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> 10 CFR 50.75(f) 10 CFR 50.82(a)

RS-20-039

March 31, 2020

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

Dresden Nuclear Power Station, Unit 1 Facility Operating License No. DPR-2 NRC Docket Nos. 50-10

Peach Bottom Atomic Power Station, Unit 1 Facility Operating License No. DPR-12 NRC Docket Nos. 50-171

Three Mile Island Nuclear Station, Unit 1 Renewed Facility Operating License No. DPR-50 NRC Docket No. 50-289

Subject: Report on Status of Decommissioning Funding for Shutdown Reactors

In accordance with 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," paragraph (f), and 10 CFR 50.82, "Termination of license," paragraphs (a)(8)(v) and (a)(8)(vii), Exelon Generation Company, LLC (EGC) is submitting a report on the status of decommissioning funding as of December 31, 2019, for the reactors owned by EGC that are shutdown.

EGC currently maintains three shutdown units, Dresden Nuclear Power Station (Dresden), Unit 1, Peach Bottom Atomic Power Station (Peach Bottom), Unit 1, and Three Mile Island Nuclear Station (TMI), Unit 1. The annual radiological decommissioning funding status report for Dresden, Unit 1, is provided in Attachment 2. The annual radiological decommissioning funding status report for Peach Bottom, Unit 1, is provided in Attachment 3. The annual radiological decommissioning funding status report for TMI, Unit 1, is provided in Attachment 4.

Attachment 1 contains the Labor, Energy, and Burial factors used in the calculation of the formula cost amounts in this letter.

EGC has obtained site-specific decommissioning cost estimates for Dresden, Unit 1, Peach Bottom, Unit 1, and TMI, Unit 1, as required, in accordance with 10 CFR 50.75(f) and 10 CFR 50.82, paragraphs (a)(4)(i), (a)(8)(iii), and (a)(8)(v)(B). Accordingly, the amount of decommissioning funds estimated to be required is based on site-specific decommissioning cost estimates for Dresden, Unit 1, Peach Bottom, Unit 1, and TMI, Unit 1. Unless otherwise noted, the specific cash flow analysis for the site-specific decommissioning cost estimates conservatively assumes all expenses in a year are incurred at the beginning of year

U.S. Nuclear Regulatory Commission March 31, 2020 Page 2

(i.e., beginning of year convention) during the decommissioning period. The cash flow analysis for Peach Bottom, Unit 1, assumes that half of the current year contributions to the Peach Bottom, Unit 1, trust fund is included in the current year earnings to estimate the amount of contributions throughout the year (i.e., a mid-year convention). EGC uses a mid-year convention in this instance because contributions to the Peach Bottom, Unit 1, trust fund are made monthly at a constant rate throughout the year. Site-specific cash flows from the site-specific cost estimates for Dresden, Unit 1, Peach Bottom, Unit 1, and TMI, Unit 1, are included in Attachments 2, 3, and 4, respectively.

EGC has not made a final determination of the decommissioning approach for any of its nuclear units, including the shutdown units. For these shutdown units, EGC uses the site-specific decommissioning cost estimates to demonstrate adequacy of funding to meet regulatory requirements. While the site-specific cost estimates assume a decommissioning option, EGC may select a different decommissioning option in the future for any of its shutdown nuclear units, recognizing that the chosen approach must meet NRC requirements for decommissioning funding.

The decommissioning funding status reports provided in Attachments 2 and 4 confirm that adequate decommissioning funding is assured for Dresden, Unit 1, and TMI, Unit 1.

Due to recent market performance, Peach Bottom, Unit 1, did not meet the minimum funding assurance criteria under 10 CFR 50.75 and 10 CFR 50.82 as of December 31, 2019, based solely on the trust fund balance. Financial assurance for decommissioning this reactor is provided by the external sinking fund method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(ii). The source of revenue for the external sinking fund is a "nonbypassable charge" approved by the Pennsylvania Public Utilities Commission (PaPUC) authorizing PECO Energy Company to continue to collect decommissioning funds for EGC. The amount to be collected will be adjusted, as necessary, in accordance with the applicable tariff in the next submission to the PaPUC of the Nuclear Decommissioning Cost Adjustment (NDCA) to cover any funding shortfall that exists at that time. This cost adjustment is made every five years pursuant to PaPUC Electric Tariff No. 4. The next rate adjustment will be effective January 1, 2023. The PaPUC has been notified that the amount collected may need to be adjusted in the next filing. EGC's ability to adjust the amount collected for Peach Bottom, Unit 1, is consistent with the guidance in Regulatory Guide 1.159, "Assuring Availability of Funds for Decommissioning Nuclear Reactors," Revision 2, page 13, which provides that, "Adjustments to the annual amount of funds being set aside may be made to coincide with rate cases considered by a licensee's public utility commission (PUC)."

Disbursements made through December 31, 2019, from the decommissioning trust funds since the last report, other than those for allowed administrative costs and other incidental expenses of the fund in connection with the operation of the fund per 10 CFR 50.75(h)(1)(iv), were for decommissioning planning and, in the case of Dresden, Unit 1, and TMI, Unit 1, for decommissioning activities as outlined in Attachments 2 and 4.

