

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION  
 OFFICE OF FEDERAL AND STATE MATERIALS AND  
 ENVIRONMENTAL MANAGEMENT PROGRAMS

Scott W. Moore, Acting Director

In the Matter of	)	Docket No. 50-320
	)	
FIRSTENERGY NUCLEAR OPERATING	)	License No. DPR-73
COMPANY	)	
	)	
Three Mile Island Nuclear Station, Unit No. 2	)	

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DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

On September 30, 2010, Eric J. Epstein filed a Petition pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.206. The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) take enforcement action in the form of a Demand for Information from FirstEnergy Corp. relating to inadequate financial assurance provided by the licensee for Three Mile Island, Unit 2's (TMI-2's) nuclear decommissioning fund prior to the consummation of FirstEnergy's proposed merger with Allegheny Energy. (NOTE: GPU Nuclear Inc. is the license holder for TMI-2.) GPU Nuclear, Inc. submitted the 2009 Decommissioning Funding Status Report for TMI-2 on March 29, 2010 (available in NRC's Agency-wide Documents Access and Management System (ADAMS) under ADAMS No. ML100960464). As the basis for this request, the Petitioner states that the current radiological decommissioning cost estimate is \$831.5 million and the current amount in the decommissioning trust fund is \$484.5 million, as of December 31, 2008. Further, the Petitioner asserts that FirstEnergy does not provide adequate financial assurance for decommissioning funding of TMI-2: (1) FirstEnergy's annual

report fails to account for the special status of TMI-2, (2) the current level of the decommissioning trust fund demonstrates underfunding, and (3) that the underfunding would increase once decommissioning rate recovery payments from Metropolitan Edison and Pennsylvania Electric were terminated on December 31, 2010, pursuant to Pennsylvania Public Utility Commission orders.

This Petition was assigned to the NRC's Office of Federal and State Materials and Environmental Management Programs (FSME) for review. FSME convened a Petition Review Board (PRB) that met, via teleconference, with the Petitioner and licensee on October 19, 2010, to discuss the issues raised in the petition. The transcript of this meeting is a supplement to the petition. The petition and transcript are available in ADAMS for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, and from the NRC's Public Electronic Reading Room on the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> under ADAMS Nos. ML102770308 and ML103120216, respectively. Persons who do not have access to ADAMS or who have problems accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov). By letter dated November 9, 2010 (ADAMS No. ML101310049), NRC informed the Petitioner that his request met the criteria for accepting the petition for enforcement, pursuant to 10 CFR 2.206.

By letter dated November 9, 2010, FirstEnergy Nuclear Operating Company (FENOC) transmitted information regarding the petition. Additional information was provided by email dated February 10, 2011. This information is available under ADAMS Nos. ML103200528 and ML110540341, respectively. The information provided by GPU Nuclear Inc. and FENOC was considered by the staff in its evaluation of the petition.

The NRC sent a copy of the proposed Director's Decision to the Petitioner and to GPU Nuclear Inc. for comment on April 5, 2011 (ADAMS Nos. ML110680183 and ML110940183). The Petitioner responded with comments on May 1, 2011 (ADAMS No. ML111260128), and the licensee responded on April 18, 2011 (ADAMS No. ML11116A073). Comments submitted by the Petitioner and licensee, and the NRC staff responses, are discussed in the attachment to this Director's Decision.

## II. DISCUSSION

The Petitioner seeks enforcement action in the form of a Demand for Information (DFI) requiring FirstEnergy to provide the NRC with site-specific information and financial guarantees that demonstrate and verify the licensee has adequate funding in place to decommission and decontaminate TMI-2. The Petitioner requests specifically that the NRC demand the following information from FirstEnergy Corporation:

1. A site-specific decommissioning funding plan for TMI-2.

### Petitioner Basis for Request

The Petitioner states that the Decommissioning Trust Fund for TMI-2 is underfunded. As of December 31, 2008, the radiological decommissioning cost estimate was \$831.5 million. However, the amount in the decommissioning trust fund was \$484.5 million. The Petitioner states that the TMI-2 decommissioning report "is inadequate and fails to account for the special status of TMI-2, the current level of underfunding, or the fact that decommissioning rate recovery for Metropolitan Edison and Pennsylvania Electric cease per [Pennsylvania Public Utility Commission] PUC Orders on December 31, 2010."

