



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 31, 2013

EA-11-267

Mr. Michael J. Pacilio  
Senior Vice President  
Exelon Generation Company, LLC  
President and Chief Nuclear Officer (CNO)  
Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: EXELON GENERATION CO., LLC – U.S. NUCLEAR REGULATORY COMMISSION (NRC) OFFICE OF INVESTIGATIONS (OI) INVESTIGATION; SUMMARY OF OI REPORT NO. 3-2010-034; NRC INSPECTION REPORT 05000456/2012012, 05000457/2012012, 05000454/2012012, 05000455/2012012, 05000461/2012012, 05000010/2012012, 05000237/2012012, 05000249/2012012, 05000373/2012012, 05000374/2012012, 05000352/2012012, 05000353/2012012, 05000219/2012012, 05000171/2012012, 05000277/2012012, 05000278/2012012, 05000254/2012012, 05000265/2012012, 05000272/2012012, 05000311/2012012, 05000289/2012012, 05000295/2012012, 05000304/2012012

Dear Mr. Pacilio:

This letter refers to the results of an investigation conducted by the U.S. Nuclear Regulatory Commission (NRC) Office of Investigations (OI). The investigation was initiated on September 10, 2010, to determine whether Exelon Generation, LLC's (Exelon) employees deliberately provided incomplete and inaccurate information in decommissioning funding status (DFS) reports submitted to the NRC. The OI investigation included interviews of Exelon managers and employees that took place at Exelon corporate offices, the review of Exelon Decommissioning Fund Status (DFS) reports for reporting years 2001, 2002, 2003, 2005, 2006, 2007, 2009, and 2011<sup>1</sup>, and the review of internal Exelon documents for the reporting years obtained via subpoena. Enclosure 1 provides additional details of the OI investigation.

The OI investigation identified apparent violations of NRC requirements that are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is located on the NRC's web site at [www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html](http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html).

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<sup>1</sup> 10 CFR 50.75(f)(2) requires Exelon to report at least once every 2 years after 1999, on the status of its decommissioning funding for each reactor or part of a reactor that it owns. Exelon submitted biennial reports to the NRC for the years 2001, 2003, 2005, 2007, 2009, and 2011, Exelon was involved in a license transfer in during 2002 and 2005 – 2006 and for this reason was required to submit DFS reports in March 2002 and March 2006.

The investigation determined that Exelon apparently failed to provide complete and accurate information to the NRC in the 2005, 2006, 2007, and 2009 Exelon DFS reports. Specifically, the March 31, 2005, March 31, 2006, March 31, 2007, and March 31, 2009, DFS reports state the amount reported for each reactor was determined in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.75(b) and the applicable formulas of 10 CFR 50.75(c). The NRC identified multiple instances in which the amount reported was a value that was less than the minimum required amount specified by 10 CFR 50.75(b) and (c)<sup>2</sup>. The DFS reports are material because the NRC requires licensees to report estimates of decommissioning costs that are greater but not less than estimates calculated in accordance with 50.75(b) and (c). Exelon submitted estimates that were not calculated in accordance with the regulations, yet represented and certified that the estimates were calculated in accordance with the regulations. Therefore, Exelon appears to be in violation of 10 CFR 50.9, regarding completeness and accuracy of information.

Before the NRC makes its enforcement decision, we request Exelon's participation in a pre-decisional enforcement conference (PEC). The conference will be transcribed and will be closed to public observation in accordance with the NRC Enforcement Policy because the findings are based on an NRC OI report that has not been publicly disclosed. Please contact Mr. Michael Dudek, Chief, Plant Licensing Branch 3-2, at 301-415-6500, within 10 days of the date of this letter to notify the NRC of your willingness to participate in a pre-decisional enforcement conference. In general, the NRC attempts to hold a conference within 30 days of the date of this letter.

This conference is being held to obtain information to assist the NRC in making an enforcement decision. The conference will afford Exelon the opportunity to provide its perspective on the apparent violation and any other information that Exelon believes the NRC should take into consideration before making an enforcement decision. The topics discussed during the conference may include: information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned to be taken. In presenting Exelon's corrective actions, you should be aware that the promptness and comprehensiveness of the actions will be considered in assessing any civil penalty for the apparent violations.

This issue was discussed with members of your staff during a conference call on January 24, 2013; this letter is being administratively tracked as NRC Inspection Report 05000456/2012012, 05000457/2012012, 05000454/2012012, 05000455/2012012, 05000461/2012012, 05000010/2012012, 05000237/2012012, 05000249/2012012, 05000373/2012012, 05000374/2012012, 05000352/2012012, 05000353/2012012, 05000219/2012012, 05000171/2012012, 05000277/2012012, 05000278/2012012, 05000254/2012012, 05000265/2012012, 05000272/2012012, 05000311/2012012, 05000289/2012012, 05000295/2012012, 05000304/2012012. Please be advised that the number and characterization of the apparent violations described herein may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations in this matter.

