

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of ) ENTERGY NUCLEAR OPERATIONS, INC. ) (Indian Point Nuclear Generating Units 2 and 3) )	Docket Nos. 50-247-LR and 50-286-LR  May 28, 2013
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**ENTERGY’S ANSWER OPPOSING STATE OF NEW YORK MOTION SEEKING  
LEAVE TO FILE AN ADDITIONAL EXHIBIT AND SUPPLEMENTAL FINDINGS OF  
FACT AND CONCLUSIONS OF LAW ON CONTENTION NYS-16B**

**I. INTRODUCTION**

In accordance with 10 C.F.R. § 2.323(c), Entergy Nuclear Operations, Inc. (“Entergy”) files this Answer opposing the State of New York (“New York”) Motion Seeking Leave to File an Additional Exhibit and Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B (“Motion”), dated May 17, 2013. In its Motion, New York seeks to admit one additional exhibit and to supplement its proposed findings on NYS-16B. For the reasons stated below, the Atomic Safety and Licensing Board (“Board”) should fully reject New York’s Motion. The proposed exhibit upon which New York’s supplemental findings are based is inadmissible because it is not relevant or material to the Board’s merits ruling on NYS-16B.

If the Board grants New York’s Motion, admits the proposed exhibit, and considers New York’s supplemental proposed findings on NYS-16, then Entergy respectfully requests leave to file the attached reply to New York’s supplemental proposed findings as a matter of fairness.<sup>1</sup>

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<sup>1</sup> In its May 23, 2013 opposition to New York’s Motion, the U.S. Nuclear Regulatory Commission (“NRC” or “Commission”) Staff similarly requested the opportunity to respond to New York’s supplemental proposed findings and conclusions of law. Entergy agrees with the Staff that denying the Staff and Entergy an opportunity to respond to New York’s proposed supplemental filing, if granted, would be inequitable. See NRC Staff’s Opposition to State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B at 1 n.2 (May 23, 2013) (“NRC Staff Opposition”), available at ADAMS Accession No. ML13134A354.

## II. FACTUAL BACKGROUND

### A. Overview of Contention NYS-16B and the Parties' Positions on the Merits

NYS-16B alleges that the NRC Staff's December 2010 final supplemental environmental impact statement ("FSEIS") for the Indian Point Energy Center ("IPEC") license renewal is legally deficient "because it accepts a SAMA [(severe accident mitigation alternatives)] analysis predicated on inaccurate population estimates."<sup>2</sup> Specifically, it asserts that the FSEIS improperly accepts Entergy's estimate of the 2035 population within 50 miles of IPEC, despite two alleged errors in Entergy's estimate: (1) failure to account for "census undercount" of minority and low-income groups in the 2000 U.S. Census data underlying the estimate, and (2) failure to account for the commuter population into the 50-mile radius region surrounding IPEC.<sup>3</sup>

In its hearing testimony, Entergy explained that: (1) it reasonably and appropriately relied upon officially-published 2000 U.S. Census Bureau data; (2) it conservatively addressed transient populations for the entire 50-mile region within the SAMA analysis, including tourists and business travelers; and (3) New York's commuter population calculations are flawed in numerous respects and significantly overstate the net commuter population into the 50-mile SAMA analysis region.<sup>4</sup> Even disregarding these demonstrated and dispositive facts of record, Entergy further showed that New York's proposed increases to Entergy's 2035 population estimate—even if assumed to be valid—would not materially alter the SAMA analysis outcome by resulting in the identification of an additional cost-beneficial SAMA.<sup>5</sup>

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<sup>2</sup> State of New York Initial Statement of Position Contention NYS-16/16A/16B ("NYS-16B") at 14 (Dec. 16, 2011) ("New York Position Statement") (NYS000206); NUREG-1437, Supp. 38, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Final Report, (Dec. 2010) ("FSEIS") (NYS00133A-J).

<sup>3</sup> See New York Position Statement at 4 (NYS000206).

<sup>4</sup> See, e.g., Entergy Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B (SAMA Population Estimate at 4 (¶ 5) (Mar. 22, 2013) ("Entergy Proposed Findings"), available at ADAMS Accession No. ML13081A763.

<sup>5</sup> See *id.* at 96-99 (¶¶ 188-96).

**B. Entergy's SAMA Implementation Cost Estimates, As Documented in the FSEIS**

For a SAMA candidate to be cost-effective, the estimated benefit of the SAMA (expressed in dollars) must exceed the estimated cost of its implementation.<sup>6</sup> Entergy originally developed conceptual estimates of the SAMA implementation costs and identified potentially cost-beneficial SAMAs for IPEC as part of its SAMA analysis, which it submitted to the NRC in April 2007.<sup>7</sup> In December 2009, Entergy submitted a revised analysis that used corrected meteorological data as well as some revised SAMA implementation cost estimates.<sup>8</sup> The NRC Staff's detailed review of Entergy's revised SAMA analysis, including the associated SAMA implementation cost estimates, is documented in full in Appendix G of the FSEIS.<sup>9</sup> The parties' testimony and proposed findings on NYS-16B are based on the SAMA analysis documented in the FSEIS.

