UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
	)	
LUMINANT GENERATION CO. LLC	)	Docket Nos. 52-034 & 52-035
	)	
	)	
(Comanche Peak Nuclear Power Plant,	)	
Units 3 & 4)	)	

NRC STAFF CONSOLIDATED RESPONSE TO INTERVENORS' AMENDED CONTENTION 18 AND PROPOSED CONTENTIONS CONCERNING ALTERNATIVES TO NUCLEAR POWER

INTRODUCTION

Pursuant to the Atomic Safety and Licensing Board's (Board's) Order dated January 19, 2010, and 10 C.F.R. § 2.309(h)(1), the staff of the U.S. Nuclear Regulatory Commission (Staff) hereby answers the proposed amended contention filed by the Sustainable Energy and Economic Development Coalition (SEED), Nita O'Neal, Public Citizen, Don Young, True Cost of Nukes, J. Nile Fisher and Representative Lon Burnam (collectively Intervenors), on January 4, 2010,[1] and the Intervenors' six proposed new alternatives contentions, filed January 15, 2010.[2] Order (Granting Applicant & NRC Staff's Joint Motion to Consolidate Answers), p. 1-2 (Jan. 19, 2010) (unpublished). For the reasons set forth below, the Intervenors' proposed Amended Contention 18 and new proposed alternatives contentions Alt-1, Alt-2, Alt-3, and Alt-4, should be rejected for failure to comply with the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1), and new proposed alternatives contentions Alt-5 and Alt-6 should be rejected for failure to comply with the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(1), (f)(2)

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[1] See "Intervenors' Response Opposing Applicant's Motion to Dismiss Contention 18 as Moot" (Jan. 4, 2010) (Motion Answer).

[2] See "Intervenors' Contentions Regarding Applicant's Revisions to Environmental Report Concerning Alternatives to Nuclear Power" (Jan. 15, 2010) (New Alternatives Contentions).

and (c). Additionally, proposed contention Alt-6 constitutes an impermissible challenge to 10 C.F.R. § 52.55(c) in violation of 10 C.F.R. § 2.335.

BACKGROUND

On September 19, 2008, Luminant Generation Company LLC and Comanche Peak Nuclear Power Company LLC (Applicant), pursuant to the Atomic Energy Act of 1954, as amended (AEA) and the Commission's regulations, submitted an application for combined licenses (COL) for two US-Advanced Pressurized Water Reactors (US-APWRs) to be located adjacent to the existing Comanche Peak Nuclear Power Plant, Units 1 and 2, near Glen Rose in Somervell County, Texas (Application). The Application references the standard design certification application for the US-APWR, including a design control document (DCD), submitted by Mitsubishi Heavy Industries, Ltd (MHI). The proposed units will be known as Comanche Peak Nuclear Power Plant, Units 3 & 4.

In response to the Notice of Hearing on the Application[3], published on February 5, 2009, Intervenors submitted a "Petition for Intervention and Request for Hearing" on April 6, 2009 (Petition), proposing several contentions, including the original Contention 18. On August 6, 2009, the Board ruled on the Intervenors' proposed contentions, admitting contentions 13 and 18. *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 & 4), LBP-09-17, 70 NRC __, (slip op.) (Aug. 6, 2009) ("*Comanche Peak, Units 3 and 4*"). The Board reserved ruling on proposed Contention 7, which is still pending, and dismissed all other proposed contentions. *Id*.

On December 8, 2009, the Applicant notified the Board and the parties of an amendment to the Environmental Report (ER) relating to Contention 18. *See* Letter from Jon Rund, Counsel for Luminant, to Members of the Licensing Board, Notification of Filing Related to Contention 18, (Dec. 8, 2009) (Notification Letter). Attached to this letter was a copy of the Applicant's

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[3] 74 Fed. Reg. 6177 (Feb. 5, 2009)

submission to the NRC, also dated December 8, 2009, of a supplement to the ER. *See* Attachment to Notification Letter, Letter from Rafael Flores, Luminant, to NRC Document Control Desk (Dec. 8, 2009) (Alternatives Submission). Subsequently, the Applicant filed a motion to dismiss Contention 18 as moot. Luminant's Motion to Dismiss Contention 18 as Moot (Dec. 14, 2009) (Motion to Dismiss). The Staff agreed with the Applicant that Contention 18 should be dismissed as moot. *Id.* at 6.

The Intervenors opposed the dismissal of Contention 18, and, in the alternative, proposed that Contention 18 be modified. Motion Answer at 7-9. In addition, on January 15, 2010, the Intervenors filed six new contentions alleging omissions from and deficiencies in the Applicant's Alternatives Submission. By this consolidated response to the Motion Answer and the New Alternatives Contentions, filed pursuant to the Board's January 19 Order,[4] the NRC Staff opposes the admission of the Intervenors' proposed Amended Contention 18 and each of the Intervenors' proposed New Alternatives Contentions.

DISCUSSION

The Intervenors assert that Contention 18, as reformulated and admitted by the Board should not be dismissed, or, in the alternative, should be amended as described in the Intervenors' Motion Answer. The Intervenors have also submitted six new contentions (ALT-1 through ALT-6) which they contend should be admitted in this proceeding. The Intervenors' proposed amended Contention 18 and new alternatives contentions Alt-1, Alt-2, Alt-3 and Alt-4 were timely filed, but do not meet the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1). The Intervenors' proposed new alternatives contentions Alt-5 and Alt-6 were not timely filed and do not otherwise meet the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(1), (f)(2), and (c). Additionally, proposed contention Alt-6 constitutes an impermissible

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[4] Order (Granting Joint Motion to Consolidate Answers), p. 1-2 (January 19, 2010) (unpublished).

challenge to 10 C.F.R. § 52.55(c) in violation of 10 C.F.R. § 2.335. For the reasons set forth below, the Intervenors' proposed amended and new contentions should be rejected.

I. LEGAL STANDARDS

A. Legal Standards for Admission of New, Amended, or Nontimely Contentions

The admissibility of new and amended contentions is governed by 10 C.F.R. §§ 2.309(f)(1), 2.309(f)(2), and 2.309(c). First, contentions must comply with the general contention admissibility requirements set forth in 10 C.F.R. § 2.309(f)(1). In accordance with 10 C.F.R. § 2.309(f)(1), an admissible contention must:

> (i) provide a specific statement of the legal or factual issue sought to be raised;
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> (ii) provide a brief explanation of the basis for the contention;
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> (iii) demonstrate that the issue raised is within the scope of the proceeding;
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> (iv) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;
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> (v) 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 at the hearing;
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> (vi) . . . provide sufficient information to show that a genuine dispute with the Applicant exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief . . . .

10 C.F.R. § 2.309(f)(1). The Commission has emphasized that the rules on contention admissibility are "strict by design." *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *pet. for reconsideration denied*, CLI-02-01, 55 NRC 1 (2002). Failure to comply with any of these requirements is

grounds for the dismissal of a contention. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325. "Mere 'notice pleading' does not suffice." *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 119 (2006) (internal quotation omitted).

Second, contentions may be amended or new contentions filed after the initial filing period only with leave of the presiding officer if, in addition to meeting the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1), the contention meets the following requirements in 10 C.F.R. § 2.309(f)(2):

> (i) The information upon which the amended or new contention is based was not previously available;
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> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
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> (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). Specifically, in this proceeding, the Board has stated that a motion and proposed new or amended contention will 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." Initial Scheduling Order at 5 (Oct. 28, 2009).

Third, a non-timely contention that meets the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1) may be admitted if it also satisfies the provisions set forth in 10 C.F.R. § 2.309(c). *See* Initial Scheduling Order at 5. In accordance with § 2.309(c)(1), the presiding officer may admit a late filed contention after balancing the following eight factors:

> (i) Good cause, if any, for the failure to file on time;
> (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
> (iii) The nature and extent of the requestor's/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 requestor's/petitioner's interest;
> (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
> (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
> (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
> (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1). Intervenors seeking admission of a late-filed contention bear the burden of showing that a balancing of these factors weighs in favor of admittance. *See Baltimore Gas & Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC 325, 347 (1998) (noting that the Commission has summarily dismissed petitioners who failed to address the factors for a late-filed petition).

The first factor, whether good cause exists for the failure to file on time, is entitled to the most weight. *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 296 (1993). Where no showing of good cause for lateness is tendered, a petitioner's demonstration on the other factors must be particularly strong. *Texas Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 73 (1992). The fifth and sixth factors, the availability of other means to protect the petitioner's interest, and the ability of other parties to represent the petitioner's interest, are less important than the other factors, and are therefore entitled to less weight. *See id.* at 74.

In the Board's Initial Scheduling Order of October 28, 2009, the Board stated that parties seeking to submit new or amended contentions should file a "motion or request for leave to file any such contention(s) along with the substance of the proposed contention(s), simultaneously." Initial Scheduling Order at 5 (October 28, 2009). The Board also stated:

> The pleading shall include a motion for leave to file any timely new or amended contention(s) under 10 C.F.R. § 2.309(f)(2), or a motion for leave to file any non-timely new or amended contention under 10 C.F.R. § 2.309(c) (or both), as well as the statement of the contention(s) and the support therefor, demonstrating how the requirements of 10 C.F.R. § 2.309(f)(1)(i) – (vi) are met.