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There are no regulatory commitments contained within this letter.

If you have any questions concerning this letter, please contact me at (630) 657-2823.

Respectfully,

Patrick R. Simpson

Senior Manager – Licensing

Exelon Generation Company, LLC

Attachments:

- 1. Labor, Energy, and Burial Factors Used in Calculations (All Facilities)
- 2. Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1
- 3. Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1
- 4. Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

cc: Regional Administrator – NRC Region I

Regional Administrator - NRC Region III

NRC Senior Resident Inspector – Dresden Nuclear Power Station

NRC Senior Resident Inspector – Peach Bottom Atomic Power Station

NRC Senior Resident Inspector – Three Mile Island Nuclear Station

Labor, Energy, and Burial Factors Used in Calculations (All Facilities)

ATTACHMENT 1 Labor, Energy, and Burial Factors Used in Calculations (All Facilities)

The labor, energy, and burial indexes used are consistent with those described in NUREG-1307, Revision 17, "Report on Waste Burial Charges," issued February 2019.

The current labor cost indexes used are obtained from the Employment Cost Index, published by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). Specifically, Exelon Generation Company, LLC (EGC) used the Employment Cost Index for total compensation for private industry workers by region. The labor adjustment factors were calculated according to Section 3.2 of NUREG-1307, Revision 17, using fourth quarter 2019 data. Table 1 shows the data used for this calculation.

Table 1: Labor Adjustment Factors

Region	Applicable Sites	Series ID	4Q2019 Index Number	Base L _x	Labor Adjustment Factor (L _x)
Northeast	TMI	CIU2010000000210I	140.7	2.16	3.039
Midwest	Dresden	CIU2010000000230I	135.7	2.08	2.823

The current energy cost indexes used are obtained from Producer Price Indexes (PPI) – Commodities, published by the U.S. Department of Labor, BLS. Specifically, EGC used the PPI for industrial electric power (WPU0543) and light fuel oils (WPU0573). The energy adjustment factors were calculated according to Section 3.3 of NUREG-1307, Revision 17, using December 2019 data. Table 2 shows the data used for this calculation.

Table 2: Energy Adjustment Factors

WPU0543 – January 1986 (base value)	114.2
WPU0573 – January 1986 (base value)	82.0
WPU0543 – December 2019 (preliminary value)	237.9
WPU0573 – December 2019 (preliminary value)	222.6
Industrial electric power adjustment factor - P _x	2.083
Light fuel oil adjustment factor - F _x	2.715
Energy Adjustment Factor (PWR) – E _x (PWR)	2.348
Energy Adjustment Factor (BWR) – E _x (BWR)	2.374

ATTACHMENT 1 (Continued) Labor, Energy, and Burial Factors Used in Calculations (All Facilities)

The waste burial adjustment factors used are taken from Table 2-1 of NUREG-1307, Revision 17, based on 2018 data. The adjustment factors EGC used assume a combination of compact-affiliated and non-compact facilities for sites affiliated with a compact. This is consistent with current waste disposal practices at EGC and consistent with typical waste disposal practices during decommissioning. For sites not affiliated with a compact, the values for generators located in unaffiliated states were used. Table 3 summarizes the data used for the calculation of the waste adjustment factors.

Table 3: Waste Adjustment Factors

LLW Burial Site	Reactor Type	Applicable Site	Combination of Compact- Affiliated and Non-Compact Disposal Facilities Waste Adjustment Factor (B _x)	Generators Located in the Unaffiliated States and those Located in Compact- Affiliated States having no Disposal Facility Waste Adjustment Factor (B _x)
Generic LLW Disposal Site	BWR	Dresden	N/A	13.422
Generic LLW Disposal Site	PWR	TMI	N/A	12.853

The calculation methodology used for all adjustment factors is consistent with NUREG-1307, Revision 17.

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1 (December 31, 2019 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	N/A (a)
2	Site-specific cost amount per 10 CFR 50.75(b)(4) and 50.75(f)	\$450,303 (a)
3	Site-specific cost amount per 10 CFR 72.30(b)	N/A (b)
4	The amount of decommissioning trust funds accumulated as of December 31, 2019	\$390,155 (c)
5	Schedule of the annual amounts remaining to be collected	\$0
6	Assumptions used regarding rates of escalation for decommissioning costs, earnings on funds, and other factors used in funding projections	2% (d)
7	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v)	
8	Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i)	
9	The trust fund agreements were amended effective September 30, 2019 to reflect a change of the company holding the trusts from a Nevada LLC to an Illinois LLC	
10	2019 annual amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A)	\$2,098 (e)
11	Cumulative amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A)	\$129,080 (f)
	Reimbursed from the decommissioning trust fund	\$123,564 (g)
	Not yet reimbursed from the decommissioning trust fund	\$5,515 (h)
12	Amount of funds accumulated to cover the cost of managing irradiated fuel pursuant to 10 CFR 50.82(a)(8)(vii)(A) as of December 31, 2019	\$41,087 (i)
13	Projected cost of managing irradiated fuel based on site- specific estimate per 10 CFR 50.82(a)(8)(vii)(B)	\$47,421(a)