**C. Entergy's Sensitivity Analyses Incorporating New York's Postulated Increases to the 2035 Population Estimate**

As summarized in Entergy's proposed findings, Entergy's experts performed MACCS2 sensitivity analyses to evaluate the potential impacts of the various population increases posited by Dr. Sheppard on Entergy's SAMA analysis.<sup>10</sup> Relevant here, Entergy's second sensitivity analysis addressed additional criticisms raised by New York in its rebuttal testimony.<sup>11</sup> Even after applying Dr. Sheppard's assumptions, however erroneous, Entergy's experts determined that the

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<sup>6</sup> See Testimony of Entergy Witnesses Lori Potts, Kevin O'Kula, Grant Teagarden, and Jerry Riggs on Consolidated Contention NYS-16B (Severe Accident Mitigation Alternative Analysis) at 49 (¶ 89) (ENT000003).

<sup>7</sup> See generally, Indian Point Energy Center License Renewal Application, App. E at 4-47 to -78, E-I to E.4-82 (Apr. 2007) (ENT000015B).

<sup>8</sup> See NL-09-165, Letter from Fred Dacimo, Entergy, to NRC, License Renewal Application - SAMA Reanalysis Using Alternate Meteorological Tower Data, Indian Point Nuclear Generating Units Nos. 2 and 3, Attach. 1 at 3-9 (Dec. 11, 2009) (ENT000009).

<sup>9</sup> See FSEIS, Vol. 3, App. G at G-1 to G-51 (NYS001331).

<sup>10</sup> See Entergy's Proposed Findings at 96-99 (¶¶ 188-96).

<sup>11</sup> Specifically, the sensitivity analysis incorporated: (1) the full census undercount and commuter-related population increases proposed by New York's witness (Dr. Sheppard); (2) the peak populations for the three counties within the SAMA analysis region (New York, Rockland, and Westchester) projected to have population peaks prior to 2035; and (3) Dr. Sheppard's proposed population distribution method. *Id.* at 98 (¶ 193).

impact to the total estimated baseline accident costs resulting from the increased population was an estimated 6.15% increase.<sup>12</sup> They compared this 6.15% increase to the margin that exists relative to the next potentially cost-beneficial SAMA candidate (approximately 11% for IP2 SAMA 025) and concluded that New York’s postulated population increases—even if fully accepted—would not have a material impact on the FSEIS SAMA analysis conclusions with respect to which SAMAs are potentially cost-beneficial.<sup>13</sup>

**D. Entergy’s May 2013 Completed Engineering Project Cost Estimates**

On May 6, 2013, Entergy submitted for the NRC Staff’s review the results of its completed, more refined engineering project cost estimates for implementing the 22 SAMAs identified in the revised IPEC SAMA analysis and FSEIS as being potentially cost-beneficial.<sup>14</sup> The purpose of Entergy’s submittal was to provide information to the NRC Staff to support resolution of certain issues identified by the Board in its July 14, 2011 decision granting New York’s motion for summary disposition of Contention NYS-35/36<sup>15</sup> and to address certain statements made by the Commission in its December 22, 2011 ruling<sup>16</sup> on Entergy’s petition for review of LBP-11-17.<sup>17</sup> As explained in NL-13-075, Entergy determined that six of those SAMAs are not cost-beneficial based on the completed, more comprehensive engineering project cost estimates submitted on May 6, 2013 for NRC Staff review.<sup>18</sup>

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<sup>12</sup> *Id.* (¶ 194).

<sup>13</sup> *Id.*

<sup>14</sup> See NL-13-075, License Renewal Application-Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 6, 2013) (“NL-13-075”), available at ADAMS Accession No. ML13127A459.

<sup>15</sup> *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-11-17, 74 NRC 11 (2011).

<sup>16</sup> *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), CLI-11-14, 74 NRC \_\_ (July 14, 2011).

<sup>17</sup> NL-13-075 at 2.

<sup>18</sup> *Id.*, Attach. 1 at 5.

Entergy promptly notified the Board and the other parties to this proceeding of Entergy's submission the following day, on May 7, 2013.<sup>19</sup>

### III. ARGUMENT

#### A. New York's Proposed Exhibit and Supplemental Proposed Findings Are Not Relevant or Material to the Board's Disposition of Contention NYS-16B

As explained below, New York has not demonstrated that its proposed exhibit (NYS000476) is relevant and material to the Board's merits decision on NYS-16B, or that supplemental proposed findings are warranted in these circumstances.<sup>20</sup> In its Motion, New York proposes to admit a two-page excerpt from NL-13-075 (*i.e.*, Table 1) and to supplement its proposed findings based on the new exhibit.<sup>21</sup> New York asserts that two of the six SAMA candidates identified in NL-13-075 as no longer cost-beneficial "have small margins between the costs and benefits."<sup>22</sup> In particular, it identifies IP2 SAMA 021, for which the revised difference between the benefit with uncertainty and the newly-estimated implementation cost is 4.5%, and IP2 SAMA 053, for which the revised difference is 5.7%.<sup>23</sup> New York contends that these

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<sup>19</sup> See Letter from Kathryn M. Sutton, et al., to ASLB, Notification of Entergy's Submission of the Results of Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 7, 2013), *available at* ADAMS Accession No. ML13127A458.