### NRC Staff Response

The Petition was based on outdated data contained in the March 2009 report; the staff is using the data contained in the licensee's 2010 Decommissioning Funding Status Report. The Petitioner raised concerns over the decommissioning cost estimates and the decommissioning

trust fund amounts that were accurate for the reporting period ending December 31, 2008. The Commission's regulations at CFR 50.75(f)(2) require that "[e]ach power reactor licensee shall report, on a calendar-year basis, to the NRC . . . at least once every 2 years . . . on the status of its decommissioning funding for each reactor or part of a reactor that it owns." However, NRC regulations require that an *annual report* be submitted by a licensee for a plant that has closed before the end of its licensed life. The requirement to submit an *annual* decommissioning funding status report applies to TMI-2. The information in a decommissioning funding status report must include:

- (1) the amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c);
- (2) the amount accumulated to the end of the calendar year preceding the date of the report;
- (3) a schedule of the annual amounts remaining to be collected;
- (4) the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections;
- (5) any contracts upon which the licensee is relying pursuant to paragraph (e)(1)(v) of this section;
- (6) any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and
- (7) any material changes to trust agreements.

Therefore, a reactor licensee must submit annual recalculations of decommissioning cost estimates and projected available funding that will be at the time of decommissioning.

GPU Nuclear submitted its annual decommissioning funding status report for TMI-2, in compliance with NRC regulations at 10 CFR 50.75(f) (ADAMS No. ML100960464). The licensee's most current decommissioning funding status report states:

- Based on the *site-specific* decommissioning cost estimate (SSCE), *Decommissioning Cost Analysis for Three Mile Island, Unit 2*, dated January 2009, the cost for the radiological decommissioning of TMI-2 is estimated to be \$836,859,007.
- As of December 31, 2009, the amount accumulated in all the external decommissioning trust funds dedicated to TMI-2, totaled \$576,826,096.
- Additionally, the annual report stated that one remaining annual collection from Metropolitan Edison Company and Jersey Central Power and Light Company, in the amount of \$4,054,046, was to be deposited into the TMI-2 decommissioning trust fund in 2010.

The staff evaluated the information provided in the March 29, 2010, decommissioning funding status report, to determine whether the licensee provided reasonable assurance that funds will be available for the TMI-2 decommissioning process scheduled to begin in 2034. The staff reviewed the payment schedule filed with the licensee's *site-specific Decommissioning Cost Analysis for Three Mile Island, Unit 2*, dated January 2009. NRC regulations at 10 CFR 50.75(e)(1)(ii) provide:

A licensee that has collected funds based on a *site-specific estimate* under § 50.75(b)(1) of this section may take credit for projected earnings on the external sinking funds using up to a *2 percent annual real rate of return* from the time of future funds' collection through the decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage, final dismantlement, and license termination. (Emphasis added.)

The payment schedule provided in the 2009 report incorporates the licensee's use of the forecast interest rate of 4.8 percent. The forecast interest rate is offset by the licensee's assumption of an annual rate of inflation of 2.81 percent. The staff determined that the use of the 4.81 percent forecast interest rate and the 2.81 percent annual inflation rate, is in

compliance with the regulations at 10 CFR 50.75(e)(1)(ii), which permit using a 2.00 percent real rate of return. [4.81 percent (forecast interest rate) - 2.81 percent (projected inflation rate) = 2.0 percent real rate of return.] The staff accepts the licensee's projection that the effect of compounding interest over the period of Post Defueling Monitored Storage will result in sufficient growth of the trust funds to provide reasonable assurance for estimated decommissioning costs. The staff emphasizes that the regulations at 10 CFR 50.75 provide for on-going re-analysis of the TMI-2 decommissioning trust fund; the financial qualifications review for decommissioning funding assurance is revisited every year until the license is terminated.