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

(December 31, 2019 dollars, thousands)

(a) A formula cost amount using the formula in 10 CFR 50.75(c) is not applicable because Dresden, Unit 1, has been shutdown since October 31, 1978, and some decommissioning activities have already occurred on this unit. However, the amount to decommission Dresden, Unit 1, was calculated pursuant to 10 CFR 50.75(c) to be \$585.0 million (as of December 31, 2019). Dresden, Unit 1, was a BWR reactor that operated at a maximum power level of 700 MWt (< 1200 MWt as specified in 10 CFR 50.75(c)). This amount assumes Dresden, Unit 1, was a BWR reactor type rated at a power capacity of 1200 MWt as required by the formula in 10 CFR 50.75(c). The calculation of this value assumes the labor, energy, and burial factors described in Attachment 1 and does not account for decommissioning activities that have occurred for Dresden, Unit 1.

In accordance with the regulatory requirements, the site-specific amount is reported per 10 CFR 50.75(b)(4), 50.75(f), 50.82(a)(8)(iii), and 50.82(a)(8)(v)(B) and assumes a DECON scenario as described in the site-specific cost estimate (SSCE) (TLG Report E16-1726-009, Revision 0, "Decommissioning Cost Analysis for the Dresden Nuclear Power Station Unit 1," December 2017). The decommissioning cost estimate has been adjusted consistent with the description of planned decommissioning activities in the Dresden Nuclear Power Station, Unit 1, Post-Shutdown Decommissioning Activities Report (PSDAR), as most recently updated in a letter from Michael P. Gallagher (EGC) to U.S. Nuclear Regulatory Commission dated March 19, 2018. The costs have been escalated from the 2017 dollars reflected in the 2017 decommissioning cost estimate to estimated costs as of December 31, 2019.

Decommissioning expenditures prior to the year the SSCE updates were prepared (historical expenditures) are not included in the estimated total cost of decommissioning in the final SSCE reports. Also, the amount reported does not include cash flows from the SSCE estimate for the 2017 through 2019 annual radiological costs because EGC considers the SSCE estimated costs for 2017 through 2019 decommissioning activities to be historical expenditures at the time the 2020 decommissioning funding assurance report is generated.

Decontamination and dismantlement of Dresden Nuclear Power Station, Unit 1, will take place no earlier than 2029, coinciding with the decommissioning of Dresden Nuclear Power Station, Unit 2.

(b) ISFSI decommissioning cost is included in the Dresden Nuclear Power Station, Unit 2 and Unit 3 site specific cost estimates.

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

(December 31, 2019 dollars, thousands)

(c) The trust fund amount is the amount allocated for radiological decommissioning only. The allocation of funds for radiological decommissioning is based on the fraction of radiological decommissioning costs to radiological decommissioning costs plus spent fuel management costs identified in the DECON scenario as described in the site-specific cost estimate (SSCE) (TLG Report E16-1726-009, Revision 0, "Decommissioning Cost Analysis for the Dresden Nuclear Power Station Unit 1," December 2017). This allocation is for purposes of demonstrating adequate decommissioning funding assurance only and is adjusted, as necessary, to provide adequate funding assurance for radiological decommissioning and spent fuel management. No spent fuel management costs are planned to be incurred until 2029.

There are no past-due tax payments owed on the decommissioning trust fund activities as of December 31, 2019. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis. EGC then obtains reimbursement from the trust funds. The reported trust fund amounts comply with the reporting requirements of 10 CFR 50.75(f) in that the amount of funds reported are those that were accumulated as of December 31, 2019.

- (d) A 2% annual real rate of return is used as allowed by 10 CFR 50.75(e)(1)(i).
- (e) The amount spent on decommissioning in 2019 is consistent with the projected 2019 expense total of \$3,526 (December 31, 2019 thousands of dollars) from the site-specific cost estimate. The delta of \$1,428 can be attributed to lower dormancy costs in 2019 than projected in the site specific cost estimate.

The amount spent on decommissioning in 2019 represents the 2019 charges to the Dresden, Unit 1, project. Prior to reimbursement from the decommissioning trust fund, these charges will be validated to confirm they are legitimate decommissioning expenses. Consequently, the amount reimbursed may differ from the value provided.

- (f) Not all historical data was available, and therefore, the cumulative amounts spent on decommissioning are estimates based on the best information obtainable at this time.
- (g) Not all historical data was available, and therefore, the amount reimbursed is an estimate based on the best information obtainable at this time.
- (h) The amount not yet reimbursed is an estimate based on the best information obtainable at this time.

