federal funds for energy efficiency/conservation discussed in DEIS Contention 1 was raised more generally in the initial Petition for intervention.¹³ The Panel rejected the contention.¹⁴ However, the DEIS Contention 1 is more precise in terms of the actual amount of funds that are available for DSM than the original contention that was rejected by the Panel.¹⁵ For purposes of contention admissibility, that the more precise amount for DSM is now known the contention is justified. 10 CFR

¹¹ DEIS contentions, pp. 2-5.

¹² Staff Answer, p. 9. See also Applicant's Answer at p. 22.

¹³ Petition for Intervention, p. 63.

¹⁴ Panel Memorandum and Order, Aug. 27, 2009, p. 55

¹⁵ Power Report, p.6.

2.309(c)(1)(i). The Intervenor's rights to party status and their interests are already part of the record in this case.¹⁶ 10 CFR 2.309(c)(1)(ii)(iii)(iv). Clearly, no other party has expressed the slightest interest in this issue. 10 CFR 2.309(c)(1)(v)(vi). This contention will not needlessly broaden or delay the proceeding because the need for power and is a fundamental issue for a licensing decision. 10 CFR 2.309(c)(1)(vii). In the interest of providing an accurate evaluation of the need for power the effect of these and similar funds and conservation/efficiency measures should be considered. 10 CFR 2.309(c)(1)(viii).

The argument that the DEIS need not consider the potential impacts of the \$6 billion of energy efficiency funds in HB 5019 because it has not been enacted misses the essential point that efficient end use of electricity is now a public policy priority. The proposed legislation is indicative of the policy trend that is focused on taking steps to reduce demand. While NEPA does not require absolute precision it does require some effort to account for realistic trends in conservation/efficiency in order to consider all salient aspects that bear on the purported need for power.¹⁷

Applicant dismisses the anticipated ERCOT study that will more accurately account for energy storage and other means to optimize delivery of electricity. Applicant argues that this study, taken alone, is inadequate to demonstrate that the need for power study is inadequate.¹⁸ But it is not the subject study alone that undermines the need for power conclusions in the DEIS. The study is representative of the trend discussed in the David Power Report that there is a growing recognition by ERCOT that energy storage will account for additional capacity.¹⁹ In addition to the ERCOT report, the Intervenor has also cited to the conclusions of the U.S. DOE National Renewable Energy Laboratory that endorses compressed air energy storage (CAES) coupled with wind generation to meet baseload generation needs

¹⁶ Id. at p.4.

¹⁷ *Washington Toxics Coalition v. U.S. Dept. of Interior, Fish and Wildlife Service*, 457 F.Supp 2d 1158, 1175 (W.D. Wash. 2006)(internal cite omitted)

¹⁸ Applicant Answer, p.23.

¹⁹ Power Report, p.3, n.6.

and the ConocoPhillips/General Compression announcement of a wind/CAES project that will be suitable for baseload capacity .²⁰

The Applicant and Staff also argue that the ConocoPhillips/General Compression announcement of a CAES project be disregarded.²¹ Again, the Applicant and Staff take an overly narrow view of energy alternatives. The ConocoPhillips/General Compression CAES project is a manifestation of precisely what the U.S. DOE's National Renewable Energy Laboratory has identified as a viable baseload generation source.²² And while the proposed pilot project does not specify planned capacity, its sponsors recognize its capability for baseload generation.²³ Neither Staff nor Applicant offer any evidence that counters the assertion by the sponsors of the ConocoPhillips/General Compression wind/CAES project that it can provide baseload generation.