Moreover, if Three Mile Island, Unit 1 (TMI-1) ceases operations prior to 2034, the NRC staff would require the TMI-1 and TMI-2 licensees to provide new SSCE for both facilities. The new SSCE would be required to provide a revised timeline for conducting decommissioning activities at the two facilities, as well as a revised plan demonstrating reasonable assurance that funds will be available for the decommissioning process, pursuant to 10 CFR 50.75(a). NRC would analyze the revised SSCEs to assess whether the licensee provided reasonable assurance. More importantly, if the staff made a finding of no reasonable assurance, pursuant to 10 CFR 50.75(e)(2),

[t]he NRC reserves the right to take the following steps in order to ensure a licensee's adequate accumulation of decommissioning funds: review, as needed, the rate of accumulation of decommissioning funds; and, either independently or in cooperation with the FERC and the licensee's State PUC, take additional actions as appropriate on a case-by-case basis, including *modification of a licensee's schedule for the accumulation of decommissioning funds*. (Emphasis added.)

The staff reviewed the Petition, as well as the related documentation referenced and supplied by the Petitioner and the licensee. Based on this review, the NRC staff has determined that the licensee has met the requirement for providing decommissioning funding assurance for TMI-2 and finds that no further information is required from the licensee at this time.

2. FENOC's site-specific funding plan for the TMI-2 decommissioning trust after the rate caps expire for Metropolitan Edison and Pennsylvania Electric on December 31, 2010.

#### Petitioner Basis for Request

The Petitioner states "FirstEnergy's rate recovery opportunities in Pennsylvania are restricted after December 31, 2010. Three Mile Island Unit-2 will no longer receive rate payer funding for decommissioning after December 31, 2010, when Metropolitan Edison and Penn Elec's rate cap are lifted."

#### NRC Staff Response

The March 29, 2010, Decommissioning Funding Status Report, includes the "Schedule of Annual Amounts Remaining to be Collected as of December 31, 2009" (Schedule 1) for TMI-2 (ADAMS No. ML100960464). In Schedule 1, the licensee reported \$4,054,046 was to be deposited into the TMI-2 decommissioning trust fund in 2010 (ADAMS No. ML100960464). Schedule 1 also reports that on February 19, 2010, the Jersey Central Power & Light Company filed a request with the New Jersey Board of Public Utilities to reduce the Nuclear Decommissioning Cost charge to zero by June 1, 2010. If approved, Jersey Central Power & Light Company is expected to collect \$1,206,046 in 2010 with no further deposits anticipated (ADAMS No. ML100960464). Although no additional ratepayer contributions to the decommissioning trust funds are contemplated at this time, this does not mean that the decommissioning trust funds will remain stagnant. The staff evaluated the projected annual earnings on the decommissioning funds, as detailed in Schedules 2 and 3 of the 2010 Decommissioning Funding Status Report. The NRC staff found in its review of the 2010 TMI-2 Decommissioning Funding Status Report that the compounded projected earnings on the trust funds, permitted under 10 CFR 50.75(e)(1)(ii), that the licensee provided reasonable assurance that adequate funds will be available for the decommissioning of TMI-2. The staff has determined that no further information is required at this time.

3. FENOC's investment plan to make-up the current decommissioning shortfall.

Petitioner Basis for Request

The Petitioner states that FENOC's Decommissioning Trust Fund for TMI-2 is underfunded. At the time the petition was filed, the radiological decommissioning cost estimate was \$831.5 million. However, as of December 31, 2008, the amount in the decommissioning trust fund was \$484.5 million.

NRC Staff Response

As mentioned earlier, the Petition was based on outdated data contained in the March 2009 report; the staff is using the data contained in the licensee's 2010 Decommissioning Funding Status Report. The staff points out that as of December 31, 2009, the total amount accumulated in all the external decommissioning trust funds dedicated to TMI-2 is \$576,826,096.

