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From: Quinn, Laura
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Here is the applicant response to the DEIS contention. Just an FYI.
Laura

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)
)
CALVERT CLIFFS 3 NUCLEAR)
PROJECT, LLC AND UNISTAR)
NUCLEAR OPERATING SERVICES,) Docket No. 52-016-COL
LLC)
)
(Calvert Cliffs Nuclear Power Plant, Unit 3))

APPLICANTS' RESPONSE TO PROPOSED CONTENTION 10

INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1), Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (“UniStar” or “Applicants”) hereby respond to the “Submission of Contention 10 by Joint Intervenors,” dated June 25, 2010 (“Late-Filed Contention”). For the reasons discussed below, proposed Contention 10 does not meet the criteria for late-filing and is otherwise inadmissible in this proceeding.

BACKGROUND

The standards governing the admissibility of contentions are found in 10 C.F.R. Part 2. Initial contentions must be based on the application or other documents available at the time the petition is filed. 10 C.F.R. § 2.309(f)(2). Intervenors may file a new contention if there are data or conclusions in the Draft or Final Environmental Impact Statement or Draft or Final Safety Evaluation Report that “differ significantly from the data or conclusions in the applicant’s documents.” *Id.* Otherwise, a new contention may be considered only if: (1) the information upon which the new contention is based was not previously available; (2) the information upon

which the new contention is based is materially different from information previously available; and (3) the new contention has been submitted in a timely fashion based on the availability of subsequent information. 10 C.F.R. § 2.309(f)(2)(i)-(iii). However, meeting these criteria is not sufficient to warrant admission of a new contention.¹ The petitioner must also address the criteria in 10 C.F.R. § 2.309(c)(1).²

Under Section 2.309(c)(1), the Licensing Board must weigh the following five factors: (1) good cause, if any, for the failure to file on time;³ (2) the availability of other means whereby the requestor's interest will be protected; (3) the extent to which the requestor's interests will be represented by existing parties; (4) the extent to which the requestor's participation will broaden the issues or delay the proceeding; and (5) the extent to which the requestor's participation may reasonably be expected to assist in developing a sound record. *See* 10 C.F.R. § 2.309(c)(1)(i), (v)-(viii). The first factor, good cause for lateness, carries the most weight in the balancing test, and the lack thereof requires the petitioner to make a "compelling case" relative to the remaining factors. *See State of New Jersey* (Department of Law and Public

¹ *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045-50 (1983). The late-filed factors in Section 2.309(c)(1) apply fully even in cases where contentions are filed late only because the information on which they are based was not available until after the filing deadline. Although the Commission has ruled that the first factor — good cause for filing late — is met in such circumstances, the other factors, if implicated, permit the denial of the contention in a given case. *Id.*; *see also Union of Concerned Scientists v. NRC*, 920 F.2d 50, 52 (D.C. Cir. 1990).

² The requirement to apply the factors in 10 C.F.R. § 2.309(c) did not change with the promulgation of the revised 10 C.F.R. Part 2. *See* "Changes to Adjudicatory Process; Final Rule," 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004) ("If information in [a new Staff document] bears upon an existing contention or suggests a new contention, it is appropriate for the Commission to evaluate under § 2.309(c) the possible effect that the admission of amended or new contentions may have on the course of the proceeding.").

³ The criteria in Section 2.309(f)(2), in effect, codify the test for establishing "good cause."

Safety's Requests Dated October 8, 1993), CLI-93-25, 38 NRC 289, 296 (1993) (citations omitted).

Finally, any late-filed contentions also must meet the admissibility standards that apply to all contentions. As set forth in 10 C.F.R. § 2.309(f)(1), a proposed contention must contain: (1) a specific statement of the issue of law or fact raised; (2) a brief explanation of the basis for the contention; (3) a demonstration that the issue is within the scope of the proceeding; (4) a demonstration that the issue is material to the findings that the NRC must make regarding the action which is the subject of the proceeding; (5) a concise statement of the alleged facts or expert opinions supporting the contention; and (6) sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact.

DISCUSSION

The Intervenors seek admission of proposed Contention 10, which challenges the NRC Staff's Draft Environmental Impact Statement ("DEIS") issued on April 21, 2010.⁴ The contention has four separate bases:

Contention 10: The Draft Environmental Impact Statement (DEIS) is inadequate to meet the requirements of 10 CFR 51.71(d) or provide reasonable support for the NRC's decision on issuance of a construction/operating license for the proposed Calvert Cliffs-3 nuclear reactor because its analyses of Need for Power, Energy Alternatives and Cost/Benefit analysis (Chapters 8, 9 and 10) are flawed and based on inaccurate, irrelevant and/or outdated information.

- A. The DEIS' Analysis of Need for Power is Inadequate and Based on Faulty and Outdated Information.
- B. The DEIS Discussion of Energy Alternatives is Inadequate, Faulty and Misleading.

⁴ See "Notice of Availability of the Draft Environmental Impact Statement for the Combined License for Calvert Cliffs Nuclear Power Plant Unit 3," 75 Fed. Reg. 20867 (April 21, 2010).

- C. The DEIS Discussion of a Combination of Alternatives is Inadequate and Faulty.
- D. The DEIS Discussion of Costs Both Understates Likely Costs and Disputes Cost Estimates in the Applicants' ER, Calling into Question the ER's discussion of Calvert Cliffs-3 vs. Alternatives.

