

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Ann Marshall Young, Chair
Dr. Gary S. Arnold
Dr. Alice C. Mignerey

In the Matter of

LUMINANT GENERATION COMPANY, LLC
(Comanche Peak Nuclear Power Plant,
Units 3 and 4)

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

ASLBP No. 09-886-09-COL-BD01

February 24, 2011

MEMORANDUM and ORDER
(Ruling on Motion for Summary Disposition of
Contention 18 and Alternatives Contention A)

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I. Introduction and Background

The Licensing Board rules herein on Luminant's Motion for Summary Disposition of Contention 18 and Alternatives Contention A,¹ in this matter involving the Combined License (COL) Application of Luminant Generation Company (Luminant or Applicant) for two new nuclear reactors at its Comanche Peak site, designated as proposed Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4.² Intervenors Sustainable Energy and Economic Development (SEED) Coalition, Public Citizen, True Cost of Nukes, and Texas State Representative Lon Burnam have challenged this Application and shown standing to participate collectively as a party in the proceeding.³ Intervenors oppose Luminant's motion;⁴ the NRC Staff supports it, arguing also that the last remaining contention in the proceeding is moot.⁵

We originally admitted two contentions, one concerning the environmental impacts of a severe radiological accident at one unit on operation of the other units also located at the Comanche Peak site (original Contention 13), and one concerning alternatives to the proposed new units consisting of combinations of renewable energy sources including wind and solar power with certain storage methods and supplemental use of natural gas to create baseload power (original Contention 18).⁶ Applicant subsequently amended its Environmental Report

¹ Luminant's Motion for Summary Disposition of Contention 18 and Alternatives Contention A (Aug. 26, 2010) [hereinafter Motion].

² See Letter from M.L. Lucas, Luminant Vice President, Nuclear Engineering & Support, to Document Control Desk, U.S. NRC (Sept. 19, 2008), Transmitting Combined License Application for Comanche Peak Nuclear Power Plant, Units 3 & 4 (ADAMS Accession No. ML082680250); <http://www.nrc.gov/reactors/new-reactors/col/comanche-peak/documents.html> [hereinafter Application or COLA]; see also Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 66,276 (Nov. 7, 2008).

³ See LBP-09-17, 70 NRC 311, 321-22, 382 (2009).

⁴ See Intervenors' Response to Luminant's Motion for Summary Disposition of Contention 18 and Alternatives Contention A (Sept. 15, 2010) [hereinafter Intervenors' Response].

⁵ See NRC Staff Answer to Luminant's Motion for Summary Disposition of Contention 18 and Alternatives Contention A (Sept. 15, 2010) [hereinafter Staff Response].

⁶ See LBP-09-17, 70 NRC at 365-69, 375-80, 382.

(ER)⁷ to include discussion related to these issues, and moved to dismiss the two original admitted contentions on the basis of mootness.⁸ We granted this motion as to Contention 13, and granted it in part as to Contention 18.⁹ We also denied admission of certain new environmental contentions,¹⁰ but admitted portions of others as Alternatives Contention A, which we found to be co-extensive with that part of original Contention 18 not dismissed as moot. The remaining parts of Contention 18 and Alternatives Contention A were thus to be adjudicated as one contention, which we limited and reformulated as follows:

Alternatives Contention A

The Applicant has not considered the feasibility under NEPA of an alternative consisting of a combination of solar and wind energy, energy storage methods including CAES and molten salt storage, and natural gas supplementation, to produce baseload power, with specific regard to

- (a) the reasonable availability of the four parts of such combination for consolidation into an integrated system to produce baseload power;
- (b) the feasibility of the use of such combination in the area of Texas served by the Comanche Peak plant;

⁷ Comanche Peak Nuclear Power Plant Units 3 and 4, COL Application Environmental Report (rev. 1, Nov. 20, 2009) [hereinafter ER], *available at* <http://adamswebsearch2.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML100081557>

⁸ See Letter from Jonathan M. Rund, Counsel for Luminant, to Ann Marshall Young *et al.* (Dec. 8, 2009), with attached Letter from Rafael Flores to NRC Document Control Desk (Dec. 8, 2009), with attached COL Application Part 3, Environmental Report Revision 1, Update Tracking Report Revision 0 (Dec. 7, 2009) (ADAMS Accession No. ML093440179) [hereinafter ER Update]; Luminant's Motion to Dismiss Contention 18 as Moot (Dec. 14, 2009); Letter from Jonathan M. Rund, Counsel for Luminant, to Ann Marshall Young *et al.* (Jan. 15, 2010), with attached Letter from Rafael Flores to NRC Document Control Desk (Jan. 15, 2010), with attached COL Application Part 3, Environmental Report Revision 1, Update Tracking Report, Contention 13 (Jan. 15, 2010) (ADAMS Accession No. ML100191529); Letter from Jonathan M. Rund, Counsel for Luminant, to Ann Marshall Young *et al.* (Jan. 19, 2010), with attached Letter from Rafael Flores to NRC Document Control Desk (Jan. 19, 2010), with attached COL Application Part 3, Environmental Report Revision 1, Update Tracking Report Revision 2 (Jan. 19, 2010) (ADAMS Accession No. ML100192101) [hereinafter Co-Location ER Revision or ER Revision]; Luminant's Motion to Dismiss Contention 13 as Moot (Jan. 25, 2010) [hereinafter Motion to Dismiss Contention 13].

⁹ LBP-10-10, 71 NRC __, __ (slip op. at 9, 14) (June 25, 2010).

¹⁰ *Id.* at __ (slip op. at 86).

- (c) the extent to which there may be efficiencies arising from overlapping uses of land for each of the four parts of the combination as well as for other reasonable purposes; and
- (d) if it is shown that such an alternative is environmentally preferable, the extent to which operation and maintenance costs of solar in such combination may be a comparative benefit.¹¹

We have also denied admission of several additional contentions filed by Intervenors, finding that they did not meet the contention admissibility criteria of 10 C.F.R. § 2.309(f).¹²

Based on the analysis provided in Section VI.A, we find Luminant's pending Motion has merit and therefore grant summary disposition of Contention 18 and Alternatives Contention A. Alternatively, as discussed in Section VI.B, we find the contentions moot and dismiss them on this basis. Finally, no further matters remaining for adjudication in the matter, we terminate this proceeding.

II. Legal Standards for Summary Disposition

In this 10 C.F.R. Part 2, Subpart L proceeding, NRC regulations require, at 10 C.F.R. § 2.1205(c), that in ruling on a motion for summary disposition we apply the standards of Subpart G. Subpart G at § 2.710(d)(2) provides that summary disposition should be granted:

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

The Commission has ruled that, in applying this standard, it is appropriate for the Board to look not only to NRC regulatory and case law, but also to federal court case law on

¹¹ *Id.* at ___ (slip op. at 86-87). "NEPA" stands for National Environmental Policy Act, found at 42 U.S.C. 4321 *et seq.* "CAES" stands for Compressed Air Energy Storage.

¹² See LBP-10-05, 71 NRC ___ (March 11, 2010) (ADAMS Accession No. ML1007005230) (public redacted version); Licensing Board Memorandum and Order (Ruling on New Contentions Based on the Draft Environmental Impact Statement) (Dec. 28, 2010) (unpublished) (ADAMS Accession No. ML1036205010) [hereinafter 12/28/10 Memorandum and Order].

summary judgment under Rule 56 of the Federal Rules of Civil Procedure.¹³ We note in this regard the U.S. Supreme Court's recognition that summary judgment, which is appropriate "upon proper showings of the lack of a genuine, triable issue of material fact," is "an integral part of the Federal Rules as a whole, which are designed 'to secure the just, speedy and inexpensive determination of every action.'"¹⁴ The same might thus be observed about summary disposition in NRC proceedings.

The party moving for summary disposition bears the burden of demonstrating that there is no genuine issue as to any material fact and that it is entitled to a decision in its favor. As the Commission has said, "if the proponent of the motion fails to make the requisite showing, the Board must deny the motion – even if the opposing party chooses not to respond or its response is inadequate."¹⁵ This approach is supported by case law from the District of Columbia Circuit Court of Appeals, which has observed:

In assessing whether a party moving for summary judgment has met his or her burden, a court must view all inferences to be drawn from underlying facts in the light most favorable to the party opposing the motion. . . . In fact, "the record must show the movant's right to [summary judgment] "with such clarity as to leave no room for controversy," and must demonstrate that his opponent "would not be entitled to [prevail] under any discernible circumstances." ' ' Summary judgment "should be awarded only when the truth is quite clear.' "

If the moving party meets this burden, then and only then is the nonmoving party required to proffer evidence that contradicts the moving party's showing and that proves the existence of a genuine issue of material fact. . . . If the moving party does not meet its burden, however, the nonmoving party is, without making any showing, entitled to a denial of the motion. . . . Although it is risky for a nonmoving party to fail to proffer evidence in response to the moving party's showing, such a failure does not automatically mandate granting of the motion.¹⁶

¹³ See *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC __, __ (slip op. at 11-12) (Mar. 26, 2010); *Advanced Med. Sys., Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

¹⁴ *Celotex Corp. v. Catrett*, 477 U.S. 317, 327 (1986).

¹⁵ *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102.

¹⁶ *McKinney v. Dole*, 765 F.2d 1129, 1135 (D.C. Cir.1985). We note the Supreme Court's ruling in *Celotex* that, when the issue on which summary judgment is sought is one on which the nonmoving party bears the burden of proof, the "burden on the moving party may be discharged

If, considering only the moving party's support for its motion, we determine that it has met its burden, we then look to whether an opponent of the motion has overcome the movant's case by showing a genuine dispute on a material issue of fact. We note in this regard the following recent statements of the Commission:

When a motion for summary disposition is made and supported as described in our regulations, "a party opposing the motion may not rest upon [] mere allegations or denials," but must state "specific facts showing that there is a genuine issue of fact" for hearing. It is not sufficient, however, for there merely to be the existence of "some alleged factual dispute between the parties, for "the requirement is that there be no *genuine* issue of *material* fact." "Only disputes over facts that might affect the outcome" of a proceeding would preclude summary disposition. "Factual disputes that are . . . unnecessary will not be counted."

. . . . At issue is not whether evidence "unmistakably favors one side or the other," but whether "there is sufficient evidence favoring the non-moving party" for a reasonable trier of fact to find in favor of that party. If the evidence in favor of the non-moving party is "merely colorable" or "not significantly probative," summary disposition may be granted.¹⁷

Thus, if the question is a close one we must, in considering the motion opponent's submission, carefully ascertain whether any factual disputes asserted are genuine and relate to a material issue or issues, *i.e.*, issues that would affect the outcome of the proceeding under relevant substantive law.¹⁸ If the opposing party fails to meet this standard, *and* the moving party has successfully shown that there is no genuine dispute on a material issue of fact and that it is entitled to a decision as a matter of law, then we must grant the motion.¹⁹ Any doubt as

by 'showing' . . . that there is an absence of evidence to support the nonmoving party's case." *Celotex*, 477 U.S. at 325. In this proceeding, however, the Applicant of course bears the burden of proof on all issues admitted for hearing. See, e.g. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319, 326 (2005), *aff'd Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage installation), CLI-05-19, 62 NRC 403 (2005) ("While an applicant has the ultimate burden of proof on any issues upon which a hearing is held, hearings are held on only those issues that an intervenor brings to the fore.").

