UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 50-391-OL
TENNESSEE VALLEY AUTHORITY	)	
	)	March 1, 2010
(Watts Bar Nuclear Plant Unit 2)	)	

TENNESSEE VALLEY AUTHORITY'S RESPONSE IN OPPOSITION TO PETITION FOR WAIVER OF 10 C.F.R. §§ 51.53(b) AND 51.95(b)

In accordance with the Order of the Atomic Safety and Licensing Board ("Board") of February 17, 2010, Tennessee Valley Authority ("TVA"), Applicant in the above-captioned proceeding, submits this Response in Opposition to the Petition for Waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b) with Respect to Admission of Contentions Regarding Need for Power and Consideration of Alternative Energy Sources ("Waiver Petition") filed by Southern Alliance for Clean Energy ("SACE") on February 4, 2010.

I. PRELIMINARY STATEMENT

SACE requests a waiver of long-standing U.S. Nuclear Regulatory Commission ("NRC" or "Commission") regulations establishing that, for purposes of the National Environmental Policy Act of 1969, as amended ("NEPA"), need for power and alternative energy sources issues will not be considered in operating license ("OL") proceedings.[1] As described further below, this Waiver Petition should be denied for three independent reasons.

First, the Waiver Petition is inexcusably late. SACE could have submitted its request in July 2009, instead of waiting almost 7 months. Thus, granting the waiver will adversely impact

[1] Waiver Petition at 1 (requesting waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b)).

the schedule for this proceeding, including, at a minimum, a likely delay in the issuance of the NRC's Draft Supplemental Environmental Impact Statement ("SEIS").

Second, even if considered timely, the Waiver Petition is premised on SACE's fundamental misunderstanding of its burden under 10 C.F.R. § 2.335(b). Simply put, the length of time that has passed between the NRC's issuance of the construction permit ("CP") for Watts Bar Nuclear Plant ("WBN") Unit 2 and the OL application is not a sufficient basis for a waiver. Rather the requirements that SACE must meet in order to establish the special circumstances necessary for a waiver are set forth in the Commission's Statement of Considerations and in binding NRC precedent.[2] Applying those requirements, SACE fails to satisfy the lynchpin for a waiver—a demonstration that the rule would not serve the purpose for which it was adopted—because SACE does not make a *prima facie* showing that WBN Unit 2 is not needed to: (1) meet increased energy demand; (2) displace an equivalent amount of older, less economical generation capacity; or (3) reduce air emissions and provide fuel diversity and operational flexibility. Similarly, the Waiver Petition does not make a *prima facie* showing that environmentally- and economically-superior alternative energy sources exist.

Third, certification of the Waiver Petition would require the Commission to expend resources on a purely academic issue given that SACE has not submitted an otherwise admissible contention regarding need for power and energy alternatives issues.

For all of these reasons, the Waiver Petition should be denied.

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[2] *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-837, 23 NRC 525, 546-48 (1986); Final Rule, Need for Power and Alternative Energy Issues in Operating License Proceedings, 47 Fed. Reg. 12,940 (Mar. 26, 1982); Proposed Rule, Need for Power and Alternative Energy Issues in Operating License Proceedings, 46 Fed. Reg. 39,440 (Aug. 3, 1981).

II. BACKGROUND

On May 1, 2009, the Commission published the Hearing Notice for the WBN Unit 2 OL proceeding in the *Federal Register*, providing that all requests for hearing and proposed contentions be filed within 60 days (*i.e.*, by June 30, 2009).[3] On July 13, 2009, SACE (along with several other petitioners that are not parties to this proceeding or to the Waiver Petition) filed a Petition to Intervene and Request for Hearing ("Petition"). The Petition included seven proposed contentions, including Proposed Contention 4, which alleged that TVA's discussion of the need for power and energy alternatives was inadequate.[4] Despite the clear prohibition on consideration of need for power and energy alternatives issues in OL proceedings,[5] SACE claimed that such issues were within the scope of this proceeding because one of the stated purposes of TVA's 2007 Final SEIS[6] was to update TVA's 1972 Final Environmental Statement ("TVA's 1972 FES") for construction of the plant.[7] In apparent recognition that this contention was barred by NRC regulations, however, SACE stated that if the Board were to reject this contention, then it would file a 10 C.F.R. § 2.335(b) waiver petition.[8]

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[3] Tennessee Valley Authority; Notice of Receipt of Update to Application for Facility Operating License and Notice of Opportunity for Hearing for the Watts Bar Nuclear Plant, Unit 2, 74 Fed. Reg. 20,350, 20,351 (May 1, 2009). Subsequently, SACE requested and received a two-week extension of time, giving SACE until July 14, 2009 to file a request for hearing. *See* Request for Extension of Time to Submit Hearing Request/Petition to Intervene (June 16, 2009); Order (June 24, 2009) (unpublished). A detailed summary of the background of this OL proceeding is found in TVA's Answer Opposing the Petition to Intervene and Request for Hearing at 2-5 (Aug. 7, 2009) ("TVA's Answer to the Petition to Intervene").

[4] Petition at 16.

[5] *See* 10 C.F.R. §§ 51.53(b), 51.95(b), & 51.106(c).

[6] Final Supplemental Environmental Impact Statement, Completion and Operation of Watts Bar Nuclear Plant Unit 2, Rhea County, Tenn. (June 2007), *available at* http://www.tva.gov/environment/reports/wattsbar2/seis.pdf.

[7] TVA's Final Environmental Statement, Watts Bar Nuclear Plant Units 1 and 2 (Nov. 1972) ("TVA's 1972 FES"), *available at* http://www.tva.gov/environment/reports/wattsbar2/related/nov_1972.pdf.

[8] Petition at 16 n.4.

On November 19, 2009, the Board issued a Memorandum and Order granting SACE's Petition and admitting two contentions.[9] The Board ruled, however, that Proposed Contention 4 was not admissible.[10] As the Board explained, because 10 C.F.R. § 51.53(b) indicates that TVA need not include "any discussion of the need for power or of alternative energy sources in its application for an operating license, a challenge to the adequacy of TVA's discussion of these issues is not within the scope of this proceeding at this point."[11] The Board went on to note that "the Commission might well decide that a full discussion of the need for power and of alternative energy sources should be incorporated into the final environmental impact statement."[12] Nonetheless, the Board indicated that "at this stage of this proceeding, absent an adequately supported request to waive the application of this rule pursuant to 10 C.F.R. § 2.335, the Board is bound by Section 51.53(b) and, even in light of the unusual circumstances of this case, this contention cannot be admitted."[13]

On February 4, 2010—almost 7 months after its original Petition was filed and more than 2 months after the Board found Proposed Contention 4 inadmissible—SACE filed the instant Waiver Petition, requesting certification of the request to the Commission. According to SACE, application of Sections 51.53(b) and 51.95(b) would not serve the purpose for which those regulations were adopted.[14]

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9 *Tenn. Valley Auth.* (Watts Bar Unit 2), LBP-09-26, 70 NRC __, slip op. at 2-3 (Nov. 19, 2009).

10 *Id.* at 44.

11 *Id.*

12 *Id.* (citing 10 C.F.R. § 51.95(b)).

13 *Id.*

14 Waiver Petition at 2.

III. LEGAL STANDARDS

A. Criteria for Waiver Under 10 C.F.R. § 2.335

As a general matter, a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[15] In order to seek waiver of a rule in a particular adjudicatory proceeding, a party must submit a petition pursuant to 10 C.F.R. § 2.335(b). The requirements for a Section 2.335(b) petition are as follows:

> The sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted.

Further, such a petition,

> must be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted. The affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested.[16]

In accordance with NRC precedent, a Section 2.335 petition "can be granted only in unusual and compelling circumstances."[17] The standards for a Licensing Board to certify a waiver petition are therefore "*extremely high*."[18] These high standards "for setting aside an

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15 10 C.F.R. § 2.335(a).