Because each basis addresses a distinct aspect of the DEIS, we address each basis separately. As discussed in detail below, none of the bases for proposed Contention 10 reflect materially new or different information than that available in the Environmental Report ("ER") portion of the application. There is nothing new in the DEIS that would warrant admission of a late-filed contention. The DEIS does not "reset" the timeliness clock and permit Intervenors to raise issues that should have been raised based on information in the Applicants' ER or other information available at the time. And, the Intervenors have not made any showing with respect to the factors in Section 2.309(c)(1) that must be applied to late-filed contentions. Proposed Contention 10 also fails to satisfy the Commission's strict admissibility standards in Section 2.309(f)(1). The proposed contention does not raise a material issue and lacks the expert or factual support necessary to demonstrate a genuine dispute with the conclusions in the DEIS.

A. Basis A does not support admission of proposed Contention 10.

In proposed Contention 10, the Intervenors challenge the adequacy of the NRC Staff's analysis of the need for the proposed Calvert Cliffs Unit 3. Late-Filed Contention at 2. The Intervenors note that the DEIS relies on updated information relative to the UniStar's ER, but maintain that the information relied on by the NRC Staff is still outdated. *Id.* The Intervenors also fault the NRC Staff for focusing on the need for power within the State of Maryland rather than the broader area that could be served by Unit 3 (*i.e.*, the PJM service area). *Id.* Finally, the Intervenors assert that the DEIS lacks a meaningful discussion of a demand site management program. *Id.* at 5.

1. *Basis A is untimely.*

Intervenors may propose new contentions if there are data or conclusions in the DEIS that “differ significantly from the data or conclusions in the applicant’s documents.” 10 C.F.R. § 2.309(f)(2). Otherwise, new contentions may be considered only if the information upon which the new contention is based was not previously available and the new information upon which the new contention is based is materially different from information previously available. 10 C.F.R. § 2.309(f)(2)(i)-(ii). Here, the information relied upon by the Intervenors either was previously available or is not materially different from information previously available. Although the DEIS relies on some information that post-dates the ER, that information supports the conclusions in the ER. The contention itself is not based on any new data or new conclusions in the DEIS. The challenge could have been made to the ER at the time of the intervention petition.

First, the Intervenors state that the NRC Staff’s conclusions are based on different data than that presented in the ER, including a 2009 decision by the Maryland Public Service Commission (“PSC”) authorizing issuance of a Certificate of Public Convenience and Necessity (“CPCN”) for Calvert Cliffs 3 and a January 2010 load report forecast. But, both of these documents have been available for some time and both were identified in hearing file updates. *See* Public Service Commission of Maryland, “Proposed Order of Hearing Examiner,” dated April 28, 2009 (ADAMS Accession No. ML091470597); PJM Load Forecast Report (January 2010) (ADAMS Accession No. ML100540735). The Intervenors have not provided any explanation for why a contention based on documents more than a year old could not have been raised sooner.

In any event, the Intervenors do not cite any allegedly different information or conclusions contained in these documents that supports a challenge to either the ER or the DEIS. In its discussion of the need for power, UniStar specifically relied on Maryland's CPCN process. ER at Sections 8.1 to 8.4. So did the NRC in the DEIS. DEIS at Section 8.5. Both the ER and the DEIS state that the CPCN process satisfies the NRC's evaluation criteria of being (1) systematic; (2) comprehensive; (3) subject to confirmation; and (4) and responsive to forecast uncertainty. ER at Sections 8.0 and 8.1; DEIS at Section 8.5; *see also* NUREG-1555, at 8.1-2 (explaining the evaluation criteria). This is consistent with NRC precedent and practice, which permits affected States, regions, and/or Independent System Operators ("ISOs") to prepare the initial need for power evaluation (rather than the applicant).⁵ The fact that the CPCN was ultimately issued by Maryland simply confirms the information and conclusions previously presented in the ER.

Second, the Intervenors are attempting to challenge, for the first time, UniStar's use of Maryland as the region of interest ("ROI"). *See* Late-Filed Contention at 2, 5. But, UniStar previously explained that the ROI is Maryland. *See, e.g.*, ER, Rev. 6, at Section 1.1 ("The purpose is to build and operate a baseload nuclear merchant power plant that will generate needed power for Maryland."); *id.*, Section 9.2.1.2 ("A new baseload facility would allow for the generation of needed power and would meet future power needs within the region of interest (ROI), which is Maryland."). Any challenge to the ROI should have been raised previously,

⁵ The U.S. Supreme Court also has noted that there is little doubt that, under the AEA, State public utility commissions or similar bodies are empowered to make the initial decision regarding the need for power. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 550 (1978). Under NEPA, the NRC may place heavy reliance on the judgment of local regulatory bodies charged with energy planning. *Rochester Gas and Electric Corporation* (Sterling Power Project, Nuclear Unit No. 1), ALAB-502, 8 NRC 383, 388-389 (1978).

based on the ER. Because the ROI was defined previously and because the DEIS reflects the same ROI, this aspect of Basis A is impermissibly late.

Third, the Intervenors argue that the NRC Staff's analysis is "not reliable" because it focuses on Maryland rather than the "PJM grid." Late-Filed Contention at 2. This aspect of Basis A is a corollary to the challenge to the use of Maryland as the ROI. As noted above, the ER is based on serving baseload power needs in Maryland. Thus, the NRC Staff's analysis in the DEIS, which also focuses on baseload power needs in Maryland, does not include materially different information from that previously available in the ER. The ER also includes a discussion of the role of PJM Interconnection, LLC ("PJM") in reliability and transmission capacity planning. ER, Rev. 6, at Section 8.1. PJM's load and reliability forecasts were specifically addressed in the Maryland CPCN process and subsequently incorporated into the DEIS. DEIS at Sections 8.2 and 8.4.2. If the Intervenors believed that Maryland's reliance on PJM load and reliability forecasts, as discussed in the ER, was inadequate, then the Intervenors had an obligation to raise that concern at the time of the ER.