Id. The Intervenors submitted their amended and new contentions in two separate pleadings, neither of which was accompanied by a "a motion for leave to file a timely new or amended contention under 10 C.F.R. § 2.309(f)(2), or a motion for leave to file an untimely new or amended contention under 10 C.F.R. § 2.309(c) (or both)." Although, the Intervenors did not submit a motion or otherwise address the late-filing factors, the Staff will address § 2.309(c) and (f)(2), as relevant, in addition to the contention admissibility requirements of § 2.309(f)(1).

II. INTERVENORS' PROPOSED AMENDED CONTENTION 18 SHOULD BE DISMISSED

As an alternative to their position that Contention 18, as reformulated and admitted by the Board, remains viable, the Intervenors argue that Contention 18 should be modified or amended as described in their Motion Response. Specifically, the Intervenors argue that:

> Alternatively, Contention 18 should advance in a modified version that requires the Applicant to:
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> 1) at a minimum, actually consider combinations of wind and solar with [compressed air energy storage] CAES supplemented with natural gas;
> 2) consider molten-salt storage by itself and in combination with CAES, and
> 3) address the geological advantages presented in the [Electric Reliability Council of Texas] ERCOT area that favor deployment of CAES in tandem with wind and solar power resources.

Motion Response at 8-9. In support of this proposed amendment to Contention 18, the Intervenors include a footnote cite to a report by Dr. Ray Dean (Dean Report), but the Intervenors do not address the contention admissibility criteria in 10 C.F.R. §§ 2.309(f)(1), 2.309(f)(2), or 2.309(c), or explain how the Dean Report supports their proposed amendment of Contention 18.[5]

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[5] As previously noted, the Intervenors have not complied with the Board's Initial Scheduling Order, which provides that parties seeking to submit new or amended contentions should file a "motion or request for leave to file any such contentions(s) along with the substance of the proposed contention(s), simultaneously." Initial Scheduling Order at 5. In its Order, the Board made it clear that the proponent of a new or amended contention was required to demonstrate how the proposed new or amended contention met the requirements of 10 C.F.R. § 2.309(f)(2) or 10 C.F.R. § 2.309(c) (or both), as well as how the requirements of 10 C.F.R. § 2.309(f)(1)(i) – (vi) are met. *Id*.

The Intervenors' proposed amended Contention 18 is inadmissible because the Intervenors have not demonstrated that the ER omits information concerning wind power, solar power, CAES or geological considerations, supplementation with natural gas, or molten salt storage, and thus have not provided sufficient information to show that the COL application is deficient or otherwise omits information it is legally required to contain. 10 C.F.R. § 2.309(f)(1)(vi). While the Intervenors stated their proposed amendment to Contention 18 and cited the Dean Report, the Intervenors have not provided a concise statement of the alleged facts or expert opinions which support their position on the issues, nor have they explained how the Dean Report supports their position on the proposed amendment to Contention 18. 10 C.F.R. § 2.309(f)(1)(v). As the Intervenors have not provided sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, or provided a concise statement of alleged facts or expert opinions that support their position, their proposed modification of Contention 18 should be rejected. 10 C.F.R. § 2.309(f)(1)(v), (vi).

The Intervenors argue that the Applicant should be required, at a minimum, to actually consider combinations of wind and solar with CAES supplemented with natural gas, and molten-salt storage by itself and in combination with CAES. Motion Response at 8. Motion Response at 8. These portions of the proposed new contention appear to allege material omissions from the ER, but the Applicant's Alternatives Submission evaluates the use of wind with CAES, solar with storage, and supplemental power from natural gas, and also considers the combinations of renewable power generation with the options that are considered the most advanced at this time in subsequent sections. Alternatives Submission at 9.2-31-32, 9.2-37-50. The Applicant's Alternatives Submission also contains an evaluation of molten salt storage, as well as the use of solar power generation combined with molten salt storage. Alternatives Submission at 9.2-35-36, 9.2-41- 44. An evaluation of renewable energy sources combined with storage and natural gas power generation is also included in this amendment to the ER. Alternatives Submission at 9.2-44-50. Because the ER now contains the information that the Intervenors claim is

necessary to conduct an environmental review and alternatives analysis that includes information on the combinations of wind, solar, natural gas, and various storage technologies, the Intervenors both fail to directly controvert the COL application and mistakenly assert that the application does not address a relevant issue, and their proposed amendment of Contention 18 can be dismissed on both grounds. *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19-21 (2007) ("*Susquehanna EPU*").

The Intervenors also argue that the Applicant should be required to address the geological advantages presented in the ERCOT area that favor deployment of CAES in tandem with wind and solar power resources. Motion Response at 9. In support of this argument, the Intervenors cite the Dean Report concerning the "geological advantages that weigh in favor of CAES in Texas." Motion Response at 9; Dean Report at 3-4. The Dean Report does not, however, contain any information that controverts any information in the Applicant's Alternatives Submission or any other section of the COL application.

The Intervenors contend that the Applicant has discounted and marginalized the use of compressed air energy storage (CAES), ignored the geological features that would favor development of CAES in Texas as an alternative to Comanche Peak Units 3 and 4, and dispute the Applicant's position that CAES technology is not currently available as a means to produce baseload generation capacity. Motion Response at 3-4. The Intervenors also complain that the Applicant's use of the term "intermittent" to describe wind power is incorrect because wind speeds vary and forecasts are predictable the majority of the time. Motion Response at 6-7. The Intervenors do not provide alleged facts or expert opinions which actually support their positions, however, because the exhibit their expert relies on contradicts him, the expert provides no other support for his conclusory statements, and the Intervenors have not otherwise demonstrated that the alternatives they advocate are viable means of generating baseload power, even in combination.

The exhibit the Intervenors submit as support for their arguments, which their expert refers to, contradicts their arguments and their expert's conclusion. The Intervenors argue that wind combined with natural gas or wind combined with CAES are the "easiest and most reasonable application" for baseload generation, and "the developed combination of wind, natural gas and storage would also meet intermediate and peaking demand whereas nuclear is only for baseload demand." Motion Response at 4-5. Citing the Makihijani Report, the Intervenors argue that the fact that CAES facilities have been used as peaking plants does not mean that CAES cannot be used to provide baseload generation, but they do not provide support for their argument that CAES can be used to provide baseload generation. Motion Response at 5.

The conclusory statements made by the Intervenors' expert witness are insufficient support for the conclusion the Intervenors urge this Board to reach, particularly where the Intervenors submit other information that contradicts their expert's statements. The National Renewable Energy Laboratory fact sheet (NREL Factsheet), upon which Dr. Makhijani relies to state his conclusion that wind with compressed air storage and natural gas supplement can meet baseload requirements, states that "[t]he large-scale deployment of wind energy is ultimately limited by its intermittent output and remote location of high-value wind resources, particularly in the United States[,]" and "[d]evelopment of the 'baseload' wind concept will require a greater understanding of the local geologic compatibility of air storage, and additional work will be required to examine the feasibility of advanced wind/CAES concepts described here." NREL Factsheet; Makhijani Report at 1. Thus, the Intervenors' own exhibit explains that the feasibility of the alternative technology they advocate is still a matter for thought, research, and development, and these technologies have not yet been proven viable for baseload applications.

The Intervenors have failed to provide facts or expert opinions which support their argument that the alternatives they advocate are viable, and as such, have failed to

demonstrate that the COL application omits information it is legally required to contain. There is no requirement that every conceivable alternative be examined; if an alternative is not viable, there is no legal requirement that it be evaluated. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc*., 435 U.S. 519, 551 (1978). While NEPA requires that the EIS identify and address "all reasonable alternatives," this does not mean that every conceivable alternative must be included in the EIS. *Progress Energy Fla., Inc.* (Combined License Application for Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC __, __ (slip op. at 80) (July 8, 2009) (*citing Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519, 551 (1978)). "[T]he 'rule of reason' governs the agency's duty to identify and consider all reasonable alternatives under NEPA." *Progress Energy Fla., Inc.*, LBP-09-10, slip op. at 80 (*quoting Westlands Water Dist. V. U.S. Dep't of Interior*, 376 F.3d 853, 868 (9th Cir. 2004); City of Bridgeport v. Fed. Aviation Admin., 212 F.3d 448, 458 (8th Cir. 2000)). In determining whether an alternative is reasonable, the applicant's goals for the project are given substantial weight. *Progress Energy Fla., Inc.*, LBP-09-10, slip op. at 80 (*citing City of New York v. U.S. Dep't of Transportation*, 715 F.2d 732, 742 (2d Cir. 1983)). "[T]he EIS alternatives analysis should be based around the applicant's goals, including its economic goals[,]" and an agency cannot redefine those goals. *Progress Energy Fla., Inc.*, LBP-09-10, slip op. at 80 (citing *Hydro Resources, Inc*. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 55 (2001)(internal citations omitted); *Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2004) ("[i]n considering alternatives under NEPA, an agency must 'take into account the needs and goals of the parties involved in the application")(*quoting Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 1999 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991)). Accordingly, the Intervenors' proposed amendment to Contention 18 should be rejected for failure to meet the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(v) and (vi).