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<sup>2</sup> Although the manner in which the reported value was calculated is not the subject of this enforcement action, the instances in which the amount reported by Exelon was a value less than the minimum required amount specified by 10 CFR 50.75(b) and (c) are provided in Enclosure 2.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response concerning participation in a PEC, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions, please contact Mr. Michael Dudek, at 301-415-6500.

Sincerely,

Handwritten signature of Allen P. Howe in black ink.

Ho K. Nieh, Director  
Division of Inspection & Regional Support  
Office of Nuclear Reactor Regulation

Docket Nos.: 05000456, 05000457, 05000454, 05000455, 05000461, 05000010, 05000237, 05000249, 05000373, 05000374, 05000352, 05000353, 05000219, 05000171, 05000277, 05000278, 05000254, 05000265, 05000272, 05000311, 05000289, 05000295, 05000304

License Nos.: NPF-72, NPF-77, NPF-37, NPF-66, NPF-62, DPR-2, DPR-19, DPR-25, NPF-11, NPF-18, NPF-39, NPF-85, DPR-16, DPR-12, DPR-44, DPR-56, DPR-29, DPR-30, DPR-70, DPR-75, DPR-50, DPR-39, DPR-48

Enclosures: As stated

## FACTUAL SUMMARY OF NRC INVESTIGATION

On September 10, 2010, the U.S. Nuclear Regulatory Commission's Office of Investigations (OI), Region III Field Office, initiated an investigation to determine whether employees of Exelon Generation LLC (Exelon), deliberately provided incomplete and inaccurate information to the NRC in its March 31, 2009, decommissioning funding status (DFS) report.

On March 31, 2009, Exelon submitted its decommissioning funding status (DFS) report to the NRC (ADAMS Accession No. ML090900436). The DFS report states that the report is in accordance with 10 CFR 50.75(b), (c), (e)(1)(i), and (f)(1). The submission further stated, "All of these cost estimates are greater than the amount specified in 10 CFR 50.75(c) and are based on a period of safe storage that is specifically described in the estimates."<sup>1</sup> As part of its review of the 2009 Exelon DFS report, the NRC staff independently calculated the minimum amount of funds using the 10 CFR 50.75(b)(1) minimum formula. Comparing the minimum formula amounts to the amounts reported by Exelon, the staff found Exelon's reported decommissioning funding estimates for 23 plants<sup>2</sup> fell *below* the minimum estimates required pursuant to 10 CFR 50.75(b) and (c). The underreporting of decommissioning funding cost estimates for 2009 was of particular concern to the NRC staff because the total amount of shortfalls was significant and impacted several reactors in the Exelon fleet.

As part of the investigation, the NRC obtained internal Exelon calculations used in the preparation of DFS reports for reporting years 2001, 2002, 2003, 2005, 2006<sup>3</sup>, 2007, 2009, and 2011 via subpoena. The internal Exelon calculations show (1) when Exelon began calculating decommissioning funding estimates using formulas not allowed pursuant to 10 CFR 50.75; (2) when the impermissible reporting of the estimates began; (3) the period during which the impermissible reporting continued; (4) how many instances of underreporting occurred due to improperly calculated and reported estimates; and (5) the total dollar amount of underreporting for years 2005, 2006, 2007, and 2009.

The evidence obtained during the investigation indicates that Exelon's DFS reports for 2001, 2002, and 2003 did not under report the amount of funds required for decommissioning. The decommissioning funding estimates reported by Exelon were equal to or greater than the NRC minimum formula for those years. The 2001, 2002, and 2003 DFS reports appear to include accurate values for the NRC minimum formula and an accurate description of the related calculations. Exelon documents associated with the 2003 DFS report indicate that site specific values less than the NRC minimum formula amount were calculated, but not reported to the NRC.

Internal Exelon calculations associated with the 2005 DFS report demonstrate that Exelon correctly calculated the NRC minimum formula amount; however, the minimum decommissioning cost estimates reported to the NRC were lower than allowed by regulations. The 2005 Exelon DFS report is the first instance of Exelon calculating and reporting decommissioning funding estimates less than the minimum estimate required pursuant to

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<sup>1</sup> Attachment 1, n. 1 of the 2009 Exelon DFS report states: "The amount of decommissioning funds for the operating reactors is determined in accordance with 10 CFR 50.75(b) and the applicable formulas in 10 CFR 50.75(c) and is reported in beginning of year 2009 dollars."

<sup>2</sup> See Enclosure 2 for a listing of the plants.

<sup>3</sup> Exelon was involved in a license transfer in 2005 – 2006 and for this reason was required to submit a DFS report in March 2006.