¹⁷ *Pilgrim*, CLI-10-11, 71 NRC at __ (slip op. at 12-13) (quoting 10 C.F.R. § 2.710(b), (d)(2); *Anderson v. Liberty Lobby*, 477 U.S. 242, 247-52 (1986) (noting emphasis in original)).

¹⁸ *Liberty Lobby*, 477 U.S. at 248.

¹⁹ See also *Advanced Med. Sys.*, 38 NRC at 102 ("[I]f the movant makes a proper showing for

to the existence of a genuine issue of material fact is, however, resolved against the moving party.²⁰

In other words, we must in evaluating the motion and responses to it look at *whether “the Applicant has . . . considered the feasibility under NEPA of an alternative consisting of a combination of solar and wind energy, energy storage methods including CAES and molten salt storage, and natural gas supplementation, to produce baseload power, with specific regard to” the four subparts of Alternatives Contention A, as stated above.*²¹ And we must look at whether Applicant has considered this sufficiently to leave no genuine issue of material fact remaining for adjudication in this proceeding, and to show that it is entitled to a decision in its favor as a matter of law.²² Of course, as we discussed in admitting Alternatives Contention A, in considering this question we are governed by NEPA and related case law, and NEPA’s “rule of reason.”²³

With these principles in mind, we turn now to Luminant’s Motion, responses to it, and our analysis and ruling on it.

summary disposition, and if the party opposing the motion does not show that a genuine issue of material fact exists, the Board may summarily dispose of all arguments on the basis of the pleadings.”).

²⁰ *Id.*

²¹ See *supra* text accompanying note 11 (emphasis added).

²² We note that it might theoretically be argued that essentially any “consideration” (by Applicant or by the NRC Staff in the DEIS) would moot the contention at issue, and note the Staff’s argument that in fact the contention at issue is moot. See Staff Response at 7-10. We find it appropriate, however, to address first the substance of Applicant’s Motion, by looking to how – and how well, in the sense of demonstrating that no genuine dispute exists on any material fact and that it is entitled to judgment in its favor as a matter of law – Applicant in its Motion and supporting documents has considered the multiple substantive issues contained within the contention. Our analysis of the substance of Applicant’s Motion and responses to the same is found at Section VI.A of this Memorandum; we address the Staff’s mootness argument in Section VI.B.

²³ See LBP-10-10, 71 NRC at ___ (slip op. at 60-70).

III. Luminant's Motion

Luminant contends that it demonstrates in its motion and the support therefor that “no genuine issue of material fact exists regarding (1) the feasibility and availability of the four-part combination of solar, wind, energy storage, and natural gas supplementation to generate baseload power; and (2) the environmental impacts of the four-part combination, accounting for the possibility of overlapping land uses.”²⁴ It argues that “the undisputed material facts show” that:

(1) Because natural gas is developed, proven, and available for producing baseload power, combinations involving natural gas (including the four-part combination that is the subject of Alternatives Contention A) are also developed, proven, and available for producing baseload power, provided that natural gas supplies the majority of the electricity. Furthermore, because wind, solar, energy storage, and natural gas are each proven and available means for generating electricity, a four-part combination involving wind, solar, energy storage, and natural gas is a feasible and available method for producing baseload power in Texas, even if natural gas does not supply the majority of the electricity. However, such a combination does not exist and has not been proven for producing baseload power.

(2) Combinations of wind and solar power with storage, supplemented with natural gas are not environmentally preferable to CPNPP Units 3 and 4, even assuming overlapping land uses.²⁵

Applicant argues that, “[b]ased upon these undisputed facts, Luminant is entitled to judgment as a matter of law,” adding that “Issue (d) in Alternatives Contention A regarding the costs of solar power is not relevant or material, given that the four-part combination is not environmentally preferable to CPNPP Units 3 and 4.”²⁶

Applicant includes in its Motion a section entitled “Uncontested Facts Regarding Proposed CPNPP Units 3 and 4,” which begins with the statement that the “Intervenors have not contested the location, purpose, capacity, or the significance level of the environmental

²⁴ Motion at 12-13 (footnote omitted).

²⁵ *Id.* at 13.

²⁶ *Id.*

impacts of CPNPP Units 3 and 4 as described in the ER.”²⁷ In this section Applicant recounts these impacts, noting with regard to land use that, of the 7,950 acres of the present Comanche site, the “total area to be disturbed during construction of CPNPP Units 3 and 4 is 675 acres, including permanent structures, the blowdown treatment facility area, and construction laydown areas.”²⁸ Further, the purpose of the new units is “to operate as an independent merchant baseload plant,” which would produce power to be sold in the “Electric Reliability Council of Texas (‘ERCOT’) wholesale market.”²⁹ Each unit would have a “net electrical output of approximately 1600 electric megawatts (‘MWe’)” and, “[b]ased upon a capacity factor of 93% . . . will have a combined average annual energy output of approximately 25,500,000 megawatt-hours (‘MWH’).”³⁰

In the same “Uncontested Facts” section, Applicant makes the following statements about the environmental impacts of the new proposed units:

The adverse environmental impacts of CPNPP Units 3 and 4 upon aesthetics, waste management, environmental justice, historic and cultural resources, air quality, and human health each will be SMALL. The adverse environmental impacts of CPNPP Units 3 and 4 upon land use, water use and quality, and ecological resources may be MODERATE. Living organisms in and around CPNPP Units 3 and 4 would be exposed to low-levels of radiation and radiological effluents. Exposure from liquid pathways, gaseous pathways, or direct radiation from the station operation would be within the limits specified by NRC and EPA regulations. Accordingly, human health impacts and environmental impacts from radiological effluents from CPNPP Units 3 and 4 would be SMALL. Similarly, the risk-based radiological impacts of accidents at CPNPP Units 3 and 4 will be SMALL.³¹

²⁷ *Id.* at 14.

²⁸ *Id.*

²⁹ Motion at 14. According to the ER, and as Intervenor’s point out, ERCOT is a “membership-based, not-for-profit corporation, overseen by the [Texas Public Utility Commission], that manages the flow of electric power, ensures transmission reliability, and serves as the central hub for retail transactions.” ER at 8.1-6; Intervenor’s Response at 2.

³⁰ *Id.*

³¹ *Id.* at 15 (footnotes omitted).

Applicant cites various parts of its ER and the NRC Staff's Draft Environmental Impact Statement (DEIS)³² in support of the preceding statement.³³ Applicant also provides, as a backdrop for both this and parts of its Statement of Material Facts, a summary explanation of the significance levels of environmental impacts that are used, which are taken from a table appended to certain NRC environmental regulations relating to license renewal of power plants.³⁴ A footnote to this table refers to the significance levels of impacts; indicates that "[u]nless the significance level is identified as beneficial, the impact is adverse, or in the case of 'small,' may be negligible"; and further provides the following "definitions of significance":

SMALL--For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE--For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE--For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.³⁵

Asserting that there is "No Issue of Material Fact Regarding the Feasibility and Availability of the Four-Part Combination,"³⁶ Applicant discusses such feasibility and availability in its Motion and goes on to assert further that there is no issue of material fact as to the environmental impacts of wind, solar, natural gas power, and energy storage taken either

³² NUREG-1943, Environmental Impact Statement for the Combined Licenses (COLs) for Comanche Peak Nuclear Power Plant Units 3 and 4 – Draft Report for Comment (Aug. 2010) (ADAMS Accession No. ML102170030) [hereinafter DEIS].

³³ Motion at 15 nn.79-84. In footnote 80 of the Motion, Applicant cites the DEIS at 9-32, and goes on to state that its own "ER determined that the adverse environmental impacts of CPNPP Units 3 and 4 upon land use, water use and quality, and ecological resources will each be SMALL. . . . Although the Intervenor did not challenge these conclusions, this Motion conservatively assumes that the characterization of these impacts in the DEIS as MODERATE is correct." *Id.* at 15 n.80 (citing ER, tbl. 9.2-1).

³⁴ *Id.* at 12. See also *infra* note 55.

³⁵ 10 C.F.R. Part 51, Subpt. A, App. B, Table B-1, n.3.

³⁶ Motion at 16.

separately or as a four-part combination.³⁷ Regarding the four-part combination, Applicant states that “[t]here are many possible combinations of wind and solar power, storage, and natural gas,” notes NEPA case law and Council on Environmental Quality guidance that it is not necessary to examine “every possible combination,” and presents two “bounding cases” for the purpose of “illustrat[ing] the range of combinations.”³⁸

The first of Applicant’s “bounding cases” assumes the amounts of energy provided by the largest existing wind and solar facilities (735 MWe and 354 MWe, respectively), combined with storage (assumed to be 100% efficient with no environmental impacts) and supplemented with natural gas.³⁹ The second case assumes:

³⁷ *Id.* at 22, 32; *see id.* at 16-43.

³⁸ *Id.* at 34 (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 474, 479 (2003); Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981); Motion, Attached Joint Affidavit of Donald R. Woodlan, John T. Conly, Ivan Zujovic, David J. Bean, John E. Forsythe, and Kevin Flanagan (Aug. 26, 2010) ¶¶ 74-75 [hereinafter Joint Affidavit]); *see id.* ¶¶ 74-80; *see also* 40 C.F.R. § 1502.14. We note, regarding the Joint Affidavit, that Mr. Woodlan is the Manager of Nuclear Regulatory Affairs NuBuild for Luminant, has over 35 years’ experience in the commercial nuclear industry, and has an M.S. in Electrical Engineering. Mr. Conly is Luminant’s COL Application Project Manager, also has over 35 years’ experience in the nuclear industry, and has a B.S. in Electrical Engineering. Mr. Zujovic is a Lead Engineer for Enercon Services, Inc. (apparently a contractor that assisted in the preparation of the Application at issue, including the ER), and the lead author of the Application section on alternative energy sources; he has over 13 years’ experience in “process evaluation and engineering, remediation design, site assessment, and environmental compliance and permitting,” and is a Florida-licensed Professional Engineer with a B.S.E. and M.S. in chemical engineering. Mr. Bean is a Senior Technical Specialist with Enercon Services who provides technical and environmental support for the preparation of COL applications; he has over 33 years’ experience in the environmental industry, a B.S. in biology, and an M.S. in zoology. Mr. Forsythe is a Project Director for Enercon with more than 20 years’ experience in environmental planning projects and environmental compliance studies, a B.S. in Environmental Studies and Planning, and a Masters in City and Regional Planning. Mr. Flanagan is a Senior Project Manager for Enercon with over 20 years’ experience performing geological, hydrogeological, and environmental evaluations, and B.S. and M.S. degrees in geology. Joint Affidavit ¶¶ 1-18.

