

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman  
Dale E. Klein  
Kristine L. Svinicki

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In the Matter of )  
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DUKE ENERGY CAROLINAS, LLC )  
)  
(Combined License Application for William States ) Docket Nos. 52-018-COL  
Lee III Nuclear Station, Units 1 and 2) 52-019-COL  
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In the Matter of )  
)  
TENNESSEE VALLEY AUTHORITY ) Docket Nos. 52-014-COL  
) and 52-015-COL  
(Bellefonte Nuclear Power Plant, Units 3 and 4) )  
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**CLI-09-21**

**MEMORANDUM AND ORDER**

The Atomic Safety and Licensing Boards in the captioned combined license (COL) proceedings have referred to the Commission two contention admissibility rulings concerning the consideration in COL applications of certain environmental impacts relevant to greenhouse gas emissions. As discussed below, we decline to review the referred rulings.

**I. BACKGROUND**

These proceedings relate to the COL applications filed by the Tennessee Valley Authority (TVA), seeking authorization to construct and operate two new nuclear reactor units (proposed Units 3 and 4) at its Bellefonte site in Alabama, and by Duke Energy Carolinas, LLC (Duke), seeking authorization to construct and operate two new nuclear reactor units at its Lee site in South Carolina.

In the *Bellefonte* proceeding, three organizations jointly petitioned to intervene.<sup>1</sup> On September 12, 2008, the Licensing Board issued LBP-08-16 which, among other things, found that two petitioners had demonstrated standing and had submitted four wholly- or partially-admissible contentions. Based on these findings, the Board admitted them as parties to the proceeding.<sup>2</sup>

In proposed contention NEPA-M,<sup>3</sup> the joint petitioners asserted omissions in TVA's COL application, arguing that TVA failed to include in its environmental report (1) "an analysis of the emission of [g]reenhouse gases in the process of the production of raw materials and components, and the transportation of these materials and components and the construction processes required to build Bellefonte 3 [and] 4;" and (2) an analysis of greenhouse gas emissions associated with each step in the uranium fuel cycle, including reprocessing.<sup>4</sup> The *Bellefonte* Board found the contention, framed as a contention of omission, to be inadmissible because the application did in fact contain a discussion of greenhouse gas

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<sup>1</sup> Petition for Intervention and Request for Hearing by the Bellefonte Efficiency and Sustainability Team, the Blue Ridge Environmental Defense League and the Southern Alliance for Clean Energy (June 6, 2008) (Bellefonte Petition).

<sup>2</sup> LBP-08-16, 68 NRC 361 (2008). In LBP-08-16, the Board also referred to its ruling admitting two contentions pertaining to the disposal of low-level radioactive waste (Contentions NEPA-G and FSAR-D). The Board further suggested that we consider instituting a "low-level waste confidence" rulemaking proceeding. *Id.*, 68 NRC at 415. We recently declined that referral, reversing the Board's admission of both contentions and declining to accept the Board's rulemaking suggestion. *Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4)*, CLI-09-3, 69 NRC 68 (2009) The Board's rulings admitting two other contentions, NEPA-B and NEPA-N, are not at issue here.

<sup>3</sup> Supplement to Petition of June 6, 2008 Providing Alphanumeric Designation of Contentions (June 26, 2008) at 5; Bellefonte Petition at 81-84.

<sup>4</sup> Bellefonte Petition at 82-83.

emissions.<sup>5</sup> Nevertheless, the Board referred the question whether the applicant had adequately accounted for the environmental effects of the “carbon footprint” associated with construction and operation of the new reactors for our consideration. The Board observed that COL applicants continue to rely on “greenhouse gas avoidance” as an environmental benefit of nuclear power plant operation, and noted the “apparent failure” of Table S-3<sup>6</sup> to account for the release values for greenhouse gases such as carbon dioxide.<sup>7</sup> The Board reasoned that it is “conceivable” that an admissible contention regarding analysis of greenhouse gas and “carbon footprint” impacts relative to other baseload power sources will be proffered in the future, and that the Commission may wish to consider the potential generic significance of the issue to, *inter alia*, other COL proceedings.<sup>8</sup>

In the *Lee* case, the Blue Ridge Environmental Defense League (BREDL) petitioned to intervene.<sup>9</sup> Just ten days after the *Bellefonte* Board issued LBP-08-16, the *Lee* Board issued LBP-08-17, in which it ruled that, although BREDL had demonstrated standing to intervene in

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<sup>5</sup> LBP-08-16, 68 NRC at 418-19, citing section 10.3.1.3 and Table 10.3-1 of the applicant’s Environmental Report, regarding the avoidance of greenhouse gases as a benefit of the Bellefonte facilities relative to other baseload energy sources. See 10 C.F.R. § 2.309(f)(1)(vi).

<sup>6</sup> 10 C.F.R. § 51.51(b) (“Table of Uranium Fuel Cycle Environmental Data”). As stated in 10 C.F.R. § 51.51(a), each environmental report prepared for the combined license stage of a light-water cooled nuclear power reactor must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle (uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials, and low- and high-level waste management related to fuel cycle activities) to the environmental costs of licensing the reactor.

