

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

LUMINANT GENERATION COMPANY LLC)

(Comanche Peak Nuclear Power Plant Units 3 and 4))

Docket Nos. 52-034-COL
52-035-COL

September 27, 2010

**LUMINANT’S ANSWER OPPOSING NEW CONTENTIONS BASED ON
THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

I. INTRODUCTION

In accordance with 10 C.F.R. § 2.309(h) and the Atomic Safety and Licensing Board (“Board”) October 28, 2009 Initial Scheduling Order, Luminant Generation Company LLC and Comanche Peak Nuclear Power Company LLC, Applicants in the above-captioned matter (jointly, “Luminant”), submit this Answer opposing the new contentions proffered by the Intervenor on September 7, 2010.¹ The contentions allege inadequacies in the U.S. Nuclear Regulatory Commission (“NRC”) Staff’s August 2010 Draft Environmental Impact Statement (“DEIS”) for the construction and operation of Comanche Peak Nuclear Power Plant (“CPNPP”)

¹ Intervenor’s Motion for Leave to File New Contentions Based on the Draft Environmental Impact Statement (Sept. 7, 2010) (“Motion”); *see also id.* attach. D. Power, Comments Regarding Draft Environmental Impact Statement for Combined Licenses (COLs) for Comanche Peak Nuclear Power Plant Units 3 and 4 (undated) (“Power Report”); *id.* attach., T. Smith, Report of Tom “Smitty” Smith (undated) (“Smith Report”). On September 13, 2010, the Intervenor filed two additional documents apparently intended as attachments to the Motion. *See* R. Dean, Comments Regarding Luminant’s Revision to the Comanche Peak Nuclear Power Plant, Units 3 & 4 COL Application Part 3 – Environmental Report (previously filed on Jan. 4, 2010) (“Dean Report”); U.S. Environmental Protection Agency (“EPA”), Climate Change Indicators in the United States (Apr. 2010) (“EPA Climate Change Report”). The Power and Smith Reports reference a number of other documents that were not attached to these reports (or the Motion) and were not “clearly and completely identified.” Initial Scheduling Order at 11. Nonetheless, to the extent that Luminant has been able to identify and obtain the documents relied upon by the Intervenor, these documents are further discussed below.

Units 3 and 4.² Specifically, the Intervenor seek admission of six purportedly new contentions: DEIS Contention 1 (need for power); DEIS Contention 2 (comparison of carbon dioxide (“CO₂”) emissions from nuclear with the combination of alternatives); DEIS Contention 3 (impact of global warming on cumulative impacts); DEIS Contention 4 (increased water temperatures caused by global warming); DEIS Contention 5 (comparison of CO₂ emissions from the nuclear uranium fuel cycle with wind and solar power); and DEIS Contention 6 (combinations of wind and solar without storage).³

As demonstrated below, the Intervenor’s new contentions should be denied in their entirety for not satisfying the NRC’s late-filed contention requirements set forth in 10 C.F.R. § 2.309(c) and (f)(2), or the contention admissibility requirements codified in 10 C.F.R. § 2.309(f)(1). Contrary to 10 C.F.R. § 2.309(f)(2) and the Board’s Initial Scheduling Order, the Intervenor have not claimed, much less demonstrated, that any of their new contentions are based on “data or conclusions” in the DEIS that “differ significantly” from those in Luminant’s Environmental Report (“ER”)⁴ for CPNPP Units 3 and 4. Additionally, essentially all of the information relied upon by the Intervenor as support for these contentions has been available for many months, if not years. Indeed, most of the new contentions are embellished versions of previously rejected contentions. Furthermore, to the extent that the Intervenor cite any new information, it is not materially different from information previously available to them.

² NUREG-1943, Environmental Impact Statement for Combined Licenses (COLs) for Comanche Peak Nuclear Power Plant Units 3 and 4, Draft Report for Comment (Aug. 2010) (“DEIS”), *available at* ADAMS Accession Nos. ML102170030 & ML102170036.

³ Motion at 3-13.

⁴ Comanche Peak Nuclear Power Plant, Units 3 & 4 COL Application, Environmental Report (Rev. 1 Nov. 20, 2009), *available at* ADAMS Accession No. ML100081557.

Additionally, the new contentions raise issues that are not material to the NRC Staff's environmental findings, fail to provide adequate factual or legal support for alleged deficiencies in the DEIS, and fail to establish a genuine dispute of material fact relative to the Staff's National Environmental Policy Act ("NEPA") analysis. Accordingly, the contentions also should be rejected for failing to meet the admissibility requirements set forth in 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

II. PROCEDURAL BACKGROUND

On September 19, 2008, Luminant submitted an Application to the NRC for combined licenses ("COLs") for CPNPP Units 3 and 4.⁵ The Sustainable Energy and Economic Development Coalition, Nita O'Neal, Public Citizen, Don Young, True Cost of Nukes, J. Nile Fisher, and Representative Lon Burnam ("Intervenors") filed a Petition for Intervention and Request for Hearing on April 6, 2009 ("Petition"), alleging 19 separate contentions.

Earlier in this proceeding, the Intervenors proposed the following contentions on topics similar to those presented in DEIS Contentions 1 through 6:

Earlier Contention	Similar DEIS Contention
Contention 11 – "The COLA is inadequate because it assumes there will be an adequate supply of fresh water for purposes of plant operations. This assumption is faulty because of the failure of the Comanche Peak Environmental Report to analyze impacts of global warming on rainfall and the hydrological cycle."	DEIS Contentions 4 – "The DEIS fails to discuss increases in ambient water temperatures caused by global warming as such would affect the capacity of the Squaw Creek Reservoir to maintain water temperatures consistent with operational requirements," including the impact of global warming on limited quantities of water.

⁵ Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 66,276, 66,276-77 (Nov. 7, 2008).

Earlier Contention	Similar DEIS Contention
<p>Contention 12 – “The uranium fuel cycle has substantial greenhouse gas impacts must be considered in each phase of the uranium fuel cycle.”</p>	<p>DEIS Contentions 2, 3(A), and 5 –</p> <p>“The DEIS distorts the CO2 emissions in the comparison of nuclear power and the combination of alternatives.”</p> <p>“A full accounting for all stages of the UFC shows that nuclear power has significantly greater GHG burdens than wind, solar power or geothermal.”</p> <p>“The DEIS fails to compare the CO2 emissions of the uranium fuel cycle (UFC) to the CO2 emissions of wind and solar power.”</p>
<p>Contention 18 – “The Comanche Peak Environmental Report is inadequate because it fails to make reasonable assumptions about alternatives to the proposed action of constructing and operating Comanche Peak Units 3 and 4,” including wind and solar.</p>	<p>DEIS Contention 6 – “Combinations of wind and solar without storage for baseload are not discussed in the DEIS.”</p>
<p>Alternatives Contention 5 – “In evaluating alternatives, the Applicant has not taken into account new ERCOT demand data and the positive impacts of modular additions of renewable/storage combinations in meeting a declining and uncertain demand.”</p>	<p>DEIS Contention 1 – “The DEIS analysis of the need for power is flawed, incomplete and internally contradictory,” including failure to account for ERCOT data.</p>

The Board rejected Contentions 11 and 12 in their entirety, and rejected Contention 18 to the extent it dealt with alternatives that do not address baseload power generation, such as demand-side management, energy conservation, and renewable alternative energy sources not combined with storage and natural gas generation.⁶ In addition, the Board found Alternatives

⁶ *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 & 4), LBP-09-17, 70 NRC ___, slip op. at 59-60, 62, 81-82 (Aug. 6, 2009).

Contention 5 inadmissible pursuant to 10 C.F.R. § 2.309(c) because it raised need for power issues that could have been proffered much earlier in the proceeding.⁷

The NRC issued the DEIS for CPNPP Units 3 and 4 in August 2010.⁸ The Staff's preliminary recommendation from an environmental perspective is that the COLs for CPNPP Units 3 and 4 should be issued.⁹ On September 7, 2010, the Intervenor filed the instant Motion and proposed six new contentions.

III. LEGAL STANDARDS

A. Timeliness Requirements

Under 10 C.F.R. § 2.309(f)(2), proposed contentions that raise issues arising under NEPA must be filed based on an applicant's ER. An intervenor may amend environmental contentions or file new contentions "if there are data or conclusions in the NRC draft or final environmental impact statement . . . that *differ significantly* from the data or conclusions in the applicant's documents."¹⁰

The requirement of 10 C.F.R. § 2.309(f)(2) that data or conclusions "differ significantly" is "inextricably intertwined with the requirement that the newly supplied information be material

⁷ *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 & 4), LBP-10-10, 71 NRC ___, slip op. at 83 (June 25, 2010).

⁸ See Letter from S. H. Vrahoretis, Counsel for NRC Staff, to Administrative Judges (Aug. 6, 2010), *available at* ADAMS Accession No. ML102180333.

⁹ DEIS at 10-26.

¹⁰ 10 C.F.R. § 2.309(f)(2) (emphasis added). See also *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-00-27, 52 NRC 216, 223 (2000) (*quoting Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 251 (1993) ("as a matter of law, an intervenor must file contentions on the basis of an applicant's ER, and does not have good cause for delaying its filing until issuance of a Staff document unless it establishes that new or different data or conclusions are contained in the Staff environmental document"), *pet. for review & mot. for directed certification denied*, CLI-94-2, 39 NRC 91 (1994)), *review denied in relevant part*, CLI-04-4, 59 NRC 31, 45 (2004).

to the outcome of the proceeding.”¹¹ In other words, new information is not significantly different if it is not material to the Staff’s NEPA determination.¹²

Furthermore, an intervenor cannot avoid the requirement in 10 C.F.R. § 2.309(f)(2) simply by contending that the DEIS has omissions. For example, in *Private Fuel Storage*, the intervenor filed a new contention asserting that certain information was omitted from the DEIS.¹³ The information, however, also was omitted from the applicant’s ER.¹⁴ The licensing board determined that the omission from the DEIS did not constitute “new or different data or conclusions,” and ruled that “[a]n intervenor that awaits the publication of a DEIS or FEIS [Final Environmental Impact Statement] before filing a contention for which the intervenor has sufficient information does so ‘at its peril.’”¹⁵

If an intervenor does not demonstrate that the data or conclusions in the DEIS are significantly different from those in the ER, 10 C.F.R. § 2.309(f)(2) states that an intervenor may file amended or new contentions “only with leave of the presiding officer” upon a showing that all three of the following criteria are met:

- (i) The information upon which the amended or new contention is based was *not previously available*;
- (ii) The information upon which the amended or new contention is based is *materially different than information previously available*; and

¹¹ *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 163 (2005), *review denied*, CLI-05-29, 62 NRC 801 (2005), *aff’d sub nom.*, *Env’tl. Law & Policy Ctr. v. NRC*, 470 F.3d 676 (7th Cir. 2006).

¹² *See id.*

¹³ *Private Fuel Storage*, LBP-00-27, 52 NRC at 223.

¹⁴ *Id.*

¹⁵ *Id.* (quoting *La. Energy Servs., L.P.* (Claiborne Enrichment Ctr.), LBP-94-11, 39 NRC 205, 212 (1994)).

- (iii) The amended or new contention has been *submitted in a timely fashion* based on the availability of the subsequent information.¹⁶

In the Commission's words, a new or amended NEPA contention "is not an occasion to raise additional arguments that could have been raised previously."¹⁷

If an intervenor cannot satisfy the requirements of 10 C.F.R. § 2.309(f)(2), then the intervenor must demonstrate that it satisfies the eight-factor balancing test in 10 C.F.R. § 2.309(c)(1)(i) to (viii).¹⁸ The first factor identified in that regulation, whether "good cause" exists for the failure to file on time, is entitled to the most weight.¹⁹ Without good cause, a "petitioner's demonstration on the other factors must be particularly strong."²⁰

The intervenor has the burden of showing that these criteria have been satisfied.²¹ Thus, if the intervenor's pleading does not address these criteria, it should be summarily denied.²²

Accordingly, the Board's Initial Scheduling Order made clear that if the party proposing a new

¹⁶ 10 C.F.R. § 2.309(f)(2) (emphasis added).

¹⁷ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 385-86 (2002). As the D.C. Circuit explained, it is "unreasonable to suggest that the NRC must disregard its procedural timetable every time a party realizes based on NRC environmental studies that maybe there was something after all to a challenge it either originally opted not to make or which simply did not occur to it at the outset." *Union of Concerned Scientists v. NRC*, 920 F.2d 50, 55 (D.C. Cir. 1990).

¹⁸ See 10 C.F.R. § 2.309(c)(2) ("The requestor/petitioner *shall* address the factors in paragraphs (c)(1)(i) through (c)(1)(viii) of this section in its nontimely filing.") (emphasis added). These factors include: (i) good cause, if any, for the failure to file on time; (ii) the nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding; (iii) the nature and extent of the petitioner's property, financial or other interest in the proceeding; (iv) the possible effect of any order that may be entered in the proceeding on the petitioner's interest; (v) the availability of other means whereby the petitioner's interest will be protected; (vi) the extent to which the petitioner's interests will be represented by existing parties; (vii) the extent to which the petitioner's participation will broaden the issues or delay the proceeding; and (viii) the extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record. 10 C.F.R. § 2.309(c)(1).

¹⁹ See *State of New Jersey* (Dep't of Law & Pub. Safety's Requests Dated Oct. 8, 1993), CLI-93-25, 38 NRC 289, 296 (1993).

²⁰ *Tex. Utils. Elec. Co.* (Comanche Peak Steam Elec. Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 73 (1992) (*quoting Duke Power Co.* (Perkins Nuclear Station, Units 1, 2 & 3), ALAB-431, 6 NRC 460, 462 (1977)).

²¹ See *Balt. Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC 325, 347 & n.9 (1998).

²² *Id.*

contention is unsure whether 10 C.F.R. § 2.309(c) or (f)(2) were applicable, “it may file pursuant to both, and the motion should cover the three criteria of 10 C.F.R. § 2.309(f)(2) and the eight criteria of 10 C.F.R. § 2.309(c), as well as the six criteria of 10 C.F.R. § 2.309(f)(1).”²³

B. Substantive Admissibility Requirements

In addition to complying with the requirements in 10 C.F.R. § 2.309(c) and (f)(2), an intervenor must show that a late-filed contention meets the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(i) to (vi).²⁴ These requirements are discussed in detail in Luminant’s May 1, 2009 Answer opposing the Petition, and a brief discussion of the key contention admissibility requirements is set forth below.

Under 10 C.F.R. § 2.309(f)(1), a hearing request “must set forth with particularity the contentions sought to be raised.” In addition, that section specifies that each contention must: (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents that support the petitioner’s position and upon which the petitioner intends to rely; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact.²⁵

²³ Initial Scheduling Order at 5.

²⁴ *See Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 NRC 355, 362-63 (1993); *see also Crow Butte Res., Inc.* (In Situ Leach Facility, Crawford, Neb.), CLI-09-9, 69 NRC 331, 364 (2009) (stating that the timeliness of the late-filed contention need not be evaluated because the contention did not satisfy the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)).

²⁵ 10 C.F.R. § 2.309(f)(1)(i)-(vi).

The purpose of these six criteria is to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”²⁶ The Commission has stated that it “should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.”²⁷

The Commission’s rules on contention admissibility are “strict by design.”²⁸ The rules were “toughened . . . in 1989 because in prior years ‘licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.’”²⁹ “‘Mere ‘notice pleading’ is insufficient” under NRC’s current contention admissibility rules.³⁰ As the Commission has stated, “we require parties to come forward at the outset with sufficiently detailed grievances to allow the adjudicator to conclude that genuine disputes exist justifying a commitment of adjudicatory resources to resolve them.”³¹ Therefore, the failure to comply with any one of the six admissibility criteria is grounds for rejecting a new contention.³²

²⁶ Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

²⁷ *Id.*

²⁸ *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001).

²⁹ *Id.* (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)).

³⁰ *Fansteel, Inc.* (Muskogee, Okla. Site), CLI-03-13, 58 NRC 195, 203 (2003).

³¹ *N. Atl. Energy Serv. Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 219 (1999).

³² See Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. at 2221; see also *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

IV. THE INTERVENORS' NEW DEIS CONTENTIONS DO NOT MEET NRC'S CONTENTION TIMELINESS CRITERIA IN 10 C.F.R. § 2.309(c) AND (f)(2)

A. The New Contentions Should Be Rejected for Not Addressing the Regulatory Requirements for Late-Filed Contentions

The Motion fails to address the criteria in 10 C.F.R. § 2.309(c) and (f)(2). The Intervenor has the burden of showing that these criteria have been satisfied.³³ The Commission has held that it is appropriate to summarily dismiss late-filed contentions that fail to address these factors.³⁴ Because the Intervenor has not met their burden for late-filed contentions, their Motion and the associated contentions should be summarily rejected.³⁵

B. The New Contentions Do Not Relate to Data or Conclusions in the DEIS That Differ Significantly From Those in the ER

As discussed above, 10 C.F.R. § 2.309(f)(2) states that NEPA contentions must be filed based on the ER, and new contentions can only be filed based on the DEIS if data or conclusions in the DEIS “differ significantly” from those in the ER. For the reasons discussed below, the new contentions do not meet this requirement.

First, none of the proposed new contentions allege that the DEIS contains data or conclusions that “differ significantly” from those in Luminant’s ER. In fact, the Motion only once mentions the ER for CPNPP Units 3 and 4—and even then, fails to point to any differences between the DEIS and the ER that might warrant a new contention.³⁶

³³ See *Calvert Cliffs*, CLI-98-25, 48 NRC at 347 & n.9.

³⁴ See, e.g., *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 126 (2009) (“The Board correctly found that failure to address the requirements [of 10 C.F.R. § 2.309(c) and (f)(2)] was reason enough to reject the proposed new contentions.”).

³⁵ See *Calvert Cliffs*, CLI-98-25, 48 NRC at 347.

³⁶ Motion at 9 & n.30.

Second, the new contentions filed by the Intervenors generally allege omissions from the DEIS (*i.e.*, omitted discussion of various topics or documents). In this regard, the Intervenors could have raised the same contentions of omission with respect to the adequacy of the ER for CPNPP Units 3 and 4 much earlier in this proceeding. As discussed above, the licensing board in *Private Fuel Storage* determined that an omission of information from the DEIS did not constitute “new or different data or conclusions” when that information also was not contained in the ER.³⁷

Finally, the data and conclusions in the DEIS do not differ significantly from those in the ER. For example:

- DEIS Contention 1 (need for power) – Both the DEIS and the ER rely on studies performed by the ERCOT and both conclude that more than 3200 MWe of new baseload generation capacity will be needed in the ERCOT region to meet reserve targets.³⁸
- DEIS Contentions 2, 3, and 5 (CO₂ emissions from nuclear and alternatives) – Both the DEIS and the ER conclude that wind and solar power alone are not reasonable alternatives for producing baseload power.³⁹ Therefore, neither the DEIS nor the ER compares the CO₂ emissions by nuclear, wind and solar power, and compressed air energy storage (“CAES”).⁴⁰

³⁷ *Private Fuel Storage*, LBP-00-27, 52 NRC at 223.