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

(December 31, 2019 dollars, thousands)

(i) The allocation of funds accumulated for managing irradiated fuel is based on the fraction of spent fuel management costs to radiological decommissioning costs plus spent fuel management costs identified in the DECON scenario as described in the site-specific cost estimate (SSCE) (TLG Report E16-1726-009, Revision 0, "Decommissioning Cost Analysis for the Dresden Nuclear Power Station Unit 1," December 2017). This allocation is for purposes of demonstrating adequate decommissioning funding assurance only and is adjusted, as necessary, to provide adequate funding assurance for radiological decommissioning and spent fuel management. No spent fuel management costs are planned to be incurred until 2029.

Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

(December 31, 2019 dollars, thousands)

	Radiological Decommissioning	BOY Trust Fund	BOY Trust Fund Value	Trust Fund	EOY Trust Fund
<u>Year</u>	Cost	Value	Less Cost	Earnings	Value
2020	\$3,536	\$390,155	\$386,619	\$7,732	\$394,352
2021	\$3,526	\$394,352	\$390,825	\$7,817	\$398,642
2022	\$3,526	\$398,642	\$395,116	\$7,902	\$403,018
2023	\$3,526	\$403,018	\$399,492	\$7,990	\$407,482
2024	\$3,536	\$407,482	\$403,946	\$8,079	\$412,025
2025	\$3,526	\$412,025	\$408,499	\$8,170	\$416,668
2026	\$3,526	\$416,668	\$413,142	\$8,263	\$421,405
2027	\$3,526	\$421,405	\$417,879	\$8,358	\$426,237
2028	\$3,526	\$426,237	\$422,710	\$8,454	\$431,165
2029	\$43,512	\$431,165	\$387,652	\$7,753	\$395,405
2030	\$91,000	\$395,405	\$304,405	\$6,088	\$310,493
2031	\$104,014	\$310,493	\$206,479	\$4,130	\$210,609
2032	\$71,983	\$210,609	\$138,626	\$2,773	\$141,399
2033	\$63,611	\$141,399	\$77,788	\$1,556	\$79,343
2034	\$2,479	\$79,343	\$76,864	\$1,537	\$78,402
2035	\$2,479	\$78,402	\$75,923	\$1,518	\$77,441
2036	\$2,479	\$77,441	\$74,962	\$1,499	\$76,461
2037	\$19,732	\$76,461	\$56,729	\$1,135	\$57,864
2038	\$7 <i>,</i> 571	\$57,864	\$50,293	\$1,006	\$51,299
2039	\$106	\$51,299	\$51,194	\$1,024	\$52,217
2040	\$60	\$52,217	\$52,157	\$1,043	\$53,200
2041	\$0	\$53,200	\$53,200	\$1,064	\$54,264
2042	\$0	\$54,264	\$54,264	\$1,085	\$55,349
2043	\$0	\$55,349	\$55,349	\$1,107	\$56,456
2044	\$0	\$56,456	\$56,456	\$1,129	\$57,586
2045	\$0	\$57,586	\$57,586	\$1,152	\$58,737
2046	\$0	\$58,737	\$58,737	\$1,175	\$59,912
2047	\$0	\$59,912	\$59,912	\$1,198	\$61,110
2048	\$0	\$61,110	\$61,110	\$1,222	\$62,332
2049	\$0	\$62,332	\$62,332	\$1,247	\$63,579
2050	\$9,069	\$63,579	\$54,510	\$1,090	\$55,600
2051	\$453	\$55,600	\$55,148	\$1,103	\$56,251

Total* \$450,303

^{*}Column may not add due to rounding

ATTACHMENT 2 (Continued) Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station, Unit 1

(December 31, 2019 dollars, thousands)

	Irradiated Fuel	BOY Irradiated Fuel Trust Fund	BOY Irradiated Fuel Trust Fund	Irradiated Fuel Trust Fund	EOY Irradiated Fuel Trust Fund
Year	Cost	Value	Less Cost	Earnings	Value
2020	\$0	\$41,087	\$41,087	\$822	\$41,909
2021	\$0	\$41,909	\$41,909	\$838	\$42,747
2022	\$0	\$42,747	\$42 <i>,</i> 747	\$855	\$43,602
2023	\$0	\$43,602	\$43,602	\$872	\$44,474
2024	\$0	\$44,474	\$44,474	\$889	\$45,364
2025	\$0	\$45,364	\$45,364	\$907	\$46,271
2026	\$0	\$46,271	\$46,271	\$925	\$47,196
2027	\$0	\$47,196	\$47,196	\$944	\$48,140
2028	\$0	\$48,140	\$48,140	\$963	\$49,103
2029	\$437	\$49,103	\$48,666	\$973	\$49,639
2030	\$513	\$49,639	\$49,126	\$983	\$50,108
2031	\$513	\$50,108	\$49,595	\$992	\$50,587
2032	\$513	\$50,587	\$50,074	\$1,001	\$51,075
2033	\$637	\$51,075	\$50,438	\$1,009	\$51,447
2034	\$1,509	\$51,447	\$49,938	\$999	\$50,936
2035	\$1,509	\$50,936	\$49,427	\$989	\$50,416
2036	\$1,509	\$50,416	\$48,907	\$978	\$49,885
2037	\$1,906	\$49,885	\$47,979	\$960	\$48,938
2038	\$2,491	\$48,938	\$46,447	\$929	\$47,376
2039	\$2,560	\$47,376	\$44,816	\$896	\$45,713
2040	\$2,616	\$45,713	\$43,096	\$862	\$43,958
2041	\$2,699	\$43,958	\$41,259	\$825	\$42,084
2042	\$2,692	\$42,084	\$39,392	\$788	\$40,180
2043	\$2,692	\$40,180	\$37,488	\$750	\$38,238
2044	\$5,148	\$38,238	\$33,090	\$662	\$33,752
2045	\$3,929	\$33,752	\$29,823	\$596	\$30,420
2046	\$2,692	\$30,420	\$27,728	\$555	\$28,283
2047	\$2,692	\$28,283	\$25,591	\$512	\$26,103
2048	\$2,692	\$26,103	\$23,411	\$468	\$23,879
2049	\$2 <i>,</i> 699	\$23,879	\$21,180	\$424	\$21,603
2050	\$2 <i>,</i> 772	\$21,603	\$18,831	\$377	\$19,208
2051	\$0	\$19,208	\$19,208	\$384	\$19,592