<sup>7</sup> LBP-08-16, 68 NRC at 419.

<sup>8</sup> *Id.*

<sup>9</sup> Petition for Intervention and Request for Hearing by the Blue Ridge Environmental Defense League (June 27, 2008) (*Lee* Petition).

the proceeding, it had not proffered an admissible contention.<sup>10</sup> Among others, the Board was presented with BREDL Contention 2, a “carbon footprint” contention substantively identical to the one proffered by the joint petitioners in the *Bellefonte* proceeding.<sup>11</sup> Specifically, BREDL asserted omissions from the COL application, arguing that Duke “fail[ed] to include any discussion of Green House Gas emissions or ‘Carbon Foot-Print’ in its environment[al] report.”<sup>12</sup> The *Lee* Board rejected BREDL Contention Two, again framed as a contention of omission, for failure to articulate a genuine dispute on a material issue of law or fact, noting that several sections of Duke’s environmental report addressed hydrocarbon and other emissions.<sup>13</sup> Because the *Bellefonte* Board had referred to us its ruling on the issue, the *Lee* Board also referred its ruling on BREDL Contention 2 to us on grounds of “fairness and efficiency.”<sup>14</sup> We consider both referred rulings today.

## II. DISCUSSION

Our rules of practice provide that we will review referred rulings only if the referral “raises significant and novel legal or policy issues, and resolution of the issues will materially advance the orderly disposition of the proceeding.”<sup>15</sup> In this case, we decline to review the referred

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<sup>10</sup> LBP-08-17, 68 NRC 431 (2008). BREDL did not appeal the Board’s decision.

<sup>11</sup> Lee Petition at 11-14.

<sup>12</sup> *Id.* at 12.

<sup>13</sup> LBP-08-17, 68 NRC at 444; see 10 C.F.R. § 2.309(f)(1)(vi).

<sup>14</sup> *Id.*, 68 NRC at 445.

<sup>15</sup> 10 C.F.R. § 2.341(f)(1); *Bellefonte*, CLI-09-3, 69 NRC at 72. See 10 C.F.R. § 2.323(f) (the presiding officer may refer a ruling to the Commission if, in the judgment of the presiding officer, “prompt decision is necessary to prevent detriment to the public interest or unusual delay or expense, or if the presiding officer determines that the decision or ruling involves a novel issue that merits Commission review at the earliest opportunity”).

rulings, because we find that their consideration would not advance the orderly disposition of either proceeding.

As discussed above, the *Bellefonte* and *Lee* Boards rejected the proposed “carbon footprint” contention on the ground that the petitioners failed to satisfy the contention admissibility requirements with respect to that contention. We understand the referral, however, to concern principally the suggestion that the Commission may wish to address the policy issue of whether, and how, COL applicants and the agency should address the environmental analysis of greenhouse gas and carbon footprint impacts relative to nuclear and other baseload power sources. Indeed, the bases for the Boards’ rulings on the contentions do not necessarily implicate the general policy issue. At the same time, we recognize the likelihood that the issue will continue to be raised in other licensing proceedings, and COL proceedings in particular. In these circumstances, we decline to undertake the review of the specific referred rulings on the admissibility of the contentions in the *Bellefonte* and *Lee* proceedings, but we provide the following guidance.

The Staff has already considered “carbon footprint” impacts in a recent environmental review. The draft supplemental environmental impact statement for the combined license application for the proposed North Anna Power Station Unit 3 includes a section on greenhouse gas impacts.<sup>16</sup> We do not find it necessary or appropriate to opine on the adequacy of that or any other facility environmental review in the context of this adjudication. However, because the Staff is currently addressing the emerging issues surrounding greenhouse gas emissions in environmental reviews required for the licensing of nuclear facilities, we believe it is prudent to

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<sup>16</sup> Draft Supplemental Environmental Impact Statement for the Combined License (COL) for North Anna Power Station Unit 3, NUREG-1917 (Dec. 2008), § 5.11, Global Warming, Climate Change, and Greenhouse Gas Impacts.

provide the following guidance to the Staff. We expect the Staff to include consideration of carbon dioxide and other greenhouse gas emissions in its environmental reviews for major licensing actions under the National Environmental Policy Act. The Staff's analysis for reactor applications should encompass emissions from the uranium fuel cycle as well as from construction and operation of the facility to be licensed. The Staff should ensure that these issues are addressed consistently in agency NEPA evaluations and, as appropriate, update Staff guidance documents to address greenhouse gas emissions.

### III. CONCLUSION

For the reasons set forth above, we *decline* to review the Boards' referred rulings as to Contention NEPA-M and BREDL Contention 2. We also provide guidance to the Staff relating to its continued consideration of carbon dioxide and other greenhouse gas emissions in major licensing actions under the National Environmental Policy Act.

IT IS SO ORDERED.

For the Commission

**[NRC SEAL]**

**/RA/**

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 3<sup>rd</sup> day of November, 2009.