The Intervenors have not demonstrated facts that controvert the information in the Applicant's Alternatives Submission regarding CAES, and provide no legal requirement that the Applicant must also address the alleged geological advantages of CAES. The Applicant's Alternatives Submission discusses CAES facilities in general, the combination of CAES facilities with natural gas plants, and the challenges of identifying and developing large scale underground storage facilities in Texas. Alternatives Submission, 9.2-33 – 34. The Intervenors do not controvert this information or provide a legal requirement that the application contain this information. As such, their proposed amendment of Contention 18 does not meet the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(v) and (vi), and should be rejected.

III. INTERVENORS HAVE NOT SUBMITTED AN ADMISSIBLE NEW ALTERNATIVES CONTENTION

The Intervenors propose six new alternatives contentions which allege omissions from and deficiencies in the Applicant's Alternatives Submission. Since none of these proposed new contentions meets the contention admissibility requirements of 10 C.F.R. §§ 2.309(f)(1), and, in addition, proposed new contentions Alt-5 and Alt-6 do not meet the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(2) and 2.309(c) for new and amended or late-filed contentions, the Intervenors' proposed new alternatives contentions should all be rejected.

A. Proposed Contention Alt-1:
The Applicant overstates and mischaracterizes, without substantiation, the impacts of wind power generation and CAES.

New Alternatives Contentions at 3.

The Intervenors assert that the Applicant fails to acknowledge that the land necessary for wind generation is "available for other activities and enterprises." New Alternatives Contentions at 3. Also, the Intervenors state that the regulatory requirements related to nuclear power generation do not apply to wind power generation and compressed air energy storage (CAES). Intervenors claim that the Applicants "attenuated comparison of the environmental

impacts of nuclear and wind and CAES is inadequate to adequately inform decision makers about the competing choices." New Alternatives Contentions at 3. Intervenors claim that the Applicant includes the underground reservoir of the CAES facility as part of the above-ground footprint. New Alternatives Contentions at 4. In addition, Intervenors argue that the Applicant failed to consider the benefits of using CAES in Texas, citing the report of their expert, Dr. Ray Dean (Dean Report), which claims there are "geological advantages" that weigh in favor of CAES in Texas due to the vast amount of geological data available in the region. New Alternatives Contentions at 5.

This proposed contention does not meet the admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi). The Intervenors cite the Dean Report, which states that the Applicant uses "misleading statements about environmentally impacted areas." New Alternatives Contentions at 3. However, the Dean Report makes no attempt to identify or describe the current types of land use at the site. Likewise, the Intervenors make no specific references to the current or potential land uses at the site described in the ER. *See* Table 2.2-1, ER at 2.2-10; Sections 4.1.1.1 and 4.1.1.2 of the ER, ER at 4.1-1 to 4.1-4. The Intervenors assume, without factual support, that wind or solar generation would not have a negative impact on any current land uses. The Intervenors claim the amount of land necessary for wind generation is "aside from the small footprint for each turbine, available for other activities and enterprises." New Alternatives Contentions at 3. Even assuming that the Applicant overestimated the amount of land that would be necessary for wind generation, such a facility would likely extend beyond the boundaries of the proposed facility and affect land uses that would not otherwise be impacted. For example, the ER states that there are 144,425 acres of prime farmlands within the vicinity of the site. ER 4.1-3, Section 4.1.1.2. Furthermore, the ER states that because construction does not occur where croplands are located, "no adverse impacts are expected to occur" and "[n]o additional land is expected to be required." ER 4.1-3, 4.1-4, Section 4.1.1.2. The Intervenors fail to show that a wind generation facility would be

environmentally preferable to the Applicant's facility because the Intervenors have not addressed the potential disturbance to other land uses beyond the proposed site. Also, the Intervenors claim that the Applicant failed to acknowledge that the regulatory requirements related to nuclear energy generation "do not apply" to wind or CAES. This general assertion does not support the Intervenors contention that the Applicant has overstated the environmental impacts of wind or CAES.

Intervenors cite *Department of Transportation v. Public Citizen*, 541 U.S. 752, 768-69 (2004) in support of their argument that the Applicant has not provided sufficient comparison to "adequately inform decision-makers about the competing choices" of power generation. New Alternatives Contentions at 3. While NEPA requires that the EIS identify and address "all reasonable alternatives," this does not mean that every conceivable alternative must be included in the EIS. *Progress Energy Fla., Inc.*, LBP-09-10, 70 NRC __, __ (slip op. at 80) (*quoting Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. at 551). "[T]he 'rule of reason' governs the agency's duty to identify and consider all reasonable alternatives under NEPA." *Progress Energy Fla., Inc.*, LBP-09-10, slip op. at 80 (*quoting Westlands Water District v. U.S. Department of the Interior*, 376 F.3d at 868); *City of Bridgeport v. Federal Aviation Administration*, 212 F.3d at 458). Furthermore, if the Applicant eliminates an alternative from consideration, NEPA does not require a detailed discussion of the rejected alternative's environmental impacts. Pursuant to CEQ regulations, the EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 CFR § 1502.14. Here, the Intervenors have failed to establish that NEPA requires the Applicants to provide an analysis beyond a brief discussion of why certain alternatives – such as wind power generation and CAES – were eliminated from consideration. Therefore, the Intervenors' Contention Alt-1 has failed to demonstrate that the issue raised is material to the findings the NRC must make based on the Environmental Report, and has not

shown a genuine dispute with the Applicant on a material issue of law or fact. 10 CFR § 2.309(f)(1)(iv) and (vi).

In support of Contention Alt-1, the Intervenors incorporate by reference their Motion Answer to support the Dean Report's criticism of the Applicant's description of wind and CAES impacts. New Alternatives Contentions at 3-4, FN 3. The burden of setting forth a clear and coherent argument for standing and intervention is on the petitioner. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 194 (1999), *pet. for review den. sub nom. Dienenthal v. NRC,* 203 F.3d 52 (D.C. Cir. 2000) ("We do not expect our adjudicatory Boards, unaided by the parties, to sift through the parties' pleadings to uncover and resolve arguments not advanced by litigants themselves."). While the Petitioner does not need to prove its contention at the admissibility stage, *Private Fuel Storage*, CLI-04-22, 60 NRC 125, 139 (2004), 10 C.F.R. § 2.309(f)(1)(v) requires a "concise statement of the alleged facts or expert opinions which support the requestor's [or] petitioner's position on the issue . . . together with references to the *specific sources and documents* on which the requestor/petitioner intends to rely . . . ." (Emphasis added). A petitioner cannot include a reference as support without showing why the reference provides a basis to support its contention. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 89 (2004). Here, the Intervenors do not restate or point to any of their arguments featured in their Motion Answer. Accordingly, the Intervenors have failed to articulate a genuine dispute with the Applicant on a material issue of law or fact, and have not provided a statement of the facts or expert opinions which supports the contention. 10 CFR § 2.309(f)(1)(vi) and (v).

In addition, Part B of Contention Alt-1 cites the Dean Report concerning the "geological advantages that weigh in favor of CAES in Texas" to support the Intervenors' argument that the Applicant failed to consider such benefits. New Alternatives Contentions at 4-5. On its face, this argument fails to support the Intervenors' contention that the Applicant *mischaracterizes* the impacts of wind power generation and CAES. The excerpt from the Dean Report does not state

anything that controverts information contained in the Environmental Report revisions. Therefore, Contention Alt-1 should be rejected because it fails to provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 CFR § 2.309(f)(1)(vi).

B. Proposed Contention Alt-2:

> The Applicant inadequately characterizes, without substantiation, the impacts of solar with storage.

New Alternatives Contentions at 5.

The Intervenors claim that the Applicant inappropriately characterizes solar with storage as having a "LARGE" adverse socioeconomic impact. New Alternatives Contentions at 5. To support this claim, the Intervenors argue that the Applicant fails to consider the cost savings and reliability gained with thermal storage of solar energy. New Alternatives Contentions at 5. According to the Intervenors, the Applicant inaccurately contends that the adverse socioeconomic impact is based on economic losses due to energy stored during peak hours and later sold at non-peak prices. New Alternatives Contentions at 5. The Intervenors claim that the Applicant ignores positive local economic impacts in terms of jobs and additional sources of revenue available from selling stored solar energy at peak prices. New Alternatives Contentions at 6. In addition, the Intervenors argue that the Applicant failed to consider steam augmentation technology, thermal energy storage (TES), and solar with no land use impacts. New Alternatives Contentions at 7-8.