Total* \$47,421

^{*}Column may not add due to rounding

Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1

Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1 (December 31, 2019 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	N/A (a)
2	Site-specific cost amount per 10 CFR 50.75(b)(4) and 50.75(f)	\$269,720 (a)
3	Site-specific cost amount per 10 CFR 72.30(b)	N/A (h)
4	The amount of decommissioning trust funds accumulated as of December 31, 2019	\$131,929 (b)
5	Schedule of the annual amounts remaining to be collected.	\$3,860 (c)
6	Assumptions used regarding rates of escalation for decommissioning costs, earnings on funds, and other factors used in funding projections	3% (d)
7	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v).	
8	Financial assurance for decommissioning is provided by the external sinking fund method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(ii).	
9	The trust fund agreements were amended effective September 30, 2019 to reflect a change of the company holding the trusts from a Nevada LLC to an Illinois LLC.	
10	2019 annual amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$4,259 (e)
11	Cumulative amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$11,539 (f)
	Reimbursed from the decommissioning trust fund	\$4,094
	Not yet reimbursed from the decommissioning trust fund	\$7,444 (g)
12	Amount of funds accumulated to cover the cost of managing irradiated fuel pursuant to 10 CFR 50.82(a)(8)(vii)(A) as of December 31, 2019.	N/A (h)
13	Projected cost of managing irradiated fuel based on site-specific estimate per 10 CFR 50.82(a)(8)(vii)(B).	N/A (h)

ATTACHMENT 3 (Continued) Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1

(December 31, 2019 dollars, thousands)

(a) A formula cost amount using the formula in 10 CFR 50.75(c) is not applicable because Peach Bottom, Unit 1, has been shutdown since October 31, 1974, and some decommissioning activities have already occurred on this unit. Furthermore, Peach Bottom, Unit 1, was a High Temperature Gas Cooled Reactor (HTGR), which does not translate to a BWR or PWR as specified in the formula for calculating the formula cost amount, and hence a formula cost amount per 10 CFR 50.75(c) cannot be calculated for Peach Bottom, Unit 1.

In accordance with the regulatory requirements, the site-specific amount is reported per 10 CFR 50.75(b)(4), 50.75(f), 50.82(a)(8)(iii), and 50.82(a)(8)(v)(B) and assumes a DECON scenario as described in the site-specific cost estimate (SSCE) (TLG Report E16-1640-015, Revision 0, "Decommissioning Cost Analysis for the Peach Bottom Atomic Power Station Unit 1," August 2015). The decommissioning cost estimate has been adjusted consistent with the description of planned decommissioning activities in the Peach Bottom, Unit 1, Decommissioning Plan. The costs have been escalated from the mid-year 2015 dollars reflected in the SSCE to estimated costs as of December 31, 2019.

Decommissioning expenditures prior to the year the SSCE updates were prepared (historical expenditures) are not included in the estimated total cost of decommissioning in the final SSCE reports. Also, the amount reported does not include cash flows from the SSCE for the annual radiological decommissioning costs for 2015 through 2019. EGC considers the SSCE estimated costs for 2015 through 2019 decommissioning activities to be historical expenditures at the time the 2020 decommissioning funding assurance report is generated.

Decontamination and dismantlement of Peach Bottom, Unit 1, will take place no earlier than 2033, coinciding with the decommissioning of Peach Bottom, Unit 2.

- (b) The trust fund amount is the amount allocated for Radiological Decommissioning only. There are no past-due tax payments related to decommissioning trust fund activities as of December 31, 2019. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis. EGC then obtains reimbursement from the trust funds. The reported trust fund amounts comply with the reporting requirements of 10 CFR 50.75(f) in that the amount of funds reported are those that were accumulated as of December 31, 2019.
- (c) The funding mechanism being used as the source of revenues for the external sinking funds is a non-bypassable charge approved by the Pennsylvania Public Utilities Commission (PaPUC) authorizing PECO Energy Company to continue to collect decommissioning funds for EGC. Any needed adjustments to the amount collected will be made in the next filing of the Nuclear Decommissioning Cost Adjustment (NDCA) to the PaPUC. This cost adjustment is made every five years pursuant to PaPUC Electric Tariff No. 4. The last adjustment was effective January 1, 2018, and allows for the collection of annual payments from ratepayers of \$3,860K through 2032.