<sup>20</sup> Evidence proffered in support of a contention is admissible only if it is relevant and material. See 10 C.F.R. § 2.337(a). The Board may exclude evidence or exhibits that are outside the scope of the admitted contention or the proceeding as irrelevant or immaterial. See 10 C.F.R. § 2.319(d) (stating that the presiding officer may "strike any portion of a written presentation or a response to a written question that is irrelevant, immaterial, unreliable, duplicative, or cumulative"); *id.* § 2.319(e) (stating that the presiding officer may "restrict irrelevant, immaterial, unreliable, duplicative, or cumulative evidence and/or arguments"); see also Licensing Board Memorandum and Order (Denying Clearwater's Motion to Supplement the Record) at 3 (Dec. 5, 2012) (unpublished) (applying the standards in Section 2.337 to reject immaterial and irrelevant evidence); Official Transcript of Proceedings, Indian Point Units 2 and 3 License Renewal at 1220 (Sept. 24, 2012) (Judge McDade) (stating that the admissibility of late-filed exhibits "will depend on the argument you make for relevance and why we should consider the document").

<sup>21</sup> Motion at 1. Entergy respectfully submits that if the Board decides to admit New York's proposed exhibit into evidence, then it should admit NL-13-075 in its entirety to provide appropriate factual and legal context for the two-page table excerpted by New York in proposed exhibit NYS000476.

<sup>22</sup> *Id.* at 4.

<sup>23</sup> *Id.*

margins are less than the 6.15% increase discussed above,<sup>24</sup> thereby rendering the population errors alleged in NYS-16B “material.”<sup>25</sup> It also claims that “the equities weigh in favor of the State’s request,” because Entergy “chose to wait” to submit NL-13-075 until after the hearing on NYS-16B and the parties’ filing of their proposed findings.<sup>26</sup>

New York’s arguments are meritless and fail to support its Motion. First, neither New York’s Motion nor its proposed supplemental findings are directed at the adequacy of the FSEIS. But as the Commission has explained: “NEPA compliance is determined by the adequacy of the SEIS, not the applicant’s Environmental Report [which includes the SAMA analysis]. Therefore, the ultimate issue in determining NEPA compliance is the adequacy of the Staff’s environmental review, not the applicant’s Environmental Report.”<sup>27</sup> Indeed, NYS-16B expressly challenges the FSEIS for accepting an allegedly inaccurate population estimate.<sup>28</sup>

In contrast, Entergy’s recently-submitted revised cost estimates have not been reviewed by the NRC Staff. Unless and until the Staff completes its review of the revised cost estimates discussed in NL-13-075, the SAMA implementation cost estimates evaluated in the 2010 FSEIS are the cost estimates of record.<sup>29</sup> Therefore, for purposes of NYS-16B, any evidentiary arguments based on, or related to, Entergy’s SAMA implementation cost estimates must be based on those NRC Staff-reviewed cost estimates, as documented in the FSEIS. New York’s proposed exhibit and supplemental findings thus are not relevant or material to the Board’s disposition of

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<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 6.

<sup>27</sup> *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-12-01, 75 NRC \_\_\_, slip op. at 29-30 (Feb. 9, 2012).

<sup>28</sup> New York Position Statement at 14 (NYS000206).

<sup>29</sup> As evidenced by the NRC Staff’s review of Entergy’s original and revised SAMA analyses, it is conceivable that the Staff’s review of the revised cost estimates discussed in NL-13-075 may engender Staff requests for additional information, associated revisions to Entergy’s submittal, and/or the issuance of an FSEIS Supplement.

NYS-16B, which, as admitted by the Board and litigated by the parties, relates to the adequacy of the current FSEIS.<sup>30</sup>

Second, even if it were appropriate to treat the cost estimates in NL-13-075 as reviewed and approved SAMA estimates, New York's argument also fails because it is dependent upon the Board's acceptance of *all* of New York's criticisms of Entergy's population estimate. In other words, the Board must agree that Entergy should have: (1) used adjusted Census 2000 data to account for census undercount (despite the U.S. Census Bureau's determination not to adjust the Census 2000 data for its own purposes<sup>31</sup>); (2) included commuters within the transient population estimate (even those that Dr. Sheppard double-counted as business travelers<sup>32</sup> and without considering the actual amount of time commuters actually spend in the region per day<sup>33</sup> or residents who commute *out* of the region<sup>34</sup>); and (3) used peak populations for any county projected to have population peaks prior to 2035 (rather than using a consistent and conservative year for the entire SAMA region<sup>35</sup>). Entergy discussed at length in its Proposed Findings and its Reply Findings the many reasons for rejecting each of New York's criticisms.<sup>36</sup> Rejecting all, or even some, of New York's criticisms would lead to a different conclusion on whether