Based on the staff's review of the March 29, 2010, submittal (ADAMS No. ML100960464), and in accordance with NRC Regulations at 10 CFR 50.75, guidance document NUREG-1307, Rev. 14, "Report on Waste Burial Charges," and staff guidance LIC- 205, Rev. 4, "Procedures for NRC Independent Analysis of Decommissioning Funding Assurance for Operating Nuclear Power Reactors," the NRC staff has found that the licensee is providing reasonable decommissioning funding assurance. Therefore, no modification of the licensee's schedule for the accumulation of decommissioning funds is necessary at this time. Had the staff found the licensee had not provided adequate assurance for decommissioning funding, the NRC staff would have sought further assurances from the licensee through the methods available to the licensee under 10 CFR 50.75(e)(1).

4. FENOC's proposed financial contribution plan to make-up the current decommissioning shortfall.



Petitioner Basis for Request

The Petitioner raises concerns that the financial contribution plan submitted by the licensee in 2008, indicates a shortfall in the required funding amount and that adequate funds will not be available at the time of decommissioning. The Petitioner points out that in the 2009 status report, the radiological decommissioning cost estimate was \$831.5 million and the amount of funds in the decommissioning trust fund was \$484.5 million, as of December 31, 2008. The Petitioner raises an additional concern that the cost to decommission TMI-2 increased by \$26.5 million in less than 3 years, while FENOC's decommissioning trust fund assets decreased by \$116.5 million during the same time period.

NRC Staff Response

As was discussed above, the staff's review of the March 29, 2010, submittal (ADAMS No. ML100960464) determined that no further contributions to the licensee's external decommissioning trust funds were necessary. The staff agrees with the Petitioner that market fluctuations and other site-specific factors may affect trust fund balances; for this reason the regulations at 10 CFR 50.75(f)(2) require annual submittals for TMI-2 updating and any change to the decommissioning plans, as well as any deviations experienced in decommissioning funding, shall be reviewed accordingly. Future NRC staff reviews may reveal circumstances that require the licensee to make appropriate funding changes, pursuant to 10 CFR 50.75(e)(2), so that reasonable decommissioning funding assurance will be preserved.

5. FirstEnergy's plan to fund the decommissioning trust for TMI-2, if TMI-1 is prematurely retired.

Petitioner Basis for Request

FENOC anticipates that TMI-1 will operate at least until the end of their current license. In the event that any of the nuclear generating stations are retired early, FENOC anticipates that

funding will be adjusted to match any change in decommissioning schedule and/or cost scenario.

NRC Staff Response

As stated in the SSCE, FirstEnergy Corp. plans on synchronizing the decommissioning of TMI-2 with the decommissioning of TMI-1. At this time, GPU Nuclear has not declared any schedule deviations since the March 29, 2010, submittal, and the NRC regulations do not require a licensee to speculate about possible decommissioning funding alternatives. According to the SSCE, TMI-2 will remain in a state of Post-Defueling Monitored Storage until decommissioning activities begin in 2034. However, should TMI-1 cease operations prior to 2034, FirstEnergy will be required to provide a new site-specific decommissioning cost estimate, subject to approval by NRC staff, addressing the revised timeline, as well as a revised plan to satisfactorily meet decommissioning funding assurance.

6. FirstEnergy's planned timing for decommissioning TMI-2, if TMI-1 is prematurely retired.

Petitioner Basis for Request

FENOC anticipates that TMI-1 will operate at least until the end of their current license. In the event that any of the nuclear generating stations are retired early, FENOC anticipates that funding will be adjusted to match any change in decommissioning schedule and/or cost scenario.

NRC Staff Response

As indicated above, at this time, GPU Nuclear has not declared any schedule deviations since the March 29, 2010, submittal, and NRC regulations do not require a licensee to speculate about possible decommissioning funding alternatives. If GPU Nuclear changes the current decommissioning plans for TMI-2, then appropriate submittals attesting to the change will be required by the staff, pursuant to 10 CFR 50.75.

7. Petitioner requested the NRC provide the Petitioner with copies of correspondence concerning NRC's review of the petition, as well as, notice of meetings and the opportunity to participate in meeting related to the petition.

