



RS-16-069

10 CFR 50.75(f)  
10 CFR 50.82(a)(8)

March 31, 2016

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 No. 50-010

Oyster Creek Nuclear Generating Station  
Renewed Facility Operating License No. DPR-16  
NRC Docket No. 50-219

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

Subject: Report on Status of Decommissioning Funding for Shutdown Reactors and Reactors within 5 Years of Shutdown

In accordance with 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," paragraph (f), and 50.82, "Termination of license," paragraphs (a)(8)(v) and (vii), Exelon Generation Company, LLC (EGC) is submitting a report on the status of decommissioning funding as of December 31, 2015, for the reactors owned by EGC that are within 5 years of shutdown or are already shutdown.

EGC currently maintains two shutdown units, Dresden Nuclear Power Station (Dresden) Unit 1 and Peach Bottom Atomic Power Station (Peach Bottom) 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.

EGC currently maintains one unit, Oyster Creek Nuclear Generating Station (Oyster Creek), which is within 5 years of the projected end of operation. In accordance with 10 CFR 50.75, the annual radiological decommissioning funding status report for Oyster Creek is provided in Attachment 4.

The calculation of the Dresden Unit 1 and Oyster Creek specific decommissioning cost values provided in Attachments 2 and 4 assume the labor, energy, and burial factors described in Attachment 1.

EGC has obtained site-specific decommissioning cost estimates in accordance with 10 CFR 50.75(f) and 50.82(a)(4)(i), (8)(iii), and (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 Oyster Creek. The site-specific decommissioning cost estimates are based on a period of safe storage that is specifically described in the estimates. Site-specific cash flows from the site-specific cost estimates are included in Attachments 2, 3, and 4. For Dresden Unit 1 and Oyster Creek, the specific cash flow analyses for the site-specific decommissioning cost estimates conservatively assume all expenses in a year are incurred at the beginning of the year (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 are included in the current year earnings to estimate payment of contributions throughout the year (a mid-year convention). EGC uses a mid-year convention in this instance because the contributions are made monthly at a constant rate throughout the year.

EGC has not made a final determination of the decommissioning approach for any of its nuclear units, including the shutdown units. For the shutdown units and units within five years of shutdown, EGC uses the site-specific decommissioning cost estimates to demonstrate adequacy of funding to meet regulatory requirements. EGC may select a different decommissioning approach in the future for any of its 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 Oyster Creek.

Due to increased costs, as reflected in an updated site-specific decommissioning cost estimate, Peach Bottom Unit 1 does not currently meet the minimum funding assurance criteria under 10 CFR 50.75 and 10 CFR 50.82 as of December 31, 2015 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 revenues for the external sinking fund 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. The amount collected will be adjusted in accordance with the applicable tariff in the next filing of the Nuclear Decommissioning Cost Adjustment (NDCA) to the PaPUC 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 adjustment will be effective January 1, 2018. 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 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)."

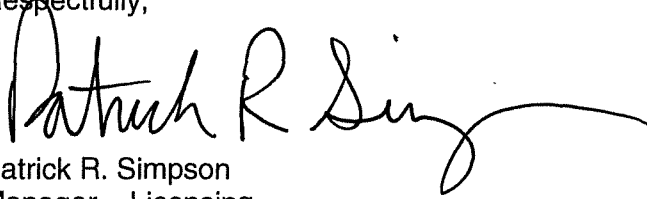
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There were no disbursements from the decommissioning trust funds other than those for allowed administrative costs and other incidental expenses of the fund in connection with the operation of the fund per 10 CFR 50.75(h)(1)(iv).

There are no regulatory commitments contained within this letter.

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

Respectfully,



Patrick R. Simpson  
Manager – Licensing  
Exelon Generation Company, LLC

cc: Regional Administrator - NRC Region I  
Regional Administrator - NRC Region III  
NRC Senior Resident Inspector - Dresden Nuclear Power Station  
NRC Senior resident Inspector – Oyster Creek Nuclear Generating Station  
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station

Attachments:

1. Labor, Energy, and Burial Factors Used in Calculations (Dresden and Oyster Creek)
2. Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station Unit 1
3. Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Peach Bottom Atomic Power Station Unit 1
4. Annual Radiological Decommissioning Funding Assurance Report for Oyster Creek Nuclear Generating Station

## ATTACHMENT 1

### Labor, Energy, and Burial Factors Used in Calculations (Dresden and Oyster Creek)

The labor, energy, and burial indexes used are consistent with those described in NUREG-1307, Revision 15, issued January 2013.