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<sup>30</sup> As the NRC Staff notes, New York's proposed exhibit and proposed supplemental findings are immaterial in another respect. Specifically, New York neglects to mention that the two SAMAs singled out in its Motion and supplemental findings—IP2 SAMA 021 and IP2 SAMA 053—were identified as cost-beneficial in the 2010 FSEIS. Thus, even if the Board admits New York's newly proposed exhibit and then accepts New York's arguments regarding the population estimate, the impact of all those changes would simply reflect the Staff's current findings in the FSEIS regarding which SAMAs are potentially cost-beneficial. *See* NRC Staff Opposition at 2-3.

<sup>31</sup> *See* Entergy's Reply to New York State's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B at 28 (¶ 48) (Severe Accident Mitigation Alternatives Analysis Population Estimate) (May 3, 2013) ("Entergy Reply Findings"), available at ADAMS Accession No. ML13123A445.

<sup>32</sup> *See* Entergy Proposed Findings at 87-88, 90 (¶¶ 171-72, 178).

<sup>33</sup> *See id.* at 96 (¶ 189).

<sup>34</sup> *See id.* at 91-92 (¶¶ 179-81).

<sup>35</sup> *See id.* at 69 (¶¶ 133-35).

<sup>36</sup> *See, e.g., id.* at 73-95 (¶¶ 143-87); Entergy Reply Findings at 23-39 (¶¶ 37-67).

incorporating New York’s postulated population increases would have a material impact on the IPEC SAMA analysis.<sup>37</sup>

**B. Entergy Did Not Delay Submittal of NL-13-075 Until After the Hearing**

Contrary to New York’s claim, Entergy did not deliberately delay submittal of its completed SAMA implementation cost estimates until after the hearing on NYS-16B or the parties’ submittal of their proposed findings.<sup>38</sup> In addition to presenting the results of Entergy’s now-completed engineering project cost estimates, NL-13-075 presents Entergy’s decision to implement certain SAMAs and an augmented rationale for not implementing other SAMAs in connection with license renewal. As is evident from the discussion in NL-13-075, that rationale is substantially informed by long-anticipated Commission and Entergy actions stemming from the March 2011 Fukushima accident that are applicable to all U.S. nuclear power plants—including IPEC Units 2 and 3.<sup>39</sup>

For example, in response to the Fukushima Near-Term Task Force’s recommendations, the Commission issued Order EA-12-049, “Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design Basis External Events,” on March 12, 2012.<sup>40</sup> Entergy timely filed its response to Order EA-12-049, which applies to IPEC, on February 28,

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<sup>37</sup> For example, Entergy’s first sensitivity analysis, in which Entergy used Dr. Sheppard’s census undercount value (231,632) and adjusted his commuter population value to conservatively account for the amount of time commuters would be expected to be within the 50-mile SAMA analysis region (497,889, or 50% of 995,778), concluded that adding these persons resulted in only a 3.2% increase to the total estimated baseline accident costs. Entergy Proposed Findings at 96-97 (¶¶ 189-90). In comparison, the revised margins between the costs and benefits for IP2 SAMA 021 (4.5%) and IP2 SAMA 053 (5.7%) are both greater than the 3.2% increase described in Entergy’s first sensitivity analysis. See State of New York’s Supplemental Proposed Findings of Fact and Conclusions of Law for Contention NYS-16/16A/16B (“NYS-16B”) at 4 (¶ 211) (May 17, 2013), available at ADAMS Accession No. ML13137A475. Thus, even the addition of 729,521 persons would not have a material impact on the SAMA analysis reflected in NL-13-075.

<sup>38</sup> Motion at 7.

<sup>39</sup> See NL-13-075, Attach. 1 at 10-11.

<sup>40</sup> *Id.* at 11.



2013.<sup>41</sup> In short, Entergy did not delay its submittal of NL-13-075 for reasons related to the hearing on NYS-16B, as New York wrongly suggests. In fact, in view of the timing of the Commission and Entergy Fukushima-related actions cited above, Entergy's filing was timely. Consequently, there are no "equitable" considerations supporting New York's Motion.

#### IV. CONCLUSION

For the foregoing reasons, Entergy respectfully requests that the Board deny New York's Motion to admit the proffered exhibit into evidence and to submit supplemental proposed findings on NYS-16B. New York's proposed exhibit and supplemental findings clearly are not relevant or material to NYS-16B. However, if the Board grants the Motion, then Entergy requests leave to file the attached reply to New York's supplemental proposed findings.