Petitioner Requests

- (a) Copies of all correspondence sent to FirstEnergy regarding this Petition.
- (b) Advance notice of all public and private meetings conducted by the Agency with regarding this Petition.
- (c) An opportunity to participate in all relevant phone calls between NRC staff and FirstEnergy regarding this Petition.
- (d) Copies of all correspondence sent to Members of Congress and/ or industry organizations (e.g., the Nuclear Energy Institute, the Electric Power Research Institute, the Institute for Nuclear Power Operations, Commonwealth of Pennsylvania), Department of Justice, and the Securities and Exchange Commission regarding this Petition.

NRC Staff Response

The staff has provided the Petitioner ADAMS Accession Numbers for all documents and correspondence relevant to the review of the Petition. Petitioner was provided with notice of and an opportunity to participate in telephone calls between the staff and the licensee. With the exception of a short conversation on February 10, 2011, between the staff and the licensee (memorialized in ADAMS No. ML110540341), the staff held no public or private meetings concerning this Petition. In addition, no correspondence from third-parties concerning the petition was received by the staff.

8. Petitioner raised the concern that a proposed merger between FirstEnergy and Allegheny Energy will “place additional financial pressures on FirstEnergy's ability to satisfy its decommissioning obligations in 2036.”

#### NRC Staff Response

In the teleconference of October 19, 2010, the staff and the Petitioner discussed the proposed merger between FirstEnergy and Allegheny Energy; the Petitioner stated he understood that FirstEnergy has not filed a formal application with the NRC for a review of the merger and that the NRC was not planning to take any action in the matter (ADAMS No. ML103120216 at 15-16). The staff's evaluation of the licensee's decommissioning funding status report for 2010, determined there is reasonable assurance of adequate funding for the decommissioning process and the staff considers this issue to be closed.

### III. CONCLUSION

On March 29, 2010, GPU Nuclear submitted an updated decommissioning funding status report for TMI-2, which is the latest site-specific decommissioning funding plan. The NRC staff reviewed this submission and determined that GPU Nuclear is providing adequate decommissioning funding assurance. (Note: Although the Petitioner referred to a March 2009 Decommissioning Funding Status Report, the staff reviewed and discussed the March 2010 report because it contained current data.) Furthermore, in accordance with NRC Regulations at 10 CFR 50.75, and guidance documents; NUREG- 1307, Rev. 14, “Report on Waste Burial Charges,” and LIC- 205, Rev. 4, “Procedures for NRC Independent Analysis of Decommissioning Funding Assurance for Operating Nuclear Power Reactors,” staff has determined that GPU Nuclear is providing reasonable decommissioning funding assurance and no modification of the licensee's schedule for the accumulation of decommissioning funds is necessary at this time.

As provided in 10 CFR 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

Dated at Rockville, Maryland, this 2<sup>nd</sup> day of June 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

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Scott W. Moore, Acting Director  
Office of Federal and State Materials  
and Environmental Management Programs

ATTACHMENT TO THE FINAL DIRECTOR'S DECISION  
COMMENTS ON THE PROPOSED DIRECTOR'S DECISION  
FROM THE PETITIONER AND LICENSEE, AND THE NRC STAFF RESPONSES

The U.S. Nuclear Regulatory Commission (NRC) sent a copy of the proposed Director's Decision to the Petitioner and to GPU Nuclear Inc. for comment on April 5, 2011 (ADAMS Nos. ML110680183 and ML110940183). The Petitioner responded with comments on May 1, 2011 (ADAMS No. ML11111260128), and the licensee responded on April 18, 2011 (ADAMS No. ML11116A073). NRC's response to the comments received is provided below:

The NRC Staff Response to the Petitioner's Comments:

The Petitioner provided comments on the proposed Director's Decision via email dated May 1, 2011. The Petitioner's comments are publicly available in ADAMS (ADAMS No. ML111260128). The Petitioner's comments made changes to the NRC-published proposed Director's Decision. The staff notes that much of the text included under the headings titled "NRC Staff's Response" in the Petitioner's comments were inconsistent with the text of the proposed Director's Decision.