³⁹ Motion at 34. In this case Applicant assumes a “conservative capacity factor for a wind facility in Texas of 55% (which is the maximum seasonal capacity factor for a wind facility in Texas) and no energy loss during storage and conversion,” which would result in the wind/CAES portion of the combination generating “approximately 3,600,000 MWh annually. *Id.* at 34-35. Further, according to Applicant, “[b]ased upon maximum capacity factor for a solar facility (32%)

the use of a wind plant and CAES facility with a nameplate capacity of 3200 MWe, a solar power and molten salt storage facility with a nameplate capacity of 3200 MWe, and a natural-gas fired plant that supplies the difference between available energy from both wind and solar and the total energy required, *i.e.* the energy that would be generated annually by CPNPP Units 3 and 4. Again, the amount and type of storage in this Bounding Case are not material since the Bounding Case assumes that the storage is 100% efficient and has no environmental impacts.⁴⁰

Applicant discusses in its Motion the environmental impacts of both cases,⁴¹ and summarizes the impacts in a table taken from the Joint Affidavit of its experts.⁴² This table provides:

and no energy loss during energy storage and conversion, the solar power and molten salt storage facility portion of the combination would generate approximately 990,000 MWh annually.” *Id.* at 35. This leads Applicant to the conclusion that “[n]atural gas would be used to provide energy in sufficient quantity to supply the difference between the annual energy production of CPNPP Units 3 and 4 (25,500,000 MWh) and the energy produced by the combination of wind, CAES, solar, and molten salt storage.” *Id.* Thus, Applicant states, “natural gas would provide approximately 21,000,000 MWh of electricity per year, requiring a 2800-MWe natural-gas fired plant (assuming an 85% capacity factor).” *Id.* Applicant based these assumptions on facts stated in its experts’ Joint Affidavit, *id.* at 34-35, nn. 201-204 (citing Joint Affidavit ¶ 75), and also notes that bounding case 1 is “similar to the combination evaluated in the DEIS, which assumed 650 net MWe of wind with storage and 330 net MWe of solar with storage, with the remaining energy predominately supplied by natural gas.” Motion at 34 (citing DEIS at 9-28 to 9-29).

⁴⁰ *Id.* at 38 (citing Joint Affidavit ¶ 76). In this case Applicant assumes, as with the first case, “a conservative capacity factor for a wind facility in Texas of 55% . . . and no energy loss during storage and conversion.” Motion at 38. Under these assumptions, Applicant states that the “combined wind and CAES facility would generate approximately 15,500,000 MWh annually,” and that, “[b]ased upon the maximum capacity factor for a solar facility (32%) and no energy loss during energy storage and conversion, the combined solar power and molten salt storage facility would generate approximately 9,000,000 MWh annually.” *Id.* Further, “[n]atural gas would be used to provide energy in sufficient quantity to supply the difference between the annual energy production of CPNPP Units 3 and 4 (25,500,000 MWh) and the energy produced by the combination of wind, CAES, solar, and molten salt storage,” and thus “natural gas would need to provide approximately 1,000,000 MWh of electricity per year, requiring approximately one 135-MWe natural-gas fired plant (assuming an 85% capacity factor).” *Id.*

⁴¹ *Id.* at 35-37, 39-41.

⁴² *Id.* at 40-42; see Joint Affidavit ¶ 80.

Category	Nuclear	Bounding Case 1	Bounding Case 2
Air Quality	SMALL	SMALL to MODERATE	SMALL
Land Use	MODERATE	LARGE	LARGE
Ecology	MODERATE	MODERATE	MODERATE
Water Use and Quality	MODERATE	MODERATE	SMALL to MODERATE
Waste Management	SMALL	SMALL	SMALL
Radiological Impacts	SMALL	SMALL	SMALL
Human Health	SMALL	SMALL	SMALL
Socioeconomic	MODERATE (Beneficial)	MODERATE (Beneficial)	MODERATE (Beneficial)
Aesthetics	SMALL	LARGE	LARGE
Historic and Cultural Resources	SMALL	SMALL	SMALL
Environmental Justice	SMALL	SMALL	SMALL ⁴³

Applicant supports its Motion with a Statement of Material Facts,⁴⁴ which includes sections on the feasibility of the four-part combination, the environmental impacts of wind and solar power as well as of natural gas alone, energy storage, overlapping land uses, and the relative environmental impacts of the four-part combination as compared to the proposed new Comanche Peak Units 3 and 4.⁴⁵ The Statement is supported with specific and detailed citations to the Joint Affidavit, Applicant's ER (including a December 2009 update that created a new section, Section 9.2.2.11⁴⁶), and the NRC Staff's August 2010 DEIS.

⁴³ Motion at 42; Joint Affidavit ¶¶ 80. In the table, the radiological impacts for the bounding cases are assumed to be zero. *Id.*; Motion at 42 n. 233. Also, Applicant points out that the table assumes the beneficial socioeconomic impacts of CPNPP Units 3 and 4 will be moderate, to be conservative, in contrast to the DEIS assignment of large beneficial socioeconomic impacts. Motion at 42 n.234; Joint Affidavit at ¶¶ 80.

⁴⁴ Motion, Attached Statement of Material Facts on Which There is No Genuine Issue To Be Heard (Aug. 26, 2010) [hereinafter Luminant Statement or Statement].

⁴⁵ *Id.* at 2-14.

⁴⁶ See ER Update.

In the first section of its Statement, Applicant states among other things that both wind and solar power are “developed and proven” technologies used in the ERCOT area, most of the generation capacities of which are in western Texas and the western part of the ERCOT region, but that neither used alone is capable of producing baseload power.⁴⁷ Applicant goes into some detail in this section about the capacities of a number of installed and in-development projects.⁴⁸ In the first section Applicant also states that, while pumped hydropower storage is not available in the ERCOT area, both compressed air energy storage and molten salt thermal storage are promising storage mechanisms that exist; that several combined renewable energy and CAES projects are under development; and that combined solar-molten salt storage plants have been proposed.⁴⁹

Applicant recognizes that the four-part combination at issue is “developed, proven and available (i.e., reasonable) for producing baseload power, provided that natural gas supplies the majority of the electricity.”⁵⁰ Further, Applicant indicates, while a four-part combination of wind, solar, energy storage, and supplemental natural gas (not producing the majority of the electricity) does not currently exist anywhere in the world, it is a “theoretically feasible and available method for producing baseload power in Texas.”⁵¹ However, according to Applicant’s Statement,

A four-part combination involving wind, solar, and natural gas, in which natural gas does not supply the majority of the electricity, does not exist anywhere in the world.⁵²

⁴⁷ Luminant Statement ¶¶ I.A.1-4, I.B.1-4, at 2-3.

⁴⁸ See *id.*

⁴⁹ *Id.* ¶¶ I.C.1-5, at 3-4.

⁵⁰ *Id.* ¶ I.F.1, at 4-5.

⁵¹ *Id.* ¶ I.F.2, at 5. We note that in its Motion, Applicant omits the qualifier, “theoretically,” and states that “the four-part combination (with natural gas producing less than half of the electrical energy) is technologically feasible and available, but is not proven for generating baseload power.” Motion at 21; see also *supra* text accompanying note 25.

⁵² Luminant Statement, ¶ I.F.3, at 5.

In addition:

If the largest wind, solar, CAES, and molten salt storage facilities were combined to produce baseload power, their total capacity would be less than 1100 MWe. Given the capacity factors of the individual elements, the combination would be able to generate less than half of the energy to be generated by CPNPP Units 3 and 4 [which, according to the ER Introduction at 1.0, will each have “a net electrical output of approximately 1600 MWe,” or a total of 3200 MWe].⁵³

Further, according to Applicant:

Utilities and merchant generators use proven technologies for large generating facilities. Before committing to a technology (including a combination of technologies) for a large generating facility, it is typical and prudent for a utility or merchant generator to establish that the technology has been demonstrated at an existing commercial generating facility, or to develop a pilot project or a small-scale facility to prove that the technology works and is cost-effective.⁵⁴

The second section of Applicant’s Statement concerns the environmental impacts of wind, solar, and natural gas power. To illustrate its level of detail, we find it appropriate to quote it in full:

A. Wind Power

1. Wind turbines vary in size, typically from about 1.5 to 2.5 MWe (and some are larger). The height of towers varies, typically from 200 to 300 feet tall.
2. A wind-power project of nameplate capacity comparable to the proposed CPNPP Units 3 and 4 would require approximately 1600 above-ground towers, assuming that each tower supported a 2-MWe wind turbine.
3. The 735-MWe Horse Hollow Wind Energy Center utilizes a total land area of 47,000 acres.
4. Wind turbines must be sufficiently spaced to maximize capture of wind energy. Typically, 100 acres of unobstructed area is needed around each wind turbine, of which a quarter to half acre is needed for actual placement and support of the wind tower.
5. About 2 to 5% of the land needed for a wind farm is used for towers, roads, and support facilities. The remaining land can be used for other purposes, such as agriculture and ranching, provided that the use does not interfere with wind flow. However, a wind facility would preclude a number of land uses, particularly uses requiring above-ground structures that could interfere with, or disrupt, the wind flow patterns driving the turbines.

⁵³ *Id.* ¶ I.F.5, at 5.

⁵⁴ *Id.* ¶ I.F.6, at 5 (footnote omitted).

6. A wind facility with a capacity equivalent to CPNPP Units 3 and 4 would cover approximately 204,000 acres of land, of which approximately 4100 to 10,200 acres would be occupied by wind turbines, support facilities, and roads.

7. Operation of wind facilities comparable in capacity to CPNPP Units 3 and 4 likely would necessitate construction and operation of new transmission lines from western Texas (where most of the wind potential is located) to eastern Texas (where most of the demand is located). Construction and operation of new transmission lines likely would entail additional land use and terrestrial impacts.

8. Potential adverse impacts of wind power on water quality, air quality, human health, and waste management are SMALL.

9. A wind power facility with a capacity of 3200 MWe would have a LARGE impact on land use based upon the following considerations:

a. The total amount of land for the facility would be approximately 204,000 acres.

b. About 2 to 5% of the total amount of land would be occupied by the wind towers, roads, and support facilities for the wind farm, or approximately 4100 acres to 10,200 acres. This land would not be available for other uses.

c. Some compatible land uses, such as agriculture and ranching, could utilize the land not occupied by the wind towers, roads, and support facilities.

d. A number of land uses, particularly uses requiring above-ground structures that could interfere with, or disrupt, the wind flow patterns driving the turbines, would not be compatible for land not occupied by the wind towers, roads, and support facilities.