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 3.1 of NUREG-1307, Revision 15, using fourth quarter 2015 data. Table 1 shows the data used for this calculation.

**Table 1: Labor Adjustment Factors**

Region	Applicable Sites	Series ID	4Q2015 Index Number	Base $L_x$	Labor Adjustment Factor ( $L_x$ )
Midwest	Dresden	CIU2010000000230I	122.5	2.08	2.548
Northeast	Oyster Creek	CIU2010000000210I	125.6	2.16	2.713

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 3.2 of NUREG-1307, Revision 15, using December 2015 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 2015 (preliminary value)	214.9
WPU0573 – December 2015 (preliminary value)	130.4
Industrial electric power adjustment factor - $P_x$	1.882
Light fuel oil adjustment factor - $F_x$	1.590
Energy Adjustment Factor (BWR) – $E_x(\text{BWR})$	1.748

**ATTACHMENT 1 (Continued)**  
**Labor, Energy, and Burial Factors Used in Calculations**  
**(Dresden and Oyster Creek)**

The waste burial adjustment factors used are taken from Table 2-1 of NUREG-1307, Revision 15, based on 2012 data. The adjustment factors EGC used assume a combination of compact-affiliated and non-compact facilities, consistent with current waste disposal practices at EGC and consistent with typical waste disposal practices during decommissioning. Table 3 summarizes the data used for the calculation of the waste adjustment factors.

**Table 3: Waste Adjustment Factors**

<b>LLW Burial Site</b>	<b>Reactor Type</b>	<b>Applicable Site</b>	<b>Combination of Compact-Affiliated and Non-Compact Facility Waste Adjustment Factor (B<sub>x</sub>)</b>
Generic LLW Disposal Site	BWR	Dresden	14.160
South Carolina Site – Atlantic Compact	BWR	Oyster Creek	14.160

The calculation methodology used for all adjustment factors is consistent with NUREG-1307, Revision 15.

## ATTACHMENT 2

### Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station Unit 1 (December 31, 2015 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)	\$402,730 (a)
3	The amount of decommissioning trust funds accumulated as of December 31, 2015	\$348,129 (b)
4	Schedule of the annual amounts remaining to be collected.	\$0
5	Assumptions used regarding rates of escalation for decommissioning costs, earnings on funds, and other factors used in funding projections	2% (c)
6	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v).	
7	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).	
8	There are no material changes to the trust fund agreements.	
9	2015 annual amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$2,846 (d)
10	Cumulative amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$117,457 (e)
	Reimbursed from the decommissioning trust fund	\$86,848 (f)
	Not yet reimbursed from the decommissioning trust fund	\$30,609 (g)
11	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, 2015.	\$12,820
12	Projected cost of managing irradiated fuel based on site-specific estimate per 10 CFR 50.82(a)(8)(vii)(B).	\$14,831 (a)

## ATTACHMENT 2 (Continued)

### Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Dresden Nuclear Power Station Unit 1 (December 31, 2015 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. Nevertheless, EGC did calculate the amount to decommission Dresden Unit 1 using the formula in 10 CFR 50.75(c), which resulted in a formula cost amount of \$573.8 million (as of December 31, 2015). 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)). The amount resulting from the formula in 10 CFR 50.75(c) 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), and 50.82(a)(8)(iii) and (v)(B), and assumes a DECON scenario as described in the site-specific cost estimate (SSCE) (TLG Report E16-1640-004, Revision 0, "Decommissioning Cost Analysis for the Dresden Nuclear Power Station Unit 1," August 2012). 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 K. R. Jury (EGC) to the U. S. Nuclear Regulatory Commission (NRC) dated January 5, 2007. The costs have been escalated from the 2012 dollars reflected in the 2012 SSCE to estimated costs as of December 31, 2015.

Decommissioning expenditures prior to the year the SSCE update was prepared (historical expenditures) are not included in the estimated total cost of decommissioning in the final SSCE report. Also, the amount reported does not include cash flows from the SSCE for the 2012, 2013, 2014, and 2015 annual radiological costs because EGC considers the SSCE estimated cost for 2012, 2013, 2014, and 2015 decommissioning activities to be historical expenditures at the time the 2016 decommissioning funding assurance report is generated.

Decontamination and dismantlement of Dresden Unit 1 will take place beginning in 2029, coinciding with the decommissioning of Dresden Unit 2.