16 *Id.* § 2.335(b).

17 *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-895, 28 NRC 7, 16 (1988), *aff'd*, CLI-88-10, 28 NRC 573, 597, *recons. denied*, CLI-89-3, 29 NRC 234 (1989) (citation omitted).

18 *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-20, 30 NRC 231, 245 (1989) (emphasis added).

agency rule in a specific case" under Section 2.335(b) "are intended to ensure that duly promulgated regulations are not lightly discarded."[19]

According to the Commission, a petitioner must demonstrate that it satisfies each of the following criteria in order for a waiver request to be granted: (1) the rule's strict application "would not serve the purposes for which [it] was adopted"; (2) the petitioner has alleged "special circumstances" that were "not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived"; and (3) those circumstances are "unique" to the facility rather than "common to a large class of facilities."[20]

If the petitioner makes the required *prima facie* showing on these criteria, then the Licensing Board will certify the matter to the Commission.[21] However, if the petitioner fails to satisfy any of these requirements, then the matter may not be litigated, and "the presiding officer may not further consider the matter."[22]

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[19] *Seabrook*, ALAB-895, 28 NRC at 16. The Appeal Board has explained that the "relatively small number of waiver petitions filed in NRC adjudicatory proceedings and the fact that few, if any, such petitions have been successful evidence the difficulty of meeting the waiver standard." *Id.*

[20] *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station Units 2 & 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (citing *Seabrook*, CLI-89-20, 30 NRC at 235; *Seabrook*, CLI-88-10, 28 NRC at 597). SACE suggests that a fourth factor—whether waiver of the regulation is necessary to reach a "significant safety problem"—is not applicable because of NRC's obligation under NEPA to consider new and significant information. Waiver Petition at 3. However, other Licensing Boards have considered this factor when evaluating waiver requests involving NRC NEPA regulations. *See, e.g.*, *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 242 (1998) (finding request to waive Waste Confidence Rule failed to establish a "significant safety problem"). Nonetheless, given SACE's failure to satisfy the first three factors, the Board need not decide whether the fourth factor is applicable.

[21] *See* 10 C.F.R. § 2.335(c) & (d).

[22] *See id.* § 2.335(c); *see also Millstone*, CLI-05-24, 62 NRC at 560 ("The use of 'and' in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.") (emphasis in the original) (citations omitted).

B. Summary of Controlling NEPA Principles

1. Need for Power Analysis Under NEPA

NEPA generally requires a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal.[23] In a 2003 denial of a rulemaking petition regarding the removal of need for power and energy alternatives issues from all NRC reactor licensing environmental reviews, the Commission discussed the need-for-power inquiry at some length, explaining that the NRC historically has "equated the need for power with the benefits of the proposed action."[24] Specifically, "need for power" is "a shorthand expression for the 'benefit' side of the cost-benefit balance, which NEPA mandates for a proceeding considering the licensing of a nuclear plant."[25] There are also other "reasonably foreseeable" benefits associated with a proposed project.[26] For example, the Commission specifically acknowledged "that the construction and operation of a nuclear power plant could have multiple benefits such as reducing greenhouse gases and other air pollutants."[27]

With respect to cost-benefit balancing, the Commission has emphasized that NEPA's "theme . . . is sounded by the adjective 'environmental': NEPA does not require the agency to assess every impact or effect of its proposed action, but only the impact or effect on the environment."[28] In the case of economic benefits, "a key consideration . . . [is] whether the

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23 *See, e.g., Idaho v. ICC*, 35 F.3d 585, 595 (D.C. Cir. 1994); *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1113 (D.C. Cir. 1971).

24 Nuclear Energy Institute; Denial of Petition for Rulemaking, 68 Fed. Reg. 55,905, 55,909 (Sept. 29, 2003) ("2003 Rulemaking Petition Denial").

25 *Id.* (quoting *Pub. Serv. Co. of Okla.* (Black Fox Station, Units 1 & 2), ALAB-573, 10 NRC 775, 804 (1979); *see also Rochester Gas & Elec. Corp.* (Sterling Power Project, Nuclear Unit 1), ALAB-502, 8 NRC 383, 388 n.11 (1978); *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), ALAB-422, 6 NRC 33, 90 (1977); *Kan. Gas & Elec. Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 327) (1978).

26 2003 Rulemaking Petition Denial, 68 Fed. Reg. at 55,909.

27 *Id.*

28 *La. Energy Servs., L.P.* (Claiborne Enrichment Ctr.), CLI-98-3, 47 NRC 77, 88 (1998) (quoting *Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772 (1983)).

economic assumptions of the FEIS were so distorted as to impair fair consideration of the project's adverse environmental effects."[29] In this regard, the Commission has indicated that, for purposes of NEPA, the NRC generally need not undertake a rigorous economic analysis of the need for power of the type performed routinely by cognizant state regulators.[30] Indeed, the Commission has made clear that:

> [W]hile a discussion of need for power is required, the Commission is not looking for burdensome attempts by the applicant to precisely identify future market conditions and energy demand, or to develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power.[31]

This recognition that precision in need for power analyses is unnecessary and, in fact, undesirable, has its roots in a long-line of NRC cases. In the leading case, the Atomic Safety and Licensing Appeal Board ("Appeal Board") in the *Nine Mile Point* CP proceeding held that "inherent in any forecast of future electric power demands is a substantial margin of uncertainty," and therefore an applicant's projection of future need should be accepted if it is "reasonable."[32] This standard was endorsed by the Commission in the *Shearon Harris* CP proceeding.[33]

Furthermore, as the Appeal Board held in a later case:

> [A] forecast that such need exists is not to be discarded as fatally flawed simply because the future course of events is sufficiently clouded to give rise to the possibility of a significant margin of

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29 *Id.* at 89 (internal quotation marks omitted).

30 2003 Rulemaking Petition Denial, 68 Fed. Reg. at 55,909.

31 *Id.* at 55,910 (citing *Claiborne*, 47 NRC at 88 & 94).

32 *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 365-67 (1975).

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

> error. Given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service—and the severe consequences which may attend upon a failure to discharge that responsibility—the most that can be required is that the forecast be a reasonable one in the light of what is ascertainable at the time made.[34]

Similarly, the Appeal Board in the *Catawba* CP proceeding ruled that an applicant's load forecasts

> are [not] automatically suspect because they are inclined to be "conservative," that is to say they tend to project future loads closer to the high than to the low end of the demand spectrum. To be sure, if demand does turn out to be less than predicted it can be argued (as intervenor does) that the cost of the unneeded generating capacity may turn up in the customers' electric bills. . . . But should the opposite occur and demand outstrip capacity, the consequences are far more serious.[35]

2. Analysis of Alternatives to the Proposed Action Under NEPA

NEPA also requires a discussion of "alternatives to the proposed action."[36] Under NEPA's rule of reason, however, the NRC need not look at every conceivable alternative to the proposed licensing action, but only reasonable alternatives—namely those that are feasible.[37] Similarly, the NRC need only consider a range of alternatives reasonably related to the scope and goals of the proposed action.[38] The term "alternatives" thus means "[t]he alternative ways of accomplishing the objectives of the proposed action and the results of not accomplishing the

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

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

36 42 U.S.C. § 4332(2)(C)(iii).

37 *See Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 551 (1978) ("To make an impact statement something more than an exercise in frivolous boilerplate the concept of alternatives must be bounded by some notion of feasibility."); *see also NRDC v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972); *City of Carmel-by-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997); *La. Energy Servs., L.P.* (Nat'l Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006) (citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)).