ATTACHMENT 3 (Continued) Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1

(December 31, 2019 dollars, thousands)

- (d) 10 CFR 50.75(e)(1)(ii) allows licensees to use a rate of return higher than 2% if the applicable rate-setting authority has specifically authorized a higher rate. The PaPUC approved a 3% real rate of return as part of the approval of the restructuring plan for PECO Energy Company (Letter from J. J. McNulty (PaPUC) to B. D. Crowe (PECO Energy Company), "Approval of Restructuring Plan for PECO Energy Company under Section 2806 of the Public Utility Code; Docket No. R-00973953," dated May 3, 2001). Accordingly, EGC uses a 3% real rate of return. The 3% is applicable through the decommissioning period as described in RAI #1 response provided in the Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information Related to 2013 Report on Status of Decommissioning Funding for Reactors," dated August 15, 2013.
- (e) The amount spent on decommissioning in 2019 is lower than the amount budgeted at the station. Even though the amount exceeds the projected 2019 expense total of \$222 (December 31, 2019 thousands of dollars) from the site-specific cost estimate, it is immaterial to the overall funding assurance analysis. The \$4,037 (thousands of dollars) difference between actual and projected is the result of activities related to hazardous material remediation and containment shell maintenance.

The amount spent on decommissioning in 2019 represents the 2019 charges to the Peach Bottom, Unit 1, project. Prior to reimbursement from the decommissioning trust fund, these charges will be validated to confirm they are legitimate decommissioning expenses. Consequently, the amount reimbursed may differ from the value provided.

- (f) The cumulative amount spent on decommissioning is an estimate based on the best information obtainable at this time.
- (g) The amount not yet reimbursed is an estimate based on the best information obtainable at this time.
- (h) Peach Bottom, Unit 1, was shut down in October of 1974, with defueling of the core completed by the following June. Starting in 1975, the spent fuel was shipped by truck to Idaho. The final of 44 shipments was completed in February of 1977. Consequently, no irradiated fuel for Peach Bottom, Unit 1, remains on-site; therefore, 10 CFR 50.82(a)(8)(vii) and 10 CFR 72.30(b) do not apply.

ATTACHMENT 3 (Continued) Annual Radiological Decommissioning Funding Assurance Report for Peach Bottom Atomic Power Station, Unit 1

(December 31, 2019 dollars, thousands)

	Radiological	BOY Trust	BOY Trust Fund	First	Trust	Second	EOY Trust
	Decommissioning	Fund	Value	Half	Fund	Half	Fund
Year	Cost	Value	Less Cost**	Contributions	Earnings	Contributions	Value
2020	\$223	\$131,929	\$131,706	\$1,930	\$4,009	\$1,930	\$139,575
2021	\$222	\$139,575	\$139,353	\$1,930	\$4,238	\$1,930	\$147,451
2022	\$222	\$147,451	\$147,229	\$1,930	\$4,475	\$1,930	\$155,563
2023	\$222	\$155,563	\$155,341	\$1,930	\$4,718	\$1,930	\$163,919
2024	\$223	\$163,919	\$163,696	\$1,930	\$4,969	\$1,930	\$172,525
2025	\$222	\$172,525	\$172,303	\$1,930	\$5,227	\$1,930	\$181,390
2026	\$222	\$181,390	\$181,167	\$1,930	\$5,493	\$1,930	\$190,520
2027	\$222	\$190,520	\$190,298	\$1,930	\$5,767	\$1,930	\$199,925
2028	\$223	\$199,925	\$199,702	\$1,930	\$6,049	\$1,930	\$209,611
2029	\$222	\$209,611	\$209,388	\$1,930	\$6,340	\$1,930	\$219,588
2030	\$222	\$219,588	\$219,365	\$1,930	\$6,639	\$1,930	\$229,864
2031	\$222	\$229,864	\$229,642	\$1,930	\$6,947	\$1,930	\$240,449
2032	\$223	\$240,449	\$240,226	\$1,930	\$7,265	\$1,930	\$251,351
2033	\$39,810	\$251,351	\$211,541	\$0	\$6,346	\$0	\$217,887
2034	\$59,966	\$217,887	\$157,921	\$0	\$4,738	\$0	\$162,659
2035	\$69,207	\$162,659	\$93,452	\$0	\$2,804	\$0	\$96,255
2036	\$50,539	\$96,255	\$45,716	\$0	\$1,371	\$0	\$47,087
2037	\$44,845	\$47,087	\$2,243	\$0	\$67	\$0	\$2,310
2038	\$2,459	\$2,310	\$(149)	\$0	\$0	\$0	\$(149)