³⁸ See DEIS at 8-22 (“[T]he NRC staff concludes there is a justified need for new baseload generating capacity in Texas in excess of the planned output of proposed Units 3 and 4.”); ER ch. 8, at 8.4-9, *available at* ADAMS Accession No. ML100081517 (“[T]he ERCOT generation capacity and demand projections demonstrate a need for power based on a shrinking reserve margin . . .”). Because the DEIS was issued almost two years after the ER was first submitted, the DEIS relies on more recent (2009) ERCOT data. However, the DEIS demonstrates that the 2009 ERCOT data does not differ significantly from the data relied upon in the ER, *see* DEIS at 8-14 to 8-15, and the Intervenors do not challenge this conclusion.

³⁹ See DEIS at 9-20 to 9-25; ER ch. 9, at 9.2-7 to 9.2-12, *available at* ADAMS Accession No. ML100081548.

⁴⁰ See DEIS at 9-33; ER ch. 9, at 9.2-30.

- DEIS Contentions 3 and 4 (global warming and water use) – Both the DEIS and the ER discuss water use and quality impacts from CPNPP Units 3 and 4, compare these impacts to those from reasonable alternatives, and find that those impacts would be similar.⁴¹
- DEIS Contention 6 (combinations of wind and solar without storage) – Both the DEIS and the ER discuss wind and solar power, and find that neither are viable baseload energy alternatives.⁴²

In summary, the fact that a DEIS has been issued for CPNPP Units 3 and 4 does not give the Intervenor an unrestricted right to file new contentions. In order to file such contentions, the Intervenor must show that the DEIS differs significantly from the ER. However, the Intervenor fails to explain how specific data and conclusions in the DEIS are truly new (*i.e.*, different from those in the ER) or why any differences are significant. Accordingly, the Intervenor has ignored the standard set forth in 10 C.F.R. § 2.309(f)(2) for DEIS contentions and must therefore satisfy the three criteria in 10 C.F.R. § 2.309(f)(2)(i) to (iii). As discussed below, the Intervenor has failed to satisfy this standard as well.

C. The New Contentions Are Not Based on New and Materially Different Information

Although the Intervenor is permitted, with leave of the Board, to file new contentions based on recent developments other than the Staff's issuance of the DEIS, the new contentions

⁴¹ See DEIS at 5-9, 5-13, 9-32; ER ch. 5, at 5.2-8 to 5.2-17, *available at* ADAMS Accession No. ML100081496; ER ch. 9, at 9.2-50.

⁴² See DEIS at 9-28 (“[A] combination of alternatives would still necessitate the installation of natural gas power facilities to ensure that power is available as a baseload power source when wind and solar (without storage) sources cannot meet the demand.”); COL Application Part 3, Environmental Report Revision 1, Update Tracking Report Revision 0, at 9.2-31 (Dec. 8, 2009) (“ER Update”) (attachment to Letter from R. Flores, Luminant, to NRC) (Dec. 8, 2009), *available at* ADAMS Accession No. ML093440179 (“[D]ue to the intermittent and unpredictable availability of solar and wind power and the finite capacity of the energy storage units, the baseload power would have to be generated by the natural gas plant and the use of the natural gas plant could be temporarily suspended or reduced when solar and wind power or stored energy is available.”).

fail to meet the requirements for such new contentions in 10 C.F.R. § 2.309(f)(2)(i) to (iii). To satisfy these requirements, the Intervenor must demonstrate that the information upon which it relies was “not previously available” and is “materially different than information previously available,” and “has been submitted in a timely fashion based on the availability of the subsequent information.”⁴³ The Initial Scheduling Order makes clear that a new contention “shall be deemed timely under 10 C.F.R. § 2.309(f)(2)(iii) if it is filed within *thirty (30) days* of the date when the new and material information on which it is based first becomes available” and, “[i]f filed thereafter, the motion and proposed contention shall be deemed non-timely under 10 C.F.R. § 2.309(c).”⁴⁴ The Motion was filed on September 7, 2010; therefore, the new contentions must be based on information that was not available before August 5, 2010 to meet the 10 C.F.R. § 2.309(f)(2)(iii) timeliness requirement.⁴⁵

A table identifying all of the references in the Motion, the Power Report, and the Smith Report is provided as Attachment 1 to this Answer. As shown on this table, aside from the Power Report and the Smith Report themselves, all of the references cited by the Intervenor in the Motion, the Power Report, and the Smith Report were available before August 5, 2010. Therefore, the Intervenor does not satisfy 10 C.F.R. § 2.309(f)(2)(iii) with regard to these references.

Although the undated Power and Smith Reports appear to have been prepared after August 5, 2010, these reports do not constitute new or previously unavailable information. As

⁴³ 10 C.F.R. § 2.309(f)(2)(i)-(iii).

⁴⁴ Initial Scheduling Order at 5 (emphasis in original).

⁴⁵ See *Millstone*, CLI-09-5, 69 NRC at 126 (“[A] petitioner must show that the information on which the new contention is based was not *reasonably available to the public*, not merely that the *petitioner* recently found out about it.”) (emphasis in original).

demonstrated in Attachment 1, all of the references relied upon in these reports were publicly available before the DEIS was issued. Furthermore, if an intervenor were allowed to use a document it prepared as a basis for satisfying 10 C.F.R. § 2.309(f)(2)(i), the time limits for late-filed contentions would be meaningless, because an intervenor always could prepare a report and then use that document as the basis for tolling the time limits for a new contention.⁴⁶ Under similar circumstances, the licensing board in the *Bellefonte* COL proceeding rejected a late-filed contention as untimely under 10 C.F.R. § 2.309(f)(2)(i) notwithstanding the intervenors' claim that it was based on a new document that integrated older information into a single document for the first time.⁴⁷ As that licensing board explained, this repackaged information's "status as 'materially different' for the purpose of interposing timely a new contention in this proceeding is problematic."⁴⁸ For this same reason, the Power Report and the Smith Report do not satisfy the timeliness requirements of 10 C.F.R. § 2.309(f)(2)(i).

The Intervenors also fail to explain why the information contained in the Power Report and the Smith Report is materially different from information available to the public at a much earlier date. In fact, all of the information that the Intervenors use to support their DEIS contentions was available before the DEIS was even issued. NRC tribunals have held that the unavailability of a specific document does not justify admission of a new contention when the

⁴⁶ This is especially the case here, because Messrs. Power and Smith are not independent experts, but are staff members of Public Citizen, one of the Intervenors.

⁴⁷ *Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant Units 3 & 4), Licensing Board Memorandum and Order (Ruling on Request to Admit New Contention) at 6 (Apr. 29, 2009) (unpublished), *available at* ADAMS Accession No. ML091190393.

⁴⁸ *Id.* at 8.

contention's "factual predicate" was previously available.⁴⁹ The Intervenor make no attempt to explain why the issuance of the DEIS was "necessary" or "integral" to the formulation of their new contentions. In fact, given that the Power Report and the Smith Report rely on documents that have been available for several months, it appears that reliance on the August 2010 issuance of the DEIS was a pretext for submitting belated contentions.⁵⁰ Accordingly, the Intervenor fail to comply with 10 C.F.R. § 2.309(f)(2)(ii).

In summary, the DEIS contentions do not satisfy 10 C.F.R. § 2.309(f)(2)(i) to (iii). As a result, the Intervenor must satisfy 10 C.F.R. § 2.309(c). However, as discussed below, the Intervenor have not satisfied that regulation either.

D. The New Contentions Do Not Satisfy the Requirements for Nontimely Contentions in 10 C.F.R. § 2.309(c)(1)

Given that the Intervenor have not satisfied the criteria in 10 C.F.R. § 2.309(f)(2), they must satisfy the test set forth in 10 C.F.R. § 2.309(c)(1) related to "nontimely" contentions. The burden is on the Intervenor to demonstrate "that a balancing of these factors [in 10 C.F.R. § 2.309(c)(1)] weighs in favor of granting the petition."⁵¹ The factors in 10 C.F.R. § 2.309(c)(1) are not of equal importance: absence of good cause (factor one) and the likelihood of substantial

⁴⁹ *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 208, *aff'd*, CLI-98-13, 48 NRC 26 (1998) (citing *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), CLI-83-19, 17 NRC 1041, 1043, 1045 (1983)). See also *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 26 (1996); *Phila. Elec. Co.* (Limerick Generating Station, Units 1 & 2), LBP-83-39, 18 NRC 67, 69 (1983)) (ruling that the intervenor's reliance on newly-disclosed proprietary materials was not necessary or integral to the development of its late-filed contention, such that delay in filing was not justified).

⁵⁰ In fact, earlier in this proceeding, the Board rejected an earlier attempt by the Intervenor to belatedly challenge the need for power evaluation. See *Comanche Peak*, LBP-10-10, slip op. at 83 (noting that "Chapter 8 of the ER, dealing with and headed 'Need for Power,' has been available since 2008" and the "Intervenor have neither seriously argued, nor shown, good cause to permit the issue to be brought at this time, when it could obviously have been raised at a much earlier time").

⁵¹ *Tex. Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-88-12, 28 NRC 605, 609 (1988).

broadening of the issues and delay of the proceeding (factor seven) are the most significant.⁵² Factors five (availability of other means) and six (interests represented by other parties) are entitled to the least weight.⁵³

Turning to the first factor, the Intervenors have not identified much less demonstrated, good cause for failure to file the new contentions on time. To demonstrate good cause, a petitioner must show not only that it “acted promptly after learning of the new information, but the information itself must be *new* information, not information already in the public domain.”⁵⁴ As discussed in detail above, the new contentions do not rely on any new information and the Intervenors were not prevented from filing these contentions much earlier. In fact, as discussed above, the Intervenors filed similar contentions in their original Petition, and these contentions were rejected by the Board.

The Commission has stated that “[l]acking a favorable showing on good cause, a petitioner must show a compelling case on the remaining [applicable] factors.”⁵⁵ Factors two through four speak towards standing. Therefore, their applicability is limited here because the Intervenors are already parties to this proceeding and are seeking admission of nontimely contentions, rather than nontimely intervention. There are other means for the Intervenors to protect their interests under the fifth factor—namely, the Intervenors can submit comments on

⁵² See, e.g., *Project Mgmt. Corp.* (Clinch River Breeder Reactor Plant), ALAB-354, 4 NRC 383, 395 (1976).

⁵³ See *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-00-8, 51 NRC 146, 154 (2000) (citing *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 & 2), CLI-86-8, 23 NRC 241, 244-45 (1986)).

⁵⁴ *Comanche Peak*, CLI-92-12, 36 NRC at 70.

⁵⁵ *New Jersey*, CLI-93-25, 38 NRC at 296. See also *Dominion Nuclear Conn. Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 565 (2005).

the DEIS.⁵⁶ Under the sixth factor in 10 C.F.R. § 2.309(c)(1), there are no other parties in this proceeding that will represent the Intervenor's interests. Thus, only the seventh and eighth factors remain to be evaluated.

The seventh factor (*i.e.*, the extent to which the participation will broaden the issues or delay the proceeding) weighs against the new contentions. The new contentions would broaden the issues in this proceeding by introducing topics that are different from the currently admitted contentions. Furthermore, Luminant has submitted a motion that if granted would result in the dismissal of all of the currently admitted contentions and would obviate the need for a contested hearing. Thus, admitting the new contentions at this time could delay this proceeding considerably by requiring an otherwise unnecessary contested hearing.

The eighth factor (*i.e.*, extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record) also weighs against the new contentions. As the Commission has stated, to make a showing on this factor, an intervenor should specify the precise issues it plans to cover, identify its prospective witnesses, and summarize their proposed testimony.⁵⁷ The Intervenor has failed to do so, and otherwise has failed to identify how they would assist in developing a sound record. In this regard, the new contentions, the Power Report, and the Smith Report essentially consist of references to documents and reports prepared by others, without any expert analysis. As another licensing board explained in holding this

⁵⁶ In accordance with 10 C.F.R. § 51.91(a)(1), the FEIS must address any comments. Furthermore, controlling Commission case law holds that the weight given to this factor is only slight and insufficient to satisfy the compelling showing standard. *See Comanche Peak*, CLI-92-12, 36 NRC at 74. *See also Westinghouse Elec. Corp.* (Nuclear Fuel Export License for Czech Republic–Temelin Nuclear Power Plants), CLI-94-7, 39 NRC 322, 329 (1994) (explaining that “excusing untimeliness for every petitioner who meets only this factor would effectively negate any standards for untimely intervention in cases . . . where no one else has requested a hearing, since a late-filing petitioner could always maintain that there will be no hearing to protect its interest”).

⁵⁷ *Braidwood*, CLI-86-8, 23 NRC at 246. *See also Comanche Peak*, CLI-88-12, 28 NRC at 611.

factor against an intervenor, “[the intervenor] has done little more than point to the two affiants supporting the contention, without providing any real clue about what they would say to support the contention beyond the minimal information they provide for admitting the contention.”⁵⁸

Thus, based upon the contentions themselves, it is not evident that the Intervenor would be able to assist in developing a sound record.

In summary, weighing the factors in 10 C.F.R. § 2.309(c)(1) demonstrates that the new contentions should be rejected. Accordingly, the Motion and the new DEIS contentions should be denied.

V. THE INTERVENORS’ NEW DEIS CONTENTIONS DO NOT MEET NRC’S CONTENTION ADMISSIBILITY CRITERIA IN 10 C.F.R. § 2.309(f)(1)

As support for their proposed contentions on the DEIS, the Intervenor relies heavily on attached reports by David Power and Tom Smith. However, other than indicating that these individuals are members of Public Citizen (one of the Intervenor in this proceeding), the Intervenor does not discuss the qualifications of these individuals to address the matters identified in their reports. At the contention admissibility stage, it is necessary for the Board to consider a proffered expert’s qualifications in evaluating whether a contention is adequately supported (*i.e.*, whether the proffered expert has at least a minimal amount of knowledge to prepare a report for the purposes of supporting a contention).⁵⁹ Here, the Intervenor fails to provide any information indicating that Messrs. Power and Smith have the requisite knowledge, skill, training, education, or experience to be considered an expert for the purposes of supporting a new contention.⁶⁰

⁵⁸ *Private Fuel Storage*, LBP-98-7, 47 NRC at 208-09.

⁵⁹ *See Progress Energy Fla., Inc.* (Levy Cnty. Nuclear Power Plants, Units 1 & 2), CLI-10-2, 71 NRC ___, slip op. at 17 (Jan. 7, 2010).

⁶⁰ *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 91 n.39, *aff’d* CLI-04-36, 60 NRC 631 (2004) (finding inadequate factual basis or expert opinion for contention

Accordingly, to the extent that the proposed contentions are based upon the Power Report and Smith Report, the contentions should be rejected for failure to establish the qualifications of these individuals, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Furthermore, as discussed below, all six of the proposed DEIS contentions should be denied for failing to satisfy one or more of the requirements in 10 C.F.R. § 2.309(f)(1).

A. DEIS Contention 1 – Need for Power

DEIS Contention 1 states: “The DEIS analysis of the need for power is flawed, incomplete and internally contradictory.”⁶¹ The Intervenor go on to list fourteen bases related to need for power, listed as (A) through (N) in the Motion, which address the following issues: (A) profitability of CPNPP and current market conditions; (B) the need for energy to meet peak loads; (C) the growth of wind capacity; (D) increases in wind carrying capacity; (E) dispatch decisions by ERCOT; (F) increases in responsive reserve power sources; (G) increased natural gas capacity; (H) energy efficiency programs; (I) non-wind renewables; (J) new building codes; (K) energy efficiency; (L) new government programs; (M) CAES; and (N) a high-wind generation scenario.⁶² As support for bases (A) through (M) of this contention, the Intervenor reference the Power Report.

DEIS Contention 1 should be rejected because it does not meet the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1). As demonstrated below, DEIS Contention

because affidavits included with petition did not indicate “any basis for their knowledge or any expert knowledge of any kind”); *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-98-13, 47 NRC 360, 367 (1998) (discounting an affidavit of a proffered expert because the intervenor “failed to establish he has the requisite knowledge, skill, training, education, or experience to be considered an expert on physical security matters”), *recons. granted on another issue*, LBP-98-17, 48 NRC 69 (1998).

⁶¹ Motion at 3.

⁶² *Id.* at 3-6.

1 is not admissible because it raises issues that are not material to the NRC Staff's environmental findings, fails to provide adequate factual or legal support for alleged deficiencies in the DEIS, and fails to establish a genuine dispute of material fact relative to the Staff's NEPA analysis.

The need for power evaluation for CPNPP Units 3 and 4 is addressed in the DEIS Chapter 8: Section 8.1 describes the power system; Section 8.2 discusses power demand; Section 8.3 discusses power supply; and Section 8.4 assesses the need for power. The DEIS concludes that: “(1) there could become a shortage of power in the ERCOT region that could be at least partially addressed by construction of proposed Units 3 and 4 at the CPNPP site; (2) construction of Units 3 and 4 would reduce the likelihood of an electricity supply reliability crisis in Texas; and (3) construction of Units 3 and 4 would contribute to the new generation needed in the ERCOT region by 2019 to meet reserve targets.”⁶³ In fact, the DEIS finds that even with the addition of CPNPP Units 3 and 4, the generation capacity in the ERCOT region may still fall below ERCOT's target reserve margin of 12.5 percent in 2019 and 2024.⁶⁴ Thus, the DEIS concludes that “there is a justified need for new baseload generating capacity in Texas in excess of the planned output of proposed Units 3 and 4” and “that it is reasonable for a merchant power vendor, such as Luminant, to expand its baseload power capacity, starting construction in the relatively near term.”⁶⁵

The evaluation of need for power in the DEIS is based upon studies prepared by ERCOT.⁶⁶ ERCOT is the independent system operator (“ISO”) for the electrical grid for most of

⁶³ DEIS at 8-22.

⁶⁴ *See id.* at 8-19, 8-21.

⁶⁵ *Id.* at 8-22.

⁶⁶ *See id.* at 8-2.

Texas. ERCOT is assigned by state law with responsibility for central planning and analysis of the resources needed for the electrical system in the ERCOT region, and is subject to oversight by the Public Utility Commission of Texas.⁶⁷ Before relying upon the ERCOT forecasts, the NRC Staff reviewed the ERCOT processes, methodologies and forecasts, and concluded that these processes, methodologies and forecasts are systematic, comprehensive, subject to confirmation, and responsive to forecasting uncertainty.⁶⁸

DEIS Contention 1 does not provide or reference any new demand or generation forecast that is materially different than the DEIS analysis or the ERCOT studies referenced in the DEIS. Instead, this contention provides a laundry list of possible changes in legislation, possible increases in conservation and energy efficiency, possible new generating plants—speculative future events which, if they occurred, might theoretically impact the results of the DEIS analysis. However, in so arguing, this contention essentially ignores a long-established set of NRC cases governing need for power analyses.