In its Motion, New York has anticipated Entergy's request and has raised no objection to Entergy's (or the NRC Staff's) filing of a response to its Supplemental Proposed Findings.<sup>42</sup> However, citing "fairness," New York also requests an opportunity to submit a response to any replies filed by Entergy or the NRC Staff.<sup>43</sup> Entergy opposes this request, which, if granted, would be prejudicial to Entergy and the NRC Staff and contrary to the process for post-hearing submissions adopted by the Board, in that New York would have an extra opportunity to be heard on this contention.

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<sup>41</sup> *Id.*

<sup>42</sup> Motion at 8.

<sup>43</sup> *Id.*

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Dated in Washington, D.C.,  
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**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of )	Docket Nos. 50-247-LR and
ENTERGY NUCLEAR OPERATIONS, INC. )	50-286-LR
(Indian Point Nuclear Generating Units 2 and 3) )	May 28, 2013
) )	

**CERTIFICATION OF COUNSEL**

Counsel for Entergy certifies that he has made a sincere effort to make himself available to listen and respond to the moving party, and to resolve the factual and legal issues raised in the motion, and that his efforts to resolve the issues have been unsuccessful.

*Executed in accord with 10 C.F.R. § 2.304(d)*

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**ATTACHMENT 1:**

**ENTERGY'S REPLY TO NEW YORK STATE'S SUPPLEMENTAL PROPOSED  
FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR CONTENTION NYS-16B**

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**ENTERGY'S REPLY TO NEW YORK STATE'S SUPPLEMENTAL PROPOSED  
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FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR CONTENTION NYS-16B**

Pursuant to the Atomic Safety and Licensing Board’s (“Board”) grant of Entergy Nuclear Operations, Inc.’s (“Entergy”) request for leave, Entergy submits its Reply to New York State’s (“New York”) Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B.<sup>44</sup> Contention NYS-16B alleges that the U.S. Nuclear Regulatory Commission (“NRC” or “Commission”) Staff’s December 2010 final supplemental environmental impact statement (“FSEIS”) for Indian Point Energy Center (“IPEC”) license renewal is legally deficient “because it accepts a SAMA [(severe accident mitigation alternatives)] analysis predicated on inaccurate population estimates.”<sup>45</sup> This Reply is based on the evidentiary record in this proceeding and is set out in numbered paragraphs, with corresponding citations to the record of this proceeding.

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<sup>44</sup> State of New York’s Supplemental Proposed Findings of Fact and Conclusions of Law for Contention NYS-16/16A/16B (“NYS-16B”) (May 17, 2013) (“New York Supplemental Proposed Findings”), *available at* ADAMS Accession No. ML13137A475.

<sup>45</sup> State of New York Initial Statement of Position Contention NYS-16/16A/16B (“NYS-16B”) at 14 (Dec. 16, 2011) (“New York Position Statement”) (NYS000206); NUREG-1437, Supp. 38, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Final Report (Dec. 2010) (“FSEIS”) (NYS00133A-J).

## I. INTRODUCTION

1. On March 22, 2013, Entergy, the NRC Staff, and New York filed proposed findings of fact and conclusions of law on Contention NYS-16B,<sup>46</sup> which relates to Entergy's and the NRC Staff's compliance with the National Environmental Policy Act ("NEPA"),<sup>47</sup> as implemented by the NRC's 10 C.F.R. Part 51 regulations. Entergy, the NRC Staff, and New York filed replies to the other parties' proposed findings on May 3, 2013.<sup>48</sup>

2. On May 17, 2013, New York filed a motion for leave to file an additional exhibit and supplemental proposed findings, as well as its Supplemental Proposed Findings.<sup>49</sup> Entergy and the NRC Staff filed answers opposing New York's Motion.<sup>50</sup> In Entergy's Answer, Entergy sought, in the alternative, leave to file the instant reply to New York's Supplemental Proposed Findings.<sup>51</sup>

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<sup>46</sup> Entergy's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B (SAMA Population Estimate) (Mar. 22, 2013) ("Entergy Proposed Findings"), *available at* ADAMS Accession No. ML13081A763; NRC Staff's Proposed Findings of Fact and Conclusions of Law Part 6: Contention NYS-16B (SAMA Analysis Population Estimate) (Mar. 22, 2013), *available at* ADAMS Accession No. ML13081A717; State of New York's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16/16A/16B ("NYS-16B") (Mar. 22, 2013), *available at* ADAMS Accession No. ML13081A769.

<sup>47</sup> 42 U.S.C. § 4321 *et seq.* (2006).

<sup>48</sup> Entergy's Reply to New York State's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16B (Severe Accident Mitigation Alternatives Analysis Population Estimate) (May 3, 2013) ("Entergy Reply Findings"), *available at* ADAMS Accession No. ML13123A445; State of New York's Reply to NRC Staff's and Entergy's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16/16A/16B ("NYS-16B") (May 3, 2013), *available at* ADAMS Accession No. ML13123A464; NRC Staff's Reply to State of New York's Proposed Findings of Fact and Conclusions of Law for Contention NYS-16/16A/16B ("NYS-16B") (May 3, 2013), *available at* ADAMS Accession No. ML13123A353.