Proposed Contention Alt-2 is inadmissible because fails to provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 CFR § 2.309(f)(1)(vi). The Intervenors criticize the Applicant's socioeconomic analysis as inaccurate because the analysis only addresses economic factors. New Alternatives Contentions at 5. The Intervenors cite a report by their expert, Paul Robbins, arguing that "solar could have positive local economic impacts in terms of jobs." New Alternatives Contentions at

6. In the Environmental Report, the Applicant states that "in terms of socio-economics, the combination of solar power generate with storage would be expected to have a LARGE adverse impact" due, in part, to "substantial economic losses." Alternatives Submission at 9.2-43. The Intervenors correctly point out that the Applicant's analysis in the ER is an economic – not socioeconomic – analysis. However, the Applicant dismissed solar power generation with storage after determining that it was not a viable alternative. Therefore, this alternative did not meet the "rule of reason" under NEPA. *Department of Transportation v. Public Citizen*, 541 U.S. 752, 754 (2004). As discussed in response to proposed contention Alt-1, the Applicant's discussion of alternatives must be bounded by some notion of feasibility. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. at 551 ("Time and resources are simply too limited to hold that an impact statement fails because the agency failed to ferret out every possible alternative, regardless of how uncommon or unknown that alternative may have been . . . ."); *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d at 868. Therefore, because the Applicant was not required to provide a discussion of socioeconomic impacts under NEPA, the Intervenors' proposed contention must fail.

The Intervenors describe several technologies, including Integrated Solar Combined Cycle Systems, steam augmentation technology, and thermal energy storage, which "could be integrated into the Applicant's existing steam electric plants" and would have a "minimal impact of land use." New Alternatives Contentions at 7. Here, the Intervenors' argument that the Applicant must consider new alternatives does not support proposed Contention Alt-2 regarding the Applicant's characterization of the impacts of solar power with storage. In addition, Part B of Contention Alt-2 claims that the Applicant failed to consider solar technologies with "no land use impacts." Here, the Intervenors merely challenge the amount of acreage listed in the Alternatives Submission which the Applicant states would be necessary for a solar facility. The Intervenors make reference to the estimated acreage of Mojave Solar Park, an incomplete facility, which is significantly smaller than the amount of land described in the ER. New

Alternatives Contentions at 8. Similar to the Intervenors arguments in Alt-1, which failed to discuss the current land uses at the site, Intervenors again appear to confuse land *use* impacts with the *amount* of land required for the operation of a power generation facility. Again, the Intervenors fail to recognize that the Applicant's discussion of alternatives is bounded by feasibility. *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. at 551. Here, the Intervenors' reference to the *incomplete* Mojave Solar Park fails to show how such a facility would provide a *viable* alternative. The Applicant is not required under NEPA to discuss alternatives that are not viable. *Id*.

Contention Alt-2 does not directly challenge any of the information contained in the ER related to the types of land use at the site, and fails to show how the effects of solar power generation with storage would not negatively affect current land uses. Furthermore, Contention Alt-2 does not sufficiently allege why the Applicant's analysis of alternatives is deficient under NEPA. Therefore, Contention Alt-2 has failed to show that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 CFR § 2.309(f)(1)(vi), and should be rejected.

C. <u>Proposed Contention Alt-3</u>:

> The Applicant's determination that nuclear is environmentally preferable to renewable energy with storage, supplemented by natural gas is based on fundamentally flawed assumptions about the nature and extent of environmental impacts related thereto.

New Alternatives Contentions at 8.

> Part A. By asserting that each technology needs to be capable of generating 3200 MW "individually," the Applicant overstates the environmental impacts of the combinations of wind and CAES, supplemented by natural gas or solar and storage supplemented by natural gas.

New Alternatives Contentions at 8. The Intervenors challenge the assertion in Section 9.2.2.11.4.1 of the Alternatives Submission that **each** technology in the combination of wind/solar, storage, and natural gas needs to be capable of generating 3200 MW individually.

New Alternatives Contentions at 9. The Intervenors also assert that "wind and CAES alone can suffice as baseload" generation. New Alternatives Contentions at 9, FN 26. The Intervenors claim that the "land area requirements for wind/solar/CAES" impacts have been overstated by the Applicant because wind generation allows "multiple uses of the same land including farming and ranching" which "minimiz[es] consequential socioeconomic dislocation." New Alternatives Contentions at 9.

> Part B. The Applicant uses inadequate characterizations of the impacts of renewable energy with storage to conclude that renewable energy storage, supplemented by natural gas is not environmentally preferable to nuclear power.

New Alternatives Contentions at 10. The Intervenors assert that as they discussed in Alt-1 and Alt-2, "solar with storage could have a positive socio-economic impact and wind with CAES could have a positive impact on land use." *Id.* The Intervenors specifically cite page 9.2-47 of the Alternatives Submission, disagreeing with the conclusion that the combination analyzed in Alternatives Submission Section 9.2.2.11.4.1 would result in additive and cumulative environmental impacts from construction and operation of three facilities that would be "expected to have significant and adverse environmental impacts and would not be environmentally more preferable than CPNPP Units 3 and 4." New Alternatives Contentions at 10 *citing* Alternatives Submission at 9.2-47.

> Part C. The Applicant did not consider wind and solar energy combined.

New Alternatives Contentions at 10. The Intervenors suggest that "coastal wind", "North and West Texas wind", and solar with storage" together can "provide a smooth generation curve that closely follows the load need." *Id*. The Intervenors also challenge the Applicant's assumption that each technology needs to be capable of generating 3200 MW individually as "flawed." *Id*.

The Intervenors' proposed new Contention Alt-3 is not admissible because it does not demonstrate that the issue raised in the contention is material to the findings that the NRC must make; provide a concise statement of the alleged facts or expert opinion which support the

Intervenors' position; reference a specific portion of the application that the Intervenors dispute, or provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact. Because this proposed new contention does not meet the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi), it should be rejected.

In Part A of proposed Contention Alt-3, the Intervenors challenge the assertion in Section 9.2.2.11.4.1 of the Alternatives Submission that *each* technology in the combination of wind/solar, storage, and natural gas needs to be capable of generating 3200 MW individually. New Alternatives Contentions at 9. However, the Applicant did not limit its analysis by requiring each energy source to produce 3200 MW. Rather, the subsequent alternative analyzed by the Applicant examined natural gas replaced by amounts *up to* 3200 MW of renewable power (either wind or solar) and *up to* 3200 MW of storage (either CAES or molten salt). See, Section 9.2.2.11.4.2 of the Alternatives Submission, Alternatives Submission at 9.2-37, 9.2-47. Since the Applicant included the alternative in Section 9.2.2.11.4.2 where the renewable energy source and the storage facility can each be "a 3200 MW or lesser capacity", the Intervenors' claim that the "Applicant asserts that each technology in the combination needs to be capable of generating 3200 MW individually" does not comply with 10 C.F.R. § 2.309(f)(1)(vi) because it does not demonstrate a genuine dispute with the Applicant. Alternatives Submission at 9.2-37, 9.2-47; New Alternatives Contentions at 9. Further, the Intervenors do not provide any facts or expert opinions challenging the Applicant's analysis of the combination alternative in Section 9.2.2.11.4.2 of the Alternatives Submission. 10 C.F.R. § 2.309(f)(1)(v).

The Intervenors also assert in Part A of proposed Contention Alt-3.A that "wind and CAES alone can suffice as baseload" generation. New Alternatives Contentions at 9, FN 26. A wind and CAES alternative energy generation combination is already examined by the Applicant in Section 9.2.2.11.3.1. Alternatives Submission at 9.2-37. The Intervenors raise this issue but do not address the Applicant's discussion of the wind and CAES alternative, and thus have not

shown that a genuine dispute exists with the Applicant on a material issue. 10 C.F.R. § 2.309(f)(1)(vi).

As previously discussed in response to proposed Contention Alt-1, the Intervenors again claim that the "land area requirements for wind/solar/CAES" impacts have been overstated by the Applicant. New Alternatives Contentions at 9 *citing* Motion Answer at 5-6. The Intervenors explain that "the area actually used by wind farms is only about 3.5% of the area where the facility is located." Motion Answer at 5. The Intervenors further provide that "the land area actually dedicated to a wind facility with 4,000 turbines and a CAES facility would only occupy approximately 1000-2000 acres." Motion Answer at 6. The Intervenors also argue that wind generation allows "multiple uses of the same land including farming and ranching" which "minimiz[es] consequential socioeconomic dislocation." New Alternatives Contentions at 9. As previously discussed by the Staff, even assuming the information from the Intervenors is correct, the discussion about the number of acres necessary for a wind facility and the actual total footprint size of all of the turbines does not describe what impacts such a facility would have on the current land uses at the site and in the vicinity.