- (b) The trust fund amount is the amount allocated for Radiological Decommissioning only. EGC has no past-due tax payments owed on the decommissioning trust fund activities as of December 31, 2015. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis, and EGC subsequently obtains reimbursement from the trust fund on a periodic basis, when the funds are sufficient to demonstrate minimum funding assurance. The trust fund amount complies 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, 2015.

**ATTACHMENT 2 (Continued)**

**Annual Radiological Decommissioning Funding Assurance and  
Spent Fuel Management Report for  
Dresden Nuclear Power Station Unit 1  
(December 31, 2015 dollars, thousands)**

- (c) A 2% annual real rate of return is used as allowed by 10 CFR 50.75(e)(1)(i).
- (d) The amount spent on decommissioning in 2015 is consistent with the projected 2015 expense total of \$3,031 (December 31, 2014 thousands of dollars) from the site-specific cost estimate.

The amount spent on decommissioning in 2015 represents the 2015 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.

- (e) Not all historical data is available. Therefore, the cumulative amount spent on decommissioning is an estimate based on the best information obtainable at this time.

Prior to reimbursement from the decommissioning trust fund, decommissioning expenses are reviewed to confirm they are legitimate decommissioning expenses. During this review of the amount spent on decommissioning from 2006 through 2014, both exclusions from and additions to the amount spent were identified. Exclusions were primarily spending associated with Dresden, Units 2 and 3, that was incorrectly coded to Dresden Unit 1. Additions were primarily spending associated with decommissioning cost estimates. As a result of these changes in the amount spent, the cumulative amount spent on decommissioning here is greater than the 2015 spend (as provided in Item 9) plus the value reported in the March 31, 2015 submittal (Letter from P. R. Simpson (EGC) to the NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations," dated March 31, 2015).

- (f) Not all historical data is available, and therefore the amount reimbursed 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.



**ATTACHMENT 2 (Continued)**  
**Annual Radiological Decommissioning Funding Assurance and**  
**Spent Fuel Management Report for**  
**Dresden Nuclear Power Station Unit 1**  
(December 31, 2015 dollars, thousands)

Prior to reimbursement from the decommissioning trust fund, decommissioning expenses are reviewed to confirm they are legitimate decommissioning expenses. During this review of the amount spent on decommissioning from 2006 through 2014, both exclusions from and additions to the amount spent were identified. Exclusions were primarily spending associated with Dresden Units 2 and 3 that was incorrectly coded to Dresden Unit 1. Additions were primarily spending associated with decommissioning cost estimates. As a result of these changes in the amount spent, the amount not yet reimbursed here is greater than the 2015 spend (as provided in Item 9) plus the value reported in the March 31, 2015 submittal (Letter from P. R. Simpson (EGC) to the NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations," dated March 31, 2015).

**ATTACHMENT 2 (Continued)**

**Annual Radiological Decommissioning Funding Assurance and  
Spent Fuel Management Report for  
Dresden Nuclear Power Station Unit 1  
(December 31, 2015 dollars, thousands)**

<b>Year</b>	<b>Radiological Decommissioning Cost*</b>	<b>BOY Trust Fund Value</b>	<b>BOY Trust Fund Value Less Cost</b>	<b>Trust Fund Earnings</b>	<b>EOY Trust Fund Value</b>
2016	\$3,094	\$348,129	\$345,036	\$6,901	\$351,936
2017	\$3,085	\$351,936	\$348,851	\$6,977	\$355,828
2018	\$3,085	\$355,828	\$352,743	\$7,055	\$359,798
2019	\$3,085	\$359,798	\$356,713	\$7,134	\$363,847
2020	\$3,094	\$363,847	\$360,753	\$7,215	\$367,968
2021	\$3,085	\$367,968	\$364,883	\$7,298	\$372,181
2022	\$3,085	\$372,181	\$369,096	\$7,382	\$376,478
2023	\$3,085	\$376,478	\$373,393	\$7,468	\$380,860
2024	\$3,094	\$380,860	\$377,767	\$7,555	\$385,322
2025	\$3,085	\$385,322	\$382,237	\$7,645	\$389,882
2026	\$3,085	\$389,882	\$386,796	\$7,736	\$394,532
2027	\$3,085	\$394,532	\$391,447	\$7,829	\$399,276
2028	\$3,094	\$399,276	\$396,182	\$7,924	\$404,106
2029	\$38,786	\$404,106	\$365,320	\$7,306	\$372,626
2030	\$82,488	\$372,626	\$290,138	\$5,803	\$295,941
2031	\$89,661	\$295,941	\$206,280	\$4,126	\$210,406
2032	\$65,265	\$210,406	\$145,140	\$2,903	\$148,043
2033	\$49,084	\$148,043	\$98,959	\$1,979	\$100,938
2034	\$2,280	\$100,938	\$98,658	\$1,973	\$100,631
2035	\$2,280	\$100,631	\$98,350	\$1,967	\$100,317
2036	\$2,287	\$100,317	\$98,031	\$1,961	\$99,991
2037	\$18,555	\$99,991	\$81,437	\$1,629	\$83,065
2038	\$6,765	\$83,065	\$76,301	\$1,526	\$77,827
2039	\$94	\$77,827	\$77,733	\$1,555	\$79,288
2040	\$53	\$79,288	\$79,234	\$1,585	\$80,819
2041	\$0	\$80,819	\$80,819	\$1,616	\$82,436
2042	\$4,991	\$82,436	\$77,445	\$1,549	\$78,994
<b>Total</b>	<b>\$402,730</b>				