Finally, the Intervenors challenge the adequacy of the DEIS discussion of demand side management. Late-Filed Contention at 5. The Intervenors complain that the demand side management program is limited to actions of Baltimore Gas & Electric ("BG&E"), which is the regulated electric distribution affiliate of Constellation Energy Group, Inc., and point to Maryland laws that aim to reduce electrical demand. *Id.* This part of the contention is also untimely. The ER specifically highlighted BG&E's demand side management plan, including peak clipping, load shifting, and conservation programs. ER, Rev. 6, at Section 9.2.1.1.1. The DEIS also highlights BG&E's demand side management plan, including peak clipping, load shifting, and conservation programs. DEIS at Section 9.2.1 (page 9-5). Further, both the ER and

the DEIS conclude that demand side management is neither a viable offset for the additional baseload generation capacity provided by Unit 3 nor a feasible alternative for the Unit 3 facility. *See* ER, Rev. 6, at Section 9.2.1.1.1; DEIS at Section 9.2.1. Because the ER and the DEIS rely on the same information and reach the same conclusions, Basis A is untimely.

Non-timely contentions cannot be admitted except upon a balancing of the factors in 10 C.F.R. § 2.309(c)(1). Here, the Petitioners did not address the late-filed criteria in 10 C.F.R. § 2.309(c)(1). The contention therefore must be rejected.⁶

2. *Basis A cannot support an admissible contention.*

The NRC Staff's role in situations where an applicant relies on a State need for power determination is to ensure that the analysis of the need for power is reasonable and meets high quality standards — that is, verify that the analysis is systematic, comprehensive, subject to confirmation, and responsive to forecasting uncertainty. NUREG-1555, “Standard Review Plans for Environmental Reviews for Nuclear Power Plants,” at 8.1-2 (October 1999). If the need for power evaluation is found acceptable by the NRC Staff, then no additional independent review by NRC is needed, and the analysis can be the basis for Staff findings.⁷ *Id.* Only if such an analysis is not available must the NRC Staff conduct an independent review of the applicant's need-for-power analysis. In the ER, UniStar relied on the Maryland CPCN process. ER at Section 8.1; DEIS at Section 8.5. The Intervenor did not challenge UniStar's reliance on the

⁶ If a petitioner fails to address the criteria in 10 C.F.R. § 2.309(c)(1) that govern late filed contentions, a petitioner does not meet its burden to establish the admissibility of such contentions. *Baltimore Gas and Electric Company* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), LBP-98-26, 48 NRC 232, 241 (1998).

⁷ This deference to State energy planning is consistent with the NRC's view of evolving State roles in deregulated markets. *See* “Final Policy Statement on the Restructuring and Economic Deregulation of the Electric Utility Industry,” 62 Fed. Reg. 44071 (Aug. 19, 1997).

Maryland CPCN process based on the ER. Nor do they now challenge the NRC Staff's conclusion in the DEIS that the CPCN process meets the four criteria for adopting a State need for power analysis. Thus, the Intervenors fail to establish a genuine or material dispute with the conclusions in the DEIS.

The Intervenors also argue that “any discussion of electrical demand and supply in a specific state must consider the demand and supply issues in the entire PJM grid, not just in an individual state.” Late-Filed Contention at 2, n.1. However, the Intervenors provide no legal or regulatory basis for this claim. The need for power analysis in the DEIS is based on the Maryland CPCN process, incorporates the Maryland PSC decision, and describes the benefits of the project in Maryland.⁸ The benefits of Unit 3 obviously include the power generated by Unit 3. But, the new Unit 3 also would improve the reliability and stability of the electrical system in Maryland, reduce peak period congestion, help ease the impact of congestion charges related to transmission of power into Maryland, and lessen Maryland's reliance on fossil fuels. DEIS at Section 8.4.1.⁹ These benefits were fully addressed in the Maryland CPCN process. And, ultimately, the NRC Staff found that the CPCN process meets the four criteria for an adequate

⁸ NEPA does not specifically call for a discussion of “need for power.” Instead, the NRC's NEPA regulations require that the benefits of the project be addressed. Traditionally, “need for power” at the NRC has been synonymous with the benefits of the proposed action. *Public Service Co. of Oklahoma* (Black Fox Station, Units 1 and 2), ALAB-573, 10 NRC 775, 804 (1979) quoting *Rochester Gas and Electric Corp.* (Sterling Power Project, Nuclear Unit No. 1), ALAB-502, 8 NRC 383, 388 n. 11 (1978).

⁹ The Commission has recognized that there may be *multiple* benefits to a proposed project (*i.e.*, benefits other than meeting a specific “need”). In the licensing proceeding for Louisiana Energy Services' Claiborne Enrichment Center, all parties agreed that the product to be produced, enriched uranium, was already in excess supply. But, the Commission went on to consider the potential benefits of enhanced competition from another market participant and the effects of the project on national policy goals — even when those benefits could not be quantified. *Louisiana Energy Services, LLP* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89-96.

State need for power analysis. DEIS at Section 8.5. Given that Maryland has concluded that there is a need for Unit 3 in Maryland, the Intervenor's argument that the need must be addressed for the entire grid does not raise a material issue.