<sup>49</sup> State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B (May 17, 2013), *available at* ADAMS Accession No. ML13137A475; New York Supplemental Proposed Findings.

<sup>50</sup> Entergy's Answer Opposing State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Findings of Fact and Conclusions of Law on Contention NYS-16B (May 28, 2013) ("Entergy Answer"); NRC Staff's Opposition to State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Proposed Findings of Fact and Conclusions of Law on Contention NYS-16B (May 23, 2013), *available at* ADAMS Accession No. ML13134A354.

<sup>51</sup> Entergy Answer at 1.



3. For the reasons discussed below and in Entergy's Proposed Findings and Reply Findings, the Board should find that the NRC Staff and Entergy have carried their respective burdens of proof, and that based on the entire record of this proceeding, the NRC Staff has satisfied its NEPA obligations under 10 C.F.R. Part 51. Nothing in New York's Supplemental Proposed Findings alters this fundamental conclusion. The Board should therefore resolve NYS-16B in favor of the NRC Staff and Entergy.

## **II. REPLY TO NEW YORK'S SUPPLEMENTAL FACTUAL FINDINGS AND LEGAL CONCLUSIONS**

### **A. Background on Entergy's SAMA Analyses**

4. Entergy developed conceptual estimates of the SAMA implementation costs and identified potentially cost-beneficial SAMAs for IPEC as part of its SAMA analysis, which it originally submitted to the NRC Staff in April 2007.<sup>52</sup> In December 2009, Entergy submitted a revised analysis using corrected meteorological data, as well as some revised SAMA implementation cost estimates.<sup>53</sup> Among those SAMAs that were identified as potentially cost-beneficial were IP2 SAMA 021 and IP2 SAMA 053.<sup>54</sup>

5. The NRC Staff's detailed review of Entergy's revised SAMA analysis, including the associated SAMA implementation cost estimates, is documented in full in Appendix G of the FSEIS.<sup>55</sup> Consistent with Entergy's revised SAMA analysis, the FSEIS identified IP2 SAMAs 021 and 053 as potentially cost-beneficial.<sup>56</sup>

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<sup>52</sup> See generally, Indian Point Energy Center License Renewal Application, App. E at 4-47 to -78, E-I to E.4-82 (Apr. 2007) (ENT00015B).

<sup>53</sup> See NL-09-165, Letter from Fred Dacimo, Entergy, to NRC, License Renewal Application - SAMA Reanalysis Using Alternate Meteorological Tower Data, Indian Point Nuclear Generating Units Nos. 2 and 3, Attach. 1 at 3-9 (Dec. 11, 2009) ("NL-09-165") (ENT000009).

<sup>54</sup> *Id.*, Attach. 1. at 13, 17.

<sup>55</sup> See FSEIS, Vol. 3, App. G at G-1 to G-51 (NYS001331).

<sup>56</sup> FSEIS, Vol. 1 at 5-9 (NYS00133B).

6. On May 6, 2013, Entergy submitted for the NRC Staff's review the results of its completed, refined engineering project estimates for implementing the 22 SAMAs identified in the revised IPEC SAMA analysis and FSEIS as being potentially cost-beneficial.<sup>57</sup> As explained in NL-13-075, Entergy determined that six SAMAs previously identified as potentially cost-beneficial – including IP2 SAMAs 021 and 053 – are not cost-beneficial based on the completed, more comprehensive engineering project cost estimates.<sup>58</sup>

**B. New York Has Not Demonstrated the Existence of a Material Deficiency in Entergy's SAMA Analysis**

7. In its hearing testimony, Entergy explained that: (1) it reasonably and appropriately relied upon officially-published 2000 U.S. Census Bureau data; (2) it conservatively addressed transient populations for the entire 50-mile region within the SAMA analysis, including tourists and business travelers; and (3) New York's commuter population calculations are flawed in numerous respects and significantly overstate the net commuter population into the 50-mile SAMA analysis region.<sup>59</sup> Even disregarding these demonstrated and dispositive facts of record, as discussed in Entergy's Proposed Findings, New York has not met its burden to demonstrate the existence of a material deficiency in the IPEC SAMA analysis.<sup>60</sup> In that regard, Entergy's

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<sup>57</sup> See NL-13-075, License Renewal Application-Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 6, 2013) ("NL-13-075"), available at ADAMS Accession No. ML13127A459. The following day, on May 7, Entergy notified the Board and the other parties to this proceeding of Entergy's submission. See Letter from Kathryn M. Sutton, et al., to Board, Notification of Entergy's Submission of the Results of Completed Engineering Project Cost Estimates for SAMAs Previously Identified as Potentially Cost-Beneficial (May 7, 2013), available at ADAMS Accession No. ML13127A458.