10 CFR 50.75(c). Lower cost estimates for 23 plants<sup>4</sup> were reported, although Exelon states in the 2005 report “[a]ll of these cost estimates are greater than the amount specified in 10 CFR 50.75(c).”<sup>5</sup>

The OI investigation also identified incomplete and inaccurate reporting of funding status information in the 2006 Exelon DFS report, the 2007 Exelon DFS report, Decommissioning Funding Assurance Plan dated July 29, 2009 (ADAMS Accession No. ML092120165), and in responses to RAIs dated August 27, 2009 (ADAMS Accession No. ML092400249), October 27, 2009 (ADAMS Accession No. ML093010121), November 16, 2009 (ADAMS Accession No. ML093210130), January 11, 2010 (ADAMS Accession No. ML100120341), and March 10, 2010 (ADAMS Accession No. ML100700098).

The internal Exelon spreadsheets for 2006, prepared by an Exelon executive, demonstrate decommissioning funding amounts calculated using either the NRC formula in 10 CFC 50.75 (b) and (c) or site-specific amounts equal to or greater than the NRC minimum. However, the 2006 DFS report also reported minimum cost estimates for 11 plants<sup>6</sup> that were less than allowed by 10 CFR 50.75(b) and (c) (ADAMS Accession No. ML060900613).

The 2007 spreadsheets, prepared by an Exelon executive, identify columns of funding amounts calculated using the NRC formula. The spreadsheets also identify columns of cost estimates which are lower than the NRC formula. These lower estimates were provided for 23 plants<sup>7</sup> reported in Exelon's 2007 DFS Report (ADAMS Accession No. ML070800730).

After a series of Requests for Additional Information in 2009 and 2010<sup>8</sup>, and interviews with an Exelon executive and an Exelon manager in 2011, Exelon submitted the 2011 DFS report (ADAMS Accession No. ML110980080). The 2011 report contained minimum decommissioning funding estimates that appear to be calculated according to NRC regulations at 10 CFR 50.75(b) and (c). The internal Exelon spreadsheets for 2011 confirm that lower cost estimates, determined using a methodology not allowed by 10 CFR 50.75(b) and (c), were no longer part of Exelon's decommissioning spreadsheets. The cost estimates calculated in the 2011 spreadsheets are the same as those reported to the NRC in the 2011 DFS report. In a May 2011 OI interview, an Exelon manager stated that he prepared the 2011 Exelon DFS Report and admitted that Exelon “actually updated the methodology” used in the report.

Notations in cells in internal Exelon spreadsheets used in the preparation of DFS reports for reporting years 2001, 2002, 2003, 2005, 2006, 2007, 2009, and 2011 identify senior level Exelon employees as being responsible for the calculation of cost estimates lower than allowed by 10 CFR 50.75(b) and (c). The evidence obtained during the investigation indicates that a senior Exelon executive and an Exelon manager exercised a high level of involvement and responsibility in the preparation of the DFS reports. One individual was responsible for the actual calculations and collection of data used in the calculations of the NRC minimum formula and the site-specific estimates in the DFS reports from 2001-2007. Both individuals were

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<sup>4</sup> See Enclosure 2 for a listing of the plants.

<sup>5</sup> Attachment 1, n. 1 of the 2005 Exelon DFS report states: “The amount of decommissioning funds for the operating reactors is determined in accordance with 10 CFR 50.75(b) and the applicable formulas in 10 CFR 50.75(c) and is reported in beginning of year 2005 dollars”.

<sup>6</sup> See Enclosure 2 for a listing of the plants.

<sup>7</sup> See Enclosure 2 for a listing of the plants.

<sup>8</sup> Exelon's Decommissioning Funding Assurance Plan dated July 29, 2009, and in responses to RAIs dated August 27, 2009, October 27, 2009, November 16, 2009, January 11, 2010, and March 10, 2010.

involved with the preparation of the 2009 DFS report. In addition, internal Exelon documents, Exelon responses to Requests for Additional Information during 2009 and 2010, and investigation testimony indicate that these senior managers understood the requirements of 10 CFR 50.75 and confirm that the individuals were involved in the preparation of Exelon DFS reports at issue.

In internal Exelon email correspondence dated February 10, 2009, a senior Exelon executive stated that "the NRC requires a certain minimum decommissioning funding level, as determined by one of the acceptable methods in 10 CFR 50.75" and that Exelon is required to report this information biennially for operating plants. He further stated that "one method is using the formula in 10 CFR 50.75," and "another method is to use site specific decommissioning cost estimates, but the caveat is that the site specific estimate must be greater than the NRC formula minimum funding amount." He then stated the, "consequences of not meeting the NRC minimum funding requires: (a) a deposit in the amount necessary to make up for the shortfall, (b) a parent company guarantee backed by 6 times the face amount in net tangible assets, or (c) other funding mechanism such as a letter of credit." Further evidence showed that during a presentation to the Risk Oversight Committee on April 27, 2009, the senior Exelon executive provided information on the NRC minimum funding requirements. This presentation included information of site-specific studies and the statement that site-specific studies "may be used . . . if the site-specific amount is larger than the formula amount." During a transcribed interview on February 8, 2011, the same senior Exelon executive confirmed his understanding of the regulations when he stated, "you can either use the formula that's in NRC regulation or you can use a site-specific decommissioning . . . the restriction, as I understand it, is that the site-specific cost estimate must be greater than the NRC minimum funding amount."