By way of background, the NRC Staff is entitled to rely upon studies and forecasts prepared by an independent body that is charged by state law with making forecasts of power demand, such as ERCOT. As discussed in detail by the Appeal Board in the *Shearon Harris* decision, such forecasts are entitled to “great weight” absent “some fundamental error” in their analyses.⁶⁹ As the Appeal Board explained:

[W]here a utilities commission forecast is neither shown nor appears on its face to be seriously defective, no abdication of NRC responsibilities results from according *conclusive effect* to that

⁶⁷ See *id.* at 8-3 to 8-6.

⁶⁸ See *id.* at 8-12 to 8-14.

⁶⁹ *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3 & 4), ALAB-490, 8 NRC 234, 240 (1978).

forecast. Put another way, although the National Environmental Policy Act mandates that this Commission satisfy itself that the power to be generated by the nuclear facility under consideration will be needed, we do not read that statute as foreclosing the placement of heavy reliance upon the judgment of local regulatory bodies which are charged with the duty of insuring that the utilities within their jurisdiction fulfill the legal obligation to meet customer demands.⁷⁰

In this proceeding, the Intervenor has not alleged, let alone provided any basis for a claim, that the ERCOT studies have a “fundamental error” or are “seriously defective.” To the contrary, the Power Report favorably cites to ERCOT’s May 2010 update of its load forecast and reserve margin calculation.⁷¹ Therefore, to the extent that DEIS Contention 1 is based upon analyses or factors that are different than those in ERCOT studies, it should be rejected because it does not provide a legally sufficient basis for challenging the need for power analysis in the DEIS, which properly relies upon ERCOT analyses.

Furthermore, the Intervenor’s recitation of uncertainties that might affect future demand or generation capacity estimates fails to provide a sufficient basis for challenging the need for power analysis in the DEIS. In the leading case, *Nine Mile Point*, the Appeal Board held that “inherent in any forecast of future electric power demands is a substantial margin of uncertainty,” and therefore the projection of future need should be accepted if it is “reasonable.”⁷² As the Appeal Board held in a later case: “[A] forecast that such need exists is not to be discarded as fatally flawed simply because the future course of events is sufficiently

⁷⁰ *Id.* at 241 (emphasis added).

⁷¹ *See* Power Report at 5 n.11.

⁷² *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 365, 367 (1975).

clouded to give rise to the possibility of a significant margin of error.”⁷³ This standard has been endorsed by the Commission itself in the *Shearon Harris* proceeding, where it stated:

The Nine Mile Point rule recognizes that every prediction has associated uncertainty and that long-range forecasts of this type are especially uncertain in that they are affected by trends in usage, increasing rates, demographic changes, industrial growth or decline, the general state of the economy, etc. These factors exist even beyond the uncertainty that inheres to demand forecasts: assumptions on continued use from historical data, range of years considered, the area considered, extrapolations from usage in residential, commercial, and industrial sectors, etc.⁷⁴

Similarly, the Appeal Board in the *Catawba* proceeding ruled that load forecasts

are [not] automatically suspect because they are inclined to be “conservative,” that is to say they tend to project future loads closer to the high than to the low end of the demand spectrum. To be sure, if demand does turn out to be less than predicted it can be argued (as intervenor does) that the cost of the unneeded generating capacity may turn up in the customers’ electric bills. . . . But should the opposite occur and demand outstrip capacity, the consequences are far more serious.⁷⁵

And, more recently, the Board in the *Clinton* ESP proceeding stated that:

[W]e are cognizant of the fact that a NEPA analysis often must rely upon imprecise and uncertain data, particularly when attempting to forecast future markets and technologies, and Boards (and parties) must appreciate the fact that such forecasts “provide no absolute answers,” and must be “judged on their reasonableness.”⁷⁶

The *Clinton* Board proceeded to apply the test articulated by the Fifth Circuit in *South Louisiana Environmental Council*, which focuses on whether economic considerations have been

⁷³ *Kan. Gas & Elec. Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 328 (1978).

⁷⁴ *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3 & 4), CLI-79-5, 9 NRC 607, 609-10 (1979).

⁷⁵ *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-355, 4 NRC 397, 410 (1976).

⁷⁶ *Clinton ESP*, LBP-05-19, 62 NRC at 167 (emphasis omitted).

“so distorted as to impair fair consideration of [the] environmental consequences” of a proposed action.⁷⁷

In contrast to this well-settled line of cases, this contention essentially argues that there is uncertainty in the DEIS forecasts because future conditions might be different than current conditions or the conditions projected in ERCOT forecasts. However, as the above cases have held, such uncertainty is inherent in need for power forecasts, and is not a sufficient legal basis for rejecting such projections. Since each of the Intervenor’s bases (A) through (N) fails to provide any basis for believing that the DEIS forecasts are unreasonable, DEIS Contention 1 does not raise a material issue and the contention should be rejected.

Aside from these overarching fatal deficiencies, however, each basis is itself inadequate to support the admissibility of DEIS Contention 1. As summarized below, each of these individual bases is not material to the NRC’s findings, lacks proper factual support, or fails to establish a genuine dispute of material law or fact.

***a.* DEIS Contention 1, Part A, Profitability of CPNPP and Current Market Conditions**

Part A of DEIS Contention 1 asserts that the DEIS should have considered “ERCOT information that call into question whether Comanche Peak Units 3 & 4 will produce adequate net revenue to justify the proposed project based on market conditions.”⁷⁸ As support, the contention references a portion of the Power Report that quotes extensively from a report by Potomac Economic, Ltd. entitled “2009 State of the Market Report for the ERCOT Wholesale Electricity Markets,” including a statement indicating that, in 2009, “the estimated net revenue

⁷⁷ *Id.* at 167-68 (*quoting S. La. Envtl. Council, Inc. v. Sand*, 629 F.2d 1005, 1011 (5th Cir. 1980)).

⁷⁸ Motion at 3.

for a new coal and nuclear unit in the South, Houston and North Zones was well below the levels required to support new entry in 2009.”⁷⁹

This basis does not raise an issue that is material to the findings that the NRC must make in this proceeding and does not provide sufficient information to show that a genuine dispute exists on a material issue of law or fact. As noted above, the DEIS concludes that there is a need for power based on ERCOT projections in 2014, 2019, and 2024.⁸⁰ Thus, whether estimated net revenues would have been sufficient to support new entry of additional nuclear generation in 2009 is simply immaterial to this proceeding. Furthermore, the issue raised by the Intervenor pertains to the profitability of CPNPP Units 3 and 4, not the need for power. As the Commission has ruled, the NRC does not review the economic or business decisions of applicants, including determinations of whether market conditions warrant commencement of a project.⁸¹ Accordingly, Intervenor’s argument should be rejected for failure to satisfy 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

b. DEIS Contention 1, Part B, Need for Energy to Meet Peak Load

Part B of DEIS Contention 1 claims that “[t]he DEIS analysis does not address the ERCOT information that suggests energy to meet peak loads is needed more than baseload energy.”⁸² As support, the Intervenor references the Power Report, which again cites to the 2009 Potomac Economic Report. According to the Power Report, “peaking energy rather than base load (as stated by Lumiant [sic]) is on the increase” and “[t]his trend is predicted to continue and

⁷⁹ Power Report at 1-3 (*quoting* Potomac Economics, Ltd., 2009 State of the Market Report for the ERCOT Wholesale Electricity Markets at xx (July 2010) (“2009 Potomac Economic Report”)).

⁸⁰ See DEIS at 8-14 to 8-15.

⁸¹ *La. Energy Servs., L.P.* (Nat’l Enrichment Facility), CLI-05-28, 62 NRC 721, 726 (2005).

⁸² Motion at 3

significant additional capacity is expected to be needed that will operate less than 5% of the hours in a year or less.”⁸³

This argument is not properly supported and does not raise a genuine dispute of material fact. The DEIS evaluation explicitly relies on ERCOT projections for 2014, 2019, and 2024.⁸⁴ Contrary to the implications of the Intervenor’s proposed contention, the 2009 Potomac Economic Report does not indicate that baseload generation is not needed during that period. Instead, that report indicates that “while average load increased in each year from 2006 to 2008 and decreased in 2009, the frequency of high-demand hours in 2009 increased compared with year 2008.”⁸⁵ The Intervenor fails to provide any support demonstrating that this slight decrease in average loads in 2009 will have any material impact on the evaluation in the DEIS of the long-term forecast of the need for baseload power. Moreover, such short-term differences between predicted and actual demand are not material to a long term need for power analysis. As stated by the Appeal Board in *Catawba* proceeding:

What intervenor attempted in essence is to rest a long term forecast of applicant’s peak load demands on changes which took place in the last two years. But, “given the fluctuating nature of the growth of electric power demand, forecasts based on short time periods may be overly influenced by transitory effects and thus not accurately reflect basic long-term trends.”⁸⁶

Therefore, the Intervenor’s argument is unsupported and fails to demonstrate a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

⁸³ Power Report at 3.

⁸⁴ See DEIS at 8-14 to 8-15.

⁸⁵ 2009 Potomac Economic Report at 43 (excerpts included as Attach. 2).

⁸⁶ *Catawba*, ALAB-355, 4 NRC at 410 (citations omitted).

c. DEIS Contention 1, Part C, Growth of Wind Capacity

Part C of DEIS Contention 1 states that “[t]he DEIS understates the continued growth of wind capacity in Texas and the ERCOT region.”⁸⁷ As support, the Intervenor reference the Power Report, which indicates that that “Texas has now ‘officially’ exceeded the 10,000 MW of installed wind capacity threshold” and this “is currently enough wind power alone to provide the necessary capacity according to Luminant’s calculations.”⁸⁸

This argument does not raise an issue that is material to the findings that the NRC must make in this proceeding and does not provide sufficient information to show that a genuine dispute exists on a material issue of law or fact. As the DEIS explains, because the capacity of wind power varies depending on region and the time of year, “ERCOT values wind capacity at 8.7 percent of nameplate capacity for reliability analyses.”⁸⁹ Thus, 10,000 MWe of installed wind capacity translates to 870 MWe of generation capacity for ERCOT reliability planning purposes. Importantly, this is the approximate amount of wind generation assumed in the DEIS (*i.e.*, 708 MWe installed + 211 MWe planned = 919 MWe total).⁹⁰ Thus, despite the Intervenor’s claim to the contrary, this argument fails to raise a genuine dispute because the DEIS already includes more than 10,000 MWe of nameplate wind in the need for power evaluation based on ERCOT projections. Accordingly, Intervenor’s argument does not raise a genuine issue of material fact and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

⁸⁷ Motion at 3.

⁸⁸ Power Report at 3-4.

⁸⁹ DEIS at 8-17. *See also* ER ch. 8, at 8.4-3 (explaining that the “effective load carrying capacity (ELCC) of wind is 8.7%”).

⁹⁰ DEIS at 8-16.

Furthermore, the Board has already rejected the Intervenor's claim that wind can provide baseload power.⁹¹ Therefore, even assuming future growth in wind power (which both the ER and DEIS do), such growth would not be material in satisfying the need for additional baseload capacity. Thus, this part of DEIS Contention 1 does not raise a material issue of fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

d. DEIS Contention 1, Part D, Increased Wind Carrying Capacity

Part D of DEIS Contention 1 claims that the NRC Staff “does not account for increases in wind carrying capacity.”⁹² As support, the contention references the Power Report, which states that “ERCOT has also increased their estimate of wind carrying capacity reported in their March 2010 report from 708 MW to 793 MW in May or a 12% increase in just 2 months and an additional increase of 115 MW⁶ by 2015.”⁹³

This argument does not raise a genuine dispute of material fact. The Intervenor's estimate of future wind generation (*i.e.*, 793 MWe + 115 MWe = 908 MWe) is essentially identical to the DEIS estimate (*i.e.*, 708 MWe installed + 211 MWe planned = 919 MWe).⁹⁴ Therefore, this argument fails to satisfy 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

Furthermore, the Intervenor's argument about potential future ERCOT changes to the effective load carrying capacity (“ELCC”) for wind power also fails to raise a genuine dispute of material fact. Essentially, the Intervenor argues that the DEIS is inadequate because ERCOT is performing a new study that may revise calculations regarding the capacity factor of wind in the

⁹¹ *Comanche Peak*, LBP-10-10, slip op. at 79-80.

⁹² Motion at 3.

⁹³ Power Report at 4.

⁹⁴ *Compare* Power Report at 4, *with* DEIS at 8-16.

ERCOT market.⁹⁵ Although the results of this study may involve ERCOT revising the above-noted 8.7 percent ELCC for wind power at some undetermined point in the future, such a change by ERCOT is speculative and does not provide a sufficient basis for contesting the NRC's reliance upon ERCOT's current position regarding the ELCC for wind power.⁹⁶ As the licensing board recently ruled in *Vogtle* in rejecting a similar contention, "[t]he fact that a new analysis is being prepared, taken alone, does not provide support for the claim that the [need for power] analysis in the ER is flawed."⁹⁷ Therefore, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi), Intervenor's claim fails to raise issues that are material to the need for power analysis and fails to raise a genuine dispute on a material issue of law or fact, and should be dismissed.

e. DEIS Contention 1, Part E, Changes in Dispatch Decision Methods by ERCOT

Part E of DEIS Contention 1 claims that the DEIS should have considered "more efficient deployment and dispatch that is expected from the transition to nodal deployment anticipated for December 2010."⁹⁸ According to the Power Report, this change should involve "significant

⁹⁵ See Power Report at 4 n.6. The Power Report appears to refer to an ERCOT Planning Presentation entitled "Target Reserve Margin (TRM) and Effective Load Carrying Capability (ELCC) of Wind Plants Evaluation - Input and Methodology" (Mar. 25, 2010) ("ERCOT Planning Presentation").

⁹⁶ As noted in the ERCOT Planning Presentation at 11 (excerpts included as Attach. 3), an ERCOT staff estimate for the revised ELCC of wind generation will not be provided to the ERCOT Board under sometime in 2012. Thus, recent ERCOT reports continue to use the 8.7 percent ELCC for wind for both installed and planned capacity. See, e.g., ERCOT, Report on the Capacity, Demand, and Reserves in the ERCOT Region at 6 (May 2010) ("ERCOT Capacity, Demand & Reserves Report") ("The value is 8.7% of the nameplate capacity listed in the Unit Capacities tables, both installed capacity and planned capacity.") (excerpts included as Attach. 4).

⁹⁷ *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 272 (2007). See also *Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant, Units 3 & 4), LBP-08-16, 68 NRC 361, 410-11 (2008).

⁹⁸ Motion at 3.

reductions in congestion based dispatch of generation resources” and “should help to increase the economic and reliable utilization of scarce transmission resources.”⁹⁹

This basis does not raise a genuine dispute of material fact. As initial matter, the DEIS clearly states that “ERCOT is now planning to switch from this zonal system to a nodal system that will highlight the costs of congestion and assign congestion costs based on differences between nodal prices at point of injection and point of withdrawal” and that “[t]he new management system generally mimics the physical power system, provides greater information on the marginal costs of power at each node, and provides incentives for more efficient behavior.”¹⁰⁰ Thus, to the extent that the Intervenor is arguing that the DEIS fails to address these issues, their argument incorrectly characterizes the DEIS and should be dismissed for failing to satisfy 10 C.F.R. § 2.309(f)(1)(vi).

Furthermore, to the extent this argument purports to challenge the DEIS, it fails to demonstrate how the change to a nodal system would materially change the need for power analysis. In particular, as the Power Report itself indicates, ERCOT’s planned change to a nodal dispatch method is intended to relieve congestion on the transmission grid—an issue that pertains to ERCOT’s dispatch decisions that specify which existing generating stations should be brought on-line during a particular time of day to meet increases in demand during that day. It does not affect the demand for power, the available resources, or the need for power analysis. Thus, this argument fails to raise a genuine dispute on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

⁹⁹ Power Report at 4.

¹⁰⁰ DEIS at 8-5.

***f.* DEIS Contention 1, Part F, Increases in Responsive Reserve Power Sources**

Part F of DEIS Contention 1 claims that “[t]he DEIS does not account for increases in responsive reserve power sources.”¹⁰¹ As support, the Power Report references the 2009 Potomac Economic Report and asserts that ERCOT “acquires 1,150 MW of load acting as a responsive reserve (LaaRs) but as of December 2009, over 2,200 MW of capability were qualified as LaaRs.”¹⁰²

By way of background, ERCOT purchases responsive reserves as a means of ensuring grid reliability. Responsive reserves are capacity that is held ready to address daily fluctuations in demand for power or the loss of operating stations. ERCOT accounts for responsive reserves in its calculation of demand.

Intervenors’ claim regarding responsive reserves falls short of meeting the requirements in 10 C.F.R. § 2.309(f)(1)(v). The Intervenors have lifted statements from the 2009 Potomac Economic Report out-of-context. Although that report indicates that “[a]s of December 2009, over 2,200 MW of capability were qualified as LaaRs,” it further explains that “[i]n 2009, LaaRs were permitted to supply up to 1,150 MW of the responsive reserves requirement” and “the amount of responsive reserves provided by LaaRs has held fairly constant at 1,150 MW since the beginning of 2006.”¹⁰³ In other words, while 2,200 MWe of generating resources are qualified as LaaRs, ERCOT designated only 1,150 MWe as responsive reserves at any one time. Thus, the 2009 Potomac Economic Report is consistent with the DEIS, which already includes 1,115 MWe

¹⁰¹ Motion at 4.

¹⁰² Power Report at 4 (*citing* 2009 Potomac Economic Report).

¹⁰³ 2009 Potomac Economic Report at xvii to xviii (Attach. 2).

of LaaRs in the need for power evaluation based on ERCOT projections.¹⁰⁴ In other words, the fact that 2,250 MWe of capacity is qualified to act as responsive reserves does not affect ERCOT's calculation of demand—ERCOT's calculation of demand is based upon the amount of responsive reserves that it actually purchases. Accordingly, Intervenor's argument does not raise a genuine issue of material fact and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

g. DEIS Contention 1, Part G, Increased Natural Gas Capacity

Part G of DEIS Contention 1 asserts that “[t]he DEIS does not account for the ability of natural gas generation to increase generation capacity in a cost-effective manner.”¹⁰⁵ The Power Report indicates that “ERCOT currently calculates EFDH (equivalent forced de-rated hours) of its natural gas turbine fleet due to the decrease in energy output based on weather conditions (increase in inlet air temperature decreases the output of the turbine)” and then claims that adding turbine inlet cooling (“TIC”) technology can provide increases in energy during peak summer months.¹⁰⁶

This argument should be rejected because the Intervenor's fail to provide adequate support for their allegations. Based on a passing reference to a report that discusses the nationwide potential for TIC to reduce inefficiencies in natural gas generation, the Intervenor's argue that the DEIS should have addressed whether natural gas generation units in the ERCOT region can increase capacity with this technology.¹⁰⁷ Significantly, Intervenor's do not provide or reference an assessment of the size or likelihood of generation improvements in the ERCOT region.