38 *See City of Grapevine v. U.S. Dep't of Transp.*, 17 F.3d 1502, 1506 (D.C.Cir. 1994); *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991); *La. Wildlife Fed'n, Inc. v. York*, 761 F.2d 1044, 1048 (5th Cir. 1985); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 806-08 (2005), *aff'd sub nom. Envtl. Law & Policy Ctr. v. NRC*, 470 F.3d 676, 685 (7th Cir. 2006).

proposed action."[39] Therefore, "[w]hen the purpose is to accomplish one thing, it makes no sense to consider alternative ways by which another thing might be achieved."[40]

Furthermore, in the absence of a feasible and environmentally preferable alternative, there is no requirement under NEPA for a comparison of the economic costs of the proposed project and alternatives.[41] As stated by the Appeal Board in the seminal *Midland* decision:

> The passage of the National Environmental Policy Act increased our concern with the economics of nuclear power plants, but only in a limited way. That Act requires us to consider whether there are *environmentally* preferable alternatives to the proposal before us. If there are, we must take the steps we can to see that they are implemented if that can be accomplished at a reasonable cost; *i.e.*, one not out of proportion to the environmental advantages to be gained. But if there are no preferable environmental alternatives, such cost-benefit balancing does not take place.[42]

Thus, "NEPA requires [the NRC] to look for environmentally preferable alternatives, not cheaper ones."[43] This principle has been applied in numerous other proceedings[44] and was recently reaffirmed by the Commission in the *Summer* COL proceeding.[45]

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39 *Citizens Against Burlington*, 938 F.2d at 195 n.4.

40 *Id.* at 195 (citing *City of Angoon v. Hodel*, 803 F.2d 1016, 1021 (9th Cir. 1986) (per curiam)).

41 *See 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); *Consumers Power Co.* (Midland Plant, Units 1 & 2), ALAB-458, 7 NRC 155, 162-63 (1978).

42 *Midland*, ALAB-458, 7 NRC at 162 (citations omitted).

43 *Id.* at 168.

44 *See, e.g., Rochester Gas & Elec. Corp.* (Sterling Power Project, Nuclear Unit No. 1), ALAB-502, 8 NRC 383, 395 n.25 (1978); *Clinton*, LBP-05-19, 62 NRC at 179, *aff'd*, CLI-05-29, 64 NRC 460, *aff'd sub nom. Envtl. Law & Policy Ctr.*, 470 F.3d 676; *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 & 3), LBP-82-117A, 16 NRC 1964, 1993 (1982) ("With the passage of NEPA, cost-benefit balancing is now required, but only if the proposed nuclear plant has environmental disadvantages in comparison to possible alternatives."); *Dairyland Power Coop.* (La Crosse Boiling Water Reactor), LBP-82-58, 16 NRC 512, 527 (1982) ("[U]nless a nuclear plant has environmental disadvantages in comparison to reasonable alternatives, differences in financial cost do not enter into the NEPA process and, hence, into NRC's cost-benefit balance."); *Pub. Serv. Co. of Okla.* (Black Fox Station, Units 1 & 2), LBP-78-26, 8 NRC 102, 161-62 (1978), *aff'd*, ALAB-573, 10 NRC 775 (1979) (holding that the economic costs of a coal plant are not relevant given that the environmental impacts of a nuclear plant are less than that of a coal plant).

45 *See Summer*, CLI-10-1, slip op. at 30-31.

3. Regulations Governing Need for Power and Alternative Energy Issues in OL Proceedings

NRC regulations explicitly state that, for purposes of NEPA, need for power and energy alternative issues will not be considered in OL proceedings. Specifically, NRC regulations establish:

- "No discussion of need for power, or of alternative energy sources . . . is required in [an applicant's environmental] report" submitted at the OL stage.[46]
- "Unless otherwise determined by the Commission, a supplement on the operation of a nuclear power plant will not include a discussion of need for power, or of alternative energy . . . and will only be prepared in connection with the first licensing action authorizing full-power operation."[47]
- "The presiding officer in an operating license hearing shall not admit contentions proffered by any party concerning need for power or alternative energy sources . . . for the facility for which an operating license is requested."[48]

As SACE acknowledges, the Statement of Considerations for these regulations indicates that "the purpose of these amendments is to avoid unnecessary consideration of issues that are not likely to tilt the cost-benefit balance by effectively eliminating need for power and alternative energy source issues from consideration at the operating license stage."[49] The Statement of Considerations also specifically addressed comments similar to those raised by SACE in the Waiver Petition that new information and new technologies must be considered at the OL stage. The Commission found that, "[w]hile it is true that certain factors may change between the CP and the OL proceeding, the notice of proposed rulemaking sets forth why it is unlikely that these changes would tip the NEPA cost-benefit balance against issuance of the operating license."[50]

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46 10 C.F.R. § 51.53(b).

47 *Id.* § 51.95(b).

48 *Id.* § 51.106(c).

49 Final Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 47 Fed. Reg. at 12,940.

50 *Id.* at 12,942.

The Proposed Rule in turn explained that "[i]n all cases to date, *and in all foreseeable future cases*, there will be some benefit [from plant operation] in terms of either meeting increased energy needs or replacing older less economical generating capacity."[51] Furthermore, "the Commission has assumed, conservatively, that the plant is not needed to satisfy increased energy needs, but rather is justified, if at all, as a substitute for other generating capacity."[52] Thus, the Commission found that "even if an alternative is shown to be marginally environmentally superior in comparison to operation of a nuclear facility [the NEPA cost-benefit balance is unlikely to change] because of the economic advantage which operation of nuclear power plants has over available fossil generating plants."[53]

In promulgating these regulations, the Commission explained that "[a]n exception to the rule would be made if, in a particular case, special circumstances are shown in accordance with 10 CFR 2.758 [now Section 2.335] of the Commission's regulations."[54] The Proposed Rule indicated that "special circumstances could exist if for example, it could be shown that nuclear plant operations would entail unexpected and significant adverse environmental impacts or that an environmentally and economically superior alternative existed."[55] The Commission emphasized that "[t]his is a much stricter standard than the current requirements for raising need for power and alternative energy sources in OL proceedings."[56] Thus, in order to satisfy the waiver requirements, an intervenor must make "a substantial concrete demonstration that,

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51 Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

52 *Id.*

53 Final Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 47 Fed. Reg. at 12,940.

54 *Id.*

55 Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

56 Final Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 47 Fed. Reg. at 12,941.

notwithstanding the enormous economic investment in [the facility], the NEPA cost-benefit balance might now tip in the direction of abandoning this essentially completed facility."[57]

4. NRC Precedent on Need for Power and Energy Alternative Waiver Petitions

As described above, the NRC has established clear requirements that SACE must meet in order to establish the special circumstances necessary for a waiver of these regulations.[58] In the *Shearon Harris* OL proceeding, the Appeal Board summarized the requirements as follows:

> [T]o demonstrate that the purpose of the Commission's rule against needless litigation at the operating license stage is not served by its application in this case, the intervenors, *at a minimum*, must establish *both* that the Shearon Harris plant is not needed to meet increased energy demand *and* that it need not be used to displace an equivalent amount of older, less economical capacity. The latter condition can be satisfied only by showing that, after applying the conservation-based alternative, there no longer remains an amount of fossil fuel baseload generation equal to that of the capacity of Shearon Harris that is less efficient than the nuclear plant.[59]

Thus, to make a *prima facie* showing necessary to allow litigation of need for power issues at the OL stage, "it is not sufficient merely to show that the proposed [conservation] alternative will displace an amount of fossil fuel generated baseload equivalent to that produced by" the planned facility—"[r]ather, the petition must establish that *all* of the applicants' fossil fuel baseload generation that is less efficient than [the facility at issue] has been accounted for by the conservation-based alternative."[60]

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57 *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 & 2), ALAB-793, 20 NRC 1591, 1615 (1984).