The Applicant's ER in Section 4.1 provides a description of the impacts of the proposed plant construction on the site and vicinity land uses as identified in ER Chapter 2. *See* Table 2.2-1, ER at 2.2-10; ER at 4.1-1 to 4.1-10. The ER discusses the total area to be disturbed and the impacts to land uses such as: "undisturbed woodland," "floodplain," "wetland habitats," "National Wild and Scenic Rivers," "historic properties," "tribal lands," and "prime farmland." ER at 4.1-1 to 4.1-3. Likewise, the ER discusses construction impacts to land use in the vicinity of the proposed plant as well as other potential land use impacts. *See* ER at 4.1-3 to 4.1-10. The ER explains that construction of the plant would be confined to the site for the resources discussed in the ER, so the Applicant identifies little to no impact to land use resources in the vicinity. *Id.*

As the Intervenors described, the total footprint of a wind facility with CAES is only a small fraction of the total facility size. New Alternatives Contentions at 9 *citing* Motion Answer at 5-6. However, the Intervenors do not provide facts or expert opinion about how construction and operation of such a large wind facility, even with a small total building footprint, would impact the land uses at the site and in the vicinity as identified by the Applicant. The Intervenors do not provide facts or expert opinion about the extent of the land use impacts in the vicinity of the site and whether those would be affected by the size of the facility versus the building footprint. Even though the Intervenors provide some support for their claim that a wind facility can be combined with either ranching or farming, the Intervenors do not provide facts or expert opinion regarding what the impacts would be to the current land uses. Alternatives Contentions at 9 *citing* Motion Answer at 5-6; Makhijani Report; Dean Report.

Without providing facts or expert opinion regarding the impacts on land use at the site or in the vicinity, the Intervenors have not met the requirements of 10 C.F.R. § 2.309(f)(1)(v). Likewise, the information provided by the Intervenors in this proposed contention does not demonstrate that a wind facility could be environmentally preferable to the construction and operation of the proposed units at the site. Therefore, the Intervenors do not demonstrate a genuine dispute with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi). If the Intervenors are proposing in this contention that the wind facility could be constructed at a different location than the proposed site, they still have not provided any facts or expert opinion to show what the impacts on land uses would be at that different location, other than to establish generally that the wind facility land could have a dual use for wind power and ranching or farming. Therefore, the Intervenors have not provided any facts or expert opinions to establish a genuine dispute with the Applicant's analysis of land use impacts from alternative power generation sources. 10 C.F.R. § 2.309(f)(1)(v).

In Part A of proposed Contention Alt-3.A, the Intervenors cite to two cases in support of their arguments in this contention. The Intervenors argue that the Applicant's methodology

would cause the viability of the energy generation alternatives "to be considered in an overly restrictive and artificial way" and cite *Druid Hills Civic Ass'n, Inc. v. Fed. Highway Admin.* as support. New Alternatives Contentions at 9 *citing Druid Hills Civic Ass'n, Inc. v. Fed. Highway Admin.* 772 F.2d 700, 709 (11th Cir. 1985). However, in *Druid Hills*, the page cited by the Intervenors (709) does not discuss an alternatives analysis, rather, it discusses the Court of Appeals' standard of review for NEPA cases. In fact, the holding in *Druid* Hills makes it clear that consideration of alternatives in NEPA is governed by the "rule of reason." The Court of Appeals in *Druid Hills* upheld the ruling of the District Court finding that the consideration of alternatives under the "rule of reason" was adequate despite the list of additional alternatives proposed by the appellants in that case. *Druid Hills* at 713-714.

The Intervenors next cite to *Ohio River Valley Environmental Coalition, Inc. v. Kempthorne* for the proposition that the Applicant's methodology "would ignore substantial evidence that contradicts the Applicant's assertion." New Alternatives Contentions at 9 *citing Ohio River Valley Environmental Coalition, Inc. v. Kempthorne* 473 F.3d 94, 102 (4th Cir. 2006). The *Ohio River Valley* case involves the review of a Department of the Interior rulemaking under the Surface Mining Control and Reclamation Act of 1977 using an arbitrary-and-capricious standard of review, and is unrelated to an examination of alternatives under NEPA. *Ohio River Valley* at 97. Therefore, the cases cited by the Intervenors do not demonstrate that the issues raised by the Intervenors are required under NEPA and are material to the findings the NRC must make to support the action involved in this proceeding, or that the issues raised demonstrate a genuine dispute with the Applicant on a material issue. 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

In Part B. of proposed Contention Alt-3, the Intervenors argue that "solar with storage could have a positive socioeconomic impact and wind with CAES could have a positive impact on land use…" New Alternatives Contentions at 10. As the Staff explained in response to Contentions Alt-1 and Alt-2, the Intervenors do not describe a material dispute with the

Applicant regarding the viability of an alternative of solar with storage, and do not provide facts or expert opinion describing what the actual land use impacts of wind with CAES would be and thereby do not comply with 10 C.F.R. § 2.309(f)(1)(v) and (vi).

In Part C of proposed Contention Alt-3, the Intervenors argue that the Applicant did not consider both wind and solar energy combined. New Alternatives Contentions at 10. The Intervenors' propose a four part combination alternative (coastal wind, North/West Texas wind, solar, and storage). *Id.* However, this proposed alternative is not material to the findings the NRC must make; is not supported by facts or expert opinion; and does not show that a genuine dispute exists with the Applicant on a material issue of law or fact together with references to specific portions of the application, and thereby does not meet 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

Pursuant to CEQ regulations, the EIS should "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14. NEPA is governed by a "rule of reason." Not every conceivable alternative is required to be examined in an EIS. *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 U.S. at 551; *See also Natural Resources Defense Council, Inc. v. Morton* 458 F.2d. 827, 837 (D.C. Cir. 1972). The Intervenors do not demonstrate that their proposed four part combination alternative is a reasonable alternative, and as a result, have not demonstrated how NEPA requires analysis of this proposed four part combination alternative.

The Applicant's analysis in Alternatives Submission Section 9.2.2.11.4 shows that the Applicant already determined that a three part combination alternative would not be environmentally preferable to the proposed project due to the cumulative and additive impacts from each part. *See* Alternatives Submission at 9.2-47 and 9.2-49. The Intervenors do not provide any facts or expert opinions challenging the Applicant's assertion that in a multi-part combination alternative (e.g. wind, storage, natural gas), the impacts from each part of the

alternative would result in additive and cumulative impacts. *See* Alternatives Submission at 9.2-47 and 9.2-49. Additionally, the Intervenors do not provide any facts or expert opinion to show that their proposed four part combination alternative would have smaller environmental impacts than the three part alternative examined by the Applicant. *See* New Alternatives Contentions at 10. The Intervenors, therefore, are proposing a four part alternative similar to the three part alternative analyzed by the Applicant that would have additive and cumulative impacts, and the Intervenors have not provided any facts or expert opinion to show that their proposed alternative could be environmentally preferable. Without such information, the Intervenors have not shown that their proposed four part proposed alternative would meet NEPA's "rule of reason" to merit additional examination. As such, the Intervenors have not demonstrated that analysis of their proposed alternative is required under NEPA or that the Applicant's failure to consider it was unreasonable. For the same reason, the Intervenors do not demonstrate that this proposed alternative is material to the findings the NRC must make, or demonstrate a genuine dispute with the Applicant on a material issue. 10 C.F.R. § 2.309(f)(1)(iv) and (vi).

Additionally, neither the Intervenors' New Alternatives Contentions nor the expert declarations submitted with their New Alternatives Contentions provide facts or expert opinions beyond assertions about what the expected impacts would be from this proposed four part alternative. Specifically, the Intervenors do not address the size of each of the four parts to explain what the total expected impacts would be, and thereby do not provide the necessary facts or expert opinions to support this proposed contention. 10 C.F.R. § 2.309(f)(1)(v). "'[A]n expert opinion that merely states a conclusion (e.g., the application is "deficient," "inadequate," or "wrong") without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion . . .'" *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (discussing expert support in the context of contention admissibility) (quoting *Private Fuel*

Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998)). Thus the Intervenors do not provide facts or expert opinion supporting their position on this issue. 10 C.F.R. § 2.309(f)(1)(v).

In Part C of proposed Contention Alt-3, the Intervenors challenge the Applicant's analysis of a combination alternative stating that it is based on the flawed assumption that, "each technology needs to be capable of generating 3200 MW 'individually'..." New Alternatives Contentions at 10. However, the Intervenors do not identify which combination alternative they challenge. As the Staff previously discussed in response to this Contention, the Intervenors do not acknowledge that the Applicant's existing discussion in Alternatives Submission Section 9.2.2.11.4.2 examines a combination alternative without assuming "that each technology needs to be capable of generating 3200 MW 'individually'". New Alternatives Contentions at 10; *Contrast* Alternatives Submission Section 9.2.2.11.4.2 at ER Revision at 9.2-47 *with* New Alternatives Contentions at 10. Thus, this Contention does not show that a genuine dispute exists with the Applicant on a material dispute of law or fact because the Application does include a combination alternative where the renewable generating source and the storage can be less than 3200 MW. 10 C.F.R. § 2.309(f)(1)(vi).

As discussed above, this contention is inadmissible because it does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi).

D. <u>Proposed Contention Alt-4</u>:

> The Applicant's assertion that renewable energy sources and energy storage options are not viable baseload generating options ignores the United States Department of Energy National Renewable Energy Laboratory (NREL) findings that "Wind energy systems that combine wind turbine generation with energy storage and long-distance transmission may overcome these obstacles and provide a source of power that is functionally equivalent to a conventional baseload electric power plant. A "baseload wind" system can produce a stable, reliable output that can replace a conventional fossil or nuclear baseload plant, instead of merely supplementing its output. This type of system could provide a large fraction of a region's electricity demand, far beyond the 10-20% often suggested as an economic upper limit for conventional wind generation deployed without storage.