¹⁰⁴ DEIS at 8-16.

¹⁰⁵ Motion at 4.

¹⁰⁶ Power Report at 4-5.

¹⁰⁷ *Id.*

Furthermore, the Intervenor fail to provide any reasoning or explanation regarding how this nationwide estimate of potential generation improvements relates to generation increase that are likely to be achieved in the ERCOT region during the timeframe at issue. In particular, the Intervenor do not identify any natural gas plants in ERCOT that are planning to use TIC. Therefore, this argument fails to provide any of the support necessary for an admissible contention and does not raise a genuine issue of material fact, contrary 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

***h.* DEIS Contention 1, Part H, Energy Efficiency Programs**

Part H of Contention 1 claims that “[t]he DEIS does not fully account for reduced demand caused by the adoption of energy efficiency programs.”¹⁰⁸ According to the Power Report, implementation of a *proposed* Texas Public Utility Commission rule would result in an additional 580 MWe of energy efficiency programs beyond the 242 MWe already included in the DEIS.¹⁰⁹

As the Intervenor acknowledge, the DEIS already assumes a reduction in demand due to 242 MWe energy efficiency of in 2010.¹¹⁰ Importantly, this is the same amount listed in ERCOT’s most recent “Report on the Capacity, Demand, and Reserves in the ERCOT Region.”¹¹¹ The DEIS further explains that this 242 MWe generally includes savings associated with Texas House Bill 3693 and that “[o]ther trends in energy efficiency increases are captured through the monthly load forecasting model.”¹¹²

¹⁰⁸ Motion at 4.

¹⁰⁹ Power Report at 5-6.

¹¹⁰ *Id.* (citing DEIS at 8-15).

¹¹¹ ERCOT Capacity, Demand & Reserves Report at 9, 21 (Attach. 4).

¹¹² DEIS at 8-14.

The Intervenors do not point to any current energy efficiency programs that should have been but were not included in the DEIS or ERCOT's load forecasting models. Instead, the Intervenors speculate about *proposed* programs that have not been approved or implemented. As the licensing board ruled in the *Bellefonte* proceeding, potential legislative action that might result in a reduction in demand is speculative and therefore does not provide a basis for admission of a contention on need for power.¹¹³ Accordingly, Intervenors' argument fails to provide the necessary support for an admissible contention and fails to establish a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

***i.* DEIS Contention 1, Part I, Non-Wind Renewables**

Part I of DEIS Contention 1 claims that the DEIS should have included "additional capacity anticipated from the Texas mandate to include non-wind in the renewable portfolio standard."¹¹⁴ As noted in the Power Report, the Texas Public Utility Commission "is *considering* adding an additional renewable energy mandate to the state's existing Renewable Portfolio Standard" and "[t]his would provide an additional 500 MW of generating capacity in the ERCOT market."¹¹⁵ The rulemaking corresponding to this mandate, however, has not been completed and it is speculation as to whether it will be completed. Therefore, based upon the *Bellefonte* decision discussed above, this argument is also insufficient to support a contention related to the need for power and fails to establish a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

¹¹³ See *Bellefonte*, LBP-08-16, 68 NRC at 410-11.

¹¹⁴ Motion at 4.

¹¹⁵ Power Report at 6 (emphasis added).

j. DEIS Contention 1, Part J, New Building Codes

Part J of DEIS Contention 1 asserts that “[t]he DEIS fails to account for new building codes that are expected to reduce demand.”¹¹⁶ As support, the Power Report lists several building code programs that, if implemented over the next several years, might result in energy savings.¹¹⁷

As an initial matter, the Intervenor has lifted statements from a 2007 American Council for an Energy-Efficient Economy (“ACEEE”) report out of context.¹¹⁸ Although the Intervenor references a 2,362 MWe reduction in peak summer demand in 2023 contained in that report, a review of this report makes clear that this estimate was based on the “total *potential* for cost-effective electricity savings in Texas” and that while this total is large, “only a portion of these savings would be *realistically achievable* given market and policy limitations.”¹¹⁹ Thus, the Intervenor essentially argues that the DEIS should have considered additional energy efficiency savings that are not “realistically achievable.” Under the “rule of reason” embodied in NEPA, there is no requirement to consider conditions that are not realistic.¹²⁰ Accordingly, this argument should be rejected for failure to raise a material issue, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

¹¹⁶ Motion at 4.

¹¹⁷ See Power Report at 6-7.

¹¹⁸ See *id.* at 6 (citing ACEEE Report No. E073, Potential for Energy Efficiency, Demand Response, and Onsite Renewable Energy to Meet Texas’s Growing Electricity Needs (Mar. 2007) (“ACEEE Report No. E073”).

¹¹⁹ ACEEE Report No. E073 at 52 (emphasis added) (excerpts included as Attach. 5).

¹²⁰ See *Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 551 (1978) (holding that NEPA does not require consideration of energy conservation issues “deemed only remote and speculative possibilities, in view of basic changes required in statutes and policies of other agencies-making them available, if at all, only after protracted debate and litigation not meaningfully compatible with the time-frame of the needs to which the underlying proposal is addressed”) (quoting *NRDC v. Morton*, 458 F.2d 827, 837-38 (D.C. Cir. 1972)).

Apart from the ACEEE estimate that was taken out of context, the Intervenor fail to estimate the size or the likelihood of any reduction in demand due to building-code improvements in the ERCOT region. Furthermore, the Intervenor fail to provide any reasoning or explanation regarding why these energy efficiency improvements would not have been captured in ERCOT's monthly load forecasting model, which accounts for trends in energy efficiency increases.¹²¹ Therefore, this argument fails to provide any support suggesting that there might be significant additional contributions from building code-related energy efficiency programs beyond what is already discussed in the DEIS. Accordingly, Intervenor's argument lacks factual support and does not raise a genuine issue of material fact, and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

Finally, even if it were assumed that 2,362 MWe of savings is realistic and not accounted for by ERCOT, the Intervenor have not shown that consideration of such savings would have any material affect on the need for power analysis in the DEIS. In particular, as indicated by the data in Table 8-5 of the DEIS, ERCOT would not be able to meet its target of a 12.5 percent reserve margin in 2019 or 2024, even including CPNPP Units 3 and 4, and the 2,362 MWe of savings postulated by the Intervenor.¹²² Thus, the Intervenor's argument does not raise a genuine dispute of material fact regarding the need for CPNPP Units 3 and 4, and it should be rejected pursuant to 10 C.F.R. § 2.309(f)(1)(vi).

¹²¹ See DEIS at 8-14.

¹²² Table 8-5 of the DEIS shows a demand of 76,057 MWe in 2019. DEIS at 8-21. A 12.5 percent reserve margin corresponds to 9,507 MWe (or a total needed capacity of 85,564 MWe). Adding 3,200 MWe to account for CPNPP Units 3 and 4, plus 2,362 MWe of savings to the available resources of 79,113 MWe results in total resources of 84,675 MWe, which still leaves a shortfall of approximately 1,000 MWe in 2019. Furthermore, the shortfall is even greater in subsequent years.

k. DEIS Contention 1, Part K, Reduction of Need for New Plants

Part K of Contention 1 argues that the DEIS should have recognized “that energy efficiency is expected to reduce the number of new power plants needed in the future.”¹²³ As support, the Power Report references an April 2010 study entitled “State Profiles of Energy Efficiency Opportunities in the South” that examined energy efficiency potential in Texas under a variety of hypothetical policy scenarios.¹²⁴ These scenarios do not represent actual policies being implemented in the State of Texas and the Intervenor fails to demonstrate that the implementation of any of these “illustrative policies”¹²⁵ discussed in this report is anything other than remote and speculative. To the contrary, the study referenced in the Power Report states: “Without new supporting policies, this potential for energy-efficiency improvement will not be realized. . . . The ability to convert this vision into reality will depend on the willingness of consumer, business and government leaders to champion the kinds of policies modeled here.”¹²⁶ Therefore, based upon the *Bellefonte* decision discussed above, this argument is also insufficient to support a contention related to the need for power, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

l. DEIS Contention 1, Part L, Government Programs

Part L of DEIS Contention 1 asserts that “[t]he DEIS does not account for all government funds available and reasonably expected for energy efficiency applications.”¹²⁷ According to the

¹²³ Motion at 5.

¹²⁴ Power Report at 7 (*citing* Southeast Energy Efficiency Alliance, Energy Efficiency in the South app. G (State Profiles of Energy Efficiency Opportunities in the South: Texas) (Apr. 2010) (“SEEA Report”).

¹²⁵ SEEA Report at vi (Apr. 12, 2010) (excerpts included as Attach. 6).

¹²⁶ *Id.* at xviii-xix.

¹²⁷ Motion at 5.

Power Report, “[i]n addition to the \$218 million in funding from the American Recovery and Reinvestment Act, additional federal incentives for energy efficiency programs recently passed in the House of Representatives in HB5019 and would provide over \$6 billion in energy efficiency retrofit incentives further reducing the need for new generation.”¹²⁸

This argument fails to raise a genuine dispute of material fact. As an initial matter, the reference to funding from American Recovery and Reinvestment Act fails to raise a genuine dispute of material fact because the Intervenor never explain how this program could materially impact the DEIS assessment of the need for baseload power in the ERCOT region within the timeframe under consideration. Furthermore, U.S. House of Representatives Bill 5019 (“HR 5019”) is still pending before the U.S. Senate and has not been enacted into law.¹²⁹ As the licensing board ruled in the *Bellefonte* proceeding, potential legislative action that might result in a reduction in demand is speculative and therefore does not provide a basis for admission of a contention on the need for power.¹³⁰ Accordingly, this argument fails to comply with 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

***m.* DEIS Contention 1, Part M, Compressed Air Energy Storage**

Part M of DEIS Contention alleges that “[t]he DEIS does not fully account for CAES capacity reasonably available in Texas and ERCOT.”¹³¹ The Power Report references a July 2007 press release discussing an agreement between Luminant and Shell to explore the use

¹²⁸ Power Report at 7.

¹²⁹ See Bill Summary and Status, 111th Congress (2009-2010), H.R. 5019 (last visited Sept. 15, 2010) (Attach. 7).

¹³⁰ *Bellefonte*, LBP-08-16, 68 NRC at 410-11.

¹³¹ Motion at 5.

of CAES and simply claims that the DEIS “omitted” this “well publicized” project.¹³² The Power Report also references the Dean Report.¹³³

As the press release referenced by the Intervenors clearly states, Luminant and Shell are only exploring the use of CAES and thus, it is speculative whether this plant will ever be constructed and operated, let alone make a material difference to the need for power analysis by ERCOT.¹³⁴ Furthermore, the Dean Report is entirely theoretical and does not identify any existing or planned CAES facility in ERCOT region that will supply baseload power. Therefore, these documents identified by the Intervenors fail to provide adequate support for this contention and fail to raise a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

***n.* DEIS Contention 1, Part N, High-Wind Scenario**

Part N of DEIS Contention 1 claims that the need for power analysis in Chapter 8 of the DEIS should have addressed the “high-wind generation case” that was discussed in the energy alternative analysis in Chapter 9 of the DEIS.¹³⁵ The Intervenors claim that this “inconsistency” or “contradiction” makes the DEIS evaluation questionable given that “ERCOT’s analysis . . . excludes Comanche Peak Units 3 & 4 and still finds that reserve margins would be met.”¹³⁶

The only information the Intervenors provide to support this claim is a reference to Chapter 9 of the DEIS, which in turn references the December 2008 ERCOT Long-Term System

¹³² Power Report at 7 (*referencing* News Release, Luminant, Luminant and Shell Join Forces to Develop a Texas-Sized Wind Farm (July 27, 2007) (“Luminant News Release”).

¹³³ *Id.* at 7-8 (*referencing* Dean Report at 1-2).

¹³⁴ *See* Power Report at 7 (“Shell and Luminant will also explore the use of compressed air storage”) (*quoting* Luminant News Release).

¹³⁵ Motion at 5-6.

¹³⁶ *Id.* at 6.

Assessment.¹³⁷ The ERCOT LTSA considered a range of hypothetical future scenarios in order to identify long-term transmission needs (not power generation needs). As the DEIS explains, one scenario evaluated by ERCOT was a high-wind generation case of 24,622 MWe (also referred to as Scenario 3), which was considered based on instructions in the Texas Public Utility Commission’s “Competitive Renewable Energy Zones” (“CREZ”) proceedings.¹³⁸ As the ERCOT LTSA cautions, the purpose of this scenario analysis was “to view a range of potential future conditions (in essence to bound the possibilities)” that might adversely affect transmission.¹³⁹ In other words, the high-wind generation scenario was intended to test the *transmission* system’s capacity and does not reflect the expected level of wind power generation, and does not represent a need for power analysis by ERCOT.¹⁴⁰ Accordingly, the transmission study referenced by the Intervenor does not provide sufficient support for Intervenor’s contention regarding the need for power evaluation in the DEIS, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Furthermore, the Texas Public Utility Commission did *not* select the 24,622 MWe high-wind generation case (Scenario 3) as the CREZ transmission plan to be constructed because it was not supported by evidence in the record.¹⁴¹ Instead, the Texas Public Utility Commission

¹³⁷ *Id.* at 5-6 (referencing DEIS at 9-29). See also ERCOT, Long-Term System Assessment for the ERCOT Region (Dec. 2008) (“ERCOT LTSA”) (excerpts included in Attach. 8).

¹³⁸ DEIS at 9-22.

¹³⁹ ERCOT LTSA at 23 (Attach. 8).

¹⁴⁰ Of note, even with 24,622 MWe of wind power generation, more than 6,600 MWe of new baseload power generation was needed to achieve the reserve margin in the ERCOT region. See ERCOT LTSA at 33 (Attach. 8).

¹⁴¹ See Pub. Util. Comm’n of Tex., Order on Rehearing, Docket No. 33672 at 17, 20 (Oct. 7, 2008) (excerpts included as Attach. 9) (finding that “it would be risky and premature for the Commission to implement Scenario 3,” and that “[i]t is also clear that from a reliability standpoint, the selection of Scenario 3, with almost 25,000 MW of wind generation, is not supported by the record evidence”).

selected a CREZ transmission plan that can accommodate up to 18,456 MWe.¹⁴² Therefore, the Intervenor’s argument fails to meet 10 C.F.R. § 2.309(f)(1)(iv) and (vi), because the high-wind generation case for the transmission study is speculative and is immaterial to the need for power evaluation in the DEIS.

Moreover, the Intervenor’s fail to controvert the pertinent discussion of this issue in the DEIS. In addition to 708 MWe ELCC of existing wind generation, the DEIS includes 211 MWe ELCC of *planned* wind generation.¹⁴³ As the DEIS explains, “ERCOT includes a limited amount of *planned* generation capacity in its capacity and reserve calculation for 2014,” which “is a portion of the larger amount of *proposed* future generation that is being evaluated by ERCOT.”¹⁴⁴ A planned unit is one that has obtained a signed interconnection agreement and air permit while a proposed unit may have undergone a screening study or even an interconnection study.¹⁴⁵ The DEIS clearly explains that potential future projects without an interconnection agreement in place are not included in ERCOT’s capacity and reserve calculations because these projects are “sufficiently far away from a utility commitment as to be disregarded in reliability planning.”¹⁴⁶ Therefore, by asserting that the DEIS should have considered analyses or factors that are different than those in pertinent ERCOT studies, the Intervenor’s claim should be

¹⁴² *Id.* at 11 (Attach. 9). This 18,456 MWe CREZ transmission plan does *not* match the amount of generation from approved wind projects, but, instead, reflects only an estimate of the *maximum* generating capacity of renewable resources in the CREZ. *Id.*

¹⁴³ DEIS at 8-16. As noted above, this 919 MWe of wind at the ERCOT-determined ELCC equals approximately 10,563 MWe of nameplate wind generation capacity.

¹⁴⁴ *Id.* at 8-18 (emphasis added).

¹⁴⁵ *Id.* at 8-17, 8-18.

¹⁴⁶ *Id.* at 8-17.

rejected because it does not provide a legally sufficient basis for challenging the need for power analysis, which is properly based upon the ERCOT evaluations.¹⁴⁷

B. DEIS Contention 2 – Comparison of CO₂ Emissions from Nuclear with the Combination of Alternatives

DEIS Contention 2 asserts that “[t]he DEIS distorts the CO₂ emissions in the comparison of nuclear power and the combination of alternatives.”¹⁴⁸ According to the Intervenors, the CO₂ emissions from the combination of alternatives discussed in the DEIS should have been lower than the CO₂ emissions from CPNPP Units 3 and 4 because (1) CAES technology has little or no greenhouse gas emissions; and (2) the nuclear emissions excluded contributions for workforce transportation, construction, and decommissioning.¹⁴⁹ As discussed below, this contention should be rejected because it lacks adequate support and fails to demonstrate a genuine material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

Section 9.2 of the DEIS includes information related to the environmental impacts of alternative energy generation sources, including wind, solar, and natural gas energy generations sources, as well as CAES. Section 9.2.4 evaluates the environmental impacts of a combination of alternative generation sources, consisting of 650 net MWe wind with energy storage such as CAES; 430 net MWe biomass, municipal solid waste, geothermal, and solar with energy storage; and four 530 MWe natural-gas fired units.¹⁵⁰ As stated in the DEIS, the NRC Staff determined that given Luminant’s objective of generating baseload power, a fossil energy source, most likely

¹⁴⁷ See *Shearon Harris*, ALAB-490, 8 NRC at 240-41.

¹⁴⁸ Motion at 6.

¹⁴⁹ *Id.* at 7.

