



March 31, 2021
TMI2-RA-COR-2021-0006

10 CFR 50.75
10 CFR 50.82

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

SUBJECT: Decommissioning Fund Status Report – Three Mile Island, Unit 2

Three Mile Island, Unit 2
NRC Possession Only License No. DPR-73
Docket No. 50-320

Pursuant to 10 CFR 50.75 and 10 CFR 50.82, TMI-2 Solutions. is hereby submitting the following three reports to the Nuclear Regulatory Commission (NRC) for Three Mile Island Unit 2, for the year ending December 31, 2020. Attachment 1 provides a decommissioning funding status report based on the NRC formula described in 10 CFR 50.75(c). Attachment 2 provides a decommissioning funding status report based upon a site-specific decommissioning cost estimate (DCE). Attachment 3 contains a financial assurance status report as required by 10 CFR 50.82(a)(8)(v).

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact me at 860-462-9707.

Sincerely,

Gerard P. Van Noordennen

Gerard P. Van Noordennen
Mar 31 2021 11:47 AM

Gerard van Noordennen
Senior Vice President Regulatory Affairs
TMI-2 Solutions, LLC

Attachments:

1. Three Mile Island, Unit 2 Decommissioning Funding Status Report – NRC Formula
2. Three Mile Island, Unit 2 Decommissioning Funding Status Report – Site-Specific Decommissioning Cost Estimate
3. Three Mile Island , Unit 2 Financial Assurance Status Report

cc:

NRC Region I Administrator
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*ADD
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Attachment 1
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Three Mile Island, Unit 2 Decommissioning Funding
Status Report – NRC Formula

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This report reflects the TMI-2 Solutions ownership interests in Three Mile Island, Unit 2 as of December 31, 2020.

1. The minimum decommissioning fund estimate, pursuant to 10 CFR 50.75(b) and (c) (see Schedule 1):

\$503,627,371

2. The amount accumulated in external trust funds:

After Tax
\$862,549,586

3. There are no longer any funds being collected from the ratepayers.
4. The assumptions used regarding escalation in decommissioning cost, rates of earnings on decommissioning funds, and rates of other factors used in funding projections:

Consolidated Ownership Interest in Unit	100%
Estimated Net Investment Rate	2.00%
Year of Site Restoration Completion	2054

Three Mile Island, Unit 2 transitions from a Post-Defueling Monitored Storage status to decommissioning in 2022.

5. There are no contracts upon which the owners/licensees are relying upon pursuant to 10 CFR 50.75(e)(1)(v).
6. There are no modifications to the licensee's current method of providing financial assurance.
7. The above-mentioned owner of Three Mile Island Unit 2, TMI-2 Solutions, became the TMI-2 licensee on December 18, 2020, following the closing specified in the October 15, 2019 Asset Purchase and Sale Agreement. The trust agreement has not been amended since the closing.
8. Mathematical rounding was performed during the development of the supporting calculations.

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Three Mile Island, Unit 2 Decommissioning Funding
Status Report – NRC Formula

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Schedule 1

TMI-2 Solutions, LLC.

Calculation of Minimum Financial Assurance Amount
December 31, 2020

THREE MILE ISLAND NUCLEAR STATION, UNIT 2

Pennsylvania Regions

Labor (L) = Northeast

Energy (E) = National

Waste Burial (B) = Generic

For PWR Unit

	Adjustment <u>Factor</u>	<u>Ratio</u>	Escalation <u>Factor</u> ¹
L =	3.060	0.65	1.989
E =	2.030	0.13	0.264
B =	12.793	0.22	2.814

PWR Escalation Factor = 5.067

Base Amount for PWR between 1200 MWt and 3400 MWt = $(\$75 + 0.0088P)$ million
(P = power level in megawatts thermal = 2772)

$(\$75 + 0.0088(2772))$ million = \$99,393,600

Escalated Amount for unit¹ = 99,393,600 = **\$503,627,371**

Note 1: Mathematical rounding was performed during the development of the supporting calculations

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Three Mile Island, Unit 2 Decommissioning Funding Status Report –
Site-Specific Decommissioning Cost Estimate

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1. Decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c) are based upon a site-specific Decommissioning Cost Estimate as presented in PSDAR Revision 4, dated March 17, 2021.