New Alternatives Contentions at 11. The Intervenors assert that "renewables and storage technologies …are capable of meeting baseload generation requirements." New Alternatives Contentions at 12. The Intervenors argue that, "[a]dopting the Applicant's premise that wind/solar/storage are not capable of providing baseload generation skews its analysis of the viability of renewable fuels in combination with storage technologies and/or natural gas." *Id.* Citing *Druid Hills* and *Ohio River Valley*, the Intervenors argue that the Applicant uses an "overly restrictive methodology with artificial constraints" and that it "ignores substantial evidence that contradicts the Applicant's assertion." *Id.*

This proposed contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi) and is therefore inadmissible. The Intervenors simply contradict the Applicant's assertions in Alternatives Submission 9.2.2.11.3 that (1) there are no large scale baseload combination renewable and storage facilities in existence; (2) this combination as a baseload power source has not been proven or demonstrated; and (3) the projects being proposed operate as either peaking or intermediate, intermittent power source. *See* Alternatives Submission 9.2.2.11.3, ER at 9.2-37. Although the Intervenors cite the NREL Factsheet for support, they overstate its conclusions regarding the viability of wind combined with CAES to provide baseload power. A review of the NREL Factsheet indicates that it is more equivocal in its discussion of the feasibility of using advanced compressed air energy storage concepts. *See* NREL Factsheet "Background/Overview", "Technical and Environmental Performance", and "Advanced Wind/CAES Concepts." Although the Intervenors disagree with the Applicant's assertions, they do not provide any facts or expert opinion to challenge the accuracy of the three assertions. Neither Drs. Dean nor Makhijani provide any facts in their reports to contravene the assertions and show that a renewable combination is available for baseload supply rather than a peaking supply. Therefore, the Intervenors have not provided any facts or expert opinion to support this contention. 10 C.F.R. § 2.309(f)(1)(v).

As discussed in response to Contention Alt-3, the *Druid Hills* and *Ohio River Valley* cases do not show that the issues raised in this contention are required to be considered under NEPA, and therefore the Intervenors have not demonstrated that the issues raised in this contention are material to the findings the NRC must make to support the action that is involved in this proceeding. 10 C.F.R. § 2.309(f)(1)(iv).

The Intervenors suggest that "this contention should advance to adjudication in order to determine whether combinations of renewable fuel sources with and without storage and with and without natural gas as a supplemental fuel is a viable alternative to Comanche Peak Units 3 and 4." New Alternatives Contentions at 12. As discussed in response to Contention Alt-3, NEPA is governed by a 'rule of reason." Not every conceivable alternative is required to be examined in an EIS. *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 U.S. at 551; *See also Natural Resources Defense Council, Inc. v. Morton* 458 F.2d. at 837. The *Vermont Yankee* decision further explains

> There is reason for concluding that NEPA was not meant to require detailed discussion of the environmental effects of 'alternatives' put forward in comments when these effects cannot be readily ascertained and the alternatives are 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.

Vermont Yankee at 551, *citing Natural Resources Defense Council v. Morton*, 458 F.2d at 837-838. Because the Intervenors do not establish that the proposed alternative is viable, and thereby do not show how examination of this proposed alternative is required under NEPA, the Intervenors do not demonstrate that this proposed alternative is material to the findings the NRC must make. 10 C.F.R. § 2.309(f)(1)(iv). Likewise, the Intervenors have not demonstrated that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi).

This contention is inadmissible because it does not meet the criteria of 10 C.F.R. § 2.309(f)(1)(iv), (v), and (vi). It should therefore be rejected.

E. Proposed Contention Alt-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.

New Alternatives Contentions at 13. The Intervenors argue that there is a discrepancy between the energy production capacity the Applicant plans and the capacity need that is established in the region. *Id*. Citing the Makhijani and Dean Reports' discussions of the economic risks associated with a large nuclear power plant, compared with a phased, modular approach involving gradual additions of renewable combinations, and a Wall Street Journal article that discusses recent trends in demand for electricity, the Intervenors argue that the Applicant has failed to consider the benefits of a modular approach over nuclear energy production. *Id.* The Intervenors prefer a phased approach to add power gradually to meet actual demand increases, which they assert could be achieved with smaller increments of renewable fuels, over the Applicant's proposed "one-time addition of 3200 MW." *Id*.

This contention is inadmissible because it would require a discussion of alternatives at a level of detail that is not required by the NRC and is beyond the scope of this proceeding, and it is not supported by specific facts or expert opinions and does not provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(iii), (vi), (v) and (vi). Additionally, this contention is based on information that has been available since 2008, when the COL application was filed; is not based on information that is new, materially different, or on from information that was previously unavailable, and is not timely. 10 C.F.R. § 2.309(f)(2)(i), (ii), (iii). Further, even though the Intervenors are parties to the proceeding, they have not demonstrated good cause for failing to raise this contention in a timely fashion, how this contention will broaden the issues or delay the proceeding, or the extent to which this contention could reasonably be expected to assist in

developing a sound record in this proceeding. 10 C.F. R. § 2.309(c)(1)(i), (vii), (viii). As this contention fails to meet the contention admissibility criteria in 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v) and (vi), § 2.309(f)(2)(i) – (iii), and § 2.309(c)(1)(i), (vii), and (viii), the contention should be rejected.

Although the Intervenors characterize this contention in terms of the Applicant's alternatives analysis, the Intervenors appear to challenge the Applicant's "need for power" analysis, which they refer to generally and without specific reference to any particular section of the COL application. The Applicant's "need for power" analysis is not contained in the December 8, 2009 new Alternatives Submission, but rather was provided September 19, 2008, in Rev. 0 of the ER. Proposed Contention Alt-5 is therefore not based on new, not previously available or materially different information, and has not been submitted in a timely fashion. 10 C.F.R. § 2.309(f)(2)(i) – (iii). While the Intervenors are parties to this proceeding, they have not articulated good cause for failing to raise this "need for power" contention in a timely fashion, nor have they otherwise demonstrated how this proposed contention – which will broaden the issues and cannot be expected to help develop a sound record – meets the late-filed contention admissibility requirements. 10 C.F.R. § 2.309(c)(1)(i), (vii), (viii). Moreover, the Intervenors have not demonstrated that the issues raised in this contention are within the scope of the proceeding and material to the finding the NRC must make, provided facts or expert opinions that support their position, or provided sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, . As this contention fails to meet the contention admissibility criteria for new or amended contentions in 10 C.F.R. § 2.309(f)(2)(i) – (iii); the late-filed contention admissibility criteria in 10 C.F.R. § 2.309(c)(1)(i), (vii), and (viii); and the contention admissibility criteria for all contentions in 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v) and (vi), it should be rejected. Additionally, to the extent the Intervenors reassert their advocacy of alternatives that do not address baseload power generation, this Board has already rejected

those arguments and should not permit the Intervenors to raise them again in this untimely contention. *Comanche Peak, Units 3 and 4,* LBP-09-17, 70 NRC __, slip op. at 81-82.

The Intervenors have misread and incorrectly referenced the COL application. The Applicant's "need for power" analysis was submitted as Chapter 8 of the ER, not in Chapter 9. The Intervenors' imprecise reading of the COL application or any other document does not generate an issue suitable for litigation in this licensing proceeding. *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 300 (1995). To the extent the Intervenors challenge the Applicant's "need for power" analysis, they have not identified a specific portion of Chapter 8 which they dispute. Contrary to the Intervenors' assertion, Chapter 8 contains analysis of ERCOT historical data and projections for 2007 – 2025, and the Applicant states that these reports show growth and increase in demand that would require two baseload units every 5 years to address the average system load. ER Chapter 8, § 8.2-1. The Intervenors have not challenged any of the data, analysis or conclusions the Applicant included in Chapter 8 of the ER. The article the Intervenors cite as support for their argument that nationwide demand is decreasing actually states that while demand for power has decreased over the past two years due to a weak economy, government energy experts believe that a strengthening economy will lift energy production in 2010, with industrial demand for electricity increasing at a rate that suggests a return to prerecession levels by 2013. Rebecca Smith, *Turmoil in Power Sector, Falling Electricity Demand Trips Up Utilities' Plans for Infrastructure Projects*, WALL STREET JOURNAL, Jan. 14, 2010, at http://online.wsj.com.article/SB10001424052748704675104575001322373417024.html. This contention both fails to directly controvert the COL application, and mistakenly asserts that the application does not address a relevant issue, and therefore may be dismissed on both grounds. 10 C.F.R. § 2.309(f)(1)(v), (vi). *Susquehanna EPU*, LBP-07-10, 66 NRC at 19-21.