¹⁵⁰ DEIS at 9-28.

coal or natural gas, would need to be a significant contributor to any reasonable alternative energy combination.¹⁵¹

The DEIS concludes that combinations of power generation alternatives are not environmentally preferable to CPNPP Units 3 and 4.¹⁵² In reaching this conclusion, the DEIS compared the CO₂ emissions resulting from power generation from CPNPP Units 3 and 4, with emissions from the combination of alternatives. As shown in Table 9-6 of the DEIS, nuclear power generation results in CO₂ emissions of 20,000 metric tons compared to 180,000,000 metric tons from the combination of alternatives.¹⁵³

Although the Intervenor argues that CAES results in little or no CO₂ emissions, this argument fails to raise a genuine issue of material fact because the DEIS conservatively assumes that “*only natural gas generation has significant CO₂ emissions.*”¹⁵⁴ In other words, the 180,000,000 metric tons of CO₂ from this alternative does not include any emissions from the CAES portion of this combination. Therefore, because the Intervenor’s imprecise reading of a document cannot be the basis for a litigable contention, this contention fails to raise a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).¹⁵⁵

Furthermore, the Intervenor’s argument that the alternatives comparison improperly excludes workforce transportation, construction, and decommissioning emissions also fails to raise a genuine issue of material fact. Despite the Intervenor’s unsupported claim to the contrary, the DEIS includes a complete discussion of the CO₂ contributions of nuclear, including

¹⁵¹ *Id.*

¹⁵² *Id.* at 9-32.

¹⁵³ *Id.* at 9-33.

¹⁵⁴ *Id.* (emphasis added). *See also id.* at 9-32.

¹⁵⁵ *See Ga. Inst. of Tech.* (Ga. Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 300 (1995).

the emissions from workforce transportation, construction, and decommissioning.¹⁵⁶ In fact, while the comparison between nuclear power and the combination of alternatives in Table 9-6 of the DEIS is based only on operations, the DEIS further explains:

Among the reasonable energy generation alternatives, the CO₂ emissions for nuclear power are a small fraction of the emissions of the other energy generation alternatives. *Even when the transportation emissions for the nuclear plant workforce and fuel cycle emissions are added in*, which would increase the emissions for plant operation over a 40-year period to about 45,000,000 metric tons, *this number is still significantly lower* than the emissions for the other reasonable alternatives.¹⁵⁷

Accordingly, Intervenor's argument does not raise a genuine issue of material fact and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(vi).

C. DEIS Contention 3 – Impacts of Global Warming on Cumulative Impacts

DEIS Contention 3 asserts that “[t]he DEIS understates the effect of global warming on the cumulative impacts of Comanche Peak Units 3 & 4.”¹⁵⁸ The Intervenor's claim that the U.S. Environmental Protection Agency (“EPA”) report entitled “Climate Change Indicators in the United States” contradicts the DEIS conclusion that the cumulative impact of greenhouse gas emissions are projected to be “noticeable but not destabilizing.”¹⁵⁹ As support for this contention, the Intervenor's argue that, contrary to the information presented in the DEIS, nuclear

¹⁵⁶ DEIS at 4-66 (estimating construction equipment CO₂ emissions as 70,000 metric tons), 4-67 (estimating construction workforce transportation CO₂ emissions as 300,000 metric tons), 6-36 (estimating decommissioning CO₂ emissions as 63,000 metric tons). Additionally, the DEIS also did not account for the CO₂ emissions from the workforce, transportation, construction, and decommissioning of alternatives. DEIS at 9-32. Therefore, the DEIS did not treat nuclear power differently than the alternatives.

¹⁵⁷ *Id.* at 9-30 (emphasis added).

¹⁵⁸ Motion at 8.

¹⁵⁹ *Id.* (citing DEIS at 7-25 to 7-26; EPA Climate Change Report).

power has greater greenhouse gas emissions and larger water use and quality impacts, than wind, solar, or geothermal power.¹⁶⁰

As demonstrated below, this contention should be dismissed because it lacks adequate factual, documentary, and expert support, and fails to establish the existence of a genuine dispute on a material law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

1. Cumulative Greenhouse Gas Impacts

As an initial matter, the issue statement presented in DEIS Contention 3 is immaterial because it focuses on the impacts of global warming rather than the impacts of the proposed construction and operation of CPNPP Units 3 and 4. The DEIS discusses the cumulative impacts of greenhouse gas emissions, and found “that the cumulative impacts would be noticeable but not destabilizing, with or without the greenhouse gas emissions of the proposed project.”¹⁶¹ Thus, the DEIS further concludes “that cumulative impacts from other past, present, and reasonably foreseeable future actions on air quality resources in the geographic areas of interest would be MODERATE. *The incremental contribution of impacts on air quality resources from building and operating proposed Units 3 and 4 would be SMALL.*”¹⁶²

The Intervenor’s dispute appears to be limited to the Staff’s characterization of the cumulative impacts as “not destabilizing.” This dispute over the characterization of cumulative impacts is not material because it does not relate to the impacts from CPNPP Units 3 and 4. As the DEIS makes clear, the greenhouse gas emissions from a 1000 MWe nuclear power plant (including emissions from the uranium fuel cycle) are less than 0.00002 of the global greenhouse

¹⁶⁰ *Id.* at 9-10.

¹⁶¹ DEIS at 7-26.

¹⁶² *Id.* (emphasis added).

gas emissions (400,000 metric tons versus 28,000,000,000 metric tons per year), and therefore do not affect the cumulative impacts of greenhouse gas emissions.¹⁶³ The Intervenor has not disputed that CPNPP Units 3 and 4 will make an insignificant contribution to the cumulative greenhouse gas emissions. Since this proceeding pertains to CPNPP Units 3 and 4, and not to climate change in general, the Intervenor's arguments regarding the impacts of greenhouse gas emissions on global climate change are immaterial.¹⁶⁴

2. Comparison of CO₂ Emissions from Nuclear with the Wind, Solar, and Geothermal

The Intervenor also claim that the DEIS comparison of greenhouse gas emissions is "incomplete and distorted" because it does not compare the greenhouse gas emissions from the uranium fuel cycle, nuclear plant construction, and decommissioning against the emissions from wind, solar, and geothermal power generation.¹⁶⁵

The DEIS does not quantitatively compare the CO₂ emissions of CPNPP Units 3 and 4 to wind, solar, and geothermal because the DEIS determined that these alternatives do not meet the need for baseload power generation.¹⁶⁶ An EIS is not required to evaluate the environmental impacts of alternatives if those alternatives are determined to not be feasible means of accomplishing the purpose of a project.¹⁶⁷ As the licensing board in the *Shearon Harris* COL proceeding explained, "unless in a particular instance there is in fact a *viable* alternative which

¹⁶³ *Id.*

¹⁶⁴ In essence, the Intervenor is quibbling over the choice of words in the DEIS rather than the nature of the impacts referenced in the DEIS. In this regard, as the Commission has noted, "[o]ur boards do not sit to 'flyspeck' environmental documents or to add details or nuances." *Sys. Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005). This aspect of DEIS Contention 3 should be rejected for this reason alone.

¹⁶⁵ Motion at 9.

¹⁶⁶ See DEIS at 9-20 to 9-26.

¹⁶⁷ See *Clinton ESP*, CLI-05-29, 62 NRC at 808.

has an extremely low carbon footprint, the footprint of the nuclear fuel cycle is immaterial to the decision the Agency must make, and therefore such a contention fails to create a genuine issue of *material* fact.”¹⁶⁸ For this reason, this contention does not raise a material issue, contrary to 10 C.F.R. § 2.309(f)(1)(iv), and does not identify a genuine dispute with the DEIS, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Furthermore, the DEIS includes a complete discussion of the CO₂ contributions of nuclear power generation, including the emissions from the uranium fuel cycle, construction, and decommissioning.¹⁶⁹ The DEIS also acknowledges:

The CO₂ emissions associated with generation alternatives such as wind power, solar power, and hydropower would be associated with workforce transportation, construction, and decommissioning of the facilities. Because these generation alternatives do not involve combustion, the review team considers the emissions to be minor and concludes that the emissions would have a minimal cumulative impact.¹⁷⁰

The Intervenor ignores this information and fail to further explain how the DEIS gives an incomplete or distorted comparison of greenhouse gas emissions.¹⁷¹ Accordingly, Intervenor’s argument does not raise a genuine issue of material fact and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(vi).

¹⁶⁸ *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 & 3), LBP-08-21, 68 NRC 554, 579 (2008), *aff’d*, CLI-10-09, 71 NRC ___, slip op. at 28-31 (Mar. 11, 2010).

¹⁶⁹ DEIS at 4-66 (estimating construction equipment CO₂ emissions as 70,000 metric tons), 4-67 (estimating construction workforce transportation CO₂ emissions as 300,000 metric tons), 6-9 (estimating uranium fuel cycle emissions as 7.2×10^7 metric tons), 6-36 (estimating decommissioning CO₂ emissions as 63,000 metric tons).

¹⁷⁰ *Id.* at 9-32.

¹⁷¹ *See* Motion at 9.

3. Water Use and Quality Impacts

The Intervenors also attempt to dispute the conclusion in the DEIS regarding the water use and quality impacts from the combination of power sources alternative.¹⁷² The DEIS finds that the water use and quality impacts from this alternative “would be comparable to the impacts for a new nuclear power plant” and thus, characterizes these impacts as MODERATE.¹⁷³ The Intervenors question this conclusion because (1) substantial water savings can be realized as wind power increases; (2) CPNPP Units 3 and 4 are expected to consume 1,317,720 gpm for the circulating water system;¹⁷⁴ (3) water use for the combination of alternatives is not quantified; and (4) the DEIS does not compare the water quality impacts from nuclear with the impacts from wind, solar, and geothermal.¹⁷⁵

As explained above, Section 9.2 of the DEIS includes information related to the environmental impacts of alternative energy generation sources, including wind, solar, and geothermal. Section 9.2.4 evaluates the environmental impacts of a combination of alternative generation sources, consisting of 650 net MWe wind with energy storage such as CAES; 430 net MWe biomass, municipal solid waste, geothermal, and solar with energy storage; and four 530 MWe natural-gas fired units.¹⁷⁶ As stated in the DEIS, the NRC Staff determined that given Luminant’s objective of generating baseload power, a fossil energy source, most likely coal or

¹⁷² *Id.*

¹⁷³ DEIS at 9-31.

¹⁷⁴ Although the Intervenors assert that “Comanche Peak Units 3 & 4 are expected to consume 1,317,720 gpm,” this statement is inaccurate. Motion at 9. The ER and the DEIS both make clear that consumptive water use from CPNPP Units 3 and 4 would be approximately 18,500 gpm per unit (*i.e.*, approximately 60,000 acre-feet per year). *See* ER ch. 3, at 3.4-10, *available at* ADAMS Accession No. ML100081467; DEIS at 3-33. The value of 1,317,720 gpm cited by the Intervenors is the flow rate of the Circulating Water System, *see* ER ch. 3, at 3.3-5, and not a water consumption value.

¹⁷⁵ Motion at 9-10.

¹⁷⁶ DEIS at 9-28.

natural gas, would need to be a significant contributor to any reasonable alternative energy combination.¹⁷⁷

Although the Intervenor argues that the discussion of the combination of alternatives is deficient because substantial water savings can be realized as wind power increases, the DEIS finding of MODERATE water use and quality impacts was not based on the wind portion of this alternative. In fact, the DEIS clearly states that there “will be substantial water savings, especially in the west, as wind power production increases.”¹⁷⁸ Rather the DEIS makes clear that “[t]he review team assumed that the 2120 MW(e) natural gas-fired portion of the combination of alternatives would be built at the CPNPP site in a manner similar to the natural gas-fired alternative discussed in Section 9.2.2.2” and thus, “the environmental effects for this portion of the combination of alternatives would be scaled to be of the order of 2/3 of the natural gas-fired alternative.”¹⁷⁹ Section 9.2.2.2 of the DEIS in turn discusses the impacts for the natural gas-fired power generation alternative and concludes that “[t]he impacts on water use and quality from constructing and operating a natural gas-fired plant at the CPNPP site would be comparable to the impacts associated with a new nuclear plant.”¹⁸⁰ Thus, consistent with the Section 5.2.3.1 of the DEIS, which finds that the impacts on surface water quality from operation of CPNPP Units 3 and 4 would be MODERATE, the NRC also concludes that the impacts from a natural gas-fired plant at the CPNPP site would also be MODERATE.¹⁸¹

¹⁷⁷ *Id.*

¹⁷⁸ *Id.* at 9-23.

¹⁷⁹ *Id.* at 9-29.

¹⁸⁰ *Id.* at 9-18.

¹⁸¹ *Id.* at 5-13, 9-18.

Given that the Intervenor fail to offer any support contradicting the DEIS conclusion that the water use impacts from a natural-gas fired plant are MODERATE, this contention fails to satisfy 10 C.F.R. § 2.309(f)(1)(v). Likewise, because the Intervenor fail to controvert the very portions of the DEIS that address water use and quality impacts, this contention also fails to contain sufficient information to show the existence of a genuine dispute on a material issue of fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).¹⁸²

Furthermore, the Intervenor's argument that the DEIS should have compared "water quality impacts from alternatives including wind, solar, geothermal, etc." is not within the scope of this proceeding fact.¹⁸³ NEPA simply does not require evaluation of the environmental impacts of alternatives that are determined to not be feasible means of accomplishing the purpose of a project.¹⁸⁴ Here, the DEIS does not quantitatively compare the impacts of CPNPP Units 3 and 4 to wind, solar, and geothermal because the DEIS determined that these alternatives do not meet the need for baseload power generation.¹⁸⁵ Accordingly, the water quality impacts from wind, solar, and geothermal are beyond the scope of this proceeding, and fail to raise a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iii) and (vi).

¹⁸² Given that the DEIS explains that "[t]he impacts on water use and quality from constructing and operating a natural gas-fired plant at the CPNPP site would be comparable to the impacts associated with a new nuclear plant," there clearly was no need for the DEIS to repeat these same water use estimates in the evaluation of impacts from the natural gas-fired alternative. DEIS at 9-18. Accordingly, the Intervenor's assertion that the DEIS should have quantified the water use of a natural gas plant fails to raise a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

¹⁸³ Motion at 10.

¹⁸⁴ See *Clinton ESP*, CLI-05-29, 62 NRC at 808.

¹⁸⁵ DEIS at 9-20 to 9-26.

D. DEIS Contention 4 – Increased Water Temperatures Caused by Global Warming

DEIS Contention 4 claims that “[t]he DEIS fails to discuss increases in ambient water temperatures caused by global warming as such would affect the capacity of the Squaw Creek Reservoir to maintain water temperatures consistent with operational requirements.”¹⁸⁶ The Intervenor argues that the NRC Staff should have discussed potential increases in water temperatures and decreases in water availability that might cause CPNPP Units 3 and 4 to decrease power output or shutdown because “[a]mbient water temperature that reaches 95 °F causes a loss in plant production and at 101 °F operations must cease.”¹⁸⁷ As support, the Intervenor references the Smith Report and a one-page report by ERM entitled “Intake Water Temperature Reduction Alternatives” (“ERM Report”).¹⁸⁸ As demonstrated below, this contention should be dismissed because the Intervenor’s allegations regarding the impacts of global warming on the water temperatures of the Squaw Creek Reservoir and water availability are not material to this proceeding; lack adequate factual, documentary, and expert support; and fail to establish the existence of a genuine dispute on a material law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

The most fundamental and fatal defect in DEIS Contention 4 is that it alleges potential increases in surface water temperatures “would affect the capacity of the *Squaw Creek Reservoir* to maintain water temperatures consistent with operational requirements.”¹⁸⁹ Similarly, the Smith Report and the ERM Report discuss the ability of the *Squaw Creek Reservoir* to

¹⁸⁶ Motion at 10.

¹⁸⁷ *Id.* at 11.

¹⁸⁸ *Id.* attach. (ERM, Intake Water Temperature Reduction Alternatives (undated)).

¹⁸⁹ *Id.* at 10 (emphasis added).

accommodate thermal discharges.¹⁹⁰ These arguments are simply irrelevant. Luminant has proposed to use two mechanical draft cooling towers that will use *Lake Granbury* as the source of cooling water and for blowdown discharges, not the *Squaw Creek Reservoir*.¹⁹¹ Therefore, this contention fails to raise a genuine issue of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

In addition, the Intervenor cites to no applicable NRC requirements or regulations in support of its assertion that the impact of hypothetical elevated cooling water temperatures or decreases in water availability are in any way material to the findings NRC must make in this proceeding. To the contrary, the scenario raised by the Intervenor (*i.e.*, temporary shutdown of CPNPP due to elevated water temperatures or lack of water) is an economic issue, not an environmental issue.¹⁹² Such economic issues are not material under NEPA, absent an environmentally preferable alternative for generating baseload power. Therefore, this proposed contention should be rejected because it is immaterial, contrary to 10 C.F.R. 2.309(f)(1)(iv).

Furthermore, the Intervenor fails to provide sufficient support for their basic, underlying premise, *i.e.*, surface water used by CPNPP Units 3 and 4 from Lake Granbury has already increased beyond the operating limits. The Intervenor cites the Smith Report, which states that the existing mean maximum *air* temperatures in the Lake Granbury watershed already exceed 95

¹⁹⁰ Smith Report at 4-5; ERM Report at 1.

¹⁹¹ DEIS at 3-4 to 3-5, 3-10.

¹⁹² See *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1 & 2), LBP-82-117A, 16 NRC 1964, 1992-94 (1982), *aff'd*, ALAB-713, 17 NRC 83 (1983). In rejecting a contention challenging the adequacy of the plant's supply of condenser water, the Appeal Board noted that "although an insufficient supply of condenser cooling water might necessitate a reduction in power levels (and perhaps total reactor shutdown), it would not pose a safety threat." *Palo Verde*, ALAB-713, 17 NRC at 84 n.2. From a NEPA perspective, the Licensing Board found that "there is no legal basis for refusing Palo Verde its operating licenses merely because some environmental uncertainties may exist in Palo Verde's future coolant supply." *Palo Verde*, LBP-82-117A, 16 NRC at 1992.

°F during the hottest months of the year.¹⁹³ However, as shown in the ER and as is uncontested by the Intervenor, the maximum *water* temperature in Lake Granbury is substantially lower (about 89 °F).¹⁹⁴ Therefore, because the Intervenor does not provide sufficient support for their claim that existing water temperatures exceed 95 °F, DEIS Contention 4 should be dismissed in its entirety pursuant to 10 C.F.R. § 2.309(f)(1)(v).¹⁹⁵

The Intervenor's claim regarding global warming impacts also does not contain sufficient information to show the existence of a genuine dispute on a material issue of fact. The DEIS states that global warming might result in a 3 to 5 °F increase in air temperatures during the period of operation of CPNPP Units 3 and 4.¹⁹⁶ This value is the same as the value cited in the Smith Report for the medium case for the mid-2050s.¹⁹⁷ The ER shows that the maximum water temperature of Lake Granbury is 89.24 °F, and that the highest monthly mean temperature is 86.13 °F.¹⁹⁸ Therefore, even accounting for a 3 to 5°F increase due to global warming, the temperature of Lake Granbury would still be below 95 °F, which is the temperature of concern to

¹⁹³ Motion at 10-11; Smith Report at 2. Although the Smith Report references the "Lake Granbury Watershed Protection Plan," the quoted portion of this document discusses *air* temperatures, not *water* temperatures. See Smith Report at 2. Furthermore, the Lake Granbury Watershed Protection Plan does not address potential future increases in water temperatures due to climate change.