The OI investigation identified that the Exelon manager was responsible for the actual calculations and collecting the data for the calculations based on the NRC minimum formula and the site-specific estimates in the 2009 DFS report. During a transcribed interview on February 8, 2011, this Exelon manager stated that if the amount of money in the trust fund did not meet the NRC minimum funding assurance requirement, then a site-specific calculation was performed. He said that either method can be used for the NRC reporting, however, he clarified that there is no NRC guidance suggesting that Exelon could report a number less than the NRC minimum requirement. When asked directly whether the regulations allow the site specific cost estimate to be reported if it's less than the amount of the NRC minimum, the Exelon manager replied, "no."

Based upon the evidence developed, the OI investigation did substantiate that a senior Exelon executive and an Exelon manager appear to have deliberately provided incomplete and inaccurate information to the NRC in Exelon's 2005, 2006, 2007, and 2009 DFS reports. These actions appear to have placed Exelon in violation of 10 CFR 50.9.

## INSTANCES OF APPARENT INACCURATE REPORTING

The reported values in Exelon's DFS reports were purported to be either determined in accordance with 10 CFR 50.75(b) and the applicable formulas in 10 CFR 50.75(c), or to be based upon site-specific cost estimates for permanently shutdown reactors. An 'X' indicates that the value reported by Exelon was less than allowed by regulations<sup>1</sup>.

Facility	2005 Report	2006 Report	2007 Report	2009 Report
Braidwood, Unit 1	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Braidwood, Unit 2	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Byron, Unit 1	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Bryon, Unit 2	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Clinton	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Dresden, Unit 1	X <sup>3</sup>		X <sup>3</sup>	X <sup>3</sup>
Dresden, Unit 2	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Dresden, Unit 3	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
LaSalle, Unit 1	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
LaSalle, Unit 2	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Limerick, Unit 1	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Limerick, Unit 2	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Oyster Creek	X <sup>2</sup>	X <sup>2</sup>	X <sup>3</sup>	X <sup>3</sup>
Peach Bottom, Unit 1	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>
Peach Bottom, Unit 2	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Peach Bottom, Unit 3	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Quad Cities, Unit 1	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Quad Cities, Unit 2	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Salem, Unit 1	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Salem, Unit 2	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Three Mile Island, Unit 1	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Zion, Unit 1	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>
Zion, Unit 2	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>

<sup>1</sup> 10 CFR 50.75(f)(2) states, in part, that the information in this report [the decommissioning funding report] must include the amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c).

<sup>2</sup> The reported value was lower than the "NRC minimum" amount calculated by Exelon, as shown on internal Exelon spreadsheets.

<sup>3</sup> The reported value was lower than the actual site specific cost estimate calculated by Exelon, as shown on internal Exelon spreadsheets.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response concerning participation in a PEC, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions, please contact Mr. Michael Dudek, at 301-415-6500.

Sincerely,  
/RA/

Ho K. Nieh, Director  
Division of Inspection & Regional Support  
Office of Nuclear Reactor Regulation

Docket Nos.: 05000456, 05000457, 05000454, 05000455, 05000461, 05000010, 05000237, 05000249, 05000373, 05000374, 05000352, 05000353, 05000219, 05000171, 05000277, 05000278, 05000254, 05000265, 05000272, 05000311, 05000289

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Enclosure: As stated

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DATE	12/04/12	12/11/12	12/12/12	12/05/12	12/18/12
OFFICE	OGC	NRR/DIRS: DD	NRR/DIRS: D		
NAME	P. Jehle <sup>5</sup>	A. Howe	H. Nieh		
DATE	01/08/13	01/09/13	01/30/13		

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<sup>1</sup> Concurrence received via e-mail from R. Turtill on December 11, 2012

<sup>2</sup> Concurrence received via e-mail from M. Dudek on December 12, 2012

<sup>3</sup> Concurrence received via e-mail from R. Goetz on December 5, 2012

<sup>4</sup> Concurrence received via e-mail from N. Hilton on December 18, 2012

<sup>5</sup> Concurrence received via e-mail from P. Jehle on January 8, 2013



Letter to Michael J. Pacilio from Ho Nieh dated January 31, 2013

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