10. A wind power facility with a capacity of 3200 MWe likely would have MODERATE impacts on ecological resources, protected species, and cultural resources, depending upon the location of the facility, due to the large amounts of land that would be disturbed for such a facility. Additionally, depending on location, some wind farms have caused bird kills.

11. A wind power facility with a capacity of 3200 MWe would have a LARGE adverse impact on aesthetics due to the visibility of a large number of the tall towers and blades spread over hundreds of thousands of acres.

12. A wind power facility with a capacity of 3200 MWe would have a MODERATE beneficial impact on socioeconomics.

B. Solar Power

1. There are two types of solar plants: solar thermal and photovoltaic cells. Solar thermal power systems convert sunlight into electricity using heat as an intermediate step. Photovoltaic cells convert sunlight directly into electricity using semiconducting materials.

2. Operation of solar facilities with a capacity of 3200 MWe likely would necessitate construction and operation of new transmission lines from western Texas (where most of the solar potential is located) to eastern Texas (where most of the demand is located).

3. The area of land required for a solar plant depends on the available solar insolation and type of plant. Current solar power plants utilize from approximately 3.8 to 10 acres per MWe.
4. Based on the 3.8 to 10 acre per MWe, a 354-MWe solar facility would utilize approximately 1350 to 3500 acres of land.
5. A solar plant with a capacity equivalent to CPNPP Units 3 and 4 would require approximately 38,000 acres.
6. The potential adverse impacts of solar power on air quality, human health, and waste management would be SMALL.
7. The potential adverse impacts of solar power on water quality would be SMALL for a facility using photovoltaics or dry cooling.
8. A 3200-MWe solar thermal facility with wet cooling would require roughly the same amount of water as CPNPP Units 3 and 4. Such a facility likely would cause MODERATE adverse impacts on water use and quality.
9. A solar power facility with a capacity of 3200 MWe would have a LARGE adverse impact on land use and aesthetics due to the large number of solar panels or reflectors covering tens of thousands of acres required for the solar facility.
10. A solar power facility with a capacity of 3200 MWe likely would have MODERATE impacts on ecological resources, protected species, and cultural resources, depending upon the location of the facility, due to the large amounts of land that would be disturbed for such a facility.
11. A solar facility with a capacity of 3200 MWe would have a MODERATE beneficial impact on socioeconomics due to job creation.

C. Natural Gas

1. A 3200 MWe natural gas-fired alternative to CPNPP Units 3 and 4 would have SMALL to MODERATE impacts on air quality due to the following emissions:

- SO_x = 253 tons per year ("Tpy")
- NO_x = 2676 Tpy
- CO = 1115 Tpy
- PM = 142 Tpy (all particulates are PM_{2.5})
- CO₂ = 8.2 million Tpy

These air quality impacts are substantially greater than those caused by nuclear generation.

2. Land-use impacts for construction and operation of a 3200-MWe natural gas-fired plant would be MODERATE due to the following:

- a. A 3200-MWe natural gas-fired plant would require approximately 350 acres, based on the NUREG-1437 factor of 0.11 acre/MWe as the land use requirement for gas-fired plants.
- b. A 3200-MWe natural gas-fired plant at the proposed CPNPP Units 3 and 4 site would require approximately 11,500 acres of additional land for natural gas wells, collection stations and pipelines, based on the NUREG-1437 factor of 3.6 acres/MWe as the additional land use requirement for gas-fired plants.

3. Overall, a 3200-MWe natural-gas fired plant would cause MODERATE adverse impacts to land use, water use and quality, and ecology.

4. A natural-gas fired plant likely would produce SMALL adverse impacts on waste management, human health, aesthetics, environmental justice, and historical and cultural resources.⁵⁵

Regarding CAES, Applicant states that this involves “using compressors powered by the generation source to pump air into a storage facility, such as an underground cavern.”⁵⁶ The compressed air is then “used in combination with a heat source, such as natural gas, to drive turbines and generate electricity”; some energy is lost during the storage and conversion process.⁵⁷ If natural gas is the heat source, between 1/3 and 1/2 of that needed in a natural gas plant is required for generating electricity from the CAES, according to Applicant, and both existing CAES facilities use natural gas as the heat source.⁵⁸ This use of natural gas will cause air quality impacts, and there are also possible water quality and waste management impacts depending on the geological formation that is used.⁵⁹

Applicant concludes its Statement of Material Facts as follows:

Relative to CPNPP Units 3 and 4, four-part combinations of wind, solar, energy storage, and natural gas that would produce an equivalent amount of baseload power would have greater environmental impacts in the areas of land use and aesthetics; and would possibly have greater environmental impacts in the area of air quality (depending upon the amount of natural gas used).⁶⁰

Applicant in its Motion argues, regarding sub-issue (d) of Alternatives Contention A,⁶¹ that “[t]he extent to which operation and maintenance costs of a solar facility may present a comparative

⁵⁵ Luminant Statement at 6-10 (citations omitted). Applicant explains at the beginning of its Statement that its use of the SMALL, MODERATE, and LARGE environmental effects classifications is taken from significance levels established by the NRC. *Id.* at 1; *see supra* text accompanying note 35.

⁵⁶ *Id.* ¶ III.A.1, at 10.

⁵⁷ *Id.* at 11.

⁵⁸ *Id.* ¶¶ III.A.2, III.A.3, at 11.

⁵⁹ *Id.* ¶¶ III.A.4, III.A.8, at 11-12.

⁶⁰ *Id.* ¶ V.A, at 13-14.

⁶¹ *See supra* text accompanying note 11.

benefit is immaterial since the four-part combination is not environmentally preferable to CPNPP Units 3 and 4.”⁶²

IV. Intervenors’ Response to Motion

Intervenors respond to Applicant’s motion by among other things arguing that it is merely a “rehash of points and arguments raised [in Applicant’s] objections to the admission of Contention 18 and Alternatives Contention A,” providing “little new information,” and that the “new information, such as the bounding cases, are defective both methodologically and analytically.”⁶³ They rely on an argument that the four-part combination exists “in the makeup of the ERCOT grid, presently.”⁶⁴ They assert:

The Applicant’s argument hinges on whether the four part alternative is proven and exists. But the material legal question is whether the four part alternative is feasible, and it is. Based the [sic] foregoing the Applicant is not entitled to summary disposition on the issue of whether the four part alternative exists because it has conceded that it is feasible.⁶⁵

Intervenors further urge, in their legal argument, that the proposed new Comanche Peak units “are not more environmentally preferable [sic] than combinations of alternatives,”⁶⁶ that aesthetic impacts may vary according to individual location,⁶⁷ that Applicant’s comparison of water-related impacts is “imprecise and inconsistent,”⁶⁸ that certain advantages of solar are not

⁶² Motion at 44; *see id.* (citing *S.C. Elec. & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 & 3)*, CLI-10-1, 71 NRC __, __ (slip op. at 30-31) (Jan. 7, 2010)).

⁶³ Intervenors’ Response at 1-2.

⁶⁴ *Id.* at 5; *see id.* at 3-5.

⁶⁵ *Id.* at 6.

⁶⁶ *Id.*

⁶⁷ *Id.* at 7 (citing *Utahans for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1172 (10th Cir. 2002); *In the Matter of Public Service Co. of New Hampshire, et al.* (Seabrook Station, Units 1 and 2), 7 NRC 477, 504-508 (1978)).

⁶⁸ *Id.* at 9. Regarding Intervenors’ arguments about water usage, at oral argument Applicant’s counsel pointed out that Intervenors’ assertion that the proposed new units will “consume” 1,317,720 gallons per minute, *see id.*, was incorrect, as the figure is for “system flow rate, not a water consumption rate.” Transcript (Tr.) at 1018.

considered by Applicant,⁶⁹ and that Applicant did not take into account that “the cumulative effects of a nuclear plant include the permanent loss of land for waste disposal.”⁷⁰

Intervenors provide little support in the way of facts, however, for their arguments and allegations. In their actual Response to Applicant’s Statement of Material Fact, they contest only five of its provisions.⁷¹ First, they challenge Applicant’s statement that “[p]umped hydropower storage is not available in the ERCOT area,”⁷² averring that this is not stated in the citation provided for the statement.⁷³ (Applicant at oral argument responded with citations to parts of its ER and ER Update.⁷⁴) Next, Intervenors challenge Applicant’s statement that “[s]everal combined renewable energy and CAES projects are under development,”⁷⁵ urging the following:

The Affiants at ¶ 53 state that the Luminant-Shell wind CAES project is not for baseload generation with no citation to supporting documentation or other evidence. Moreover, the Affiants do not state that the project is technically unable to provide dispatchable power at competitive costs. Therefore, this statement of fact is controverted.⁷⁶

Further, Intervenors controvert Applicant’s statement that “[m]ost of the available wind and solar power in Texas is in the western portion of the state” and that “[t]here currently is transmission congestion in the ERCOT region,”⁷⁷ stating as follows:

CAES facilitates transmission and provides ancillary [sic] that would help to relieve congestion. Dr. Ray Dean Report (II), p.*, attached. To the extent

⁶⁹ Intervenors’ Response at 10-11.

⁷⁰ *Id.* at 8 (citing ER, Table 10.1-2, at 10.1-22).

⁷¹ See *id.*, Attached Response to Applicant’s Statement of Facts Pursuant to 10 C.F.R. 2.710(a) (Sept. 15, 2010) [hereinafter Intervenors’ Response Statement].

⁷² See Statement at 3.

⁷³ Intervenors’ Response Statement at 1.

⁷⁴ Tr. at 1030 (citing ER at 9.2-12, 9.2-13), 1037 (citing ER Update at 9.2.2.11.2.1).

⁷⁵ See Statement at 3.

⁷⁶ Intervenors’ Response Statement at 1

⁷⁷ See Statement at 4.

Applicant has failed to acknowledge such this statement of fact is controverted as incomplete.⁷⁸

Intervenors also challenge Applicant's statement that "[w]ith a few exceptions, wind, solar, and natural gas have been operated as independent projects rather than as part of a combination,"⁷⁹ arguing that "[t]his statement is inherently misleading in light of the fact that there are combinations of various generating modes on ERCOT's system at any given time."⁸⁰ Finally, Intervenors contest Applicant's statement that, "[i]f natural gas is used as the heat source for CAES, the natural gas usage for generating electricity from CAES is between one third and one half that needed to generate the same amount of electricity at a natural gas plant,"⁸¹ asserting that the "average output of a CAES plant is lower than its maximum output and the gas consumption is only approximately 10% of a comparably sized gas plant."⁸²

Intervenors contest neither any part of the environmental impacts section of Applicant's Statement, nor the final comparison in Applicant's Statement of the environmental effects of the two new proposed units and the four-part combination.⁸³ They do, however, provide comments by Ray Dean, Ph.D., critiquing various parts of Applicant's Motion.⁸⁴

⁷⁸ Intervenors' Response Statement at 1. At oral argument, Intervenors clarified that the word "services" was intended to be included after the word "ancillary" (which we take as intended to be "ancillary") and that the reference to Dr. Dean's report was to page 4 of Dr. Ray Dean's September 15, 2010, Report. Tr. at 1032-33.