¹⁹⁴ ER ch. 2, at 2.3-104, available at ADAMS Accession No. ML100081212.

¹⁹⁵ See *Duke Energy Carolinas, LLC* (Combined License Application for William States Lee III Nuclear Station, Units 1 & 2), LBP-08-17, 68 NRC 431, 446, 447 (2008) (rejecting a contention claiming water temperatures would be impacted by global warming because the petitioner provided "no meaningful support" for that allegation); *Bellefonte*, LBP-08-16, 68 NRC at 417-18 (rejecting a contention which claimed that global warming would increase severe weather events, without providing information on the magnitude of the increase).

¹⁹⁶ DEIS at 2-111.

¹⁹⁷ Smith Report at 1.

¹⁹⁸ ER ch. 2, at 2.3-104.

the Intervenors.¹⁹⁹ Therefore, the issue raised by the Intervenors does not establish a genuine dispute of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

E. DEIS Contention 5 – Comparison of CO₂ Emissions from the Uranium Fuel Cycle with Wind and Solar Power

DEIS Contention 5 claims that “[t]he DEIS fails to compare the CO₂ emissions of the uranium fuel cycle (UFC) to the CO₂ emissions of wind and solar power.”²⁰⁰ The Intervenors claim that the DEIS is incomplete because it does not consider the CO₂ footprint of CPNPP Units 3 and 4 compared to alternatives, such as wind, solar, and geothermal.²⁰¹

This contention repeats the same arguments presented in DEIS Contention 2 and Contention 3, Part A. The DEIS compares the CO₂ emissions of nuclear power with the CO₂ emissions from alternatives that are feasible for generating baseload power, including a combination of alternatives involving wind and solar power.²⁰² As explained above, the DEIS does not quantitatively compare the CO₂ emissions of CPNPP Units 3 and 4 to wind, solar, and geothermal because the DEIS determined that these alternatives do not meet the need for baseload power generation.²⁰³ An EIS is not required to evaluate the environmental impacts of alternatives if those alternatives are determined to not be feasible means of accomplishing the

¹⁹⁹ See Motion at 11.

²⁰⁰ *Id.*

²⁰¹ *Id.* at 11-12. The Motion references Appendix I of the DEIS, “Severe Accident Mitigation Alternatives.” Luminant assumes that the Intervenors intended to reference Appendix J, “Carbon Dioxide Footprint Estimates for a 1000 MW(e) Light Water Reactor (LWR).” As the DEIS explains, Appendix J estimates the CO₂ emissions from various activities associated with nuclear power plants, including “direct emissions from the nuclear facility and indirect emissions from workforce transportation and the *uranium fuel cycle*.” DEIS app. J at J-1 (emphasis added). The Intervenors fail to provide any factual support indicating any specific error in this portion of the DEIS, contrary to 10 C.F.R. § 2.309(f)(1)(v).

²⁰² DEIS at 9-33.

²⁰³ See *id.* at 9-20 to 9-26.

purpose of a project.²⁰⁴ As the licensing board in the *Shearon Harris* COL proceeding explained, “unless in a particular instance there is in fact a *viable* alternative which has an extremely low carbon footprint, the footprint of the nuclear fuel cycle is immaterial to the decision the Agency must make, and therefore such a contention fails to create a genuine issue of *material fact*.”²⁰⁵ For this reason, this contention does not raise a material issue, contrary to 10 C.F.R. § 2.309(f)(1)(iv), and does not identify a genuine dispute with the DEIS, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

Furthermore, as also noted above, the DEIS includes a complete discussion of the CO₂ contributions of nuclear power generation, including the emissions from the uranium fuel cycle.²⁰⁶ The DEIS further acknowledges:

The CO₂ emissions associated with generation alternatives such as wind power, solar power, and hydropower would be associated with workforce transportation, construction, and decommissioning of the facilities. Because these generation alternatives do not involve combustion, the review team considers the emissions to be minor and concludes that the emissions would have a minimal cumulative impact.²⁰⁷

The Intervenor ignores this information and fails to explain how the DEIS gives an incomplete discussion of greenhouse gas emissions.²⁰⁸ Accordingly, Intervenor’s argument does not raise a genuine issue of material fact and should be rejected as contrary to 10 C.F.R. § 2.309(f)(1)(vi).

²⁰⁴ See *Clinton ESP*, CLI-05-29, 62 NRC at 808.

²⁰⁵ *Shearon Harris*, LBP-08-21, 68 NRC at 579, *aff’d*, CLI-10-09, slip op. at 28-31.

²⁰⁶ DEIS at 6-9 (estimating from uranium fuel cycle CO₂ emissions as 7.2 x 10⁷ metric tons).

²⁰⁷ *Id.* at 9-32.

²⁰⁸ See Motion at 9.

F. DEIS Contention 6 – Combinations of Wind and Solar Without Storage

DEIS Contention 6 states that “[c]ombinations of wind and solar without storage for baseload are not discussed in the DEIS.”²⁰⁹ The Intervenor claim that the DEIS incorrectly assumes that these alternatives (or combinations thereof) are not viable baseload generation sources without storage.²¹⁰ As support, the Intervenor rely on the Dean Report, which states combining wind and solar power generation might “produce a more uniform overall generation profile” that “would have been harder to deprecate as ‘inappropriate for baseload.’”²¹¹

As an initial matter, the Intervenor’s argument that wind and solar should have been considered in combination with each other attempts to re-litigate previously rejected portions of proposed Contention 18. As originally proffered, that contention argued that Luminant should have considered wind and solar together, as an alternative to CPNPP Units 3 and 4.²¹² However, in admitting Contention 18, the Board specifically narrowed the contention to include only wind and solar in conjunction with storage options and natural gas.²¹³ Accordingly, the Board should reject this contention pursuant to 10 C.F.R. § 2.309(f)(1)(iii) for attempting to raise issues that have already been rejected by the Board.

Furthermore, the Intervenor fail to demonstrate the existence of a genuine dispute of material fact that warrants further inquiry by this Board. The DEIS evaluates a combination of alternatives that includes, but was not limited to wind and solar, and found that this combination

²⁰⁹ *Id.* at 13.

²¹⁰ *Id.*

²¹¹ Dean Report at 1-2.

²¹² Petition at 42.

²¹³ *Comanche Peak*, LBP-09-17, slip op. at 82.

was not environmentally preferable to CPNPP Units 3 and 4.²¹⁴ This conclusion was based on, among other things, a finding that wind power would have LARGE impacts on land use and, and MODERATE impacts on ecological resources.²¹⁵ For the same reasons, a combined wind and solar generation facility would have LARGE impacts on land usage and MODERATE impacts on ecological resources. As such, it would not be environmentally preferable to CPNPP Units 3 and 4.

In that regard, we note that the combination of alternatives postulated by this contention is very similar to the combination postulated in Bounding Case 2 in Luminant's recent motion for summary disposition, which demonstrates that the combination is not environmentally preferable to CPNPP Units 3 and 4.²¹⁶ Given that "NEPA does not require a separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences,"²¹⁷ there is no basis for admission of this additional contention which is essentially subsumed within the existing contentions on alternative energy sources.

²¹⁴ DEIS at 9-32.

²¹⁵ *Id.* at 9-31.

²¹⁶ Luminant's Motion for Summary Disposition of Contention 18 and Alternatives Contention A at 38-43 (Aug. 26, 2010).

²¹⁷ *Headwaters, Inc. v. Bureau of Land Mgmt.*, 914 F.2d 1174, 1181 (9th Cir. 1990) (*citing N. Plains Res. Council*, 874 F.2d 661, 666 (9th Cir. 1989)).

VI. CONCLUSION

For the foregoing reasons, the Intervenor's proposed contentions are untimely, seek to relitigate contentions that were previously rejected by the Board, and do not meet the contention admissibility requirements. Therefore, the contentions submitted by the Intervenor related to the DEIS should be rejected.

Respectfully submitted,

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Counsel for Luminant

Dated in Washington, D.C.
this 27th day of September 2010

List of Attachments

1. Documents Referenced in the Motion, Power Report, and Smith Report.
2. Excerpts from Potomac Economics, Ltd., 2009 State of the Market Report for the ERCOT Wholesale Electricity Markets (July 2010).
3. Excerpts from ERCOT Planning Presentation, Target Reserve Margin (TRM) and Effective Load Carrying Capability (ELCC) of Wind Plants Evaluation - Input and Methodology (Mar. 25, 2010).
4. Excerpts from ERCOT, Report on the Capacity, Demand, and Reserves in the ERCOT Region (May 2010).
5. Excerpts from ACEEE Report No. E073, Potential for Energy Efficiency, Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs (Mar. 2007).
6. Excerpts from Southeast Energy Efficiency Alliance, Energy Efficiency in the South (Apr. 2010).
7. Bill Summary and Status, 111th Congress (2009 – 2010), H.R. 5019 (accessed Sept. 15, 2010).
8. Excerpts from ERCOT, Long-Term System Assessment for the ERCOT Region (Dec. 30, 2008).
9. Excerpts from Public Utility Commission of Texas, Order on Rehearing, Docket No. 33672 (Oct. 7, 2008).

Documents Referenced in the Motion, Power Report, and Smith Report

Referenced Document	Date	Contention	Citation	Notes
ERCOT, Long-Term System Assessment for the ERCOT Region	12/30/2008	DEIS-1	Motion at 5 n.18	
Potomac Economics, Ltd., 2009 State of the Market Report for the ERCOT Wholesale Electricity Markets	7/2010	DEIS-1	Power Report at 1 n.1, 3 nn.3-4, 4 n.7	
ERCOT's 2009 Annual Report on the Texas Renewable Energy Credit Trading Program	5/14/2010	DEIS-1	Power Report at 3 n.5	
Turbine Inlet Cooling Association, A White Paper, Turbine Inlet Cooling: An Energy Solution That's Better for the Environment, Ratepayers and Plant Owners	11/24/2009	DEIS-1	Power Report at 5 nn.8-9	
J. Herndon, Measurement and Verification of CPS Energy's 2009 DSM Program Offerings	4/26/2010	DEIS-1	Power Report at 5 n.10	
D. Woodfin, May 2010 Load Forecast and Reserve Margin Update	5/18/2010	DEIS-1	Power Report at 5 n.11	
Texas Public Utility Commission Project # 35792, Rulemaking to Relating to the Goal for Renewable Energy	12/21/2009	DEIS-1	Power Report at 6 n.12	
Written Testimony of Kate Robertson	4/2/2009	DEIS-1	Power Report at 6 n.13	
ACEEE Report No. E073, Potential for Energy Efficiency, Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs	3/2007	DEIS-1	Power Report at 6 n.14	
Texas Administrative Code, Subchapter E, Texas Building Energy Performance Standards	6/4/2010	DEIS-1	Power Report 6 n.15	

Referenced Document	Date	Contention	Citation	Notes
Website for Building Code's Assistance Project	2/9/2010	DEIS-1	Power Report at 6 n.16, 7 n.17	While the exact date of the website referenced by the Intervenor is unknown, the publication date of the information referenced by the Intervenor from this website is 2/9/2010.
Southeast Energy Efficiency Alliance, Energy Efficiency in the South, Appendix G, State Profiles of Energy Efficiency Opportunities in the South: Texas	4/2010	DEIS-1	Power Report at 7 nn.18-20	
Luminant, News Release, Luminant and Shell Join Forces to Develop a Texas-Sized Wind Farm	7/27/2007	DEIS-1	Power Report at 7 n.21	
R. Dean, Comments Regarding Luminant's Revision to the Comanche Peak Nuclear Power Plant, Units 3 & 4 COL Application Part 3 – Environmental Report	1/4/2010	DEIS-1, 6	Motion at 13 n.40; Power Report at 7	
EPA, Climate Change Indicators in the United States	4/2010	DEIS-3	Motion at 8 nn.24-26	
K. Shrader-Frechette, Greenhouse Emissions and Nuclear Energy	8/2009	DEIS-3, 5	Motion at 9 n.27, 12 n.36	
B. Sovacool, Valuing the Greenhouse Gas Emissions from Nuclear Power: A Critical Survey	6/2/2008	DEIS-3, 5	Motion at 12 n.36	

Referenced Document	Date	Contention	Citation	Notes
ERM, Intake Water Temperature Reduction Alternatives	undated	DEIS-4	Motion at 11 n.34; Smith Report at 1, 4-5	Although this document is undated, it was available prior to March 2009 because it was referenced in Luminant's "Plume Characteristics of Proposed New Cooling Towers at Comanche Peak" Report (Mar. 18, 2009), <i>available at</i> ADAMS Accession No. ML093380020.
The Nature Conservancy, Climate Wizard website	undated	DEIS-4	Smith Report at 1	Although this website is undated, it has been available since at least December 2009.
Brazos River Authority, Lake Granbury Watershed Protection Plan	7/7/2010	DEIS-4	Smith Report at 2	
EPA, Climate Change and Texas	9/1997	DEIS-4	Smith Report at 2	
U.S. Climate Change Science Program, The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity	5/2008	DEIS-4	Smith Report at 2	
G. Ward, Chapter 3, Water Resources and Water Supply from Impacts of Global Warming on Texas (2d. ed.)	1/2009	DEIS-4	Smith Report at 3	
M. Levinson et al., Watching Water: A Guide to Evaluating Corporate Risks in a Thirsty World	3/31/2008	DEIS-4	Smith Report at 4	
M. Weiss, Drought Could Force Nuke-Plant Shutdowns	1/24/2008	DEIS-4	Smith Report at 4	
J. Morrison et al., Water Scarcity & Climate Change: Growing Risks for Businesses & Investors	2/2009	DEIS-4	Smith Report at 4	

ATTACHMENT 2

Excerpts from Potomac Economics, Ltd., 2009 State of the Market Report for the ERCOT Wholesale Electricity Markets (July 2010)

**2009 STATE OF THE MARKET REPORT
FOR THE
ERCOT WHOLESALE ELECTRICITY MARKETS**

POTOMAC ECONOMICS, LTD.

Independent Market Monitor for the
ERCOT Wholesale Market

July 2010

wind production are alleviated, it is likely that the marginal fuel frequency of coal will increase in coming years.

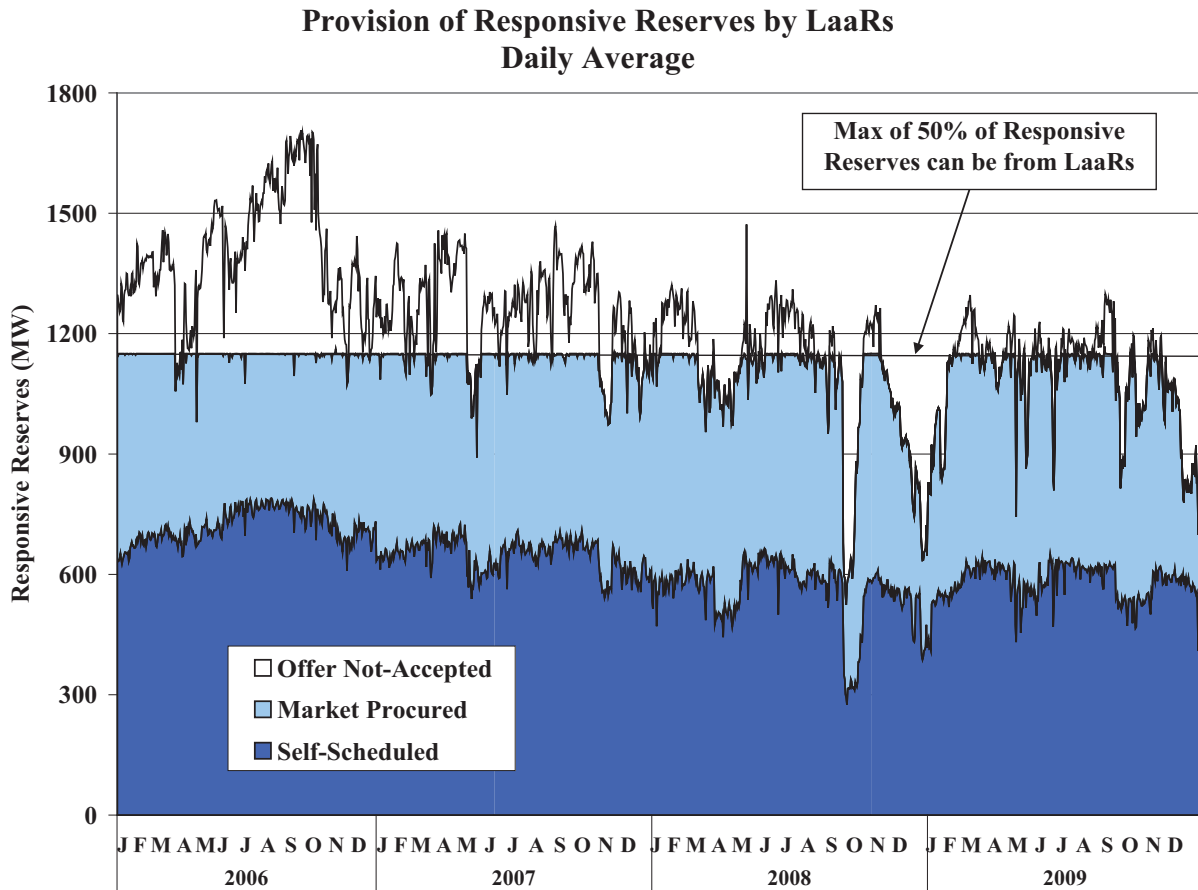
3. Load Participation in the ERCOT Markets

The ERCOT Protocols allow for loads to participate in the ERCOT-administered markets as either Load acting as Resources (“LaaRs”) or Balancing Up Loads (“BULs”). LaaRs are loads that are qualified by ERCOT to offer responsive reserves, non-spinning reserves, or regulation into the day-ahead ancillary services markets and can also offer blocks of energy in the balancing energy market.

As of December 2009, over 2,200 MW of capability were qualified as LaaRs. In 2009, LaaRs were permitted to supply up to 1,150 MW of the responsive reserves requirement. Although the participants with LaaR resources are qualified to provide non-spinning reserves and up balancing energy in real-time, LaaR participation in the non-spinning reserve and balancing energy market was negligible in 2009.⁴ This is not surprising because the value of curtailed load tends to be relatively high, and providing responsive reserves offers substantial revenue with very little probability of being deployed. In contrast, resources providing non-spinning reserves have a much higher probability of being curtailed. Hence, most LaaRs will have a strong preference to provide responsive reserves over non-spinning reserves or balancing energy. The following figure shows the daily average provision of responsive reserves by LaaRs in the ERCOT market from 2006 through 2009.