58 *See Shearon Harris*, ALAB-837, 23 NRC at 546-48; *Byron*, ALAB-793, 20 NRC at 1614-16; *Georgia Power Co.* (Vogtle Elec. Generating Plant, Units 1 & 2), LBP-84-35, 20 NRC 887, 889-95 (1984); *Duquesne Light Co.* (Beaver Valley Power Station, Unit 2), LBP-84-6, 19 NRC 393, 396-403 (1984).

59 *Shearon Harris*, ALAB-837, 23 NRC at 547-48 (emphasis added).

60 *Id.* at 548 (emphasis added).

Additionally, to establish special circumstances that would permit litigation of alternative energy issues, an intervenor must establish that an environmentally *and* economically superior alternative exists.[61] Thus, an intervenor that offers only conclusory statements regarding the need to consider conservation, solar water heating systems, or purchasing electricity from another utility, fails to make a *prima facie* showing for a waiver.[62]

In summary, as the Licensing Board in the *Beaver Valley* OL proceeding explained, to make a *prima facie* showing of special circumstances:

> [A] petitioner would have to establish that [the facility] would not be needed: (1) to meet increased energy needs; (2) to replace older, less economical generating capacity; *and* (3) that there are viable alternatives to the completed nuclear plant likely to exist which could tip the NEPA cost-benefit balance against issuance of the operating license.[63]

As discussed below, SACE fails to meet its burden with respect to these requirements and, thus, fails to establish a *prima facie* showing of special circumstances.

IV. THE WAIVER PETITION SHOULD BE DENIED

A. The Waiver Petition Is Inexcusably Late

SACE filed the Waiver Petition on February 4, 2010—almost 7 months after its original Petition was filed and more than 2 months after the Board found Proposed Contention 4 inadmissible. Although NRC regulations do not explicitly set a deadline for waiver petitions, such requests typically accompany the proposed contention that a petitioner seeks to litigate.[64]

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61 *See id.* at 546; *see also Vogtle*, LBP-84-35, 20 NRC at 893-94; *Beaver Valley*, LBP-84-6, 19 NRC at 401; Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

62 *See Vogtle*, LBP-84-35, 20 NRC at 893-94; *Beaver Valley*, LBP-84-6, 19 NRC at 402.

63 *Beaver Valley*, LBP-84-6, 19 NRC at 401 (emphasis added).

64 *See, e.g.*, *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), CLI-08-27, 68 NRC 655, 657 (2008) (affirming Licensing Board decision denying Section 2.335(b) waiver request filed concurrently with petition to intervene); *Millstone*, CLI-05-24, 62 NRC at 567 (finding that petition to intervene filed concurrently with waiver request 9 months after deadline for petitions to intervene was untimely).

When a waiver petition is submitted after the deadline for petitions to intervene, Licensing Boards have indicated that an equitable balancing test should apply to determine whether the request is timely. For example, the Licensing Board in the *Indian Point* license renewal proceeding explained that

> the waiver regulation does not set deadlines because it anticipates that the Board will use a rule of reason in considering such petitions. In determining whether such a petition has been timely filed, this Board will consider the nature of the request, the materiality of the issue that would be implicated by granting the waiver, the delay, if any, that would result if the petition was granted, and the time elapsed between when the petitioner learned of the matters that give rise to the request and when the petition is filed.[65]

Similarly, the Licensing Board in the *Shearon Harris* OL proceeding indicated that while 10 C.F.R. § 2.335 (then-Section 2.758) "does not specify a time limit for filing a petition . . . any such petitions should be prepared and filed as soon as practicable."[66] Furthermore, that Board noted that "[s]uch a petition filed inexcusably late in the proceeding would be viewed with disfavor and possibly denied on that basis alone."[67]

Applying any rule of reason, SACE's Waiver Petition is inexcusably late. Given that SACE had all of the information it needed to file its Waiver Petition in July 2009, SACE clearly could have included its waiver request with its original Petition.[68] Furthermore, NRC

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65 *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), Docket Nos. 50-247 & 50-286, Board Memorandum and Order (Scheduling Prehearing Conference and Ruling on New York State's Motion Requesting Consideration of Additional Matters) at 4 (Dec. 18, 2008) (unpublished).

66 *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 & 2), LBP-82-119A, 16 NRC 2069, 2073 (1982).

67 *Id.*

68 In fact, most of the information contained in the Waiver Petition (including the supporting Declaration of Dr. Arjun Makhijani) is similar or identical to information contained in the original Petition. *See* Waiver Petition, Exh. 1, Declaration of Dr. Arjun Makhijani in Support of Southern Alliance for Clean Energy's Petition for Waiver of or Exception to 10 C.F.R. §§ 51.53(b) and 51.95(b) with Respect to Need for Power and Consideration of Alternative Energy Sources (Feb. 4, 2010) ("Makhijani Declaration"); Waiver Petition,

regulations,[69] the Statement of Considerations for these regulations,[70] and NRC precedent[71] all make clear that litigation regarding need for power and energy alternative issues is only permitted if a waiver pursuant to Section 2.335(b) is granted. Since its experienced nuclear counsel cited to these regulations and to the Statement of Considerations in the original Petition, SACE was certainly aware of this requirement at least as early as July 2009 (*i.e.*, 7 months before the Waiver Petition was filed).[72] SACE was again reminded of this requirement when the NRC Staff raised the issue in August 2009[73]—and again when the Board refused to admit Proposed Contention 4 in November 2009.[74] Whatever the reason for SACE's "wait and see" approach, this indifference to the timely completion of this proceeding conflicts directly with the Commission's policy of avoiding unnecessary hearing delays.[75]

Moreover, the grant of the Waiver Petition would not only expand the scope of the hearing, but would likely delay the entire proceeding. For example, the Draft SEIS is scheduled for issuance in September 2010 and the NRC Staff is currently barred by regulation from addressing need for power and energy alternative issues in this document unless the Commission

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Exh. 1, Attach. 2, Arjun Makhijani, Watts Bar 2: Analysis of Need and Alternatives (July 10, 2009) ("Makhijani Report"); Waiver Petition, Exh. 2, Petition to Intervene and Request for Hearing (July 13, 2009).

69 *See* 10 C.F.R. §§ 51.53(b), 51.95(b), & 51.106(c).

70 *See* Final Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 47 Fed. Reg. at 12,940; Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

71 *See Shearon Harris*, ALAB-837, 23 NRC at 546-48; *Byron*, ALAB-793, 20 NRC at 1614-16; *Vogtle*, LBP-84-35, 20 NRC at 889-95; *Beaver Valley*, LBP-84-6, 19 NRC at 396-403.

72 Petition at 2, 16 n.4 & 17 (citing 10 C.F.R. §§ 51.53(b), 51.95(b); Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,440).

73 NRC Staff Answer to Petition to Intervene and Request for Hearing at 24-26 (Aug. 7, 2009).

74 LBP-09-26, slip op. at 43-44.

75 *See* Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 19 (1998) (explaining the Commission's policy of "avoid[ing] unnecessary delays in the NRC's review and hearing processes").

directs otherwise.[76] Even assuming the Board ruled on the Waiver Petition in 45 days,[77] any potential Commission determination is unlikely to be issued in time to allow the NRC Staff to adequately address, as necessary, the Commission determination without delaying issuance of the Draft SEIS. Accordingly, in light of the potential for this and other cascading delays, as well as the significant delay in filing its request, the Board should deny SACE's Waiver Petition as untimely.[78]

B. The Waiver Petition Fails to Meet the Criteria of 10 C.F.R. § 2.335

At the outset, SACE acknowledges that 10 C.F.R. §§ 51.53(b) and 51.95(b) were adopted "to avoid, at the operating license stage, the unnecessary duplication of need for power and energy alternatives analyses that were completed at the construction permit stage."[79] Nevertheless, SACE argues that application of Sections 51.53(b) and 51.95(b) in this proceeding would not serve the purpose for which these regulations were adopted.[80] More specifically, SACE argues that the purpose of these regulations is not satisfied in the case of WBN Unit 2 for the following four reasons:

(1) The recent economic downturn has significantly decreased energy demand such that there may no longer be a need for WBN Unit 2;[81]

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76 10 C.F.R. § 51.95(b). Notably, the Commission has not instructed the NRC Staff to include a full discussion of the need for power or alternative energy sources in the NRC's SEIS.