The Intervenor's also have not presented any factual or expert evidence to call into question Maryland's conclusions. The NRC's long-standing approach to electric power demand forecasting has emphasized historical, conservative planning to ensure electricity generating capacity will be available to meet reasonably expected needs. *See Duke Power Co. (Catawba Nuclear Station, Units 1 and 2)*, ALAB-355, 4 NRC 397, 410 (1976); *see also Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4)*, CLI-79-5, 9 NRC 607, 609-10 (1979). The description of the forecasting process in DEIS Sections 8.2, 8.3, and 8.4 indicates that the process encompassed a ten-year planning cycle based on a wide variety of factors, including new generating resources, trends in generation by fuel source, trends in consumption by class of consumer, forecasts of sales by PJM and electric utilities serving Maryland, transmission congestion in Maryland and surrounding states, demand side management, demand response, distributed generation, and reliability assessments. The analysis therefore included a reasonable assessment of factors likely to affect long-term load growth. *See Kansas Gas and Elec. Co. (Wolf Creek Generating Station, Unit No. 1)*, ALAB-462, 7 NRC 320, 328 (1978) ("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."). The Intervenor's have not demonstrated a genuine dispute with this evaluation.

The Intervenor's contention is narrowly focused on perceived near-term economic conditions. When contrasted with the long-term forecasting described in the DEIS, it is also apparent that the Intervenor's fail to provide sufficient support for an admissible contention

challenging the Maryland need for power conclusions or reliability concerns. Short-term fluctuations say nothing about a long-term need for power analysis. Nor has there been any attempt to establish the materiality of Basis A relative to the other benefits of Unit 3 (e.g., reliability) addressed in the ER and DEIS. Even if the Board were to accept at face value Intervenors' claims of reduced energy consumption during the economic downturn and the potential for demand side reductions, such allegations would be insufficient to call into question the reasonableness of the long-term need for power analysis in the DEIS.

Indeed, similar arguments have been rejected by Licensing Boards in other proceedings:

This Board does not decide energy policy, nor do we adjudicate the business wisdom of a proposed investment. Instead, at this stage, we are simply looking for some indication that Petitioners have identified and articulated some concrete allegation as to how or why the ER [or, here, the DEIS] fails to satisfy some legal requirement (e.g., Part 51), and some understanding as to what will actually be litigated at the evidentiary hearing. This contention is not admissible because it is not plausibly explained or supported by alleged facts.

Progress Energy Fla., Inc. (Levy County Nuclear Power Plant, Units 1 & 2), LBP-09-10, 70 NRC __ (slip op. at 91) (July 8, 2009); *see also*, *South Texas Project Nuclear Operating Co.* (South Texas Project Units 3 and 4), LBP-09-21, 70 NRC __ (slip op. at 55) (Aug. 27, 2009). The Intervenors' concerns here similarly lack the specific factual or expert support and the materiality necessary for contention admission. *See* 10 C.F.R. § 2.309(f)(1)(iv), (v); *see also* *Bellefonte*, LBP-08-16, slip op. at 47-48 (rejecting a similar need for power contention).

The aspects of the contention related to demand side management fail for similar reasons. The Maryland PSC, the entity responsible for evaluating the need for power in Maryland, determined there is a need for power, even taking into account conservation and

demand side management programs.¹⁰ DEIS at Section 9.2.1. Conservation was also addressed in the PSC’s Order granting a CPCN to UniStar for proposed Unit 3. *Id.* The Intervenor cannot use this NRC proceeding as a forum for a collateral challenge to the conclusions of the Maryland process.¹¹ Further, as discussed above, the “need” for the power is not just to meet demand, but also to increase the reliability and stability of the transmission system and to reduce congestion. The Intervenor has not explained how demand side management will obviate these benefits of Unit 3. Having failed to address these essential benefits of the project, the Intervenor has failed to establish the materiality of the concern in Basis A.

B. Basis B does not support admission of proposed Contention 10.

In Basis B, the Intervenor argues that the DEIS discussion of alternatives relies on “misleading, irrelevant, and flawed data and analysis.” Late-Filed Contention at 6. In particular, the Intervenor faults the DEIS discussion of wind and solar power. *Id.* at 6-8 (wind); *id.* at 8-9 (solar).

¹⁰ Considerable weight should be accorded the electrical demand forecast of a State utilities commission that is responsible by law for providing current analyses of probable electrical demand growth or which has conducted public hearings on the subject. *Rochester Gas and Electric Corporation* (Sterling Power Project, Nuclear Unit No. 1), ALAB-502, 8 NRC 383, 388-389 (1978). In resolving “need-of-power” issues, NEPA permits reliance on the judgment of local regulatory bodies that are charged with the responsibility to analyze future electrical demand growth, at least where the forecasts are not facially defective and are explained on a detailed record. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1-4), ALAB-490, 8 NRC 234, 241 (1978).

¹¹ In any event, demand side management or energy efficiency, is not a reasonable alternative that would advance the goals of the project sponsor, which has a limited purpose: selling electricity. Neither the NRC nor the applicant has the mission (or power) to implement a general societal interest in energy efficiency. *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 806 (2005).

1. *Basis B is untimely.*

It is too late for the Intervenors to challenge the adequacy of the DEIS conclusions regarding wind or solar power. Contentions based on energy alternatives could have and should have been raised at the outset of the proceeding based on the ER. The issuance of the DEIS does not present the Intervenors with a new opportunity to raise these issues.

a. Wind power

There is no new information in the DEIS regarding wind power that can support a late-filed contention. Both the ER and the DEIS acknowledge that there are potential wind resources in Maryland, including both onshore and offshore resources. DEIS at 9.2.3.2; ER, Rev. 6, at 9.2.2.1. Both the ER and the DEIS state that wind turbines operate at much lower capacity factors than nuclear power plants. Both the ER and the DEIS note that, to be considered a potential baseload alternative, wind turbines must be combined with storage mechanisms, and both also conclude that wind power, in conjunction with energy storage mechanisms, is unlikely to be economically competitive or viable. Lastly, both the ER and the DEIS reach the same ultimate conclusion that wind power is not a reasonable alternative to the baseload power generated by a new nuclear unit. In short, the DEIS and the ER rely on the same logic and reasoning to reject wind power as a reasonable alternative to the baseload power that would be generated by Unit 3.