⁴

Although there was no active participation in the balancing energy market, loads can and do respond to market prices without actively submitting a bid to ERCOT. This is often referred to as passive load response.

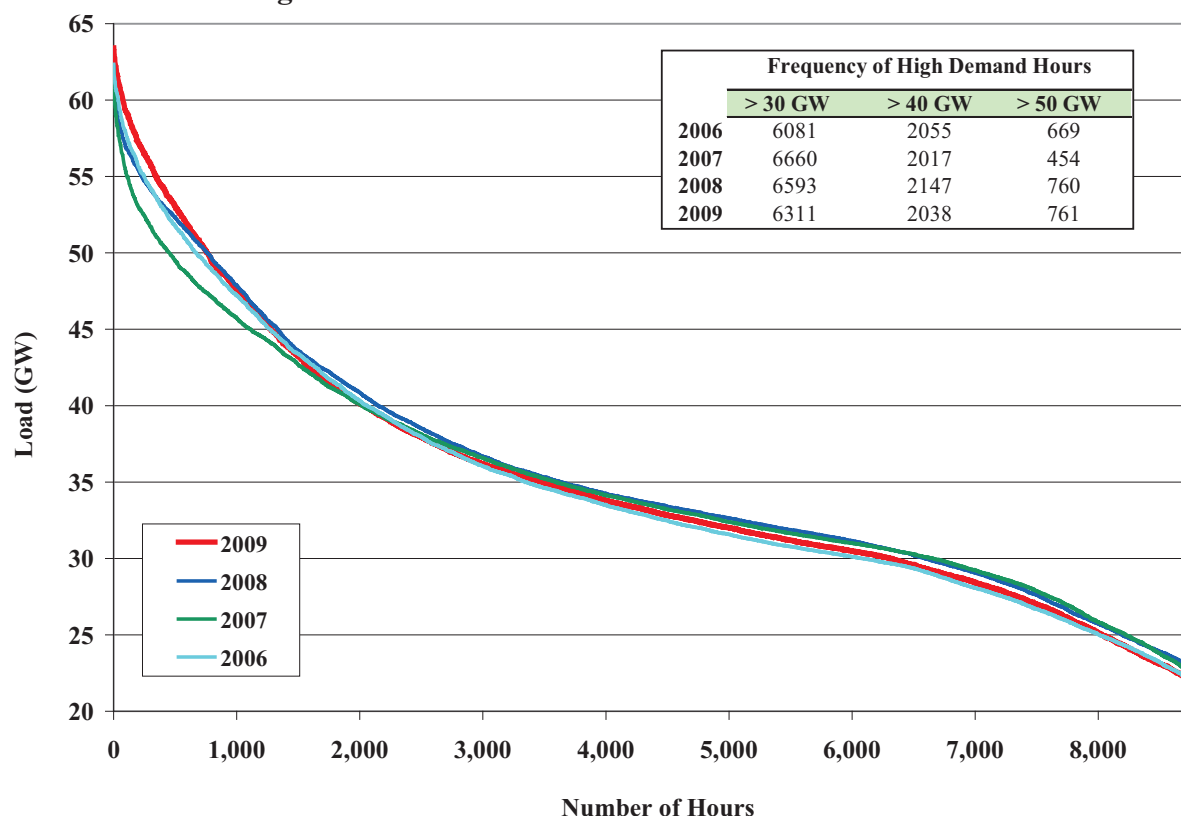


The high level of participation by demand response participating in the ancillary service markets sets ERCOT apart from other operating electricity markets. The figure above shows that the amount of responsive reserves provided by LaaRs has held fairly constant at 1,150 MW since the beginning of 2006. Exceptions include a decrease in September of 2008 corresponding to the Texas landfall of Hurricane Ike and a more prolonged reduction from November 2008 through January 2009 that was likely a product of the economic downturn and its effect on industrial operations.

4. Net Revenue Analysis

Net revenue is defined as the total revenue that can be earned by a new generating unit less its variable production costs. It represents the revenue that is available to recover a unit's fixed and capital costs. Hence, this metric shows the economic signals provided by the market for investors to build new generation or for existing owners to retire generation. In long-run equilibrium, the markets should provide sufficient net revenue to allow an investor to break-even on an investment in a new generating unit, including a return of and on the investment.

Figure 28: ERCOT Load Duration Curve – All Hours



As shown in Figure 28, the load duration curve for 2009 is slightly lower than in 2008 at load levels less than 45 GW, which accounts for approximately 85 percent of the hours in 2009 and is consistent with the load reduction of 1.3 percent from 2008 to 2009. However, the number of high demand hours (more than 50 GW) in 2008 and 2009 are at comparable levels (760 and 761 hours respectively).

To better show the differences in the highest-demand periods between years, Figure 29 shows the load duration curve for the five percent of hours with the highest loads. This figure shows that while average load increased in each year from 2006 to 2008 and decreased in 2009, the frequency of high-demand hours in 2009 increased compared with year 2008. Load exceeded 58 GW in 160 hours in 2009, more than double the hours in 2008.

ATTACHMENT 3

Excerpts from ERCOT Planning Presentation, Target Reserve Margin (TRM) and Effective Load Carrying Capability (ELCC) of Wind Plants Evaluation - Input and Methodology (Mar. 25, 2010)



Target Reserve Margin (TRM) and Effective Load Carrying Capability (ELCC) of Wind Plants Evaluation - Input and Methodology

ERCOT Planning

03/25/2010

Study Results

- **The following estimates will be provided for year 2012:**
 - The target reserve margin for the ERCOT region.
 - The ELCC of wind generation.
 - The annual loss-of-load expectation (LOLE).
 - The annual loss-of-load hours (LOLH).
 - The annual loss-of-load events (LOL-Events).
 - The annual expected unserved energy (EUE).
 - The percentage of EUE = $[EUE / (\text{Annual energy served} + EUE)] * 100$

ATTACHMENT 4

Excerpts from ERCOT, Report on the Capacity, Demand,
and Reserves in the ERCOT Region (May 2010)



**REPORT ON THE CAPACITY, DEMAND, AND
RESERVES IN THE ERCOT REGION**

May 2010

**ERCOT
2705 West Lake Drive
Taylor, Texas 76574**

Definitions

Available Mothballed Generation

The probability that a mothballed unit will return to service, as provided by its owner, multiplied by the capacity of the unit. Return probabilities are considered protected information under the ERCOT Protocols and therefore are not included in this report.

BULs

Balancing up load. Loads capable of reducing the need for electrical energy when providing Balancing Up Load Energy Service as described in the ERCOT Protocols, Section 6, Ancillary Services. BULs are not considered resources as defined by the ERCOT Protocols.

Effective Load-Carrying Capability (ELCC) of Wind Generation

The amount of wind generation that the Generation Adequacy Task Force (GATF) has recommended to be included in the CDR. The value is 8.7% of the nameplate capacity listed in the Unit Capacities tables, both installed capacity and planned capacity.

Emergency Interruptible Load Service

ERCOT procures Emergency Interruptible Load Service (EILS) by selecting qualified Loads to make themselves available for interruption in an electric grid emergency. EILS is an emergency load reduction service designed to decrease the likelihood of the need for firm Load shedding (a.k.a, “rolling blackouts”). Customers meeting EILS criteria may bid to provide the service through their qualified scheduling entities (QSEs). EILS is authorized by Public Utility Commission Substantive Rule §25.507.

LaaRs (Loads acting as resources)

Load capable of reducing or increasing the need for electrical energy or providing Ancillary Services to the ERCOT System, as described in the ERCOT Protocols, Section 6, Ancillary Services. These Resources may provide the following Ancillary Services: Responsive Reserve Service, Non-Spinning Reserve Service, Replacement Reserve Service, and Regulation Service. The Resources must be registered and qualified by ERCOT and will be scheduled by a Qualified Scheduling Entity

Mothballed Capacity

The difference in the available mothballed generation (see definition above) and the total mothballed capacity. This value is zero in the upcoming Summer CDR Report because there isn't enough time to return those units to service before the start of the summer.

Mothballed Unit

A generation resource for which a generation entity has submitted a Notification of Suspension of Operations, for which ERCOT has declined to execute an RMR agreement, and for which the generation entity has not announced retirement of the generation resource.

Net Dependable Capability

2010 Report on the Capacity, Demand, and Reserves in the ERCOT Region

Summer Summary

Load Forecast:	2010	2011	2012	2013	2014	2015
Total Summer Peak Demand, MW	64,052	65,206	66,658	68,265	69,451	70,517
less LAARs Serving as Responsive Reserve, MW	1,062	1,062	1,062	1,062	1,062	1,062
less LAARs Serving as Non-Spinning Reserve, MW	0	0	0	0	0	0
less Emergency Interruptible Load Service	336	370	407	447	492	541
less BULs, MW	0	0	0	0	0	0
less Energy Efficiency Programs (per HB3693)	242	242	242	242	242	242
Firm Load Forecast, MW	62,412	63,532	64,947	66,514	67,655	68,672

Resources:	2010	2011	2012	2013	2014	2015
Installed Capacity, MW	66,228	64,372	64,372	64,372	64,372	64,372
Capacity from Private Networks, MW	4,803	4,803	4,803	4,803	4,803	4,803
Effective Load-Carrying Capability (ELCC) of Wind Generation, MW	793	793	793	793	793	793
RMR Units to be under Contract, MW	688	0	0	0	0	0
Operational Generation, MW	72,512	69,968	69,968	69,968	69,968	69,968
50% of Non-Synchronous Ties, MW	553	553	553	553	553	553
Switchable Units, MW	2,848	2,848	2,848	2,848	2,848	2,848
Available Mothballed Generation , MW	0	0	0	0	0	0
Planned Units (not wind) with Signed IA and Air Permit, MW	0	978	2,003	2,653	3,409	4,059
ELCC of Planned Wind Units with Signed IA, MW	0	30	43	95	115	115
Total Resources, MW	75,913	74,377	75,415	76,117	76,893	77,543

less Switchable Units Unavailable to ERCOT, MW	158	0	0	0	0	0
less Retiring Units, MW	0	0	0	0	0	0
Resources, MW	75,755	74,377	75,415	76,117	76,893	77,543

Reserve Margin	21.4%	17.1%	16.1%	14.4%	13.7%	12.9%
(Resources - Firm Load Forecast)/Firm Load Forecast						

Other Potential Resources:	553	13,691	21,252	23,402	25,813	31,757
Mothballed Capacity , MW	0	5,022	5,022	5,022	5,022	5,022
50% of Non-Synchronous Ties, MW	553	553	553	553	553	553
Planned Units in Full Interconnection Study Phase, MW	0	8,116	15,677	17,827	20,238	26,182

2010 Report on the Capacity, Demand, and Reserves in the ERCOT Region

Winter Summary

Load Forecast:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Total Winter Peak Demand, MW	46,263	43,823	44,804	45,819	46,578	47,296
less LAARs Serving as Responsive Reserve, MW	1,062	1,062	1,062	1,062	1,062	1,062
less LAARs Serving as Non-Spinning Reserve, MW	0	0	0	0	0	0
less Emergency Interruptible Load Service	336	370	407	447	492	541
less BULs, MW	0	0	0	0	0	0
less Energy Efficiency Programs (per HB3693)	242	242	242	242	242	242
Firm Load Forecast, MW	44,623	42,149	43,093	44,068	44,782	45,451
Resources:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Installed Capacity, MW	67,093	67,093	67,093	67,093	67,093	67,093
Capacity from Private Networks, MW	5,265	5,265	5,265	5,265	5,265	5,265
Effective Load-Carrying Capability (ELCC) of Wind Generation, MW	793	793	793	793	793	793
RMR Units to be under Contract, MW	0	0	0	0	0	0
Operational Generation, MW	73,151	73,151	73,151	73,151	73,151	73,151
50% of Non-Synchronous Ties, MW	553	553	553	553	553	553
Switchable Units, MW	3,168	3,168	3,168	3,168	3,168	3,168
Available Mothballed Generation, MW	0	0	0	0	0	0
Planned Units (not wind) with Signed IA and Air Permit, MW	50	978	2,003	2,783	3,539	4,319
ELCC of Planned Wind Units with Signed IA, MW	0	30	43	56	115	115
Total Resources, MW	76,922	77,880	78,918	79,712	80,526	81,306
less Switchable Units Unavailable to ERCOT, MW	158	0	0	0	0	0
less Retiring Units, MW	0	0	0	0	0	0
Resources, MW	76,764	77,880	78,918	79,712	80,526	81,306
Reserve Margin	72.0%	84.8%	83.1%	80.9%	79.8%	78.9%
(Resources - Firm Load Forecast)/Firm Load Forecast						
Other Potential Resources:	8,118	16,154	25,785	29,001	31,328	32,934
Mothballed Capacity, MW	5,022	5,022	5,022	5,022	5,022	5,022
50% of Non-Synchronous Ties, MW	553	553	553	553	553	553
Planned Units in Full Interconnection Study Phase, MW	2,126	8,293	15,847	17,988	26,138	26,182

ATTACHMENT 5

Excerpts from ACEEE Report No. E073, Potential for
Energy Efficiency, Demand Response, and Onsite
Renewable Energy to Meet Texas's Growing Electricity
Needs (Mar. 2007)

**Potential for Energy Efficiency, Demand Response,
and Onsite Renewable Energy
to Meet Texas's Growing Electricity Needs**

**R. Neal Elliott, Maggie Eldridge, Anna M. Shipley,
John "Skip" Laitner, and Steven Nadel¹
Alison Silverstein²
Bruce Hedman³
Mike Sloan⁴**

March 2007

Report Number E073

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⁴ Virtus Energy Research Associates, Inc.

Estimated levelized costs for each efficiency measure, which assume a discount rate of 4.5%, are shown in Table C.1. Measures with a total costs of saved energy (\$/kWh saved) less than current average electricity prices in Texas, 10.84 cents/kWh in 2005 (EIA 2006b), were considered cost-effective. The average levelized is actually much lower, less than 6 cents per kWh saved for all efficiency measures analyzed and an average of about 5 cents for all measures deemed cost-effective. The overwhelming majority (95%) of savings potential, or 55,679 GWh in 2023, has a levelized cost less than \$0.08/kWh saved.

We estimate a **total potential for cost-effective electricity savings in Texas** of 57,720 GWh, or 32% of projected electricity consumption in 2023. Although the potential for cost-effective electricity savings is large, please note that **only a portion of these savings would be realistically achievable given market and policy limitations.** See Appendix A for the total achievable electricity savings in Texas.

Table C.1. Residential Efficiency Measure Savings and Costs

Residential - Existing Homes	Avg kWh Saved per Home	Measure Cost	Measure Life (years)	% of Homes Applicable	Interaction Adjustment	% Turning Over in 15 Years	GWh Savings Available	Cost per kWh Saved
Space Heating and Cooling								
Duct efficiency improvement							11,858	
Duct efficiency improvement Gas Heat	1319	\$ 323	20	28%	NA	100%	3200	\$ 0.02
Duct efficiency improvement Electric Heat	4530	\$ 509	20	20%	NA	100%	7691	\$ 0.01
Duct efficiency improvement Heat Pump	2656	\$ 509	20	4%	NA	100%	966	\$ 0.01
Air infiltration reduction							1,603	
Air infiltration reduction Gas Heat	352	\$ 304	15	10%	NA	100%	320	\$ 0.08
Air infiltration reduction Electric Heat	881	\$ 476	15	15%	NA	100%	1122	\$ 0.05
Air infiltration reduction Heat Pump	590	\$ 476	15	3%	NA	100%	161	\$ 0.08
Ceiling insulation							1767	
Ceiling insulation Gas Heat	432	\$ 627	20	0%	NA	100%	0	\$ 0.11
Ceiling insulation Electric Heat	2427	\$ 987	20	8%	NA	100%	1595	\$ 0.03
Ceiling insulation Heat Pump	1209	\$ 987	20	1.6%	NA	100%	170	\$ 0.06
Wall insulation							9,726	
Wall insulation Gas Heat	446	\$ 411	20	16%	NA	100%	605	\$ 0.07
Wall insulation Electric Heat	8707	\$ 647	20	11%	NA	100%	8262	\$ 0.01
Wall insulation Heat Pump	4222	\$ 647	20	2%	NA	100%	859	\$ 0.01
Floor insulation							2,304	
Floor insulation Gas Heat	55	\$ 659	20	0%	NA	100%	0	\$ 1.38
Floor insulation Electric Heat	3330	\$ 1,036	20	7%	NA	100%	2107	\$ 0.02
Floor insulation Heat Pump	1455	\$ 1,036	20	2%	NA	100%	197	\$ 0.05
Energy Star windows							3926	
Energy Star windows Non-electric heating	692	\$ 150	30	25.0%	NA	50%	1503	\$ 0.01
Energy Star windows Electric Resistance Heating	1364	\$ 236	30	17.5%	NA	50%	2074	\$ 0.01
Energy Star windows Heat Pump	1072	\$ 236	30	3.7%	NA	50%	349	\$ 0.01
Solar Screens							2047	
Solar Screens Gas Heat	1051	\$ 326	20	15.0%	NA	100%	1369	\$ 0.02
Solar Screens Electric Heat	593	\$ 513	20	10.5%	NA	100%	540	\$ 0.07
Solar Screens Heat Pump	704	\$ 513	20	2.2%	NA	100%	137	\$ 0.06
Cool roof	237	\$123	20	70%	NA	75%	1084	\$ 0.04
Efficient furnace fan	322	\$ 196	18	73%	44%	83%	905	\$ 0.05
Central A/C replacement 14 SEER	408	\$ 155	18.4	68%	44%	82%	1070	\$ 0.03
Residential - Existing Homes	Avg kWh Saved per Home	Measure Cost	Measure Life	% of Homes	Interaction Adjustment	% Turning Over in 15 Years	GWh Savings Available	Cost per kWh Saved

ATTACHMENT 6

Excerpts from Southeast Energy Efficiency Alliance,
Energy Efficiency in the South (Apr. 2010)



NICHOLAS INSTITUTE
FOR ENVIRONMENTAL POLICY SOLUTIONS
DUKE UNIVERSITY

ENERGY EFFICIENCY IN THE SOUTH

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Xiaojing Sun,² Youngsun Baek,¹ Joy Wang,¹ Rodrigo Cortes,¹
and Diran Soumonni¹

April 12, 2010

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¹Georgia Institute of Technology

²Duke University

EXECUTIVE SUMMARY

The economic recession, climate change concerns and rising electricity costs have motivated many states to embrace energy efficiency as a way to create new local jobs, lower energy bills, and promote environmental sustainability. With this surge of interest in energy efficiency, policymakers are asking how much wasted energy can be eliminated by expanding investments in cost-effective technologies and practices.