<sup>58</sup> NL-13-075, Attach. 1 at 5. As noted in NL-13-075, the purpose of Entergy's submittal was to provide information to the NRC Staff to support resolution of certain issues identified by the Board in its July 14, 2011 decision granting New York's motion for summary disposition of Contention NYS-35/36 and to address certain statements made by the Commission in its December 22, 2011 ruling on Entergy's petition for review of LBP-11-17. *Id.* at 2 (referring to *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), LBP-11-17, 74 NRC 11 (2011); *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 & 3), CLI-11-14, 74 NRC \_\_ (July 14, 2011)).

<sup>59</sup> See, e.g., Entergy Proposed Findings at 4 (¶ 5).

<sup>60</sup> *Id.* at 96-100 (¶¶ 188-97).

sensitivity analyses demonstrate that including the additional census undercount and commuter populations posited by New York would not change the cost-benefit conclusions for the SAMA candidates evaluated the NRC Staff’s 2010 FSEIS.<sup>61</sup> Relevant here, Entergy’s second sensitivity analysis addressed additional criticisms raised in Dr. Sheppard’s rebuttal testimony and incorporated (1) the full census undercount and commuter-related population increases proposed by Dr. Sheppard, (2) the peak populations for the three counties (New York, Rockland, and Westchester) within the SAMA analysis region projected to have population peaks prior to 2035, and (3) Dr. Sheppard’s proposed population distribution method.<sup>62</sup> Even after applying all of Dr. Sheppard’s assumptions, however erroneous, Entergy’s experts determined that the impact to the total estimated baseline accident costs resulting from the increased population was an estimated 6.15% increase.<sup>63</sup> They compared this 6.15% increase to the margin that exists in the next potentially cost-beneficial SAMA candidate (as noted above, 11% for IP2 SAMA 025) to demonstrate that New York’s postulated population increases—even if fully accepted—would not have any material impact on the FSEIS SAMA analysis conclusions.<sup>64</sup>

8. In response to Entergy’s materiality argument, New York asserts in its Supplemental Proposed Findings that incorporating the most recent SAMA cost estimates presented in NL-13-075 and “accounting for the omission of commuters and undercounted minority residents will make [IP2 SAMA 021 and IP2 SAMA 053] cost-beneficial.”<sup>65</sup> New York attempts to frame its argument within the context of Entergy’s second sensitivity analysis, contending that, if the respective benefits of IP2 SAMAs 021 and 053 are increased by 6.15%,

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<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at 98 (¶ 193).

<sup>63</sup> *Id.* (¶ 194).

<sup>64</sup> *Id.*

<sup>65</sup> New York Supplemental Proposed Findings at 6 (¶ 216).

those two SAMAs (which are identified in NL-13-075 as not cost-effective) will become cost-effective.<sup>66</sup> Therefore, New York claims, “[t]he record supports a Board finding that accounting for commuters and census undercount will materially alter the SAMA analysis conclusions.”<sup>67</sup>

9. New York’s argument is meritless for several reasons. First, it is not directed at the adequacy of the FSEIS. As the Commission has explained: “NEPA compliance is determined by the adequacy of the SEIS, not the applicant’s Environmental Report [which includes the SAMA analysis]. Therefore, the ultimate issue in determining NEPA compliance is the adequacy of the Staff’s environmental review, not the applicant’s Environmental Report.”<sup>68</sup> Indeed, NYS-16B expressly challenges the FSEIS for accepting an allegedly inaccurate population estimate.<sup>69</sup> In contrast, Entergy’s recently-submitted revised cost estimates have not yet been fully reviewed by the NRC Staff. Unless and until the Staff completes its review of the revised cost estimates discussed in NL-13-075, the SAMA implementation cost estimates evaluated in the 2010 FSEIS are the cost estimates of record.<sup>70</sup> Therefore, for purposes of NYS-16B, any evidentiary arguments based on, or related to, Entergy’s SAMA implementation cost estimates must be based on those Staff-reviewed cost estimates, as documented in the FSEIS.

10. Second, even if it were appropriate to treat the cost estimates in NL-13-075 as reviewed and approved SAMA estimates, New York’s argument also fails because it is dependent upon the Board’s acceptance of *all* of New York’s criticisms of Entergy’s population estimate. In

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<sup>66</sup> *Id.* at 5 (¶ 214).

<sup>67</sup> *Id.* at 6 (¶ 217).

<sup>68</sup> *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-01, 75 NRC \_\_\_, slip op. at 29-30 (Feb. 9, 2012).

<sup>69</sup> New York Position Statement at 14 (NYS000206).