The DEIS does not account for additional generating capacity discussed by ERCOT. Notwithstanding the fact that ERCOT continues to list 31,757 MW of potential generating capacity (mothballed plants, non-synchronous ties and interconnectedness capacity) the DEIS accounts for none of it. Staff and Applicant endorse this omission.²⁴ While ERCOT acknowledges uncertainty about the interconnections, it still includes over 79,000 MW of capacity attributable to such in its "Active Generation Interconnection Requests".²⁵ The DEIS disregards the entirety of this potential additional capacity. Omission, without discussion, of, for example, extant mothballed plants from potential generating capacity unreasonably assumes the capacity is unavailable. And the potential for

²⁰ DEIS Contentions, p. 5.

²¹ Id.; Staff Answer pp. 21-22.

²² NREL, "Creating Baseload Wind Power Systems Using Advanced Compressed Air Energy Storage Concepts," October 3, 2006.

²³ Applicant Answer, Attachment 14, p.1.

²⁴ Staff Answer, pp. 15-18; Applicant Answer, pp. 24-25.

²⁵ Applicant Answer, Attachment 13, p. 25.

interconnectedness capacity is not accounted for in the DEIS despite the fact that ERCOT signed interconnection agreements in 2009 that represent 2243 MW of capacity.²⁶

Similarly, the Applicant discounts the proposed non-wind renewable capacity rule currently pending before the Texas PUC.²⁷ While Intervenors acknowledge this proposal is not yet final, the point is that it represents the policy trend toward reliance on renewable fuels. The DEIS does not even acknowledge this trend and by this omission implies that it is nonexistent.

Staff dismisses the adoption of the IECC building code because it projects energy savings in 2023 based on adoption of the code in 2011. Staff's argument evidently assumes there will be no energy savings until 2023.²⁸ This argument does not consider incremental savings that will begin in 2011, upon adoption of the code, and cumulatively account for a peak demand reduction of 2362 MW by 2023. The Staff's argument that the IECC code will not cause energy conservation in the 2014-2019 simply overlooks the incremental effects that will inevitably occur from 2011 forward after the code is effective.

In order for the public and decisionmakers to have an accurate profile of the need for power the DEIS needs to discuss viable baseload alternatives such as wind combined with CAES. Additionally, the need for power from STP 3&4 is influenced by the availability of capacity from sources such as mothballed plants and interconnectedness. Finally, the need for power is reduced by ongoing DSM measures such as the updated building code that will begin reducing demand for power soon after it is implemented. The omission of these variables from the DEIS results in an inaccurate assessment of the actual need for the power that would be generated by STP Units 3&4.

²⁶ Id.

²⁷ Applicant Answer, p.23.

²⁸ Staff Answer, pp. 20-21.

DEIS Contention 2

This contention focuses on the relationship between global warming and nuclear power.

The Staff endorses the DEIS conclusion that climate change is not a destabilizing influence on environmental resources either nationally or globally.²⁹ This conclusion cannot be reconciled with the conclusions reached in the EPA's report "Climate Change Indicators in the United States". That report documents effects related climate change including heat waves, global and national precipitation changes, tropical cyclone intensity, increased ocean temperatures and acidity, rising sea levels and changing currents, and shrinking arctic sea ice and glaciers all of which impact humans, plants, and animals.³⁰ To describe these changes as "not destabilizing" ignores the conclusions reached in the EPA report. However, by minimizing the impacts of climate change, the DEIS can likewise minimize the impacts of individual contributors, such as the uranium fuel cycle, to GHG accumulation. The climate change indicators are affected by the total GHG inventory thereby putting a premium on eliminating/minimizing emissions of GHG.³¹

While quantifying the UFC CO₂ emissions (but not other GHG such as methane and nitrous oxide) for a 1000 MW nuclear plant, the DEIS makes no such quantification for wind and solar power. This omission is premised on the mistaken idea that wind, solar and other renewable fuels are not viable alternatives for baseload generation.³² This is a significant omission that renders DEIS Contention 2 material.³³ As the Intervenor argued in their proposed DEIS Contention 2, there is an emphasis on selecting the lowest GHG power generation modes because of the obvious importance of minimizing GHG emissions in order to mitigate the effects of climate change.