The DEIS does cite a study that was not specifically highlighted in the ER. *See* ER at Section 9.2.3.2 (citing *Southern Winds: A Study of Wind Power Generation Potential off the Georgia Coast*). However, the conclusions of the study that the NRC relies on in the DEIS are the same as those made by UniStar in the ER — specifically, that offshore wind power is not economically viable. *See* 10 C.F.R. § 2.309(f)(2) (stating that new contentions must be based on

significantly different conclusions in the DEIS). Beyond an unsubstantiated complaint that a study from Georgia is irrelevant in Maryland, the Intervenor do not contest the conclusions of the Georgia study (offshore projects have higher costs than onshore projects, wind turbines are not designed to withstand certain hurricanes, and Minerals Management Services has jurisdiction). If the Intervenor believe that offshore wind power is economically viable or a feasible alternative to baseload nuclear power, they had an obligation to raise that issue — with a basis — based on the information in the ER.¹²

Finally, to the extent that Basis B is based on the Intervenor's assertion that the NRC must investigate the offshore wind potential along the entire mid-Atlantic coast because wind power from the region could feed into the PJM grid, Basis B is again untimely. As noted above, the project purpose is to meet a need for baseload power within Maryland, not within PJM. A challenge to the region of interest or project purpose could have and should have been brought at the outset of the proceeding.

b. Solar Power

The Intervenor also complain that the DEIS fails to quantify the possible contribution that solar photovoltaic collectors could make for Maryland. Late-Filed Contention at 8. A challenge based on the viability of photovoltaic collectors as an alternative to a baseload nuclear unit could have and should have been raised earlier, based on the ER. In the ER, UniStar

¹² See, e.g., *Union of Concerned Scientists*, 920 F.2d at 55 (“[W]e think it unreasonable to suggest that the NRC must disregard its procedural timetable every time a party realizes based on NRC environmental studies that maybe there was something after all to a challenge it either originally opted not to make or which simply did not occur to it at the outset.”). There simply would be no end to NRC licensing proceedings if petitioners could disregard the timeliness requirements and add new contentions at their convenience based on information that could have formed the basis for a timely contention at the outset of the proceeding. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-07, 69 NRC 235, 271-72 (2009) (internal citations omitted).

acknowledged the potential of flat-plate collectors, but concluded that the footprint needed was too large to construct at the proposed plant site. *See* ER at Section 9.2.2.4.2 (concluding that 55,993 acres, or approximately 87 square miles, of photovoltaic collectors would be needed to equal the baseload power from Unit 3). The DEIS is based on the same approach and reaches the same conclusion. DEIS at Section 9.2.3.3. The contention is not based on any new data or conclusions in the DEIS. Because both the information on which the contention is based and the conclusion that it challenges were previously available, Basis B is untimely.

Further, to the extent that Basis B is based on the Intervenors' assertion that the NRC must investigate the solar potential throughout the PJM region, Basis B is again untimely. As noted above, the project is intended to meet a need for power within Maryland, not within PJM. A challenge to the region of interest or project purpose should have been brought at the outset of the proceeding.

For these reasons, Basis B is untimely. Non-timely contentions cannot be admitted except upon a balancing of the factors in 10 C.F.R. § 2.309(c)(1). Here, the Petitioners did not address the late-filed criteria in 10 C.F.R. § 2.309(c)(1) and therefore the contention must be rejected.

2. *Basis B cannot support an admissible contention.*

Basis B is inadmissible because (1) it fails to present a genuine dispute with the DEIS on a material issue and (2) it lacks sufficient expert or factual support to demonstrate a genuine dispute with the DEIS. The NRC Staff has met its obligation to take a "hard look" at energy alternatives, including wind and solar, and concluded that those alternatives are not reasonable alternatives to new baseload power.

First, at its most basic, Basis B is challenging the purpose and need for the project. As noted above, the purpose of the project is to build and operate a baseload power plant.¹³ ER, Rev. 6, at Section 1.1. While the Intervenors point out that Maryland has estimated its onshore wind potential as between 627 and 1078 MW, they nowhere assert (with a basis) that such power is a substitute for the baseload power that would be generated by Unit 3. Similarly, the Intervenors complain that the DEIS fails to consider the potential for flat-plate solar collectors in Maryland, but do not challenge the conclusion (in both the ER and the DEIS) that the land requirements are too large and the technology too costly to provide baseload power equivalent to Calvert Cliffs Unit 3. And, nowhere in Contention 10 do the Intervenors address the reliability benefits associated with new baseload power. Basis B therefore fails to establish a genuine dispute on a material issue.