In the petition, the Petitioner seeks enforcement action in the form of a Demand for Information (DFI) requiring FirstEnergy to provide the NRC with site-specific information and financial guarantees that demonstrate and verify the licensee has adequate funding in place to decommission and decontaminate Three Mile Island, Unit 2 (TMI-2). As stated in the petition, the Petitioner evaluated the 2008 Decommissioning Funding Status Report, which was the most current information at the time. However, in March 2010, GPU Nuclear submitted the 2009 Decommissioning Funding Status Report for TMI-2. Therefore, in order to determine the current state of the licensee's decommissioning funding assurance, the staff critically reviewed and evaluated the site-specific 2009 Decommissioning Funding Status Report for TMI-2, which was submitted by GPU Nuclear (the licensee) on March 29, 2010.

The licensee submitted additional information on November 9, 2010, and February 10, 2011, as part of the 2.206 process. All information submitted by the licensee was available to the Petitioner as public documents in ADAMS. The staff reviewed the licensee's submittals and determined that GPU Nuclear provided the information required by NRC regulations at 10 CFR 50.75. The staff found that the licensee's decommissioning trust fund demonstrates adequate decommissioning funding assurance, and that no modification of the licensee's schedule for the accumulation of decommissioning funds is necessary at this time.

The Petitioner's comments on the proposed Director's Decision are generally critical of the staff's evaluation and dispute the staff findings, as indicated by repeating the following comment in several places on the proposed Director's Decision:

The Staff's review is fatally flawed and based on limited assumptions, incomplete analyses and licensee driven predictions which are unverifiable and have historically proven to be grossly inaccurate. For a complete discussion of the "Petitioner's Responses and Discussion" to the Draft Director's Decision please refer to pp. 15-20. In addition, please see the Petitioner's DFI, p. 2, pp. 5-6 and pp.5-9, for a thorough analyses of TMI-2 inability to predict funding targets.

The staff reviewed the "Petitioner's Responses and Discussion to Draft Decision to the proposed Director's Decision." The Petitioner failed to raise any new information in the first 15 pages of his response. He refers the staff to concerns raised in this original DFI and reiterates them in the response. These concerns were fully evaluated and discussed in the proposed Director's Decision. The NRC staff reviewed this submission and determined that licensee is providing adequate decommissioning funding assurance and no modification of the licensee's schedule for the accumulation of decommissioning funds is necessary at this time.

The Petitioner raises new concerns and provides new information in the Response, specifically at pages 15 – 20. The Petitioner states that the proposed Director's Decision is deficient because the staff's review of the 2009 Decommissioning Funding Status Report did not include a number of evaluations concerning the merger of FirstEnergy and Alleghany Energy

and that data FirstEnergy provided concerning the merger was in some way flawed. As the staff discussed in the proposed Director's Decision, the merger between FirstEnergy and Alleghany Energy is outside the regulatory authority of the NRC; specifically, under NRC regulations the NRC does not have authority to analyze the impact of the merger. NRC evaluates mergers when nuclear interests are involved; no evidence has been provided by the Petitioner of any nuclear interests that were under the control of Alleghany Energy. Moreover, the licensee's Decommissioning Funding Status Report meets the requirements of 10 CFR 50.75, and the staff's review was conducted in accordance with NRC guidance documents; NUREG-1307, Rev. 14, and LIC- 205, Rev. 4.

The staff concludes that the Petitioner's comments reflect dissatisfaction with the regulatory requirements of 10 CFR 50.75. Changes to this regulation are outside the scope of the 2.206 Petition process.

The NRC Staff Response to the Licensee's Comments:

The licensee requested that NRC revise page 5 of the proposed Director's Decision to clarify that the \$4,054,046 was to be deposited in the TMI-2 decommissioning trust in 2010 on behalf of Metropolitan Edison Company and Jersey Central Power and Light Company instead of Metropolitan Edison Company and Pennsylvania Electric Company as stated in the proposed Director's Decision. The staff evaluated the licensee's requested clarification and found it to be accurate, and the Director's Decision was changed accordingly.