A review of the references for the DEIS Chapter 9 indicates the DEIS review team did not address the DOE's National Renewable Energy Laboratory's report that wind combined with CAES is a

²⁹ Staff Answer, p. 24.

³⁰ U.S. EPA, "Climate Change Indicators in the United States", pp. 4-7, 57-67.

³¹ Id. at p. 68.

³² Applicant Answer, p. 33; Staff Answer, pp. 29-30.

³³ This is not so-called "flyspecking" considering the consequences of climate change. Cf. *In the Matter of System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), 61 NRC 10,13.

viable baseload alternative.³⁴ And this NREL report conclusion does not depend on technologies that are untested or unavailable. The plan announced by ConocoPhillips/General Compression to develop a wind and CAES capacity is further substantial evidence that this combination is a viable alternative for baseload generation. Neither Staff nor Applicant dispute the statement made by General Compression that its CAES technology will provide baseload capacity.³⁵

This same argument applies to the failure of the DEIS to consider comparisons of nuclear power and wind and solar and CAES. That is, because renewable fuels are viable baseload generating alternatives, the DEIS should have compared the impacts on water resources of each. The DEIS's flawed conclusion about the viability of renewable fuels/CAES as viable alternatives gives nuclear fueled generation an unwarranted advantage. The omission precludes meaningful considerations of practicable alternatives required under NEPA.³⁶

DEIS Contention 3

As noted above related to DEIS Contention 2, a review of the references for the DEIS Chapter 9 indicates the DEIS Review Team did not consider the DOE's National Renewable Energy Laboratory's conclusion that wind combined with CAES is a viable baseload alternative. Had such a review been undertaken, the Review Team would have perhaps changed its qualified endorsement of CAES as a source of baseload generation.³⁷ Additionally, the Review Team correctly observes that CAES requires suitable geologic conditions such as underground caverns.³⁸ What the Review Team omitted was that Texas is endowed with abundant storage capacity for CAES.³⁹ Neither Staff nor Applicant suggest otherwise. Moreover, the Staff and Applicant criticize this NREL report on dubious grounds.⁴⁰ Applicant

³⁴ NREL, "Creating Baseload Wind Power Systems Using Advanced Compressed Air Energy Storage Concepts," October 3, 2006.

³⁵ Applicant Answer, Attachment 14, p.1.

³⁶ *In the Matter of Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site)*, 65 NRC 539,587(2007)

³⁷ The Review Team states that CAES "might serve as a means of providing baseload power." DEIS, p.9-21.

³⁸ DEIS, p. 9-21.

³⁹ Dean Report, p. 3.

⁴⁰ Staff Answer, p. 40; Applicant Answer, p.38-39.

notes that the NREL report states that additional work is required to determine the feasibility of CAES.⁴¹ But the Applicant does not refute the NREL conclusion that CAES “can produce a stable, reliable output that can replace a conventional fossil or nuclear baseload plant, instead of merely supplementing its output.”⁴² And neither Staff nor Applicant argue against the assertion of ConocoPhillips/General Compression that its CAES generating capacity is suitable for baseload generation. Hence, the additional work to establish wind/CAES as a practicable means to generate baseload has been done and there is no good reason for its exclusion from the DEIS.

The viability of alternative generating technologies is rapidly shifting in favor of renewable fuels. There is a growing recognition in the private sector (eg. the Conoco/Phillips/General Compression wind/CAES project) and government (NREL’s findings related to wind/CAES) that the variability of wind is no longer an impediment for baseload generation. In the context of this adjudication however, the Review Team, Staff and Applicant are behind the times. The failure of the DEIS to consider wind combined with CAES as a baseload capacity alternative and compare it to the Applicant’s proposal to build and operate STP Units 3&4 violates NEPA because wind/CAES is a practicable alternative.⁴³ There is ample evidence in the record to establish that CAES is a feasible and practical alternative for baseload generation. Failure to designate CAES as an alternative for consideration in the DEIS denies

⁴¹ Applicant Answer, p. 38.