Basis B also lacks sufficient factual or expert support. The Intervenors mention the proposed Bluewater Wind project, but provide no information about when the company plans to apply for a license or begin producing power. The Intervenors also fail to discuss how a project with a nameplate capacity of 600 MW is a reasonable alternative to 1600 MW baseload nuclear power plant. One specific “example” of an inchoate future project is insufficient to call into question the conclusions of the DEIS, which are based on numerous factors. More broadly,

¹³ See *Environmental Law and Policy Center v. NRC*, 470 F.3d 676 (7th Cir. 2006) (holding that the NRC may adopt “baseload energy generation” as the purpose behind a new nuclear project). This conclusion is consistent with other NRC and Federal precedent. See also, *Hydro Resources, Inc.*, CLI-01-04, 53 NRC 31, 55 (2001) (“Agencies need only discuss those alternatives that are reasonable and ‘will bring about the ends’ of the proposed action. . . . When the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved. . . . The agency thus may take into account the ‘economic goals’ of the project’s sponsor.”) (internal citations omitted); *Citizens Against Burlington v. Busey*, 938 F.2d 190, 198 (D.C. Cir. 1991), cert. denied, 502 U.S. 994 (1991) (holding that consideration of alternatives was unnecessary where those alternatives would not accomplish the purpose defined by sponsor).

the Intervenor do not address the primary reasons that the NRC rejected wind power as a reasonable option for baseload generation: low capacity factors (approximately 36 percent compared to 91.5 percent for a nuclear plant) and the technological challenges (and excessive cost) of energy storage devices. DEIS at Section 9.2.3.2. The Intervenor also fail to include any discussion of the costs of offshore wind power relative to nuclear power or discuss the practical hurdles associated with offshore wind (hurricane potential, siting constraints). Having failed to present any basis for a genuine dispute with the NRC Staff's conclusions in the DEIS, Basis B cannot support the admission of Contention 10.

The challenge to the adequacy of the discussion of solar power in the DEIS fails for similar reasons. The Intervenor do not attempt to quantify the acreage or discuss the regulatory constraints associated with large-scale deployment of flat-plate collectors. Nor do the Intervenor discuss the costs of flat-plate collectors relative to nuclear power. The Intervenor therefore fail to establish a genuine dispute with the NRC Staff's conclusion in the DEIS that solar power is not a reasonable alternative.

C. Basis C does not support admission of proposed Contention 10.

In Basis C, the Intervenor argue that the DEIS discussion of a combination of alternatives is "fatally flawed" because the NRC failed to account for wind and solar power potential in Maryland or correctly examine the impacts of demand side management. Late-Filed Contention at 9. As such, Basis C integrates the Intervenor's concerns raised in Basis A and Basis B and applies the concern to the DEIS discussion of a combination of alternatives.

1. *Basis C is untimely.*

In Basis C, the Intervenor mostly repeat complaints raised in Basis A and Basis B. Specifically, the Intervenor argue that using 100 MW of wind power in the combination of alternatives grossly underestimates the wind power potential in Maryland. Late-Filed Contention

at 9. The Intervenors also argue that the DEIS overestimates the need for power and underestimates the potential savings from demand side management. *Id.* at 9-10. And, the Intervenors repeat their claims that the DEIS failed to quantify the contribution from solar power. *Id.* at 10. Because the challenges to the conclusions regarding wind, solar, and demand side management could have been brought based on the ER (as discussed above), they cannot now be raised based on the DEIS.

The differences between the DEIS and the ER discussions of a combination of alternatives are not material. Although the Intervenors argue that the DEIS discussion of a combination of alternatives presents a “substantially different analysis” than that in the ER, the DEIS’s ultimate conclusions are the same as those in the ER. The Intervenors do not rely on any new data in the DEIS. Moreover, both the ER and the DEIS evaluate the environmental impacts of a combination of alternatives, including wind, solar, and other fossil fuel technologies. *See* ER at Section 9.2.3.3.2; DEIS at Section 9.2.5. And, both conclude that a combination of alternatives is not “environmentally preferable” to Unit 3. *Id.* The Intervenors do not point to any material differences in the logic or structure of the DEIS analysis that would justify filing a new contention now, rather than based on the ER. *Cf. Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station)*, LBP-06-14, 63 NRC 568, 579 (2006). Accordingly, Basis C is untimely.

Non-timely contentions cannot be admitted except upon a balancing of the factors in 10 C.F.R. § 2.309(c)(1). Here, the Petitioners did not address the late-filed criteria in 10 C.F.R. § 2.309(c)(1) and therefore the contention must be rejected.

2. *Basis C cannot support an admissible contention.*

In Basis C, the Intervenor challenge the specific allocation of energy production among various alternatives in the DEIS discussion of a combination of alternatives. Late-Filed Contention at 9. The Intervenor argue that the NRC should have looked at a combination that includes more than 100 MW of wind power, a “smaller” gas plant, and a larger contribution from other renewable and demand side management programs. *Id.* at 9-10. But, Licensing Boards do not sit to “flyspeak” environmental documents or to add details or nuances. *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 71 (2001). The Intervenor must allege with adequate support that the NRC Staff has failed to take a hard look at one or more significant environmental questions, that is, that the NRC Staff has unduly ignored or minimized pertinent environmental effects of the proposed action. *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-03-17, 58 NRC 419, 431 (2003). If the DEIS on its face “comes to grips with all important considerations,” nothing more need be done. *Id.*

Here, the DEIS posits a “viable energy alternative” consisting of a combination of alternatives that would be sufficient to provide approximately 1600 MW(e) of power.¹⁴ DEIS at

¹⁴ See NUREG-1555 at Section 9.2.2. (explaining that a combination of energy sources should consist of sources that are developed, proven, and available in the relevant region, should provide generating capacity equivalent to the capacity needed, should be available within the timeframe determined for the proposed project, and should have no unusual environmental impacts or exceptional that would make it impractical); see also NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants,” at Section 8.1 (1996) (“While many methods are available for generating electricity, and a huge number of combinations or mixes can be assimilated to meet a defined generating requirement, such expansive consideration would be too unwieldy to perform given the purposes of this analysis. Therefore, NRC has determined that a reasonable set of alternatives should be limited to analysis of single, discrete electric generation sources and only electric generation sources that are technically feasible and commercially viable.”).