77 *Cf.* 10 C.F.R. § 2.309(i).

78 SACE implies that NRC regulations required that it wait to file the Waiver Petition until it was admitted as a party to this proceeding. *See* Waiver Petition at 1 n.1. TVA is not aware of any case where a waiver request was rejected because a petitioner was not yet admitted as a party to the proceeding, and SACE has cited none. To the contrary, waiver requests filed by non-parties have been certified for Commission review. *See, e.g., Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station Units 2 & 3), LBP-05-16, 62 NRC 56, 65 & 75 (2005). In any event, SACE was made a party to this proceeding in November 2009, more than 2 months before the submission of the Waiver Petition.

79 Waiver Petition at 6.

80 Waiver Petition at 6. In support of this claim, SACE includes the Makhijani Declaration, SACE's Proposed Contention 4, and the Makhijani Report prepared in support of Proposed Contention 4.

81 Waiver Petition at 8-9; Makhijani Declaration ¶ 14.

(2) As a result of recent economic and political changes, the following alternative energy sources might be less costly than WBN Unit 2: (a) purchased power, (b) operation of currently idle TVA units, (c) combinations of purchased power contracts and operation of idle units, and (d) renewable energy sources such as efficiency and baseload wind;[82]

(3) The Commission's assumption that construction is complete at the OL stage is "unfulfilled" because WBN Unit 2 is only 60% complete and TVA must spend $2.5 billion to complete construction;[83] and

(4) The NRC Staff has undertaken an analysis of the need for WBN Unit 2 by issuing a request for additional information ("RAI").[84]

As explained further below, SACE's arguments are neither new nor sufficient to demonstrate that the rule would not serve the purpose for which it was adopted.

First, as required by long-standing NRC precedent, to make a *prima facie* showing necessary to litigate need for power issues in this OL proceeding, SACE must establish that WBN Unit 2 "is not needed to meet increased energy demand *and* that it need not be used to displace an equivalent amount of older, less economical capacity."[85] SACE has failed to do either. Specifically, SACE fails to demonstrate that WBN Unit 2 will represent unneeded capacity because it myopically focuses on uncertainty due to current economic conditions and never addresses long-term energy forecasts. Moreover, SACE makes no attempt to show that WBN Unit 2 is less economical to operate than *all* of TVA's fossil fuel baseload generation. Furthermore, SACE also has not demonstrated that WBN Unit 2 is not needed to meet TVA's goals of reducing air emissions or providing fuel diversity and operational flexibility.

Second, to establish special circumstances necessary to litigate alternative energy issues, SACE must also demonstrate that an environmentally *and* economically superior alternative

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82 Waiver Petition at 8-9; Makhijani Declaration ¶¶ 16 & 26.

83 Waiver Petition at 8; Makhijani Declaration ¶ 13.

84 Waiver Petition at 10; Makhijani Declaration ¶ 18.

85 *Shearon Harris*, ALAB-837, 23 NRC at 547-48 (emphasis added).

exists.[86] Again, SACE has failed to do either. In particular, SACE has not demonstrated that that purchased power, operation of currently idle TVA units, some unspecified combination of purchased power contracts and operation of idle units, or renewable energy sources are *environmentally* or *economically* superior to the operation of WBN Unit 2.

Third, the Commission never assumed that construction would be complete while the OL proceeding is still ongoing, years before the scheduled operational start date.[87] In fact, the current status of WBN Unit 2 construction can hardly be considered unique in comparison to prior NRC OL proceedings.[88] Therefore, issues related to construction costs and the completion status for WBN Unit 2 are beyond the scope of an OL proceeding and insufficient to establish special circumstances.[89]

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86 *See id.* at 546; *see also Vogtle*, LBP-84-35, 20 NRC at 893-94; *Beaver Valley*, LBP-84-6, 19 NRC at 401; Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

87 *See* Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441 ("At the time of the *operating license decision*, construction related environmental impacts have already occurred at the site and the construction costs have been incurred by the licensee. The facility is *essentially completely* constructed and ready to operate when the Commission's Atomic Safety and Licensing Board renders its *decision on the operating license application*.") (emphasis added); *Byron*, ALAB-793, 20 NRC at 1615 (explaining that a waiver petition must show, *inter alia*, "the NEPA cost-benefit balance might now tip in the direction of abandoning this *essentially completed facility*") (emphasis added).

88 *See, e.g.*, NUREG-1087, Final Environmental Statement Related to the Operation of Vogtle Electric Generating Plant, Units 1 and 2, at 1-1 to 1-2 (Mar. 1985) ("Vogtle 1985 FES"), *available at* ADAMS Accession No. ML073170375 (construction of Unit 1 only 76% complete in February 1985 and fuel load planned for September 1986, while Unit 2 only 45% complete in February 1985 with fuel load planned for March 1988); NUREG-0564, Final Environmental Statement Related to the Operation of Susquehanna Steam Electric Station, Units 1 and 2, at 1-1 (June 1981) ("Susquehanna 1981 FES"), *available at* ADAMS Accession No. ML080150291 (construction of Unit 1 91% complete in February 1981 with fuel load expected in March 1982, while Unit 2 only 70% complete in February 1981 with a tentative fuel-loading date of June 1983).

89 *See Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), LBP-82-106, 16 NRC 1649, 1665 (1982) (holding that "the appropriate economic analysis required by NEPA in this operating license proceeding is a comparison only of . . . operating costs . . . because the decision of this licensing board concerns only whether Seabrook will or will not be permitted to operate"—"[c]onstruction has already been approved, and the Board must consider construction costs to be 'sunk' costs and irrelevant to future operation"); *Consumers Power Co.* (Midland Plant, Units 1 & 2), LBP-82-95, 16 NRC 1401, 1404-05 (1982) (holding that increased construction costs do not constitute special circumstances and that NRC cannot consider increased construction costs in its review of the OL cost-benefit balance); *Consumers Power Co.* (Midland Plant, Units 1 & 2), LBP-82-63, 16 NRC 571, 586-87 (1982) (same); *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), LBP-82-16, 15 NRC 566, 584 (1982) (holding that an "attempt to inject increased costs into the cost/benefit equation at the operating license stage simply comes too late" because "the fact remains that those funds have already been

Fourth, the issuance of an NRC Staff RAI is not relevant to the underlying purpose of the regulations. The regulations bar discussion of need for power and alternative energy sources in the NRC's SEIS, and the NRC Staff—like all parties—must follow these regulations absent a waiver.[90] Moreover, just as a petitioner "must do more than 'rest on [the] mere existence' of RAIs as a basis for their contention,"[91] SACE must do more than simply point to an RAI to establish special circumstances.

Accordingly, having failed to make a *prima facie* case for waiver, SACE's Waiver Petition should be denied.

1. SACE Fails to Demonstrate There Is No Need for WBN Unit 2

a. SACE Fails to Demonstrate There Is No Need for WBN Unit 2 to Meet Increased Energy Demand

SACE claims, based on current economic conditions and the recent short-term decline in the demand for power,[92] that it would be "illogical" to assume that WBN Unit 2 is needed.[93] However, as the Commission made clear in its *Shearon Harris* CP decision, "every prediction has associated uncertainty and that long-range forecasts of this type are especially uncertain in that they are affected by trends in usage, increasing rates, demographic changes, industrial growth or decline, *the general state of the economy*, etc."[94] In accordance with this precedent, such uncertainty (including uncertainty due to current economic conditions) is inherent in demand forecasts and cannot provide a sufficient basis to show special circumstances.