Total* \$269,720

^{*} Columns may not add due to rounding

^{**} Annual contributions added to individual years - Earnings of half of contributions are included in current year to estimate payment of contributions throughout the year

Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

(December 31, 2019 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	\$498,570
2	Site-specific cost amount per 10 CFR 50.75(b)(4) and 50.75(f)	\$997,904 (a)
3	Site-specific cost amount per 10 CFR 72.30(b)	N/A (b)
4	The amount of decommissioning trust funds accumulated as of December 31, 2019	\$750,802 (c)
5	Schedule of the annual amounts remaining to be collected	\$0
6	Assumptions used regarding rates of escalation, earnings, and other factors used in funding projections	2% (d)
7	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v)	
8	Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i)	
9	The trust fund agreements were amended effective September 30, 2019 to reflect a change of the company holding the trusts from a Nevada LLC to an Illinois LLC	
10	2019 annual amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A)	\$21,609 (e)
11	Cumulative amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A)	\$26,910 (g)
	Reimbursed from the decommissioning trust fund	\$9,052
	Not yet reimbursed from the decommissioning trust fund	\$17,858 (f)
12	Amount of funds accumulated to cover the cost of managing irradiated fuel pursuant to 10 CFR 50.82(a)(8)(vii)(A) as of	
	December 31, 2019	(c)
13	Projected cost of managing irradiated fuel based on site- specific estimate per 10 CFR 50.82(a)(8)(vii)(B)	\$134,407 (a)
14	2019 annual amount spent on irradiated fuel management	\$24,653 (e)
15	Cumulative amount spent on irradiated fuel management	\$24,653 (g)
	Reimbursed from the decommissioning trust fund	\$0
	Not yet reimbursed from the decommissioning trust fund	\$24,653 (f)

Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

(December 31, 2019 dollars, thousands)

(a) In accordance with the regulatory requirements, the site-specific amount is reported per 10 CFR 50.75(b)(4), 50.75(f), 50.82(a)(8)(iii), and 50.82(a)(8)(v)(B) and assumes a SAFSTOR scenario as described in the site-specific cost estimate (SSCE) ("Site-Specific Decommissioning Cost Estimate for Three Mile Island Nuclear Station, Unit 1," April 5, 2019). The costs have been escalated from the 2018 dollars reflected in the decommissioning cost estimate to estimated costs as of December 31, 2019.

The amount reported does not include cash flows from the SSCE estimate for the 2019 annual radiological and spent fuel costs because EGC considers the SSCE estimated cost for 2019 decommissioning activities to be historical expenditures at the time the 2020 decommissioning funding assurance report is generated.

- (b) Three Mile Island does not have an ISFSI. Therefore, 10 CFR 72 does not apply to Three Mile Island.
- (c) The trust fund amount is the amount allocated for Radiological Decommissioning and Spent Fuel Management. There are no past-due tax payments related to decommissioning trust fund activities as of December 31, 2019. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis. EGC then obtains reimbursements from the trust funds. The reported trust fund amounts comply with the reporting requirements of 10 CFR 50.75(f) in that the amount of funds reported are those that were accumulated as of December 31, 2019.
- (d) A 2% annual real rate of return is used as allowed by 10 CFR 50.75(e)(1)(i).
- (e) The amount spent on decommissioning in 2019 is consistent with the projected 2019 expense total of \$20,999 (December 31, 2019 thousands of dollars) from the site-specific cost estimate.

The amount spent on irradiated fuel management in 2019 is consistent with the projected 2019 expense total of \$27,092 (December 31, 2018 thousands of dollars) from the site-specific cost estimate (SSCE). The delta of \$2,439 can be attributed to spent fuel management work not performed in 2019.

The amount spent on radiological decommissioning and irradiated fuel management in 2019 represents the 2019 charges to the TMI, Unit 1, project. Prior to reimbursement from the decommissioning trust fund, these charges will be validated to confirm they are legitimate decommissioning expenses. Consequently, the amount reimbursed may differ from the value provided.

- (f) The amount not yet reimbursed is an estimate based on the best information obtainable at this time.
- (g) The cumulative amount spent is an estimate based on the best information obtainable at this time.

ATTACHMENT 4 Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

(December 31, 2019 dollars, thousands)