Section 9.2.5. The DEIS evaluates the environmental impacts of that combination, including the impacts on land use, air quality, water use and quality, ecology, waste management, socioeconomics, human health, historic and cultural resources, and environmental justice. *Id.*; *see also* NUREG-1555 at Section 9.2.3 (identifying categories of environmental impacts to be considered in the alternatives analysis). The DEIS then compares the environmental impacts and carbon dioxide emissions of various energy alternatives, including the combination of alternatives. DEIS at Section 9.2.5. Based on that information, the DEIS concludes that none of the viable energy alternatives (including the combination of alternatives) are clearly preferable to construction of a baseload nuclear power plant. *Id.* By considering a range of environmental impacts and a reasonable combination of viable energy alternatives, the NRC has clearly examined the important environmental considerations associated with a combination of alternatives. The Intervenors have not pointed to any impacts that the NRC Staff allegedly overlooked in the DEIS. Therefore, the Intervenors have not established a genuine dispute with the DEIS.

The Intervenors' complaints also do not address a material issue with the DEIS analysis — that is, one that could lead to relief in this proceeding. An intervenor can always come up with more specifics or more areas of discussion that imaginably could have been included in the DEIS. But, an issue is not material unless it could conceivably impact the results of the analysis. Here, the Intervenors do not present any information to suggest that a different mix of alternatives would alter the overall conclusion in the DEIS. For example, the Intervenors have produced no factual information or expert support to suggest that using a smaller gas turbine or increasing the contribution from wind or solar power would change the results of the analysis. In fact, the DEIS analysis suggests that a natural gas plant (not the combination of

alternatives) has the least impacts relative to a nuclear plant. Absent some information demonstrating that the specific impacts associated with a particular combination of alternatives would be less than that of a nuclear or gas-fired plant, the Intervenor's concerns do not establish a genuine dispute with the DEIS on a material issue.

D. Basis D does not support admission of proposed Contention 10.

Basis D, at its core, raises two issues regarding the cost estimate in the DEIS: (1) the “overnight” cost estimate in the DEIS does not include the cost of capital; and (2) the cost estimate does not account for potential cost overruns. Late-Filed Contention at 11. The Intervenor's claim that the DEIS discussion of the costs of proposed Unit 3 “understates likely costs.” *Id.* The Intervenor's also dispute the cost estimates in the ER. *Id.*

1. *Basis D is untimely.*

First, any challenge to the use of “overnight costs” as the means for expressing the cost of Unit 3 should have been raised based on the ER. In the ER, UniStar explained that the phrase commonly used to describe the monetary cost of constructing a nuclear plant is “overnight capital cost.” ER at Section 10.4.2.1. The capital costs are those incurred during construction, when the actual outlays for equipment and construction and engineering are expended, in other words, the cost resulting if one were to pay for 100% of the plant “overnight.” *Id.* UniStar stated that overnight costs are: (1) expressed as a constant dollar amount versus actual nominal dollars, (2) expressed in \$/kW, and (3) for the nuclear industry, the overnight capital cost does not include inflation, financing, extraordinary site costs, licensing, transmission or the initial fuel load. *Id.* The NRC also used overnight costs in the DEIS. *See* DEIS at Section 10.6.2.1 (noting that the estimated overnight cost of \$4500/kW to \$6000/kW equates to roughly \$7.2 billion to \$9.6 billion and that interest and cost escalation during the construction and preconstruction period are excluded from the overnight capital cost); *see also*, Letter from G.

Gibson, UniStar Nuclear Energy, to NRC Document Control Desk, UN#09-475, “RAI No. 124, Estimated Tax Benefit,” dated November 16, 2009 (ADAMS Accession No. ML093220193) (stating that the “NRC may utilize a range of \$4500/KW to \$6000/KW for the cost of the unit”). Thus, there is no material difference between the cost estimate provided by UniStar and that used by the NRC in the DEIS.¹⁵ This aspect of the contention is therefore untimely.

Second, the Intervenor’s efforts to raise the potential for cost overruns based on historical experience are also too late. The Intervenor’s cite data relating to cost increases for the currently-operating nuclear power plants as well as experience in Finland. Late-Filed Contention at 10. But, this information was available at the time of the application.¹⁶ Any challenges related to historical cost overruns should have been raised at the time based on the ER. The Intervenor’s also argue that the cost estimate must include “some sort of defensible cost escalation component.” *Id.* at 13. But again, if the Intervenor’s believe that such a component is a necessary part of the cost estimate, then they could have and should have raised that concern based on the ER. The DEIS does not “reset the clock” for timeliness in the absence of new or materially different information. Where, as here, the same cost estimate terminology and elements of the estimate were identified and relied upon in both the ER and the DEIS, the Intervenor’s challenge is untimely.

¹⁵ A newly-created document that is a compilation or repackaging of previously-existing information is not equivalent to, and does not provide, information that is “materially different” under 10 C.F.R. § 2.309(f)(2)(ii). *See Tennessee Valley Authority* (Bellefonte Nuclear Power Units 3 and 4), Memorandum and Order (Ruling on Request to Admit New Contention) (unpublished), slip op. at 8 (Apr. 29, 2008).

¹⁶ *See, e.g.,* Late-Filed Contention at 12, n.25 (citing DOE/EIA-0485, *An Analysis of Nuclear Plant Construction Costs*, dated January 1, 1986); “Joint Intervenor’s Reply to NRC Staff’s Answer to Petition to Intervene and Applicants’ Answer to Petition to Intervene,” dated December 22, 2008, at 14 (noting that the Olkiluoto 3 reactor in Finland was “some two years behind schedule”).