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spent or are committed at this late stage of construction" and "[t]hus there is no practical point in considering such 'sunk' costs now").

90 10 C.F.R. § 51.95(b).

91 *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 336-37 (1999).

92 *See* Waiver Petition at 8; Makhijani Declaration ¶¶ 18-23.

93 Makhijani Declaration ¶ 26.

94 *Shearon Harris*, CLI-79-5, 9 NRC at 609-10 (emphasis added).

Furthermore, SACE makes no attempt to demonstrate that TVA's long-term load forecasts were so unreasonable as to preclude proper consideration of environmental impacts.[95] Given that absence of any such information, SACE fails to carry its burden of demonstrating that WBN Unit 2 will represent unneeded capacity.

Also, as TVA explained in its August 7 Answer to SACE's Proposed Contention 4, there is still a need for power from WBN Unit 2.[96] Specifically, additional baseload generation is needed under TVA's medium- and high-load forecasts and, even under the low-load forecast—which determines demand and energy at a rate based on low economic growth and includes *no* and *negative* growth conditions—WBN Unit 2 power is needed to provide fuel diversity, operating flexibility, and a lower delivered cost of power.[97]

Moreover, to the extent SACE quibbles with TVA's predicted energy demands, the Commission has made clear that there is uncertainty inherent in all long-range energy forecasts.[98] Also, while the source of the data cited by SACE's expert is not entirely clear, it appears that SACE fundamentally misunderstands TVA's need for power analysis when SACE suggests that TVA "overestimated" its 2012 and 2014 energy needs.[99] Essentially, SACE appears to have used an "apples to oranges" comparison, by contrasting TVA's projected total firm capacity needs in 2012 and 2014 (which includes load required for system reserves), with TVA's 2009

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95 *See Nine Mile Point*, ALAB-264, 1 NRC 347, 365-67; *see also Catawba*, ALAB-355, 4 NRC at 410 (affirming Board's dismissal of intervenor's contention, which attempted to rest a long term forecast of an "applicant's peak load demands on changes which took place in the *last two years*") (emphasis added).

96 *See* TVA's Answer to the Petition to Intervene at 58-65. TVA incorporates by reference those arguments herein.

97 *See id.*; *see also* TVA's 2007 Final SEIS at 12, 15.

98 *See, e.g.*, *Shearon Harris*, CLI-79-5, 9 NRC at 609-10.

99 *See* Makhijani Declaration ¶¶ 20-22.

summer peak demand (which does not include margin for system reserves).[100] Also, by focusing exclusively on summer peak demand, SACE ignores the fact that TVA is a dual-peaking system, which has high demand in both the summer and the winter.[101] Other than providing these irrelevant and incomplete comparisons, SACE has not stated with any particularity what information demonstrates that WBN Unit 2 is not needed to meet future energy demands. Therefore, SACE fails to demonstrate special circumstances.

b. SACE Fails to Demonstrate There Is No Need for WBN Unit 2 to Replace Existing, Less Economical Generating Capacity

Even if SACE had demonstrated that WBN Unit 2 is not needed to meet increased energy demands—which it has not—the Waiver Petition still fails because SACE makes no attempt to show that WBN Unit 2 would not displace an equivalent amount of older, less economical generating capacity. The Appeal Board's *Shearon Harris* decision establishes that such a showing is a necessary prerequisite to make a *prima facie* case for waiver.[102] Although SACE purports to show that TVA's projected energy needs can be met using some unspecified combination of purchased power, idle capacity, efficiency, and wind generation, SACE never asserts or establishes that these alternatives are large enough to replace *all* of TVA's fossil fuel baseload generation that is less efficient than WBN Unit 2.[103] As the Appeal Board made clear,

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100 *See id.*; *see also* TVA Highlights from Annual Report on Form 10-K (2009), *available at* http://www.tva.gov/finance/reports/pdf/fy2009ar.pdf (listing 2009 system peak loads of 28,711 MW (summer) and 32,571 MW (winter) and net summer capability of 36,490 MW); TVA's 2007 Final SEIS at 15 ("To assure that enough capacity is available to meet the peak demand in the summer, additional resources or planning reserves are required. Planned reserves in the utility industry are typically 12-18 percent, depending on the age of current resources. TVA targets a planned reserve of 15 percent, which includes 10 percent long-term reserves and 5 percent operating reserves.").

101 *See* TVA's 2007 Final SEIS at 15. In fact, despite the current economic downturn, "[a]s a result of a cold wave during the first week of January 2010, TVA set a number of energy demand records." Tennessee Valley Authority, Form 10-Q (Quarterly Report) at 35 (Feb. 3, 2010), *available at* http://www.sec.gov/Archives/edgar/data/1376986/000137698610000005/tva10q.htm.

102 *Shearon Harris*, ALAB-837, 23 NRC at 547-48.

103 *See* Waiver Petition at 9; Makhijani Delcaration ¶ 16.

"it is not sufficient merely to show that the proposed [conservation] alternative will displace an amount of fossil fuel generated baseload equivalent to that produced by" the planned facility—"[r]ather, the petition *must* establish that *all of the applicants' fossil fuel baseload generation* that is less efficient than [the facility at issue] has been accounted for by the conservation-based alternative."[104]

Nor does the Makhijani Declaration fill in this fatal gap in the Waiver Petition. All the Makhijani Declaration alleges is that "at times during 2009 it was cheaper for TVA to purchase power than to operate *some* of its less efficient generation plants" and "*some* existing [TVA] plants are uneconomical relative to purchased power."[105] At best, this shows that *some* portion of TVA's generation capacity was less economical than purchasing power from another generator. It does *not* show that WBN Unit 2 is less economical to operate than *all* of TVA's fossil fuel baseload generation. Accordingly, SACE fails to make a *prima facie* showing that application of NRC's regulations would not serve the purpose for which the regulations were adopted.

c. SACE Fails to Show There Is No Need for WBN Unit 2 to Reduce Air Emissions and to Provide Fuel Diversity and Operational Flexibility

The Commission explicitly recognized that there may be other "reasonably foreseeable" benefits associated with a proposed project.[106] For example, the Commission has stated "that the construction and operation of a nuclear power plant could have multiple benefits such as reducing greenhouse gases and other air pollutants."[107] Importantly, even in its original 1972 FES, TVA recognized the benefits associated with operation of WBN Unit 2 included

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104 *Shearon Harris*, ALAB-837, 23 NRC at 548 (emphasis added).

105 Makhijani Delcaration ¶¶ 15, 16.

106 2003 Rulemaking Petition Denial, 68 Fed. Reg. at 55,909.

107 *Id.*

avoiding "operation of TVA's older, less efficient fossil-fired units" and the associated "increased emission of particulates, sulfur dioxide, and other materials into the atmosphere."[108] This benefit was confirmed in TVA's 2007 Final SEIS, which specifically stated that WBN Unit 2 "provides TVA flexibility to reduce emissions from its fossil plants by reducing generation from those plants, depending on future events and the demand for energy"[109] and even under the low-load forecast, operating WBN Unit 2 in 2013 is beneficial because it "provides additional fuel diversity, [and] operating flexibility," and would provide TVA the flexibility of relying less on its coal-fired generation.[110] SACE does not refute that WBN Unit 2 is needed for these additional purposes as well.[111] Accordingly, the Waiver Petition again fails to establish the requisite special circumstances because SACE does not show that WBN Unit 2 is not needed to reduce greenhouse gases and other air pollutants, and to provide additional fuel diversity and operational flexibility.