NRC License Termination	\$1,044,364,000
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2. The amount accumulated in external trust funds as of December 31, 2020:

After Tax
\$862,549,586

3. There are no longer any funds being collected from the ratepayers.
4. The assumptions used regarding escalation in decommissioning cost, rates of earnings on decommissioning funds, and rates of other factors used in funding projections:

Consolidated Ownership Interest in Unit	100%
Estimated Rate of Escalation in Decommissioning Costs	0.00%
Estimated After-Tax Rate of Return	2.00%
Year of Site Restoration Completion	2054

Three Mile Island, Unit 2 transitions from a Post-Defueling Monitored Storage status to decommissioning in 2022.

All costs are based on a site-specific decommissioning cost study, Decommissioning Cost Estimate as presented in PSDAR Revision 4, dated March 17, 2021.

5. There are no contracts upon which the owners/licensees are relying pursuant to 10 CFR 50.75(e)(1)(v).
6. There are no modifications to the licensee's current method of providing financial assurance.
7. The above-mentioned owner of Three Mile Island Unit 2; TMI-2 Solutions, became the TMI-2 licensee on December 18, 2020, following the closing specified in the October 15, 2019 Asset Purchase and Sale Agreement. The trust agreement has not been amended since the closing.
8. Site Specific Cost Analysis Assumptions

10 CFR 50.75(e)(1)(i), states, in part, that:

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Three Mile Island, Unit 2 Decommissioning Funding Status Report –
Site-Specific Decommissioning Cost Estimate

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A licensee that has prepaid funds based on a site-specific estimate under 50.75(b)(1) of this section may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate.

In accordance with Regulatory Guide 1.159, Revision 2, *Assuring the Availability of Funds for Decommissioning Nuclear Reactors*, a facility specific analysis may be used to demonstrate the adequacy of decommissioning funds, provided that:

NRC-required cost estimate for decommissioning costs, as defined in 10 CFR 50.2, is equal to or greater than the amount stated in the formulas in 10 CFR 50.75(c)(1) and (2).

The site-specific radiological decommissioning cost estimate is \$1,044,364,000 which is greater than the 10 CFR 50.75(c) cost estimate of \$503,627,371. The analysis assumes a 2 percent yearly rate of return. The analysis also assumes that, upon approval of the license transfer amendment, the project will enter directly into decommissioning. The cash flows were contained in a decommissioning cost estimate that was prepared for Three Mile Island Unit 2. The cash flow analysis assumes the yearly expenses are incurred at mid-year.

Schedule 1 provides the site-specific analysis. The analysis values are in 2020 dollars. The analysis is based on TMI-2 transitioning from Post-Defueling Monitored Storage status to decommissioning in 2022 and includes expenditures for license termination costs only.

9. Mathematical rounding was performed during the development of the supporting calculations.
10. References:
 - A. Letter from USNRC to Halnon, G.H. (GPU Nuclear, Inc.), "Three Mile Island Nuclear Station, Unit No. 2 – Order Approving Transfer of License from the FirstEnergy Companies to TMI-2 Solutions, LLC and Draft Conforming Administrative License Amendment (EPID L-2019-LLA-0257)," dated December 2, 2020.
 - B. Notification of "Amended Post-Shutdown Decommissioning Activities Report" (PSDAR) for Three Mile Island, Unit 2 in Accordance with 10 CFR 50.82(a)(7), Revision 4, dated March 17, 2021.

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Three Mile Island, Unit 2 Decommissioning Funding Status Report –
Site-Specific Decommissioning Cost Estimate

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Schedule 1

TMI-2 SOLUTIONS, LLC.

Funding Analysis

December 31, 2020

THREE MILE ISLAND NUCLEAR STATION, UNIT 2

Estimated Net Investment Rate	After-Tax 2.00%
Estimated Escalation Rate	<u>0.00%</u>
Estimated After-Tax Rate of Return	2.00%

Qualified Trust Balance on December 31, 2020	862,549,586 After-Tax
Non-Qualified Trust Balance on December 31, 2020	-
Total	862,549,586