⁷⁹ Statement at 5.

⁸⁰ Intervenors' Response Statement at 2. Intervenors make similar arguments in their Response. Intervenors' Response at 3-5; see *also* Tr. at 1014, 1024, 1034-35.

⁸¹ See Statement at 11.

⁸² Intervenors' Response Statement at 2.

⁸³ See Intervenors' Response Statement.

⁸⁴ Intervenors' Response, Attached Response to Luminant's [Motion], Ray Dean (Sept. 15, 2010) [hereinafter Dean 9/15/10 Report]; Attached Raymond H. Dean, Ph.D., Comments Regarding Luminant's Revision to the Comanche Peak Nuclear Power Plant, Units 3 & 4 COL Application Part 3 – Environmental Report (undated) [hereinafter Dean Undated Report]; see *also* Affidavit of Raymond Dean, Ph.D. (Sept. 24, 2010), in which Dr. Dean attests that the two reports both "contain information and opinions that are true and correct to the best of [his] personal and professional knowledge." According to his Resume, Dr. Dean is Professor

Dr. Dean in two reports submitted with Intervenor's Response⁸⁵ addresses land use relating to CAES,⁸⁶ and critiques in a general way Applicant's "bounding cases," touching on issues including: (1) environmental impacts of renewable energy alternatives; (2) how proximity to water affects the value of land; (3) feasibility of placing wind and solar facilities in desert areas; (4) land location and quality, and their relation to land values; (5) placement of wind turbines as it affects land use impacts; (6) the current greater competitiveness of wind power over solar power and the impact of this; (7) the ability of solar power to replace natural gas consumption in CAES; and (8) the benefits of placing solar collectors over already-developed land and the related ability to reduce (a) peak currents in distribution and transmission systems, (b) transmission problems, and (c) land use impacts."⁸⁷

In oral argument, Intervenor's Counsel further urged among other things that Applicant had not met its burden of showing no genuine dispute on a material issue of fact,⁸⁸ because it did not consider aesthetic impacts on a location-specific basis,⁸⁹ and because of an asserted great difference between the water use and quality impacts of nuclear compared to a combination alternative.⁹⁰ Counsel, however, at one point conceded that issues (a), (b), and (c) of Alternatives Contention A were not in dispute. In response to a question on what would

Emeritus, Electrical Engineering and Computer Science, University of Kansas; has an M.S. in nuclear reactor design, control theory and acoustics, and a Ph.D. in plasma physics and solid-state devices; and pre-retirement was a Registered Professional Engineer. In addition, while he was at the University of Kansas, he was a faculty advisor for a team of students who "designed, built, and operated a small concentrating solar power system for the 1994 'Solar Two Challenge,'" which won second place in a contest "conducted at the site of the Solar II facility near Barstow, CA," and sponsored by the Department of Energy and several utilities. See Resume of Raymond H. Dean (Jan. 4, 2010).

⁸⁵ See Dean 9/15/2010 Report; Dean Undated Report.

⁸⁶ Dean Undated Report at 5-7.

⁸⁷ Dean 9/15/2010 Report at 1-6.

⁸⁸ See Tr. at 972.

⁸⁹ See, e.g., *id.* at 979-80, 988-93.

⁹⁰ See *id.* at 995-98.

remain for hearing on the contention, he stated, "It appears that we have agreed that there is really no contest on parts A, B, and C. Part D as to the reasonableness, there does appear to be a contested issue of fact in that regard."⁹¹ Counsel argued that if Applicant's impacts comparison table⁹² were modified to make the water impacts of both combination bounding cases "small," this "would begin again to tip the balance in favor of renewables."⁹³ Further, he urged:

I think that we have shown that it is preferable . . . it's preferable on the aesthetics for the reasons we have argued and as a legal matter they've not carried their burden in that regard. And in terms of the more specific environmental piece, in terms of water usage, again we think that their table is not adequate to prove that the four-part alternative is not environmentally preferable.⁹⁴

IV. NRC Staff's Response to Motion; Mootness Arguments

The NRC Staff supports Applicant's Motion and also argues that Contention 18 and Alternatives Contention A are moot, based on the Staff's consideration in the DEIS of a combination alternative including solar and wind power, energy storage, and natural gas supplementation.⁹⁵

In the DEIS, the Staff posits that "while individual alternatives may not be economically or technologically competitive for baseload power generation, it is conceivable that a combination of alternatives might be cost effective as an alternative to the 3200 MW(e) that would be generated from the new units."⁹⁶ The Staff's

review team considered a spectrum of energy alternatives that were reasonable for the ERCOT region and developed a combination of alternatives comprised of 650 net MW(e) wind power generation with storage (for example, CAES involving caverns or salt

⁹¹ *Id.* at 1028.

⁹² *See supra* text accompanying note 43.

⁹³ Tr. at 996.

⁹⁴ *Id.* at 1028-29.

⁹⁵ Staff Response at 2, 8-10.

⁹⁶ DEIS at 9-28.

domes in Texas); 430 net MW(e) biomass, municipal solid waste, geothermal, and solar with energy storage; and four 530 MW(e) [2120 net MW(e)] natural-gas-fired, combined-cycle generating units using closed-cycle cooling with cooling towers at the CPNPP site.⁹⁷

The Staff analyzed the availability and feasibility of this combination,⁹⁸ noted that a “portion of the land required may be available for other compatible uses such as agriculture,”⁹⁹ but ultimately concluded that the combination alternative would involve greater land use,¹⁰⁰ and that “there are no environmentally preferable, technically reasonable alternatives to baseload nuclear power.”¹⁰¹

Intervenors challenge the mootness argument, contending that there remain issues of site-specific aesthetic impacts and the practicability of the alternatives.¹⁰² Staff responds, arguing among other things that Intervenors did not include site-specific aesthetic impacts in their alternatives contention, and in any event that this was considered in the DEIS and the ER.¹⁰³ Applicant responds that Intervenors’ arguments are supported only by general authority that does not support the proposition that there is any “continuing controversy related to (1) the site-specific aesthetic impacts of the four-part combination of wind, solar, storage, and natural gas supplementation; and (2) the practicability of the four-part combination.”¹⁰⁴ Among other things, Luminant points out that the DEIS addresses aesthetic impacts of the Staff’s examined combination; that Luminant addresses the characteristics of a site in west Texas for the four-

⁹⁷ *Id.*

⁹⁸ *Id.* at 9-28 to 9-30.

⁹⁹ *Id.* at 9-31.

¹⁰⁰ *Id.* at 9-32.

¹⁰¹ *Id.*

¹⁰² Letter from Robert V. Eye, Kauffman & Eye, to Ann Marshall Young *et al.*, Re: Mootness question from oral argument on Oct. 28, 2010 (Nov. 4, 2010); *see also* Tr. at 1007.

¹⁰³ NRC Staff Response to Intervenors’ Letter on Mootness (Nov. 10, 2010) at 7-10 (citing LBP-09-17, 70 NRC ___ at 380, 382; LBP-10-10, 71 NRC ___ (slip op. at 74-75, 86-87); ER at 9.2-9, 9.2-11; DEIS at 9-23, 9-30, 9-31; 10 C.F.R. §2.309(f)(2)).

¹⁰⁴ Letter from Steven P. Frantz, Partner, Morgan, Lewis & Bockius, to Ann Marshall Young *et al.* (Nov. 11, 2010) at 1 [hereinafter Frantz Letter].

part combination it evaluated, and compared these to the aesthetic impacts of the proposed new Comanche Peak units; and that Intervenors did not contest Applicant's Statement of Material Fact V.A,¹⁰⁵ in which it addressed a comparison between the environmental impacts of the proposed new units and the four-part combination, including aesthetic impacts.¹⁰⁶ In addition, according to Applicant, issues relating to the reasonableness of the four-part combination, including practicability, are also moot, based on the DEIS's discussion of reasonableness of the combination examined therein, and Luminant's discussion on the reasonableness of the four-part combination.¹⁰⁷

VI. Licensing Board's Analysis and Ruling

We conclude that Applicant has shown that there exists no genuine dispute of material fact on the issues contained in Alternatives Contention A and those remaining parts of Contention 18 that are coextensive with Alternatives Contention A, and that Applicant is entitled to a favorable decision on its Motion as a matter of law. Moreover, the contentions are in any event moot. These conclusions are based on the following analysis.

A. There is No Genuine Issue of Material Fact

First, considering Applicant's Motion and supporting Statement and Affidavit standing alone, we find that Applicant has shown that no genuine dispute exists on any material issue of fact. Its Motion, Statement of Material Facts, and supporting Joint Affidavit are detailed and extensively address all relevant issues.¹⁰⁸ Applicant agrees that the four-part combination at issue is developed, proven, available and reasonable, if natural gas provides the majority of the

¹⁰⁵ See *supra* note 60 and accompanying text.

¹⁰⁶ Frantz Letter at 2; see *also* Tr. at 1008.

¹⁰⁷ Frantz Letter at 3.

¹⁰⁸ We note that, while we recount Applicant's bounding cases and impacts comparison table in our summary of Applicant's motion, we base our conclusions here primarily on those parts of Applicant's Statement of Material Facts that Intervenors have not responded to or controverted in any way.

power.¹⁰⁹ It also concedes that, even if natural gas does not provide the majority of power, the four-part combination is at least theoretically feasible, but points out that no such combination exists anywhere in the world.¹¹⁰ It shows that a wind-solar-storage combination would produce less than half the 3200 MWe the proposed units would produce.¹¹¹ Applicant states that it is not reasonable or prudent for a utility or merchant generator to use a technology that has not been demonstrated, either at an existing commercial generating facility or in a pilot project or small-scale facility that shows it works and is cost-effective.¹¹² Applicant goes into detail on the environmental impacts of the four-part combination and compares these impacts to those of the proposed new units, concluding that the impacts of the combination would be greater, primarily as to land use and aesthetics.¹¹³

We note with regard to land use that Applicant has not quantified the amounts of land in a wind farm that might be used for overlapping purposes. However, it has not been disputed that the area involved with the new units is between 675 and 7950 acres (the latter figure being the total area of the site, including both existing and proposed new units) – much less than the undisputed figure of 204,000 acres for a 3200 MWe capacity wind farm.¹¹⁴ Even giving the Intervenor the benefit of the doubt by, for example, halving the latter figure and then very conservatively assuming that 75% of a 102,000 acre wind farm has overlapping usage, this would still leave the remaining 25,000 acres greatly outweighing the acreage involved with the proposed new units. Thus, even further discounting Applicant's Statement of Material Facts

¹⁰⁹ See *supra* text accompanying note 50.

¹¹⁰ See *supra* text accompanying notes 51, 52.