2. SACE Fails to Show the Existence of an Environmentally and Economically Superior Alternative

SACE claims that, as a result of recent economic and political changes, the following alternative energy sources might be less costly than WBN Unit 2: (a) purchased power, (b) operation of currently idle TVA units, (c) combinations of purchased power contracts and operation of idle units, and (d) renewable energy sources such as efficiency and baseload wind.[112] Simply listing these possible alternatives does *not* meet SACE's burden of

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108 TVA's 1972 FES at 1.2-8.

109 TVA's 2007 Final SEIS at 32.

110 *Id.* at 15.

111 In fact, the TVA Annual Report cited in the Makhijani Declaration (at 6 n.7), explains that TVA operates fifty-nine coal-fired generating units with a total capacity of 14,711 MW. Tennessee Valley Authority, Form 10-K (Annual Report) at 13 (Nov. 25, 2009), *available at* http://www.sec.gov/Archives/edgar/data/1376986/000137698609000113/tva_10-k2009.htm.

112 Waiver Petition at 8-9; Makhijani Declaration ¶¶ 16 & 26.

demonstrating that any of these alternatives are in fact environmentally *and* economically superior alternatives to the operation of WBN Unit 2.[113]

As the Commission has emphasized, NEPA's "theme . . . is sounded by the adjective '*environmental*.'"[114] Nonetheless, SACE provides no discussion of the environmental impacts of the various alternatives it claims should be considered. In this respect, SACE's request is similar to a waiver petition filed in the *Beaver Valley* OL proceeding.[115] That Board found:

> [T]here was no showing that there are viable alternatives to the completed nuclear plant likely to exist which could tip the NEPA cost-benefit balance against issuance of the operating license. At most there were a few superficial comments on conservation and purchasing electricity from another utility. They were made in the most cursory and general terms and cannot be considered as a serious attempt at establishing those methods as viable alternatives to the completed plant and do not do so.[116]

Likewise, here, all that is offered by SACE are conclusory statements that TVA and the NRC should provide a comparison of other alternatives based on purely economic considerations.[117] Therefore, because SACE fails to provide *any* discussion of the relative environmental impacts of its preferred energy alternatives, SACE fails to make a *prima facie* showing that application of NRC's regulations would not serve the purpose for which the regulations were adopted.[118]

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113 *See Shearon Harris*, ALAB-837, 23 NRC at 546; *Vogtle*, LBP-84-35, 20 NRC at 893-94; *Beaver Valley*, LBP-84-6, 19 NRC at 401; Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441.

114 *LES*, CLI-98-3, 47 NRC at 88 (quoting *Metro. Edison*, 460 U.S. at 772).

115 *See Beaver Valley*, LBP-84-6, 19 NRC at 402.

116 *Id.*

117 *See* Waiver Petition at 9-10; Makhijani Declaration ¶¶ 16 & 26.

118 Furthermore, SACE does not demonstrate that these other alternatives meet TVA's goal of reducing greenhouse gases and other air pollutants, particularly in light of the TVA Annual Report cited in the Makhijani Declaration (at 6 n.7), which points out that TVA operates fifty-nine coal-fired generating units with a total capacity of 14,711 MW and ninety-three natural gas and oil-fired units with a total capacity of 6,871 MW. Tennessee Valley Authority, Form 10-K (Annual Report) at 13 (Nov. 25, 2009). It is well established that NEPA does not require consideration of alternatives that do not meet the purposes of the proposed action. *See Clinton ESP*, CLI-05-29, 62 NRC at 806 (explaining that "an agency cannot redefine the

The Waiver Petition also fails to demonstrate the existence of an *economically* superior alternative to the operation of WBN Unit 2. As explained above, all the Makhijani Declaration alleges is that "at times during 2009 it was cheaper for TVA to purchase power than to operate some of its less efficient generation plants" and "some existing [TVA] plants are uneconomical relative to purchased power."[119] It does *not* show that purchased power, operation of currently idle TVA units, or some unspecified combination of purchased power contracts and operation of idle units is economically superior to the operation of WBN Unit 2. Nor does it show that the operation of any renewable energy sources is economically superior to the operation of WBN Unit 2.[120] Accordingly, given its failure to demonstrate the existence of any economically superior alternative, SACE again fails to make a *prima facie* showing for a waiver.[121]

3. Construction Costs Are Irrelevant at the OL Stage

SACE claims that special circumstances are present because the Commission's alleged assumption in promulgating 10 C.F.R. §§ 51.53(b) and 51.95(b) that construction would be complete at the OL stage is "unfulfilled" because WBN Unit 2 is only 60% complete and TVA must spend $2.5 billion to complete construction.[122] Contrary to SACE's unsupported assertion about the Commission's supposed "fundamental and indispensable assumption,"[123] NRC

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goals of the proposal that arouses the call for action; it must evaluate the alternative ways of achieving its goals").

119 Makhijani Delcaration ¶¶ 15 & 16.

120 In fact, the Waiver Petition contains nothing indicating that renewable energy is even a technologically feasible way of providing baseload power equivalent to WBN Unit 2. *See* Makhijani Declaration ¶ 16 (providing only a conclusory assertion about the need to consider "baseload wind"). Moreover, to the extent that SACE suggests that "efficiency" might be addressed as an energy alternative, energy efficiency is essentially a surrogate for need for power, *see Clinton ESP*, LBP-05-19, 62 NRC at 159, and, as demonstrated above in Section IV.B.1, SACE has not met its waiver burden on need for power issues.

121 TVA also incorporates by reference the arguments in its Answer responding to the energy alternatives issues raised in Proposed Contention 4. *See* TVA's Answer to the Petition to Intervene at 65-68.

122 Waiver Petition at 8; Makhijani Declaration ¶ 13.

123 Wavier Petition at 8.

regulations are not premised on construction being finished at this stage in an OL proceeding. In fact, in the Proposed Rule, the Commission explains:

> At the time of the *operating license decision*, construction related environmental impacts have already occurred at the site and the construction costs have been incurred by the licensee. The facility is *essentially completely constructed* and ready to operate when the Commission's Atomic Safety and Licensing Board renders its *decision on the operating license application*.[124]

Thus, the Commission never assumed that construction would be complete while the OL proceeding is still ongoing, years before the scheduled operational start date. Rather the Commission assumed only that construction would be "essentially" complete at the *end* of the OL proceeding, just prior to the decision on whether to issue the OL. Furthermore, the current status of WBN Unit 2 construction[125] can hardly be considered unique in comparison to prior NRC OL proceedings.[126] Additionally, construction costs are beyond the scope of this OL proceeding and need not be considered.[127] Accordingly, SACE's argument regarding the current

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124 Proposed Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 46 Fed. Reg. at 39,441 (emphasis added); *see also Byron*, ALAB-793, 20 NRC at 1615 (explaining that a waiver petition must show, *inter alia*, "the NEPA cost-benefit balance might now tip in the direction of abandoning this *essentially completed facility*") (emphasis added).

125 TVA notes that the "60% complete" reference provided by SACE comes from the TVA's 2007 Final SEIS. *See* Makhijani Declaration ¶ 13 (citing TVA's 2007 Final SEIS at 19). Substantial progress has been made on the completion of WBN Unit 2 in the almost three years since the issuance of TVA's 2007 Final SEIS. Even at 60% complete, however, WBN Unit 2 is consistent with prior OL proceedings.

126 *See, e.g.*, Vogtle 1985 FES at 1-1 to 1-2 (construction of Unit 1 only 76% complete in February 1985 and fuel load planned for September 1986, while Unit 2 only 45% complete in February 1985 with fuel load planned for March 1988); Susquehanna 1981 FES at 1-1 (construction of Unit 1 91% complete in February 1981 with fuel load expected in March 1982, while Unit 2 only 70% complete in February 1981 with a tentative fuel-loading date of June 1983).