Year	Beginning Balance	Deposits	Earnings	Withdrawal	Ending Balance
2020	\$ 862,549,586	\$ -	\$ -	\$ -	\$ 862,549,586
2021	\$ 862,549,586	\$ -	\$ 16,936,809	\$ 31,418,287	\$ 848,068,108
2022	\$ 848,068,108	\$ -	\$ 16,461,121	\$ 50,024,122	\$ 814,505,107
2023	\$ 814,505,107	\$ -	\$ 15,604,289	\$ 68,581,309	\$ 761,528,087
2024	\$ 761,528,087	\$ -	\$ 14,529,698	\$ 70,086,339	\$ 705,971,446
2025	\$ 705,971,446	\$ -	\$ 13,404,866	\$ 71,456,339	\$ 647,919,973
2026	\$ 647,919,973	\$ -	\$ 12,232,401	\$ 72,599,868	\$ 587,552,506
2027	\$ 587,552,506	\$ -	\$ 11,182,487	\$ 56,856,284	\$ 541,878,709
2028	\$ 541,878,709	\$ -	\$ 10,356,368	\$ 48,120,627	\$ 504,114,450
2029	\$ 504,114,450	\$ -	\$ 9,803,396	\$ 27,889,339	\$ 486,028,506
2030	\$ 486,028,506	\$ -	\$ 9,427,032	\$ 29,353,813	\$ 466,101,725
2031	\$ 466,101,725	\$ -	\$ 8,887,041	\$ 43,499,325	\$ 431,489,441
2032	\$ 431,489,441	\$ -	\$ 8,082,032	\$ 54,775,656	\$ 384,795,818
2033	\$ 384,795,818	\$ -	\$ 7,076,307	\$ 61,960,930	\$ 329,911,195
2034	\$ 329,911,195	\$ -	\$ 5,568,673	\$ 102,955,072	\$ 232,524,796
2035	\$ 232,524,796	\$ -	\$ 3,596,590	\$ 105,390,563	\$ 130,730,823
2036	\$ 130,730,823	\$ -	\$ 1,816,682	\$ 79,793,491	\$ 52,754,014
2037	\$ 52,754,014	\$ -	\$ 954,300	\$ 10,078,020	\$ 43,630,294
2020 - 2037	\$ 862,549,586	\$ -	\$ 165,920,092	\$ 984,839,384	\$ 43,630,294
2038 - 2054	\$ 43,630,294	\$ 7,682,391	\$ 8,211,931	\$ 59,524,617	\$ (0)
Total		\$ 7,682,391	\$ 174,132,023	\$ 1,044,364,000	

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Three Mile Island, Unit 2 Decommissioning Funding Status Report –
Site-Specific Decommissioning Cost Estimate

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Notes:

- (1) Withdrawals reflect the project remaining in the PDMS condition until mid-2022.
- (2) Withdrawals reflect the project in decommissioning starting mid-2022 to mid-2037.
- (3) Withdrawals reflect the project in debris material storage management starting mid-2037 through 2053.
- (4) Withdrawals reflect the ISFSI decommissioning and license termination by the end of 2054.
- (5) Withdrawal amounts are net cost including allowed DOE reimbursements for debris material management.
- (6) A disbursement of decommissioning trust funds occurred in December 2020 in the amount of \$8,059,318 for planning and licensing cost incurred by TMI2 Solutions prior to project closing.
- (7) Withdrawals are estimated based upon a site-specific decommissioning cost estimate as presented in PSDAR Revision 4, dated March 17, 2021.

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Three Mile Island, Unit 2 Financial Assurance Status Report

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1. Formal decommissioning has not started at Three Mile Island Unit 2. A disbursement of decommissioning trust funds occurred in December 2020 in the amount of \$8,059,318 for planning and licensing cost incurred by TMI2 Solutions prior to project closing.
2. Decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c) are based upon a site-specific Decommissioning Cost Estimate as presented in PSDAR Revision 4, dated March 17, 2021.

NRC License Termination	\$1,044,364,000
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3. The amount accumulated in external trust funds as of December 31, 2020:

After Tax
\$862,549,586

4. There are no longer any funds being collected from the ratepayers.
5. There are no modifications to the licensee's current method of providing financial assurance.
6. There were no amendments to the trust agreements for the above-mentioned owner of Three Mile Island Unit 2.
7. Mathematical rounding was performed during the development of the supporting calculations.
8. References:
 - A. Letter from USNRC to Halnon, G.H. (GPU Nuclear, Inc.), "Three Mile Island Nuclear Station, Unit No. 2 – Order Approving Transfer of License from the FirstEnergy Companies to TMI-2 Solutions, LLC and Draft Conforming Administrative License Amendment (EPID L-2019-LLA-0257)," dated December 2, 2020.
 - B. Notification of "Amended Post-Shutdown Decommissioning Activities Report" (PSDAR) for Three Mile Island, Unit 2 in Accordance with 10 CFR 50.82(a)(7), Revision 4, dated March 17, 2021.