¹¹¹ See *supra* text accompanying note 53.

¹¹² See *supra* text accompanying note 54.

¹¹³ See *supra* text accompanying notes 55, 60; see also text accompanying note 43.

¹¹⁴ See *supra* text accompanying notes 28, 55 (¶ A.9.a).

insofar as it attributes greater impacts to the combination on aesthetics and possibly greater impacts as to air quality, the land use impacts difference is significant.

Based on the preceding, without considering Intervenors' submissions, we would conclude that Applicant has reasonably and sufficiently "considered the feasibility under NEPA of an alternative consisting of a combination of solar and wind energy, energy storage methods including CAES and molten salt storage, and natural gas supplementation, to produce baseload power," with specific regard to:

- (a) the reasonable availability of the four parts of such combination for consolidation into an integrated system to produce baseload power;
- (b) the feasibility of the use of such combination in the area of Texas served by the Comanche Peak plant; and
- (c) the extent to which there may be efficiencies arising from overlapping uses of land for each of the four parts of the combination as well as for other reasonable purposes.¹¹⁵

Regarding sub-issue (d), which requires consideration, "if it is shown that such an alternative is environmentally preferable, of the extent to which operation and maintenance costs of solar in such combination may be a comparative benefit,"¹¹⁶ Applicant has also demonstrated that this is immaterial because of its showing that the combination alternative is not environmentally preferable.

All material facts having been considered by Applicant, and Applicant having shown that there exists no genuine issue of material fact and that a decision in its favor is warranted as a matter of law, it is entitled to such a decision, unless Intervenors have overcome Applicant's showings with their own submissions. We look now to whether Intervenors have succeeded in doing this.

¹¹⁵ See *supra* text accompanying note 11

¹¹⁶ See *id.*

We begin by considering the only facts in Applicant’s Statement of Material Facts that Intervenor do contest. First, on the availability of hydropower storage,¹¹⁷ Intervenor have not shown that this is material, or indeed how it could in any way materially affect the outcome of this proceeding, whether or not it is referenced in Luminant’s citation for the statement on hydropower.¹¹⁸ Next, Intervenor dispute the seemingly straightforward statement that “[s]everal combined renewable energy and CAES projects are under development,” by challenging the authority for a statement of two of Luminant’s witnesses, on Luminant’s joint project with Shell to develop wind farms, that the CAES in this project is “not for the generation of baseload power.”¹¹⁹ However, as Applicant contended in oral argument,¹²⁰ given that what is at issue in this instance is a Luminant project, it is reasonable for its own witnesses’ statement as to the purpose of the project to stand on its own, without the need for further citation – particularly given that the Affidavit statement is offered as support for the simple statement of material fact that “[s]everal combined renewable energy and CAES projects are under development.”

Moving on to the transmission congestion issue – in which Applicant states that most of available wind and solar power in Texas is in west Texas, and that there is currently transmission congestion in the ERCOT region¹²¹ – Intervenor in response state that “CAES facilitates transmission and provides ancillary [sic] [services] that would help to relieve congestion.”¹²² But the only reference offered by Intervenor’s Counsel at oral argument¹²³ for the omitted page reference for Dr. Dean’s report was to the following language of Dr. Dean:

¹¹⁷ See *supra* text accompanying notes 72, 73.

¹¹⁸ See *id.*

¹¹⁹ See *supra* notes 75, 76, and accompanying text; Joint Affidavit ¶ 53.

¹²⁰ Tr. at 1031.

¹²¹ See *supra* text accompanying note 77.

¹²² Intervenor’s Response Statement at 1.

Although there is a first-cost economic advantage in clustering wind turbines, operationally we would much rather have electrically-associated wind turbines be widely dispersed in space. That's because disbursing [sic] wind turbines smoothes their composite variation and substantially reduces the ramp rates of whatever system components compensate for their variation. This dispersion logic creates another problem for the applicant, because it blows away the argument that allows them to assign a LARGE impact to wind power in low-value locations.¹²⁴

Although the final sentence of this quoted language would seem to be material to the environmental impacts of wind power, Intervenors did not, as noted above, contest the environmental impacts part of Luminant's Statement of Material Facts in any way. And although we do not as a result automatically discount Dr. Dean's statement, we find it to be not at all specific or sufficient to overcome Applicant's specific showings of material fact on impacts, even were we to consider it as a response to any part of Applicant's Statement as to environmental impacts.¹²⁵ Nor can it be said that Intervenors have shown in any meaningful way that different details regarding transmission congestion would change the outcome of this proceeding. Any dispute that exists is therefore immaterial.

Regarding the dispute with Applicant's statement that wind, solar, and natural gas plants have largely been "operated as independent projects rather than as part of a combination,"¹²⁶ we find Intervenors' argument that this statement is "inherently misleading in light of the fact that there are combinations of various generating modes on ERCOT's system at any given time"¹²⁷ to be disingenuous at best. Clearly, the fact that various sources of power may be coordinated on the large ERCOT grid to produce power for consumers is a very different matter than

¹²³ See Tr. at 1032-33.

¹²⁴ Dean 9/15/2010 Report at 4. We note that the style and substance of this excerpt is consistent with the overall contents of Dr. Dean's Reports.

¹²⁵ See *supra* note 17 and accompanying text; see *also* text accompanying note 114.

¹²⁶ Statement ¶ 4 at 5.

¹²⁷ See *supra* text accompanying note 80.

whether there are any combination “projects” that are distinguishable from the “independent projects” Applicant references.¹²⁸

Finally, on Intervenor’s dispute with Applicant’s statement on the natural gas usage for generating electricity from CAES being “between one third and one half that needed to generate the same amount of electricity at a natural gas plant,” with Intervenor contending that the “average output of a CAES plant is lower than its maximum output and the gas consumption is only approximately 10% of a comparably sized gas plant,”¹²⁹ we also find this not to be a material dispute, in view of the undisputed facts relating to environmental impacts that are discussed at the beginning of this analysis. Moreover, although in its Statement of Material Facts Luminant attributes a “moderate” impact of CAES on water quality and waste management (“depending upon the host geological formation”),¹³⁰ in its comparison of impacts of the four-part combination to those of the proposed new units this is not included.¹³¹

Even assuming that the combination alternative overall had lower water use and quality impacts, Intervenor has not shown that this would outweigh the land use imbalance in favor of the proposed new units. We note their Counsel’s statements in oral argument that lowering the water impacts of any combination to “small” would “*begin . . . to tip the balance* in favor of renewables.”¹³² But Intervenor did not contest Applicant’s indication in its table¹³³ that the water use and quality impacts of nuclear are “moderate” and that those of combinations would be “moderate” or “small to moderate,” nor have they contested Applicant’s Statement of Material

¹²⁸ Also, as Applicant pointed out in oral argument, there is a question whether solar storage or CAES had at that time actually been used in Texas, which Intervenor’s counsel did not contradict. Tr. at 1035.

¹²⁹ See *supra* text accompanying notes 81, 82.

¹³⁰ Statement, ¶ III.A.8, at 11-12.

¹³¹ See *supra* text accompanying note 60; see also text accompanying note 43.

¹³² See *supra* note 93 and accompanying text (emphasis added).

¹³³ See *supra* text accompanying note 43.

Facts regarding the impacts of wind, solar and natural gas power, or its comparison therein of impacts of alternative combinations relative to those of the proposed units.

Looking further, to the various issues raised by Intervenors in their Response in the manner of argument,¹³⁴ we also find none of these to be material issues, with the possible exception of their arguments on environmental preferability of nuclear versus renewable energy alternatives, aesthetic impacts, water use and quality impacts, and “permanent loss of land for waste disposal.”¹³⁵ On none, however, including these four, have Intervenors presented any statement of facts, formal or otherwise, to show any genuine dispute with those facts presented by Applicant, in its consideration of the matters at issue in all relevant parts of Alternatives Contention A, as discussed above.

We do note the two Reports of Dr. Dean, which raise some interesting points that, if further developed, Intervenors might possibly have used in more directly and specifically attempting to controvert Applicant’s Statement of Material Facts. However, these are in no way tied to specific points on environmental impacts as set forth in Applicant’s Statement of Material Facts, nor do they dispute any of Applicant’s Statement or other showings with any specificity, including Applicant’s ultimate comparison of the environmental impacts of the four-part combination with those of the proposed new units. Dr. Dean seems to imply that the four-part combination is preferable, but does not say this explicitly.¹³⁶

In addition, although Intervenors have made general references to differences in water usage and quality impacts that might theoretically favor a combination alternative, these are not specific at all, even overlooking the fact that Intervenors did not formally dispute any of

¹³⁴ See *supra* text accompanying notes 63-70.

¹³⁵ See *supra* text accompanying notes 66-68, 70.

¹³⁶ See Dean 9/15/10 Report; Dean Undated Report; see *also* Tr. at 1001 (Intervenors’ counsel conceded that this was not stated “flat out,” but argued it was “inherent in the argument” as to water and aesthetic impacts.).

Applicant's Statement in this regard. Thus they do not overcome Applicant's showing of no genuine dispute on a material issue of fact in this respect. Nor do they overcome or even contest Applicant's showing in its Statement of Material Facts that it is not reasonable or prudent for a utility or merchant generator to use a technology that has not been demonstrated, either at an existing commercial generating facility or in a pilot project or small-scale facility that shows it works and is cost-effective.¹³⁷

In short, Intervenors have not overcome Applicant's showing of a lack of any genuine dispute of material fact, with regard to any of Alternatives Contention A and its subparts. Their showings in their Response and related documents, in addition to being disorganized and incomplete in some instances, fail to demonstrate any genuine dispute on any material issue of fact. Even discounting their Counsel's concession that they do not successfully contest Applicant's showings on subparts (a), (b), and (c) of the contention at issue, they have failed in any way to controvert any facts relevant and material to these. And regarding subpart (d), Intervenors not only have not disputed Applicant's Statement of Material Facts, they have not otherwise in their Response to the Motion or in Dr. Dean's two Reports specifically shown or in any way explicitly even asserted either that a combination alternative is preferable, or that a combination would be equivalent in impacts to the proposed new units – the latter of which would not in any event overcome Applicant's showing that an appropriate combination is *not* environmentally preferable. It may be that future technology will produce renewable energy alternatives or combination alternatives that are environmentally preferable to nuclear and that can also produce equivalent power, but based on the record before us, this is not the case at the present time, even resolving all doubts in favor of Intervenors.

¹³⁷ We note Intervenors' statement through counsel that this is "just almost common knowledge," but that the parts of the combination have "been proven in their individual capacities" and applied in the ERCOT area. Tr. at 1023. However, for reasons stated in the text, we do not find this argument persuasive.