Non-timely contentions cannot be admitted except upon a balancing of the factors in 10 C.F.R. § 2.309(c)(1). Here, the Petitioners did not address the late-filed criteria in 10 C.F.R. § 2.309(c)(1) and therefore the contention must be rejected.

2. *Basis D cannot support an admissible contention.*

Basis D fails to present a genuine dispute with the application on a material issue and lacks the requisite factual or expert support. First, the Intervenor asserts that the use of overnight costs is not conservative because it does not include the cost of capital. Late-Filed Contention at 11. Overnight costs are commonly used for a number of reasons, not the least of which is that the cost of capital is ultimately dependent on financing. At the application stage, the final financing arrangements are, of course, not yet in place. Thus, the overnight cost enables the public (and the NRC) to evaluate projects on an “apples to apples” basis. And, regardless of how the cost estimate is characterized, the DEIS describes what costs are included in the estimate and which costs are not. Having explained the reasons for the use of overnight costs and fully disclosed which costs are (or are not) included in the cost estimate, the NRC Staff has met its obligation under NEPA to provide decision makers and other stakeholders with the information they need to understand the costs of the project. *See Northwest Resource Info. Ctr., Inc. v. National Marine Fisheries Serv.*, 56 F.3d 1060, 1064 (9th Cir. 1995) (explaining that one purpose of NEPA is to provide decisionmakers with information to aid in evaluating a proposed project); *Weinberger v. Catholic Action of Hawaii/Peace Education Project*, 454 U.S. 139, 143 (1981) (describing the twin aims of NEPA as informing the public of possible environmental impacts and considering those impacts in the decisionmaking process). No further relief or remedy is available.

The Intervenors also argue that the cost estimate should include a cost escalation component and cite the nuclear industry's historical record on budgets/schedules for the first wave of nuclear construction and experience in Finland. Late-Filed Contention at 12-13. Significantly, the overnight cost estimate in the DEIS specifically includes a contingency. DEIS at 10.6.2.1. But, in any event, historical events do not ordinarily satisfy the basis requirement for an admissible contention because they lack specificity and applicability to the license application at issue and to the current regulatory climate. *See, e.g., Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 366 (2001) (rejecting proposed contention on the basis that NRC proceedings are not a forum “only to litigate historical allegations” or past events with no direct bearing on the challenged licensing action). Nor have the Intervenors pointed to any particular element of the cost estimate that they specifically allege will be subject to cost escalation or provide a rationale for that escalation. A contention that merely states a conclusion (*e.g.*, the cost estimate is deficient or inadequate) without providing *a reasoned basis or explanation* for why the application is inadequate cannot provide a basis for the contention. *USEC, Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 472 (2006). The examples cited by the Intervenors — by themselves and without any correlation to the current application — cannot establish a genuine dispute with the cost estimate in the DEIS.

Finally, the Intervenors are apparently attempting to challenge, for the first time, the cost range provided in the ER. The Intervenors state that the cost estimate used by the NRC in the DEIS (\$7.2 to \$9.6 billion) conflicts with the estimate in the ER. Late-Filed Contention at 13. The Intervenors assert that the studies on which UniStar's cost estimates were based show overnight construction costs in the \$1200-\$1800/kW range rather than the \$4500-\$6000/kW

range in the DEIS. *Id.* The Intervenor claim that this “calls into serious question the Applicants’ entire discussion of alternatives.” *Id.* However, the Intervenor fail to recognize that UniStar has, in fact, updated the cost estimates in the ER to capture more recent studies and that it is this estimate on which the NRC based its DEIS. In its response to NRC Request for Additional Information No. 124, UniStar estimated the cost of Unit 3 in the range of \$4500/kW to \$6000/kW (same as the DEIS).¹⁷ UN#09-475, Enclosure, at 2. UniStar explained that the cost estimate corresponds to the ranges provided in sources such as Moody’s and Standard & Poor’s.¹⁸ *Id.* The Intervenor must have more than conjecture and supposition to support an admissible contention; they must present specific information that calls into question the estimates used by UniStar and the NRC. Here, the Intervenor have provided no expert or factual support to show that the specific cost estimate for Unit 3 in the DEIS is inadequate or unreasonable. Thus, Basis D cannot support an admissible contention.

¹⁷ It is not clear what further relief would be warranted given that the DEIS already reflects the updated cost range.

¹⁸ The Moody’s source is *New Nuclear Generation in the United States: Keeping Options Open vs Addressing An Inevitable Necessity*, dated October 2, 2007. The Standard & Poor’s publication is entitled, *Construction Costs To Soar For New U.S. Nuclear Power Plants*, dated October 15, 2008.

CONCLUSION

For the above reasons, the Intervenor's proposed Contention 10 should not be admitted for hearing.

Respectfully submitted,

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Dated at Washington, District of Columbia
this 20th day of July 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:)
)
CALVERT CLIFFS 3 NUCLEAR)
PROJECT, LLC AND UNISTAR)
NUCLEAR OPERATING SERVICES,) Docket No. 52-016-COL
LLC)
)
(Calvert Cliffs Nuclear Power Plant, Unit 3))

CERTIFICATE OF SERVICE

I hereby certify that copies of “APPLICANTS’ RESPONSE TO PROPOSED CONTENTION 10” in the captioned proceeding have been served via the Electronic Information Exchange (“EIE”) this 20th day of July 2010, which to the best of my knowledge resulted in transmittal of the foregoing to the following persons:

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