<sup>70</sup> As evidenced by the NRC Staff’s review of Entergy’s original and revised SAMA analyses, it is conceivable that the Staff’s review of the revised cost estimates discussed in NL-13-075 may engender Staff requests for additional information, associated revisions to Entergy’s submittal, and/or the issuance of an FSEIS Supplement. *See, e.g.*, NL-09-165, Attach. 1 at 3-4 (ENT000009).

other words, the Board must agree that Entergy should have: (1) used adjusted Census 2000 data to account for census undercount (despite the U.S. Census Bureau's determination not to adjust the Census 2000 data for its own purposes<sup>71</sup>); (2) included commuters within the transient population estimate (even those that Dr. Sheppard double-counted as business travelers<sup>72</sup> and without considering the actual amount of time commuters actually spend in the region per day<sup>73</sup> or residents who commute *out* of the region<sup>74</sup>); and (3) used peak populations for any individual counties projected to have population peaks prior to 2035 (rather than using a consistent and conservative year for the entire SAMA region<sup>75</sup>). Entergy discussed at length in its Proposed Findings and its Reply Findings the many reasons for rejecting each of New York's criticisms.<sup>76</sup> Rejecting all, or even some, of New York's criticisms would lead to a different conclusion on whether incorporating New York's postulated population increases would have a material impact on the IPEC SAMA analysis.<sup>77</sup>

11. Third, New York's argument overlooks the fact that the two SAMAs singled out in its Supplemental Proposed Findings—IP2 SAMA 021 and IP2 SAMA 053—*were already* identified as cost-beneficial in the 2010 FSEIS. Thus, even if the Board treats the cost estimates in

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<sup>71</sup> See Entergy Reply Findings at 28 (¶ 48).

<sup>72</sup> See Entergy Proposed Findings at 87-88, 90 (¶¶ 171-72, 178).

<sup>73</sup> See *id.* at 96 (¶ 189).

<sup>74</sup> See *id.* at 91-92 (¶¶ 179-81).

<sup>75</sup> See *id.* at 69 (¶¶ 133-35).

<sup>76</sup> See, e.g., *id.* at 73-95 (¶¶ 143-87); Entergy Reply Findings at 23-39 (¶¶ 37-67).

<sup>77</sup> For example, Entergy's first sensitivity analysis, in which Entergy used Dr. Sheppard's census undercount value (231,632) and adjusted his commuter population value to conservatively account for the amount of time commuters would be expected to be within the 50-mile SAMA analysis region (497,889, or 50% of 995,778), concluded that adding these persons resulted in only a 3.2% increase to the total estimated baseline accident costs. Entergy Proposed Findings at 96-97 (¶¶ 189-90). In comparison, the revised margins between the costs and benefits for IP2 SAMA 021 (4.5%) and IP2 SAMA 053 (5.7%) are both greater than the 3.2% increase described in Entergy's first sensitivity analysis. See New York Supplemental Proposed Findings at 4 (¶ 211). Thus, even the addition of 729,521 persons would not have a material impact on the SAMA analysis reflected in NL-13-075.

NL-13-075 as reviewed and approved by the NRC Staff and accepts New York's criticisms of Entergy's population estimate, the impact of all those changes would simply reflect the NRC Staff's current findings in the FSEIS regarding which SAMAs are potentially cost-beneficial and have no material impact on the current SAMA analysis.

12. Thus, in view of the above, nothing in New York's Supplemental Proposed Findings changes the fundamental conclusion set forth in Entergy's and the NRC Staff's proposed findings; *i.e.*, that New York has failed to demonstrate any material impact on the IPEC SAMA analysis conclusions, as fully evaluated by the NRC Staff in its December 2010 FSEIS.

### **III. CONCLUSION**

13. In summary, as shown in Entergy's Proposed Findings and Reply to New York's Proposed Findings, the preponderance of the evidence shows that, in projecting the 2035 population estimate, Entergy reasonably and appropriately relied upon officially-published 2000 Census Bureau data, without any adjustment for alleged undercount, and conservatively addressed transient populations for the entire 50-mile region within the SAMA analysis, including tourists and business travelers. Accordingly, the Board finds that the NRC Staff and Entergy carried their respective burdens of proof, and that, based on the entire record of this proceeding, the NRC Staff has satisfied its NEPA obligations under 10 C.F.R. Part 51.

Respectfully submitted,

Executed in Accord with 10 C.F.R. § 2.304(d)

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Dated in Washington, D.C.  
this 28th day of May 2013

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of )	Docket Nos. 50-247-LR and
ENTERGY NUCLEAR OPERATIONS, INC. )	50-286-LR
(Indian Point Nuclear Generating Units 2 and 3) )	
	May 28, 2013

**CERTIFICATE OF SERVICE**

Pursuant to 10 C.F.R. § 2.305 (as revised), I certify that, on this date, copies of “Entergy’s Answer Opposing State of New York Motion Seeking Leave to File an Additional Exhibit and Supplemental Findings of Fact and Conclusions of Law on Contention NYS-16B,” including Attachment 1 thereto, “Entergy’s Reply to New York State’s Supplemental Proposed Findings of Fact And Conclusions Of Law For Contention NYS-16B,” were served upon the Electronic Information Exchange (the NRC’s E-Filing System), in the above-captioned proceeding.

*Signed (electronically) by Lance A. Escher*

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