The Intervenors argue that the Applicant has failed to take into account new ERCOT demand data, but they do not identify that data or otherwise provide a cite for the data they

reference. New Alternatives Contentions at 13. The Dean Report references an ERCOT Report on the Capacity, Demand and Reserves in the ERCOT Region, December 2009, but the Intervenors do not provide the ERCOT report as a reference, cite this report or provide any specific reference to any portion of the report in support of their argument, or explain how this report supports their contention. Dean Report at 2, n. 3; New Alternatives Contentions at 13. Referencing or simply attaching materials or documents as a basis for a contention, without setting forth an explanation of the information's significance, is inadequate to support the admission of this contention. *Susquehanna EPU*, LBP-07-10, 66 NRC at 23.

The Intervenors argue that the Applicant has failed to consider the benefits of a modular approach over the generation of baseload nuclear power. New Alternatives Contentions at 13. As this proceeding pertains to the Applicant's COL application to construct and operate two US-APWR nuclear power reactors, and not an application to construct or operate unspecified modular reactors, this proposed contention raises issues that are outside the scope of this proceeding and not material to the findings the NRC must make regarding the COL application. 10 C.F.R. § 2.309(f)(1)(iii), (iv). Additionally, while the Intervenors have described the information they believe is missing from the ER, they have not demonstrated how the information is required by law, or provided facts or expert opinions that support their position that this information must be included in the application, and thus have failed to satisfy 10 C.F.R. § 2.309 (f)(1)(v) and (vi). A "bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient;" rather, "a petitioner must provide documents or other factual information or expert opinion that set forth the necessary technical analysis to show why the proffered bases support its contention." *Private Fuel Storage, L.L.C.*, (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (*citing Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *aff'd in part*, CLI-95-12,

42 NRC 111 (1995) (A petitioner is obligated to provide the [technical] analyses and expert opinion" or other information "showing why its bases support its contention.")

The Intervenors' proposal that the Applicant adopt a modular approach to gradually add power does not meet the purpose and need of the Applicant's project. "[T]he EIS alternatives analysis should be based around the applicant's goals, including its economic goals[,]" and an agency cannot redefine those goals. *Progress Energy Fla., Inc.*, LBP-09-10, slip op. at 80 (*citing Hydro Resources, Inc*. , CLI-01-04, 53 NRC at 55 (2001)(internal citations omitted); *Private Fuel Storage*, CLI-04-22, 60 NRC at 146 (2004) ("[i]n considering alternatives under NEPA, an agency must 'take into account the needs and goals of the parties involved in the application") (*quoting Citizens Against Burlington, Inc. v. Busey*, 938 F.2d at 199)). As it is beyond the authority of the NRC to redefine the Applicant's goals, the Intervenors' proposal for modular phased-in additions of power from renewable energy sources must be rejected. When the purpose of the project is to generate baseload power, it makes no sense to consider and evaluate the alternative ways by which modular phased-in additions of power to the grid might be achieved. *Exelon Generation Co*. (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 806 (2005) (*quoting Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 199 (D.C. Cir. 1991)), *aff'd Environmental Law and Policy Center v. U.S. Nuclear Regulatory Comm'n*, 470 F.3d 676 (7th Cir. 2006)). The Intervenors provide no legal basis for including an analysis of a modular approach to energy production in the ER, and thus have not complied with 10 C.F.R. § 2.309(f)(1)(vi).

Without specifying which portion of the COL application they dispute, the Intervenors argue that the Applicant failed to consider the benefits of a modular approach over nuclear power generation to meet the need for power in what the Intervenors characterize as an "uncertain demand environment." New Alternatives Contentions at 13. The Intervenors argue that the Applicant has not considered the risks inherent in predicting demand increases and has not considered adding generation capacity incrementally over time, as opposed to building a

"one-time addition of 3200 MW." New Alternatives Contentions at 13 - 14. The Intervenors also argue that "solar thermal with heat storage facilities are currently being built on a scale that modules could be built that would add up to the equivalent of CPNPP." New Alternatives Contentions at 14. To support their contention, the Intervenors cite the Makhijani and Dean Reports, and a Wall Street Journal article dated January 14, 2010, to which the Intervenors provided an internet cite. *Id.* at 13, n. 39. There is no support for the general statements in the Makhijani and Dean Reports, the article the Intervenors' cite as support somewhat contradicts their argument, and they have not otherwise provided facts or opinions that support their arguments.

Both the Makhijani and Dean Reports discuss economic principles and uncertainties in demand projections generally, but include no specific reference to any data or scientific report that supports their conclusions. Similarly, the Intervenors provide no support for their claim that demand for power is declining. The article the Intervenors cite as support for this argument does not discuss ERCOT or Texas, but does discuss increases in demand over the past year due to a strengthening economy, and predicts that demand will once again reach pre-recession levels by 2013. Rebecca Smith, *Turmoil in Power Sector, Falling Electricity Demand Trips Up Utilities' Plans for Infrastructure Projects*, WALL STREET JOURNAL, Jan. 14, 2010, at http://online.wsj.com.article/SB10001424052748704675104575001322373417024.html. Thus, the Intervenors have failed to provide factual or legal support for this contention as required by 10 C.F.R. § 2.309(f)(1)(vi), and have failed to provide references to specific sources and documents which actually support their position, as required by 10 C.F.R. § 2.309(f)(1)(v).

In raising these arguments, the Intervenors do not provide any studies or research that support their arguments that demand is decreasing, nor have the Intervenors provided any support for their arguments that the COL application must, as a matter of law, consider modular, incremental increases in power generation as an alternative to baseload power generation. The Intervenors have not demonstrated that the ER is inadequate, or that it does not address their

preferred alternatives, or that the law requires the Applicant to consider a modular approach to adding sources of electrical power generation. The Applicant did consider and discuss whether a mix of alternatives could be used to generate 3200 MWe of power, which is the purpose and need of their project. Aside from offering unsupported conclusory statements by their expert witnesses that a modular approach is less risky, the Intervenors did not offer a combination of modular energy production units or discuss why such alternate combinations would constitute reasonable alternatives, and, as such, have not demonstrated that the ER is deficient. *See South Carolina Energy and Gas Co. and South Carolina Public Service Authority* (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 109 (2009) (contention advocating modular approach to energy generation did not demonstrate an omission from the application), *rev'd and remanded on other grounds*, CLI-10-01, __ NRC __ (slip op.) (Jan. 7, 2010). To the extent the Intervenors argue that the Applicant has not considered the risks inherent in building a "one-time addition of 3200 MW, " such arguments should be rejected because the Applicant's business decisions are beyond the purview of the NRC. *Virgil C. Summer*, LBP-09-2, 69 NRC at 111 (*citing Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 726 (2005); *Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 48-49), *rev'd and remanded on other grounds*, CLI-10-01, __ NRC __ (slip op.) (Jan. 7, 2010).

The Intervenors have not demonstrated good cause for not filing challenges to the Applicant's "need for power" analysis in Chapter 8 of the ER in a timely fashion, or that raising these issues now would not broaden or delay the proceeding, or lead to the development of a sound record. 10 C.F.R. § 2.309(c)(1)(i), (vii), (viii). Additionally, the Intervenors have failed to demonstrate that the claims they raise now are based on information that is new, materially different, or was not previously available in Rev. 0 of the ER, or that the new contention has been submitted in a timely fashion based on the availability of Rev. 0 of the ER. 10 C.F.R. § 2.309(f)(2)(i) – (iii). Further, the Intervenors have failed to demonstrate that their preferred

alternatives and modular additions of power to the grid are within the scope of the proceeding before the NRC or that there is a genuine issue with the Applicant on a material issue of law or fact, and have failed to provide specific references that support their position, as required by 10 C.F.R. § 2.309(f)(1)(iii), (vi), (v), and (vi). Moreover, to the extent the Intervenors reiterate alternatives arguments this Board has already rejected in ruling on the Intervenors' original contentions, they should not be permitted to raise them again in this untimely contention.

F. Proposed Contention Alt-6:
Applicant does not meet Criterion 1: Developed, proven and available in the relevant region ERCOT.

New Alternatives Contentions at 14. The Intervenors argue that because the US-APWR reactor design has never been built or designed before and is unlikely to be certified before 2011, the proposed reactors fail to meet the first criterion in an alternatives analysis – that the technology be developed, proven and available. *Id*. at 14-15. Intervenors argue that the Applicant's failure to state that the US-APWR "is not developed, proven or available" in the ER is a material omission from the COL application. *Id*. In support of this contention, the Intervenors cite the conclusory statements in the Makhijani, Dean and Robbins Reports that the Applicant fails to account for the fact that the US-APWR is not yet certified by the NRC. *Id*. at 15, n. 42.

This proposed new contention is inadmissible because it impermissibly challenges an NRC regulation, raises issues that are beyond the scope of this proceeding, is not supported by facts or expert opinions, and does not demonstrate that a genuine dispute exits with the Applicant on a material issue of law or fact. 10 C.F.R. §§ 2.335, 2.309(f)(1)(iii), (vi), (v), (vi). Additionally, this contention based on information that has been available since 2008, when the COL application was filed; is not based on information that is materially different from information that was previously available, and the contention is not timely. 10 C.F.R. § 2.309(f)(2)(i), (ii), (iii). Further, even though the Intervenors are parties to the proceeding, they have not demonstrated any cause for failing to raise this contention in a timely fashion, how this contention will broaden the issues or delay the proceeding, or the extent to which this contention

could reasonably be expected to assist in developing a sound record in this proceeding. 10 C.F. R. § 2.309(c)(1)(i), (vii), and (viii).