This report describes the results of primary in-depth research focused on the size of the South's energy-efficiency resources and the types of policies that could convert this potential resource into reality over the next 20 years. We limit the scope of our analysis to energy-efficiency improvements in three sectors: residential and commercial buildings and industry (RCI). Our rigorous modeling approach – applied uniformly across the multi-state region and accompanied by a detailed documentation of assumptions and methods – separates this study from many previous assessments of energy-efficiency potential.

The major findings are listed below.

1. Aggressive energy-efficiency initiatives in the South could prevent energy consumption in the RCI sectors from growing over the next twenty years.

The initiatives would involve actions at multiple levels (state and local, national, utility, business, and personal). In the absence of such initiatives, energy consumption in these three sectors is forecast to grow by approximately 16% between 2010 and 2030.

2. Fewer new power plants would be needed with a commitment to energy efficiency.

Our analysis of nine illustrative policies shows the ability to retire almost 25 GW of older power plants – approximately 10 GW more than in the reference case. The nine policies would also avoid over the next twenty years the need to construct 49 GW of new plants to meet a growing electricity demand from the RCI sectors.

3. Increased investments in cost-effective energy efficiency would generate jobs and cut utility bills.

The public and private investments stimulated by the nine energy-efficiency policies would deliver rapid and substantial benefits to the region. In 2020, energy bills in the South would be reduced by \$41 billion, electricity rate increases would be moderated, 380,000 new jobs would be created, and the region's economy would grow by \$1.23 billion.

The cost/benefit ratios for the modeled policies range from 4.6 to 0.3, with only two showing costs greater than benefits. When the value of saved CO₂ is included, only one policy is not cost effective, and it could be tailored to reduce the amount of subsidy.

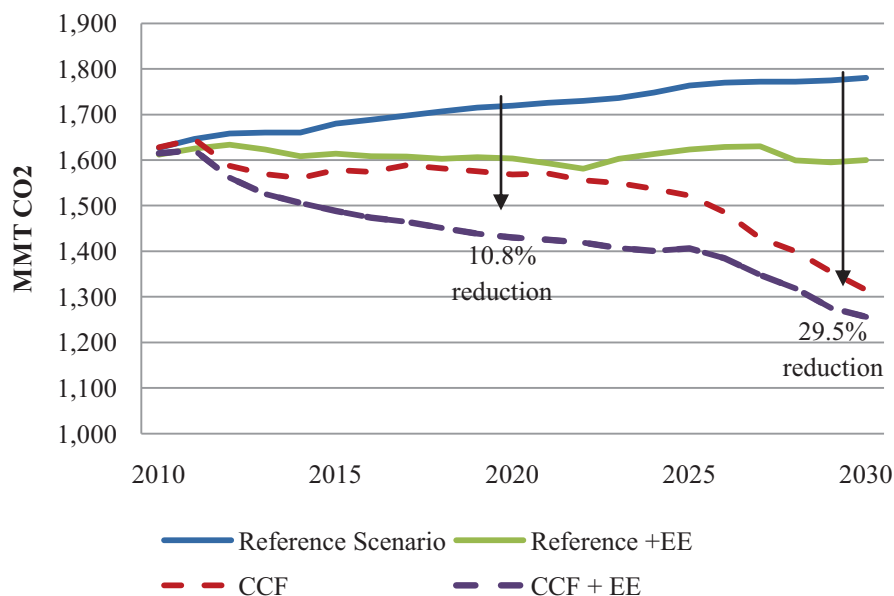


Figure ES.6 Carbon Dioxide Emissions with Energy-Efficiency Policies

Conclusions

If the South could achieve the substantial energy-efficiency improvements that have already been shown effective in other regions and nations, carbon emissions across the South would decline, air quality would improve, and plans for building new power plants could be downsized or postponed, all while saving ratepayers money.

While we examined nine policies, others exist that would lead to additional efficiency. However, these nine were chosen because they were all deemed likely to be cost-effective, significant, large, realistic, and quantifiable. We do not examine the impact of energy-efficiency investments on peak demand reductions. While clipping system peaks is critical to electric power planners, we treat this as an ancillary benefit of improved energy efficiency. Nor do we examine the role of demand-response or load-management programs aimed strictly at shifting on-peak consumption to off-peak hours. These are also valuable “demand-side” resources that merit further assessment.

The energy-efficiency policies described in this report could set the South on a course toward a more sustainable and prosperous energy future. If utilized effectively, the region’s substantial energy-efficiency resources could reverse the long-term trend of expanding energy consumption. With a concerted effort to use energy more wisely, the South could grow its economy, create new jobs, and improve the health of its citizens and ecosystems.

Without new supporting policies, this potential for energy-efficiency improvement will not be realized. Energy-efficiency upgrades require consumer and business investment and they compete with other priorities. With so many demands on financial and human capital, cost-

effective energy-efficiency improvements are easily ignored. Through a combination of information dissemination and education, financial assistance, regulations, and capacity building, consumers can be encouraged to invest in energy efficiency. In addition, expanded research and development and public-private partnerships are needed to innovate and deploy transformational technologies that enlarge the efficiency potential over the long run.

The ability to convert this vision into reality will depend on the willingness of consumer, business and government leaders to champion the kinds of policies modeled here.

ATTACHMENT 7

Bill Summary and Status, 111th Congress (2009 – 2010),
H.R. 5019 (accessed Sept. 15, 2010)

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Bill Summary & Status
111th Congress (2009 - 2010)
H.R.5019

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H.R.5019

Title: Home Star Energy Retrofit Act of 2010

Sponsor: [Rep Welch, Peter](#) [VT] (introduced 4/14/2010) [Cosponsors](#) (44)

Related Bills: [H.RES.1329](#), [S.3177](#), [S.3663](#)

Latest Major Action: 5/7/2010 Referred to Senate committee. Status: Received in the Senate and Read twice and referred to the Committee on Finance.

House Reports: [111-469](#) Part 1

All Information (except text)	Text of Legislation	CRS Summary	Major Congressional Actions All Congressional Actions All Congressional Actions with Amendments With links to <i>Congressional Record</i> pages, votes, reports
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CBO Cost Estimates	Subjects		

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ATTACHMENT 8

Excerpts from ERCOT, Long-Term System Assessment
for the ERCOT Region (Dec. 30, 2008)



**Long-Term System Assessment
for the ERCOT Region
December, 2008**

considered to be cost-effective. Based on previous analysis, average first-year revenue requirements charges for transmission projects in ERCOT are approximately 16.5% of the project's estimated capital cost. As such, a transmission project is considered economic and will be recommended by ERCOT if the expected annual reduction in system production costs (i.e., increase in system efficiency) is greater than 16.5% or 1/6 of the capital cost of the project.

C. Scenario Analysis

The purpose of scenario analysis is to evaluate potential future conditions to determine system transmission needs. The choice of scenarios is based on a need to view a range of potential future conditions (in essence to bound the possibilities), and also to analyze possible future conditions that seem more likely than others to occur. With this in mind, the following scenarios have been analyzed as part of this study:

Nuclear Generation Development

In this scenario, the impact of additional base-load nuclear capacity on system needs is evaluated. Nuclear additions present unique transmission needs because of the amount of new, very low variable cost generation that is concentrated in specific locations. Locations selected for these nuclear units are based on publicly announced projects currently in the permitting process.

Natural Gas Prices (\$7, \$11, \$15/MMBtu)/Additional Coal Generation

In these scenarios, the transmission impacts of changes in the price of natural gas are evaluated. Over the last 5 years, the spot and forward prices of natural gas have been more volatile than other generation fuel commodities. Due to the dominance of natural gas generation in the ERCOT market, increased gas prices do not alter unit dispatch significantly. However, increased gas prices are likely to lead to additional development of base-load generation, as the increased gas price is likely to lead to increased electricity prices, and increased return on investments made in new, low-variable-cost generation. Given that additional nuclear generation development is being analyzed in a separate scenario, these higher natural gas prices are assumed to result in new development of coal generation, specifically integrated-gasification combined-cycle (IGCC) generation.

Additional Renewable Generation (Wind, Solar)

Scenarios were evaluated with additional wind resources (up to the level of wind considered as Scenario 3 in the recent Competitive Renewable Energy Zone study) and for additional solar resources in the McCamey area. Based on a review of available maps of solar resources in the State of Texas, the McCamey area was found to present the greatest potential for solar thermal development.

F. High Wind Generation Case

1. Scenario Development

The LTSA High Wind Generation case was constructed by increasing the amount of wind energy in the CREZ zones to match the levels specified for CREZ Scenario 3 by the PUCT. Overall, 6,403 MW of new wind capacity was added to bring the total installed wind capacity of the High Wind Case to 24,622 MW. To achieve the target reserve margin for ERCOT, two nuclear units totaling 2,724 MW at the South Texas Project were added, as were 3,295 MW of combustion gas turbines at buses across the system, mostly at sites with existing thermal plants and at new CREZ buses in west Texas.

Several transmission projects were evaluated as part of this analysis, based on system needs as determined through the reliability analysis and through other economic scenarios, and based on model output. These projects are discussed in the following sections.

2. Lufkin to Canal

As in the other scenarios, this project consists of a new 167-mile 345-kV single-circuit transmission line from Lufkin to Canal, where Canal is a proposed substation tapping the 345-kV line connecting the Cedar and N Belt substations on Ckt # 99 in the northeastern portion of the CenterPoint service territory. This circuit is estimated to cost approximately \$300 million. The production cost savings from this line were \$32 million, indicating that it would not be cost-effective.

3. HVDC Connecting CREZ Central A and Zenith

The design specifications of this line were obtained from the transmission plan for CREZ Scenario 3 submitted by ERCOT in the PUCT docket No. 33672. This line was modeled as a 3,000 MW high-voltage direct current line connecting the CREZ Central A substation located near the existing Tonkawa bus to the Zenith substation west of Houston. Such a line would provide bulk power transfers from the West zone directly to the Houston zone. The flow on this line was set by the system dispatch model on an hourly basis, based on the relative cost of power available in the west versus the cost of power near Houston.

Production cost savings resulting from this line were \$52 million. The cost of this project is over \$950 million, indicating that it is not economically justified.

4. Fayette to Zenith

The 65-mile 345-kV single-circuit line from Fayette to Zenith was modeled in this scenario. The cost of this project is approximately \$105 million. As this project resulted in \$21 million in annual production cost savings, it would be considered economically justified in this scenario.

ATTACHMENT 9

Excerpts from Public Utility Commission of Texas, Order
on Rehearing, Docket No. 33672 (Oct. 7, 2008)

DOCKET NO. 33672

COMMISSION STAFF'S PETITION FOR § PUBLIC UTILITY COMMISSION
DESIGNATION OF COMPETITIVE §
RENEWABLE-ENERGY ZONES § OF TEXAS
§

ORDER ON REHEARING

I. Introduction

This Order addresses Commission Staff's petition for designation of competitive renewable-energy zones (CREZs), including conclusions regarding which zones should be designated as CREZs, the identification of the major transmission improvements necessary to deliver, in a manner that is most beneficial and cost-effective to customers, the energy generated by renewable resources in the CREZs, and updates of the Commission's estimate of the maximum generating capacity of renewable resources in the CREZs that the Commission expects the transmission ordered for the CREZs to accommodate.

Based on the evidence and testimony presented during hearing, the Commission concludes that the following areas from the AWS Truewind Study contained in Figure 3 of the *ERCOT Analysis of Transmission Alternatives for Competitive Renewable-energy Zones*¹ (ERCOT Study), with certain modifications as described in this order, should be designated as CREZs: zone 2A,² zone 4, zones 5 and 6, zone 9A,³ and zone 19. The Commission finds that the major transmission improvements identified in the CREZ Transmission Optimization Study⁴ (CTO Study) for Scenario 2 are necessary to deliver the energy generated by renewable

¹ ERCOT Analysis of Transmission Alternatives for Competitive Renewable-energy Zones, ERCOT Ex. 1 at Ex. DW-1 at 10.

² Zone 2A is comprised of that area enclosed by the perimeter boundaries of zones 1 and 2, plus an additional area that includes all of Briscoe County.

³ Zone 9A is comprised of zones 9 and 10, plus additional areas between and near the zones as requested by AES SeaWest, BNB Renewable Energy LLC, FPL Energy LLC, and RES America Developments, Inc.

⁴ ERCOT's Competitive Renewable-energy Zones Transmission Optimization Study, ERCOT Ex. 4 at Ex. DW-1.

1423

Table 1: MW Tiers for ERCOT CREZ Transmission Optimization Study

	Scenario 1 (MW)	Scenario 2 (MW)	Scenario 3 (MW)	Scenario 4 (MW)
Zone 2A	1422	3191	4960	6660
Zone 4	1067	2393	3720	0
Zones 5/6	829	1859	2890	3190+ ²⁶
Zone 9A	1358	3047	4735	5615
Zone 19	474	1063	1651	2051
CREZ transfer capability	5150	11,553	17,956	17,516
Total transfer capability²⁷	10,000	16,403	22,806	22,366

ERCOT was directed to pursue the completion of the CTO Study in the most expeditious manner possible, which could involve studying the lower tiers of megawatt transfer capability (*i.e.*, Scenarios 1, 2, and 4) before evaluating the higher tier (*i.e.*, Scenario 3). As directed, ERCOT filed the results of its CTO Study in this docket on April 2, 2008, along with the GE Ancillary Services study.

E. CREZ Transmission Capacity Plan

The Commission finds that the major transmission improvements identified in the CTO study for Scenario 2 are necessary to deliver the energy generated by renewable resources in the CREZs, in a manner that is most beneficial and cost-effective to the customers. A copy of ERCOT's Figure 5: Scenario 2 of the CTO Study, ERCOT Exhibit 8, which is a map depicting the major transmission improvements to deliver energy generated in the CREZs, is attached to this order as Attachment E. The Commission's updated estimate of the maximum generating capacity of renewable resources in the CREZs that the Commission expects the transmission ordered for the CREZs to accommodate is 18,456 MW.

²⁶ ERCOT may increase the 3190 MW figure to include any additional MWs that are currently being curtailed from operating wind facilities in zones 5/6.

²⁷ CREZ transfer capability plus 4,850 MW (ERCOT base case wind generation figure). See ERCOT Study, ERCOT Ex. 1 at Ex. DW-1 at 10.

This leaves Scenario 1B less cost-effective than Scenario 2, which is counter to the requirement in PURA § 39.904(g)(2) calling for the most cost-effective and beneficial plan. Additionally, although Scenario 1B is less expensive, it leaves little (if any) room for expansion of wind generation after 2008. While Scenario 1B has cost estimates of \$733,981 per MW of new capacity and barely catches up with current development, Scenario 2 has cost estimates of \$426,729 per MW of new capacity and leaves room for expansion.³⁹ ERCOT did not evaluate production cost savings for Scenarios 3 or 4, so there is no basis for making a determination on their cost-effectiveness. ERCOT did conclude that it was unlikely that the higher level of wind generation in those two scenarios could be placed in service by 2012. Because information on ERCOT generation levels, loads, and transmission additions needed to make accurate forecasts of ERCOT operation and production costs after 2012, it would be risky and premature for the Commission to implement Scenario 3 or 4.⁴⁰ In order to calculate fuel cost savings for 3 or 4, ERCOT would need to develop a transmission plan for the transmission overloads that result from the load growth between 2012 and 2018, or would need to develop a different modeling approach.⁴¹

5. Estimated Costs of Additional Ancillary Services

P.U.C. SUBST. R. 25.174(c)(3)(B) allows the Commission to consider the estimated cost of additional ancillary services in developing the transmission capacity plan. The analysis of cost-effectiveness of the plan includes consideration of the costs of reliably integrating the additional energy. The Commission acknowledges the GE study's finding that increased wind capacity requires traditional thermal units to provide ancillary services more frequently, and that ramping thermal units up and down will have cost impacts on the maintenance and operations of the units. However, the Commission finds compelling the GE study's conclusion that this displacement of thermal units with wind generation reduces the overall spot price of energy.⁴²

³⁹ CTO Study, ERCOT Ex. 4 at Ex. DW-1 at 22-23.

⁴⁰ Direct Testimony of Scott Norwood, Cities Ex. 1 at 19-20.

⁴¹ Direct Testimony of Brian Almon, Staff Ex. 6 at 14.

⁴² GE's Analysis of Wind Generation Impact on ERCOT Ancillary Services Requirements, ERCOT Resource 3 at RW-2, Executive Summary at 8, and at 5-9.

updates, and the implementation of nodal operations will provide more transparency than QSE portfolio-based dispatch and will better enable ERCOT to manage wind generation.⁴⁸

A more conservative approach would be to select Scenario 1B, which would bring into ERCOT 12,053 MW of wind-generated electricity, once the transmission facilities can be constructed and placed into service. This amount is well within the actual tiers of MW analyzed, as applied to 2008 peak system load, in the GE Ancillary Services study. However, the Commission is confident that ERCOT is capable of integrating 18,456 MW of wind-generated electricity without sacrificing system stability and reliability. The Commission notes that the GE Ancillary Services study pointed out that the 15,000 actual MW analyzed is the equivalent in terms of wind penetration to 18,456 MW of wind generation applied to the forecast 2017 peak system load.⁴⁹ In other words, 15,000 MW is 23% wind penetration as applied to the 2008 peak system load, which is equivalent to the wind penetration of 18,456 MW as applied to the 2017 forecasted peak system load. The GE study found that, although the impacts of wind generation will become a significant focus in ERCOT system operation, this percentage of wind penetration could be reliably integrated with existing technology and operational attention, without any radical alteration of operations.⁵⁰ The aforementioned efforts being undertaken at ERCOT further buttress the decision to proceed directly to Scenario 2. It is also clear that from a reliability standpoint, the selection of Scenario 3, with almost 25,000 MW of wind generation, is not supported by the record evidence. Gaining experience in reliably integrating wind, at levels of penetration as related to system load projections that have been vetted by the GE Ancillary Services study, is the most reasonable approach.

ii. Legislative Intent

The intent of the Legislature in passing the amendments to PURA §§ 36.053, 39.203, and 39.904 in 2005 was to further encourage the development of renewable-energy resources by establishing a process to provide reliable and economical transmission resources ahead of renewable generation. In addition to raising the bar on renewable-energy goals and requiring the

⁴⁸ Tr. at 1860-62 (June 12, 2008).

⁴⁹ GE Ancillary Services study, ERCOT Resource 3 at RW-2, Executive Summary at 2.

⁵⁰ *Id.* at 9-4.

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
LUMINANT GENERATION COMPANY LLC)	Docket Nos. 52-034-COL
)	52-035-COL
(Comanche Peak Nuclear Power Plant Units 3 and 4))	September 27, 2010
)	

CERTIFICATE OF SERVICE

I hereby certify that on September 27, 2010, a copy of “Luminant’s Answer Opposing New Contentions Based on the Draft Environmental Impact Statement” was served by the Electronic Information Exchange on the following recipients:

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