127 *See Seabrook*, LBP-82-106, 16 NRC at 1665 (holding that "the appropriate economic analysis required by NEPA in this operating license proceeding is a comparison only of . . . operating costs . . . because the decision of this licensing board concerns only whether Seabrook will or will not be permitted to operate"—"[c]onstruction has already been approved, and the Board must consider construction costs to be 'sunk' costs and irrelevant to future operation"); *Midland*, LBP-82-95, 16 NRC at 1404-05 (holding that increased construction costs do not constitute special circumstances and that NRC cannot consider increased construction costs in its review of the OL cost-benefit balance); *Midland*, LBP-82-63, 16 NRC at 586-87 (same); *Catawba*, LBP-82-16, 15 NRC at 584 (holding that an "attempt to inject increased costs into the cost/benefit equation at the operating license stage simply comes too late" because "the fact remains that those funds have already been

status of the WBN Unit 2 construction status fails to show that application of NRC's regulations would not serve the purpose for which the regulations were adopted.

4. NRC Staff Requests for Additional Information Are Immaterial Because Only the Commission May Grant a Waiver

SACE argues that the purpose of the regulations is not satisfied in this case because the NRC Staff has already undertaken an analysis of the need for WBN Unit 2 by issuing an RAI.[128] The fact that the NRC Staff issued an RAI on this issue, however, is irrelevant. Section 51.95(b) bars discussion of need for power and alternative energy sources in the NRC's SEIS unless the Commission directs otherwise. The NRC Staff—like all parties—is bound by the Commission's regulations absent a waiver.[129] Moreover, simply issuing an RAI does not suggest that special circumstances are present. Under well-established Commission precedent, "NRC's issuance of RAIs does not alone establish deficiencies in the application, or that the NRC Staff will go on to find any of the Applicant's clarifications, justifications, or other responses to be unsatisfactory."[130] Thus, just as a petitioner "must do more than 'rest on [the] mere existence' of RAIs as a basis for their contention,"[131] SACE must do more than rest on the existence of an NRC Staff RAI to establish special circumstances.

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spent *or are committed at this late stage of construction*" and "[t]hus there is no practical point in considering such 'sunk' costs now") (emphasis added).

128 Waiver Petition at 10; Makhijani Declaration ¶ 18.

129 *See, e.g.*, Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,470 (June 5, 1996) (explaining that if a NEPA "commenter provides new, site-specific information which demonstrates that the analysis of an impact codified in the rule is incorrect with respect to the particular plant, the NRC staff will seek Commission approval to waive the application of the rule with respect to that analysis in that specific renewal proceeding").

130 *Oconee*, CLI-99-11, 49 NRC at 336-37.

131 *Id.* (citation omitted).

Furthermore, the issuance of an RAI does not make it "unlawful" for the NRC to exclude need for power and energy alternatives issues from this OL hearing, as SACE suggests.[132] SACE cites to *Union of Concerned Scientists v. NRC* in support of this claim.[133] That case involved NRC regulations that made clear that the results of emergency planning exercises were material to OL licensing decisions, but, nonetheless, these issues were excluded from OL hearings.[134] Although these regulations were vacated because NRC attempted to exclude issues that were material and relevant to its licensing decision from the hearing process, the Court made clear "the Commission can limit . . . hearing[s] to issues—not already litigated—that it considers material to its decision.[135] In contrast, the regulations at issue here establish that need for power and energy alternative issues are *not material* to OL licensing decisions and thus, *are properly* excluded from OL hearings.[136] The U.S. Supreme Court has made clear that NRC may resolve NEPA questions through the use of generic rulemakings.[137] Courts have also made clear that challenges to such regulations may only be raised in individual hearings if the requirements for a waiver are met.[138] As explained throughout this Response, SACE has failed to meet its waiver burden and merely pointing to an NRC Staff RAI does not cure the numerous deficiencies in its Waiver Petition.

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132 Waiver Petition at 10.

133 *Union of Concerned Scientists v. NRC*, 735 F.2d 1437 (D.C. Cir. 1984).

134 *See id.* at 1442-43.

135 *See id.* at 1448, 1451.

136 *See* Final Rule, Need for Power and Alternative Energy Issues in OL Proceedings, 47 Fed. Reg. at 12,942 (finding that circumstances relating to need for power and energy alternatives were unlikely to change between the CP and the OL proceeding that "would tip the NEPA cost-benefit balance against issuance of the operating license").

137 *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 101 (1983) ("The generic method chosen by the agency is clearly an appropriate method of conducting the hard look required by NEPA").

138 *See, e.g.*, *Massachusetts v. NRC*, 522 F.3d 115, 127 (1st Cir. 2008) ("The NRC's procedural rules are clear: generic . . . issues cannot be litigated in individual licensing adjudications without a waiver.").

C. The Waiver Petition Should Be Rejected Because Proposed Contention 4 Is Not Otherwise Admissible

SACE appears to be under the impression that, if the Commission were to grant a waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b), then it would automatically be permitted to litigate Proposed Contention 4. However, notwithstanding SACE's request to waive Sections 51.53(b) and 51.95(b), Proposed Contention 4 otherwise is inadmissible. TVA's Answer to the Petition to Intervene contains a detailed discussion of the numerous reasons Proposed Contention 4 would be inadmissible even if a waiver were granted.[139] We incorporate by reference those arguments here and note that Proposed Contention 4 could have been rejected for a number of reasons unrelated to the Commission's prohibition on need for power and energy alternatives contentions in OL proceedings. Thus, certification of the Waiver Petition serves no useful purpose because SACE has not proffered an admissible need for power or energy alternative contention.

Furthermore, the Waiver Petition should also be rejected because SACE has not sought a waiver of 10 C.F.R. § 51.106(c). As explained above, that regulation provides that "[t]he presiding officer in an operating license hearing shall not admit contentions proffered by any party concerning need for power or alternative energy sources."[140] Without a waiver of this regulation, SACE cannot litigate need for power or energy alternative issues. Thus, even if SACE had met the requirements for a waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b)—which it has not—and even if SACE had submitted an admissible need for power or energy alternative contention—which, again, it has not—the Board should not admit Proposed Contention 4. Accordingly, having failed to seek a waiver of Section 51.106(c), SACE cannot litigate these issues and consequently, there is no reason to certify the Waiver Petition to the Commission.

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139 TVA's Answer to the Petition to Intervene at 58-68.

140 10 C.F.R. § 51.106(c).

V. CONCLUSION

Admittedly, a substantial amount of time has passed between the NRC's issuance of the CP for WBN Unit 2 and the OL application. Although some circumstances have certainly changed in this time, the Commission explicitly recognized this might be the case when it removed consideration of need for power and energy alternatives issues from OL proceedings. SACE, however, has not met its burden to show that these changes "tip the NEPA cost-benefit balance" against issuance of the OL. Specifically, although SACE claims that conditions have changed "dramatically," SACE fails to make a *prima facie* showing that WBN Unit 2 is not needed to (1) meet increased energy demand; (2) displace an equivalent amount of older, less economical generation capacity; or (3) reduce air emissions and provide fuel diversity and operational flexibility. SACE also fails to make a *prima facie* showing that environmentally *and* economically superior alternative energy sources exist. Accordingly, for the reasons set forth above, TVA requests that the Board deny SACE's request for waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b).

Respectfully submitted,

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Dated in Washington, D.C.
this 1st day of March 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket No. 50-391-OL
TENNESSEE VALLEY AUTHORITY	)	
	)	March 1, 2010
(Watts Bar Nuclear Plant Unit 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that, on March 1, 2010, a copy of "Tennessee Valley Authority's Response in Opposition to Petition for Waiver of 10 C.F.R. §§ 51.53(b) and 51.95(b)" was served by the Electronic Information Exchange on the following recipients:

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