The Intervenors also appear to be reasserting Contention 1, which this Board has already dismissed, as well as their Petition for Stay, which was denied by the Commission on April 27, 2009.[6] The Commission, through the Secretary, issued an Order denying the Intervenors' Petition for Stay, and stated that "10 C.F.R. § 52.55(c) envisions COLA adjudications during the pendency of design certification reviews." Order at 1. NRC regulations allow an applicant – at its own risk – to submit a COL application that does not reference a certified design. *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 4 (2008). The Commission has held that issues concerning a design certification application should be resolved in the design certification rulemaking, and not in a COL proceeding. Id. As this contention fails to meet the contention admissibility criteria in 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v) and (vi), § 2.309(f)(2)(i) – (iii), and § 2.309(c)(1)(i), (vii), and (viii), and raises issues that have previously been dismissed by the Commission and the Board in this proceeding, the contention should be rejected.

Although both the Commission and this Board have already dismissed the Intervenors' previous challenges to the US-APWR rulemaking in this COL proceeding, the Intervenors argue that because the US-APWR is still an uncertified design undergoing rulemaking, the Applicant is required to describe the US-APWR as not currently available, and has improperly omitted that information from the COL application. New Alternatives Contentions at 14-15. The Intervenors also argue that the COL application omits information concerning what the Intervenors refer to as "the history of nuclear plant construction delays and current uncertainties about financing new nuclear plants." *Id*. The Intervenors have already raised similar arguments challenging the

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[6] See the Intervenors' "Petition for Order to Stay Comanche Peak Nuclear Power Units 3 and 4 Combined Construction and Operating License Application Proceedings and Hold the Combined Operating License Application in Abeyance Pending Completion of the US-APWR Application Rulemaking," filed April 6, 2009 (Petition for Stay),

uncertainty of the US-APWR design certification rulemaking in Contention 1 of their Petition, which the Board found inadmissible and dismissed, and in a separate Petition for Stay, which the Commission dismissed by order dated April 27, 2009. As stated previously, to the extent the Intervenors challenge the Applicant's business decision to construct and operate baseload generating power plants, such arguments should be rejected because the Applicant's business decisions are beyond the purview of the NRC. *Virgil C. Summer*, LBP-09-2, 69 NRC at 111 (*citing Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC at 726; *Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 48-49), *rev'd and remanded on other grounds*, CLI-10-01, __ NRC __ (slip op.) (Jan. 7, 2010).

Proposed Contention Alt-6 does not raise a specific issue of law or fact regarding the US-APWR, demonstrate that the general objections raised to the US-APWR are within the scope of this COL proceeding, or provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309 (f)(1)(iii), (iv), (vi). Inasmuch as this contention is based on information that was provided at the time the COL application was filed in 2008, the Intervenors have also failed to demonstrate that this contention is based on information that is new or materially different, or was not previously available, and have otherwise failed to show good cause for late-filing this contention, or that it meets any of the other late-filed contention admissibility requirements.. 10 C.F.R. §§ 2.309(f)(2)(i) – (iii), 2.309(c).

When a contention is raised in a COL proceeding that challenges information in the design certification rulemaking, the Board should, if the contention is otherwise admissible, refer the contention to the staff for consideration in the design certification rulemaking, and hold it in abeyance in the COL proceeding. *Shearon Harris*, CLI-08-15, 68 NRC at 3-4, *citing Final Policy Statement on the Conduct of New Reactor Licensing Proceedings*, 73 Fed. Reg. 20,963, 20,972 (April 17, 2008). The Intervenors raised similar challenges to the US-APWR rulemaking in Contention 1 of their Petition, and, in dismissing Contention 1, this Board ruled that the

Intervenors' challenges regarding the uncertainty of the US-APWR rulemaking did not identify any omission from the Applicant's COL application, or raise a genuine dispute with the COL application, as required under § 2.309(f)(1)(vi). *Comanche Peak, Units 3 and 4*, LBP-09-17, 70 NRC at __, slip op. at 24. As proposed Contention Alt-6 is similar to Contention 1, which has already been dismissed, and is otherwise inadmissible, there are no grounds for admitting this contention, referring it to the staff for consideration in the US-APWR rulemaking, or for holding it in abeyance in this COL proceeding.

As the Intervenors have not sought a waiver from the Commission to challenge this regulation, their argument constitutes an impermissible attack on the Commission's regulations. 10 C.F.R. § 2.335. NRC regulations do not allow a contention to attack a regulation unless the proponent requests a waiver from the Commission. See 10 C.F.R. § 2.335; *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), *Entergy Nuclear Generation Co*. (Pilgrim Nuclear Power Station), CLI-07-3, 65 NRC 13, 17-18 and n. 15 (2007) (*citing Dominion Nuclear Connecticut, Inc*. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *pet. for reconsideration denied*, CLI-02-01, 55 NRC 1 (2002)).

The Intervenors cite no examples of the proven feasibility of baseload power generation using the alternative technologies they advocate, and provide no support for their argument that the technology upon which the US-APWR is based is not developed, proven or available. Even the NREL Factsheet, upon which the Makhijani Report relies to reach the conclusion that wind with compressed air storage and natural gas supplement can meet baseload requirements, clearly states that "[d]evelopment of the 'baseload' wind concept will require a greater understanding of the local geologic compatibility of air storage, and additional work will be required to examine the feasibility of advanced wind/CAES concepts described here." NREL Fact Sheet; Makhijani Report at 1. The Intervenors have failed to provide alleged facts or expert opinions which support their position. 10 C.F.R. § 2.309(f)(v).

In contrast, light-water reactor (LWR) technology is currently being used in the United States in 104 operating reactors, many of which are pressurized water reactors (PWR), and all of which provide baseload generation of power. U.S. NRC 2009 – 2010 Information Digest, NUREG-1350, Vol. 21, at 53 and Appendix A (August 2009). The US-APWR design is based on proven, LWR technology, which MHI characterizes as "advanced." U.S. APWR DCD, Tier 2, Ch. 1, § 1.1 Revision 2, October 2009 (US-APWR DCD).[7] The US-APWR design is based on proven technology, and significant experience in the design, fabrication, installation, construction, and operation of pressurized water reactors (PWR) in Japan has resulted in proven technologies being developed by MHI and incorporated in the design of the US-APWR, which is in accordance with U. S. regulatory requirements. *Id*. at § 1.2.1. LWR technology, already reliable and proven for baseload generation of power in PWRs, is, as it pertains to the US-APWR design, perhaps more appropriately characterized as advancing,or improving, rather than as undeveloped, unproven or unavailable. US-APWR DCD, § 1.2.1. As this contention fails to meet the contention admissibility criteria in 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v) and (vi), § 2.309(f)(2)(i) – (iii), and § 2.309(c)(1)(i), (vii), and (viii), and raises issues that have previously been dismissed by the Commission and the Board in this proceeding, the contention should be rejected.

V. CONCLUSION

The Intervenors' proposed amendment to Contention 18 and new alternatives contentions Alt-1, Alt-2, Alt-3 and Alt-4, do not meet the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(1). The Intervenors' proposed new alternatives contentions Alt-5 and Alt-6 are based on information that was previously available, are untimely, and do not otherwise meet the contention admissibility requirements in 10 C.F.R. §§ 2.309(f)(1), 2.309(f)(2), 2.309(c), and proposed contention Alt-6 also violates 10 C.F.R. § 2.335. Accordingly, the Intervenors'

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[7] ML093070250.

proposed amended Contention 18 and new alternatives contentions Alt-1 through Alt-6 should all be rejected.

/Signed (electronically) by/
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL

In the Matter of	)	
	)	
LUMINANT GENERATION CO. LLC	)	Docket Nos. 52-034 & 52-035
	)	
(Comanche Peak Nuclear Power Plant,	)	
Units 3 & 4)	)	

NOTICE OF APPEARANCE OF CHRISTOPHER C. HAIR

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter in accordance with 10 C.F.R. § 2.314(b).

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Respectfully submitted,

Executed in Accord with 10 CFR § 2.304(d)
Christopher Hair
Counsel for NRC Staff

Dated at Rockville, Maryland
this 3rd day of February, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
	)	
LUMINANT GENERATION CO. LLC	)	Docket Nos. 52-034 & 52-035
	)	
	)	
(Comanche Peak Nuclear Power Plant,	)	
Units 3 & 4)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the NRC STAFF CONSOLIDATED RESPONSE TO INTERVENORS' AMENDED CONTENTION 18 AND PROPOSED CONTENTIONS CONCERNING ALTERNATIVES TO NUCLEAR POWER, and NOTICE OF APPEARANCE OF CHRISTOPHER C. HAIR, have been served upon the following persons by Electronic Information Exchange this 4th day of February, 2010:

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Dated at Rockville, Maryland
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