⁴² NREL, “Creating Baseload Wind Power Systems Using Advanced Compressed Air Energy Storage Concepts,” October 3, 2006.

⁴³ In *Sierra Club v Marsh*, 744 F.Supp. 352 (D. Me. 1990) The Court discussed the alternatives analysis:

The scope of the EIS discussion of alternatives is defined by the “reasonableness” of the options, not by whether the applicant prefers or is capable of implementing a particular alternative. [*Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed.Reg. 18026, 18027 \(1981\)](#) [*CEQ Forty Questions*]. Reasonable alternatives are those “that are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply *desirable* from the standpoint of the applicant.” *Id.* The CEQ's interpretation of NEPA is entitled to “substantial deference.” See [*Sierra Club*, 701 F.Supp. at 915 n. 10](#), [*Accord Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 109 S.Ct. 1851, 1858, 104 L.Ed.2d 377 \(1989\)](#).

744 F.Supp. at 364, fn. 18.

decisionmakers and the public the very opportunity to consider reasonable alternatives expected under NEPA.⁴⁴

DEIS Contentions 4-6

Intervenors offer no further responses on DEIS Contentions 4-6. However, the absence of a response should not be interpreted as Intervenors' agreement with either the Staff's or the Applicant's Answers related to DEIS Contentions 4-6.

Conclusion

Intervenors urge that DEIS Contentions 1-6 be admitted for adjudication.

Respectfully submitted,

/s/ Robert V. Eye
Robert V. Eye, Kan. Sup. Ct. No.10689
Kauffman & Eye
Suite 202
112 SW6th Ave.
Topeka, Kansas 66603
785-234-4040
bob@kauffmaneye.com

June 21, 2010

⁴⁴ 744 F.Supp at 364.

CERTIFICATE OF SERVICE

I hereby certify that on June 21, 2010 a copy of the Intervenor's Consolidated Response to the Applicant's and Staff's Answers in Opposition to the Intervenor's Proposed Contentions Based on the Draft Environmental Impact Statement was served by the Electronic Information Exchange on the following recipients:

Administrative Judge
Michael M. Gibson, Chair
Atomic Safety and Licensing Board Panel
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: mmg3@nrc.gov

Administrative Judge
Dr. Randall J. Charbeneau
Atomic Safety and Licensing Board Panel
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: Randall.Charbeneau@nrc.gov

Administrative Judge
Dr. Gary S. Arnold
Atomic Safety and Licensing Board Panel
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: gxa1@nrc.gov

Office of the General Counsel
U.S. Nuclear Regulatory Commission
Mail Stop O-15D21
Washington, DC 20555-0001
Michael Spencer, Sara Kirkwood,
Jessica Bielecki, Anthony Wilson
E-mail: Michael.Spencer@nrc.gov
Sara.Kirkwood@nrc.gov
Jessica.Bielecki@nrc.gov
Anthony.Wilson@nrc.gov

Office of the Secretary
U.S. Nuclear Regulatory Commission
Rulemakings and Adjudications Staff
Washington, DC 20555-0001
E-mail: hearingdocket@nrc.gov

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Mail Stop: O-16C1
Washington, DC 20555-0001
E-mail: ocaamail@nrc.gov

Counsel for STP Nuclear Operating
Company
Steven P. Frantz
Stephen J. Burdick
Alvin Gutterman
John E. Matthews
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Phone: 202-739-3000
Fax: 202-739-3001
E-mail: sfrantz@morganlewis.com
sburdick@morganlewis.com
agutterman@morganlewis.com
jmatthews@morganlewis.com

Signed (electronically) by Robert V. Eye

Robert V. Eye
Counsel for the Intervenors
Kauffman & Eye
112 SW 6th Ave., Suite 202
Topeka, KS 66603
E-mail: bob@kauffmaneye.com