	Radiological Decommisioning and Spent Fuel	BOY Trust Fund	BOY Trust Fund Value	Trust Fund	EOY Trust Fund
Year	Cost	Value	Less Cost	Earnings	Value
2020	\$99,907	\$750,802	\$650,894	\$13,018	\$663,912
2021	\$72,802	\$663,912	\$591,110	\$11,822	\$602,932
2022	\$54,302	\$602,932	\$548,630	\$10,973	\$559,603
2023	\$10,462	\$559,603	\$549,140	\$10,983	\$560,123
2024	\$10,492	\$560,123	\$549,632	\$10,993	\$560,624
2025	\$10,462	\$560,624	\$550,162	\$11,003	\$561,165
2026	\$10,462	\$561,165	\$550,703	\$11,014	\$561,717
2027	\$10,462	\$561,717	\$551,255	\$11,025	\$562,280
2028	\$10,491	\$562,280	\$551,789	\$11,036	\$562,825
2029	\$10,462	\$562,825	\$552,363	\$11,047	\$563,410
2030	\$10,462	\$563,410	\$552,948	\$11,059	\$564,007
2031	\$10,462	\$564,007	\$553,545	\$11,071	\$564,616
2032	\$10,491	\$564,616	\$554,125	\$11,082	\$565,207
2033	\$10,462	\$565,207	\$554,745	\$11,095	\$565,840
2034	\$13,770	\$565,840	\$552,070	\$11,041	\$563,111
2035	\$20,315	\$563,111	\$542,796	\$10,856	\$553,652
2036	\$5,843	\$553,652	\$547,809	\$10,956	\$558,765
2037	\$5,827	\$558,765	\$552,938	\$11,059	\$563,996
2038	\$5,827	\$563,996	\$558,169	\$11,163	\$569,332
2039	\$5,827	\$569,332	\$563,505	\$11,270	\$574,775
2040	\$5,843	\$574 <i>,</i> 775	\$568,932	\$11,379	\$580,310
2041	\$5,827	\$580,310	\$574,483	\$11,490	\$585 <i>,</i> 973
2042	\$5,827	\$585,973	\$580,146	\$11,603	\$591,748
2043	\$5,827	\$591,748	\$585,921	\$11,718	\$597,640
2044	\$5,843	\$597,640	\$591,796	\$11,836	\$603,632
2045	\$5,827	\$603,632	\$597,805	\$11,956	\$609,761
2046	\$5,827	\$609,761	\$603,934	\$12,079	\$616,012
2047	\$5,827	\$616,012	\$610,185	\$12,204	\$622,389
2048	\$5,843	\$622,389	\$616,545	\$12,331	\$628,876
2049	\$5,827	\$628,876	\$623,049	\$12,461	\$635,510
2050	\$5,827	\$635,510	\$629,683	\$12,594	\$642,276
2051	\$5,827	\$642,276	\$636,449	\$12,729	\$649,178

ATTACHMENT 4 Annual Radiological Decommissioning Funding Assurance Report for Three Mile Island Nuclear Station, Unit 1

(December 31, 2019 dollars, thousands)

	Radiological Decommisioning and Spent Fuel	BOY Trust Fund	BOY Trust Fund Value	Trust Fund	EOY Trust Fund
Year	Cost	Value	Less Cost	Earnings	Value
2052	\$5,843	\$649,178	\$643,335	\$12,867	\$656,202
2053	\$5,827	\$656,202	\$650,374	\$13,007	\$663,382
2054	\$5,827	\$663,382	\$657,554	\$13,151	\$670,705
2055	\$5,827	\$670,705	\$664,878	\$13,298	\$678,176
2056	\$5,843	\$678,176	\$672,332	\$13,447	\$685,779
2057	\$5,827	\$685,779	\$679,952	\$13,599	\$693,551
2058	\$5,827	\$693,551	\$687,724	\$13 <i>,</i> 754	\$701,478
2059	\$5,827	\$701,478	\$695,651	\$13,913	\$709,564
2060	\$5,843	\$709,564	\$703,720	\$14,074	\$717,795
2061	\$5,827	\$717,795	\$711,968	\$14,239	\$726,207
2062	\$5,827	\$726,207	\$720,380	\$14,408	\$734,787
2063	\$5,827	\$734,787	\$728,960	\$14,579	\$743,539
2064	\$5,843	\$743,539	\$737,696	\$14 <i>,</i> 754	\$752,450
2065	\$5,827	\$752 <i>,</i> 450	\$746,622	\$14,932	\$761 <i>,</i> 555
2066	\$5,827	\$761,555	\$755,728	\$15,115	\$770,842
2067	\$5,827	\$770,842	\$765,015	\$15,300	\$780,315
2068	\$5,843	\$780,315	\$774,472	\$15,489	\$789,961
2069	\$5,827	\$789,961	\$784,134	\$15,683	\$799,817
2070	\$5,827	\$799,817	\$793,989	\$15,880	\$809,869
2071	\$5,827	\$809,869	\$804,042	\$16,081	\$820,123
2072	\$5,843	\$820,123	\$814,279	\$16,286	\$830,565
2073	\$25,322	\$830,565	\$805,243	\$16,105	\$821,348
2074	\$62,744	\$821,348	\$758,604	\$15,172	\$773 <i>,</i> 776
2075	\$154,029	\$773,776	\$619,747	\$12,395	\$632,142
2076	\$114,892	\$632,142	\$517,250	\$10,345	\$527,595
2077	\$74,794	\$527,595	\$452,801	\$9,056	\$461,857
2078	\$74,631	\$461,857	\$387,226	\$7,745	\$394,970
2079	\$33,627	\$394,970	\$361,343	\$7,227	\$368,570
2080	\$136	\$368,570	\$368,434	\$7,369	\$375,802
2081	\$97	\$375,802	\$375,705	\$7,514	\$383,219

Total* \$1,132,311

^{*}Column may not add due to rounding