Considering, then, (1) the only facts in Applicant's Statement of Material Facts that Intervenors do contest and the manner in which they contest them, and (2) any other parts of Intervenors' submissions that even arguably contradict any of the showings that Applicant has made, we find that these do not rise to a level of materiality that would establish a genuine dispute on a material issue of fact. Our preliminary conclusion that Applicant has met its burden of showing that there exists no genuine issue as to any material fact and that it is entitled to a decision in its favor as a matter of law therefore remains our conclusion, even considering Intervenors' submissions and resolving any doubts in a light most favorable to them.

In this final regard, we find it appropriate to comment on one additional circumstance relating to Intervenors' failure to show a genuine material dispute. We note that Intervenors' Counsel at various points in the oral argument on Luminant's Motion indicated some understanding or perception on his part that Intervenors could not contest any factual matter if it was found in Applicant's ER.¹³⁸ Because the Board has not denied Intervenors any opportunity to contest any matter in this proceeding,¹³⁹ it appears that Intervenors' Counsel made his statements about essentially being prevented from contesting various facts asserted by Applicant, based on an argument of Applicant. Specifically, Applicant argued in its Motion that, "[b]ecause there are no admitted contentions related to the environmental impacts of CPNPP Units 3 and 4, or the information from the ER that is provided above, that information is not open to dispute in response to this Motion."¹⁴⁰ Applicant cited in support of this argument a Licensing Board decision in another proceeding, characterizing a relevant ruling therein as "refusing to

¹³⁸ See, e.g., Tr. at 971-73, 978-80, 988-89.

¹³⁹ Although no party can be sure of succeeding in any argument, and Boards must rule on all matters in accordance with their best understanding of the law, parties always have the right to raise and contest factual assertions and legal arguments.

¹⁴⁰ Motion at 15.

consider new bases that were included in an answer to summary disposition motion and were outside the scope of the original contention.”¹⁴¹

We note, however, that, while that Board did ultimately decline to consider certain information provided by the Intervenors in that case, it also, in addressing the argument of those Intervenors that “if an issue was first raised by the movant in a summary disposition motion . . . discussion of that issue in a response should not be stricken,” stated the following:

[A movant’s] discussion does not necessarily establish that the matter is within the scope of a contention given that the movant’s discussion may also be outside the scope of the contention. *Nonetheless, if a movant discusses a matter in its statement of undisputed facts, it would not be untoward for the Board to view with skepticism any later argument by that movant that a response regarding that issue is outside the scope of the contention, particularly given the onus that is placed upon an opposing party to respond to such a statement. See 10 C.F.R. § 2.710(a) (“All material facts set forth in the statement required to be served by the moving party will be considered to be admitted unless controverted by the statement required to be served by the opposing party”).*¹⁴²

We must presume that Intervenors’ Counsel was aware of the quoted provision of 10 C.F.R. § 2.710(a), as well as the provision therein which *requires* a party opposing summary disposition to provide a “statement of the material facts as to which it is contended there exists a genuine issue to be heard.”¹⁴³ Counsel might also have considered that, in meeting a party’s obligation to controvert any facts with which the party disagrees, materiality and scope are not always clear-cut, indisputable matters. Indeed, if a movant for summary disposition puts forward facts in any manner that it appears to consider necessary to any determination of an issue raised in a contention, it is plausible to start with the presumption that asserting such facts makes them at least arguably material to matters within the scope of the contention, and

¹⁴¹ Applicant cites *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-08-2, 67 NRC 54, 78 (2008). Motion at 15 n.85.

¹⁴² *Vogtle*, 67 NRC at 67 n.9 (emphasis added).

¹⁴³ 10 C.F.R. § 2.710(a).

therefore subject to being disputed and controverted, until and unless they are subsequently found to be immaterial by the body deciding the matter.

We note also that NRC regulations recognize that “parties” have “rights” in NRC proceedings. For example, 10 C.F.R. § 2.316, on consolidation of parties, addresses the consolidation of multiple parties’ presentations of evidence, etc., noting as well that “any consolidation that would prejudice the *rights of any party*” may not be ordered.”¹⁴⁴ It might also be fairly said that § 2.710(a) establishes not only an obligation but also a right to respond in a summary disposition context, just as, in a hearing, § 2.337 defines the evidentiary standard of “relevant, material, and reliable evidence” being admissible in a hearing, and thereby establishes the right of all parties to present such admissible evidence.¹⁴⁵

While certainly, if any response goes beyond the scope of the fact(s) being responded to, then that portion that goes beyond that scope may be ruled inadmissible on that ground. And of course, as the Commission has noted, a party responding to a summary disposition motion may not raise “distinctly new asserted deficiencies.”¹⁴⁶ But a party could not appropriately be foreclosed from responding at all, by simply and straightforwardly disputing a statement put forward by an opposing party as a material fact.¹⁴⁷ Nor did this Board deny any such

¹⁴⁴ 10 C.F.R. § 2.316 (emphasis added).

¹⁴⁵ Such evidence would, of course, have to be relevant to the contention that is the subject of the hearing, and material to the outcome of the hearing on that contention.

¹⁴⁶ See *Pilgrim*, CLI-10-11, 71 NRC at ___ (slip op. at 29).

¹⁴⁷ There would indeed seem to be due process considerations relating to anything that would effectively deny a party – who has been formally admitted to a proceeding *as a party*, based on a showing of an *interest* sufficient to confer standing – the right to respond to facts put forward by an opposing party, whether those facts are asserted in support of a motion for summary disposition or in a hearing, including in a 10 C.F.R. Part 2, Subpart L proceeding. Any party in a legal proceeding has a legitimate expectation that all stages of the proceeding will be conducted in a manner that complies with due process, the fundamental basics of which are, of course, notice and *opportunity to respond*.

We note that the Commission has, in its Statement of Considerations for its 2004 changes to the NRC procedural rules, stated that “intervenor in reactor licensing proceedings (as opposed to reactor license applicants, and those who are the subject of an NRC

enforcement action) *ordinarily* cannot raise constitutional Due Process issues with respect to NRC hearing procedures, inasmuch as intervenors cannot claim government deprivation of ‘life, liberty or property’ as a result of the NRC’s licensing action.” Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, 2,192 (Jan. 14, 2004) (emphasis added) (citing *City of West Chicago v. NRC*, 701 F.2d 632, 645 (7th Cir. 1983)).

In *West Chicago*, the Court considered objections of the city to the Commission’s not having provided a formal hearing in response to its request for hearing. *West Chicago*, 701 F.2d at 637. The Commission had, however, actually accepted and addressed the contentions of the city that were raised in its written materials. *Id.* The Court pointed out that what the parties were “arguing about [was] the *kind of ‘hearing’* the NRC is required to conduct when issuing an amendment to a source materials license.” *Id.* at 638 (emphasis added). The NRC had argued that “the NRC may hold an informal hearing in which it requests and considers written materials without providing for traditional trial-type procedures such as oral testimony and cross-examination.” *Id.* The Court ruled that the NRC hearing procedures in effect at the time “satisfy the requirements of due process,” and that “generalized health, safety and environmental concerns do not constitute liberty or property subject to due process protection.” *Id.* at 645. (The Court went on to state that, “[e]ven if we were to find a protected liberty or property interest in this case, we would hold that Commission procedures constituted sufficient process.” *Id.*)

We note also the First Circuit’s ruling in *Citizens Awareness Network v. NRC*, 391 F.3d 338 (1st Cir. 2004), that “there is no fundamental right to participate in administrative adjudications.” *Id.* at 354. The Court then applied a “rational basis review” to CAN’s challenge to the NRC’s 2004 changes to its procedural rules, citing cases involving challenges to laws regulating aspects of prisoners’ right to access to the courts, *id.* at 355 (citing *Bolvin v. Black*, 225 F.3d 36, 42 (1st Cir. 2000)); see *Bolvin*, 225 F.3d at 42-43, and business closing laws, *CAN*, 391 F.3d at 355 (citing *Montalvo-Huertas v. Rivera-Cruz*, 885 F.3d 971, 978-79 (1st Cir. 1989)), and found that the Commission’s action in adopting the new rules met the rational basis test. *Id.* The Court did note, however, regarding the compliance of NRC’s procedural rules with the Federal Administrative Procedure Act (APA), that, “[s]hould the agency’s administration of the new rules contradict its present representations [that cross-examination will be allowed under the rules when required for a full and true disclosure of the facts] or otherwise flout this principle, nothing in this opinion will inoculate the rules against future challenges.” *Id.* at 354.

Significantly, neither *West Chicago* nor *CAN* address standing, or the “interest” that must be shown to demonstrate standing, or the rights of parties once they have shown standing and been admitted to a proceeding as parties. In contrast, Intervenor herein, in this 10 C.F.R. Part 2, Subpart L proceeding, raised more than “generalized concerns” and in fact demonstrated an *interest* sufficient to establish their standing to participate in this proceeding as parties. See LBP-09-17, 70 NRC 311, 321-22 (2009), wherein we recognized that “[a]ll of the Petitioners herein, either on their own or through individual members, have demonstrated residence within fifty miles of the proposed units,” which we found constituted a sufficient showing of an interest to establish standing. *Id.* at 322,

The Tenth Circuit has described the nature of the interest that a prospective intervenor must show as “direct, substantial, and *legally protectable*,” the test for which is “primarily a practical guide to disposing of lawsuits by involving as many apparently concerned persons as is *compatible with efficiency and due process*.” *Coalition of Arizona/New Mexico Counties for Stable Economic Growth v. Dept. of Interior*, 100 F.3d 837, 840-41 (10th Cir. 1996) (internal quotation marks omitted) (citations omitted) (emphasis added). (As we have earlier noted, in

opportunity. We will presume that Counsel understood this,¹⁴⁸ but given some apparent confusion on the matter in this case, we find the preceding points warrant clarification.¹⁴⁹

B. Alternatives Contention A is Moot

Finally, even assuming *arguendo* that summary disposition should be denied based upon a finding of some doubt sufficient to leave a genuine dispute on some material issue of fact, we find the contention in question to be moot based on Staff's consideration of these matters in its DEIS (based as well, we note, on Applicant's consideration of the matters at issue in Alternatives Contention A in its Motion and supporting documents). Clearly, in the DEIS the Staff considers these aspects of the contention:

the feasibility under NEPA of an alternative consisting of a combination of solar and wind energy, energy storage methods including CAES and molten salt storage, and natural gas supplementation, to produce baseload power, with specific regard to

- (a) the reasonable availability of the four parts of such combination for consolidation into an integrated system to produce baseload power;
- (b) the feasibility of the use of such combination in the area of Texas served by the Comanche Peak plant; and

ruling on standing under 10 C.F.R. § 2.309(d)(1)(ii)-(iv) and “determining whether a petitioner in an NRC proceeding has established the necessary ‘interest’ under the rule, licensing boards are directed to follow the guidance found in judicial concepts of standing, as stated in federal court case law.” LBP-09-17, 70 NRC at 321-22 n.30.)

Once such a legally protectable interest is shown and intervenors are admitted as parties, with all the rights under NRC rules that are tied to party status – including the right to respond simply and straightforwardly to facts put forth by an opposing party in support of a motion for summary disposition or in direct testimony in a hearing, *see supra* text accompanying notes 144, 145 – then it would seem that those rules could not be administered in such a manner as to deprive Intervenor's of their interest in such rights without due process of law, or without arguably running afoul of the APA in the manner described by the Court in *CAN*, 391 F.3d at 354.

¹⁴⁸ Even if counsel did not understand this, he certainly waived any right to respond to anything not already addressed in Intervenor's Response (and related documents) to Applicant's Motion (and related documents), in view of the provisions of 10 C.F.R. § 2.710(a), which he must be presumed to know.

¹⁴⁹ We provide the preceding analysis, *see* notes 138-148 and accompanying text, also in order to be as clear as possible on these rather complex issues in the event of any appeal in which they might arise.

(c) the extent to which there may be efficiencies arising from overlapping uses of land for each of the four parts of the combination as well as for other reasonable purposes.¹⁵⁰

In addition, regarding sub-issue (d) of the contention, requiring consideration of the extent to which operation and maintenance costs of solar in such combination may be a comparative benefit “if it is shown that such an alternative is environmentally preferable,” Staff provides a demonstration in the DEIS that the combination alternative is not environmentally preferable.¹⁵¹

Regarding Intervenors’ challenge of mootness on the grounds that there remain issues of site-specific aesthetic impacts and the practicability of the alternatives, we find it to be without merit. Although Applicant and Staff may not have considered these issues precisely as Intervenors would wish, as Luminant points out, the DEIS addressed aesthetic impacts of the Staff’s examined combination, and Luminant addressed the characteristics of a site in west Texas for the four-part combination it evaluated, and compared these to the aesthetic impacts of the proposed new Comanche Peak units. Also, Intervenors did not contest Applicant’s Statement of Material Fact V.A,¹⁵² in which it addressed a comparison between the environmental impacts of the proposed new units and the four-part combination, including aesthetic impacts. In addition, according to Applicant, issues relating to the reasonableness of the four-part combination, including practicability, are also moot, based on the DEIS’s discussion of reasonableness of the combination examined therein, and Luminant’s discussion on the reasonableness of the four-part combination.

¹⁵⁰ See *supra* text accompanying note 11; DEIS at 9-19 through 9-32; see also *supra* Sections III, VI.A.

¹⁵¹ See *supra* text accompanying note 11; DEIS at 9-19 through 9-32. We note, as indicated above, that Intervenors filed contentions challenging the DEIS in several particulars, but we found none of these to be admissible. See 12/28/10 Memorandum and Order.

¹⁵² See *supra* note 60 and accompanying text.

As we noted in LBP-10-10, in ruling on whether a contention is moot, we look to whether a “justiciable controversy” still exists,”¹⁵³ and whether an issue is still “live,” such that a party still has a legal interest in the issue.¹⁵⁴ The mootness doctrine in NRC proceedings relates primarily to “contentions of omission,” which Alternatives Contention A is, asserting the omission of the Applicant’s consideration of the feasibility of the four-part combination and related issues. As we stated in LBP-10-10,

If all matters at issue in a “contention of omission” are addressed by an applicant through the actual (not ‘purport[ed]’ or ‘claim[ed]’) provision of information on all such matters, then no legal interest in that contention remains, and the contention is moot. The information need not be such that an intervenor agrees with it, but it must actually address in some way *all* of the issues encompassed within the admitted contention it purports to moot. If, on the other hand, not all matters at issue in such a contention are addressed in information submitted by Applicant, then Intervenors retain a legal interest in having any unaddressed matter(s) appropriately resolved.¹⁵⁵

In this case, we find that no justiciable controversy still exists regarding Alternatives Contention A or those parts of original Contention 18 that were coextensive with Alternatives Contention A. For the reasons we state above, none of the issues contained within the contention are still “live,” such that Intervenors have any further legal interest in those issues.

In conclusion, we find that there is no remaining genuine dispute of material fact and no remaining justiciable controversy regarding Alternatives Contention A or those parts of original Contention 18 that were coextensive with Alternatives Contention A.

¹⁵³ See LBP-10-10, 71 NRC at ___ (slip op. at 6) (internal quotation marks omitted) (citing Intervenors’ Response Opposing Applicant’s Motion to Dismiss Contention 18 as Moot (Jan. 4, 2010) at 1; *Georgia Inst. of Tech.* (Georgia Tech Research Reactor), LBP-95-19, 42 NRC 191, 194 (1995)).

¹⁵⁴ *Id.* (internal quotation marks omitted) (citing *Texas Utilities Elec. Co.* (Comanche Peak Steam Elec. Station, Unit 2), CLI-93-10, 37 NRC 192, 200 (1993)).

¹⁵⁵ *Id.* Also, because a contention originally directed at an Applicant’s ER is subsequently deemed to be a challenge to the Staff’s DEIS and FEIS when they are issued (unless there are relevant changes therein), the same principle we quote in the text applies with regard to matters addressed by the Staff in the DEIS. See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998).

VII. Order

1. Having found that Applicant has shown that there remains no genuine dispute on any material fact relating to Contention 18 and Alternatives Contention A, and that Applicant is entitled to a decision in its favor as a matter of law, we hereby GRANT Luminant's Motion for Summary Disposition.

2. Having further found the contentions to be moot, we alternatively DISMISS Alternatives Contention A and the remaining parts of Contention 18 that were coextensive with Alternatives Contention A.

3. There being no remaining matters to be adjudicated in this proceeding on either or both of the preceding grounds, we therefore ORDER that this matter be terminated.

4. As this Memorandum and Order concludes this proceeding, in that no admitted contentions remain for litigation, any petition for review must be filed within fifteen (15) days after this issuance is served, as required at 10 C.F.R. § 2.341(b)(1).

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

/RA/

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

/RA/

Dr. Alice C. Mignerey
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 24, 2011¹⁵⁶

¹⁵⁶ Copies of this Memorandum and Order were filed this date with the agency's E-filing system for service to all parties.

Separate Statement of Administrative Judge Gary S. Arnold

Although I agree with the decision of this Order, and the legal arguments in support of that decision, this order contains a discussion that I consider dictum and with which I do not agree.

A problem was hypothesized by the Board in noting the reluctance of Intervenor's Attorney to challenge some of the items in Applicant's Statement of Material Facts. The Board noted that in several instances the utterances of Intervenor's Counsel indicated that he felt, in some way, restricted from challenging certain items. In reply to this, the Board majority provided a four-page explanation of Intervenor's right to respond, much of which is contained in footnotes. I consider this excessive. It would have been sufficient to note that the Board at no time restricted the pleadings or arguments of Intervenor's.

The issue here is whether or not Intervenor's may challenge, at the summary disposition stage, existing facts that they had not previously contested. While this is a significant issue, it was never raised in pleadings or at oral arguments. No parties provided briefs on this issue. A legal opinion regarding this issue is not necessary for this Order. And the issue is sufficiently complex that I do not wish to affix my name to its discussion without greater understanding.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing MEMORANDUM AND ORDER (RULING ON MOTION FOR SUMMARY DISPOSITION OF CONTENTION 18 AND ALTERNATIVES CONTENTION A) (LBP-11-04) have been served upon the following persons by Electronic Information Exchange.

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

U.S. Nuclear Regulatory Commission
Office of the Secretary of the Commission
Rulemakings & Adjudications Staff
Mail Stop O-16C1
Washington, DC 20555-0001
E-mail: hearingdocket@nrc.gov

U.S. Nuclear Regulatory Commission.
Atomic Safety and Licensing Board Panel
Mail Stop T-3F23
Washington, DC 20555-0001

U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop - O-15 D21
Washington, DC 20555-0001
Marian Zabler, Esq.
Laura Goldin, Esq.
Susan Vrahoretis, Esq.
Sara Kirkwood, Esq.
Joseph Gilman, Paralegal

Ann Marshall Young, Chairman
Administrative Judge
E-mail: ann.young@nrc.gov

E-mail:
marian.zabler@nrc.gov
laura.goldin@nrc.gov
susan.vrahoretis@nrc.gov
Sara.Kirkwood@nrc.gov
Joseph.gilman@nrc.gov

Gary S. Arnold
Administrative Judge
E-mail: gary.arnold@nrc.gov

Alice C. Mignerey
Administrative Judge
E-mail: acm3@nrc.gov

OGC Mail Center : OGCMailCenter@nrc.gov

Ann Hove, Law Clerk
E-mail: ann.hove@nrc.gov
Hillary Cain, Law Clerk
Hillary.cain@nrc.gov

Docket Nos. 52-034-COL and 52-035-COL
 MEMORANDUM AND ORDER (RULING ON MOTION FOR SUMMARY DISPOSITION
 OF CONTENTION 18 AND ALTERNATIVES CONTENTION A) (LBP-11-04)

Morgan, Lewis & Bockius, LLP
 1111 Pennsylvania Ave., NW
 Washington, DC 20004
 Stephen Burdick, Esq.
 Steven P. Frantz, Esq.
 Jonathan M. Rund, Esq.
 Timothy P. Matthews, Esq.
 Martin O'Neill, Esq.
 Jane T. Diecker, Esq.
 Mary L. Freeze, Legal Secretary

E-mail: sburdick@morganlewis.com
sfrantz@morganlewis.com;
jrund@morganlewis.com
tmatthews@morganlewis.com
martin.oneill@morganlewis.com
jdiecker@morganlewis.com
mfreeze@morganlewis.com

True Cost of Nukes
 1067 W. Magnolia
 Fort Worth, TX 76014
 John N. Fischer
 E-mail: jnilefischer@sbcglobal.net

Sustainable Energy and Economic
 Development (SEED) Coalition
 Robert V. Eye, Esq.
 April Middleton, Assistant
 Kauffman & Eye
 112 SW 6th Avenue, Suite 202
 Topeka, Kansas 66603
 E-mail: bob@kauffmaneye.com
 E-mail: april@kauffmaneye.com

Pillsbury Winthrop Shaw Pittman, LLP
 2300 N. Street, NW
 Washington, DC 20037-1122
 Counsel for Progress Energy
 R. Budd Haemer, Esq.
 Jason B. Parker, Esq.
 Matias F. Travieso-Diaz, Esq.
 Maria D. Webb, Senior Energy Legal
 Analyst/Paralegal Coordinator
 E-mail:
robert.haemer@pillsburylaw.com
jason.parker@pillsburylaw.com
matias.travieso-diaz@pillsburylaw.com
maria.webb@pillsburylaw.com

Sustainable Energy & Economic Development
 (SEED) Coalition
 1303 San Antonio #100
 Austin, Texas 78701
 Eliza Brown, Clean Energy Advocate
 E-mail: eliza.seedcoalition@gmail.com

[Original signed by Nancy Greathead]
 Office of the Secretary of the Commission

Dated at Rockville, Maryland
 this 24th day of February 2011