\*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, 2015 dollars, thousands)**

<b>Year</b>	<b>Irradiated Fuel Cost*</b>	<b>BOY Irradiated Fuel Trust Fund Value</b>	<b>BOY Irradiated Fuel Trust Fund Less Cost</b>	<b>Irradiated Fuel Trust Fund Earnings</b>	<b>EOY Irradiated Fuel Trust Fund Value</b>
2016	\$-	\$12,820	\$12,820	\$256	\$13,076
2017	\$-	\$13,076	\$13,076	\$262	\$13,338
2018	\$-	\$13,338	\$13,338	\$267	\$13,605
2019	\$-	\$13,605	\$13,605	\$272	\$13,877
2020	\$-	\$13,877	\$13,877	\$278	\$14,154
2021	\$-	\$14,154	\$14,154	\$283	\$14,437
2022	\$-	\$14,437	\$14,437	\$289	\$14,726
2023	\$-	\$14,726	\$14,726	\$295	\$15,021
2024	\$-	\$15,021	\$15,021	\$300	\$15,321
2025	\$-	\$15,321	\$15,321	\$306	\$15,627
2026	\$-	\$15,627	\$15,627	\$313	\$15,940
2027	\$-	\$15,940	\$15,940	\$319	\$16,259
2028	\$-	\$16,259	\$16,259	\$325	\$16,584
2029	\$830	\$16,584	\$15,754	\$315	\$16,069
2030	\$592	\$16,069	\$15,477	\$310	\$15,787
2031	\$508	\$15,787	\$15,279	\$306	\$15,585
2032	\$510	\$15,585	\$15,075	\$301	\$15,376
2033	\$508	\$15,376	\$14,868	\$297	\$15,166
2034	\$508	\$15,166	\$14,658	\$293	\$14,951
2035	\$508	\$14,951	\$14,443	\$289	\$14,731
2036	\$510	\$14,731	\$14,222	\$284	\$14,506
2037	\$2,044	\$14,506	\$12,462	\$249	\$12,711
2038	\$695	\$12,711	\$12,016	\$240	\$12,257
2039	\$744	\$12,257	\$11,512	\$230	\$11,743
2040	\$1,479	\$11,743	\$10,264	\$205	\$10,469
2041	\$2,415	\$10,469	\$8,054	\$161	\$8,215
2042	\$2,412	\$8,215	\$5,802	\$116	\$5,919
2043	\$567	\$5,919	\$5,351	\$107	\$5,458
<b>Total</b>	<b>\$14,831</b>				

\*Column may not add due to rounding

### ATTACHMENT 3

**Annual Radiological Decommissioning Funding Assurance and  
Spent Fuel Management Report for  
Peach Bottom Atomic Power Station Unit 1**  
(December 31, 2015 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)	\$244,457 (a)
3	The amount of decommissioning trust funds accumulated as of December 31, 2015	\$92,515 (b)
4	Schedule of the annual amounts remaining to be collected.	\$2,118 (c)
5	Assumptions used regarding rates of escalation for decommissioning costs, earnings on funds, and other factors used in funding projections	3% (d)
6	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v).	
7	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).	
8	There are no material changes to the trust fund agreements.	
9	2015 annual amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$435 (e)
10	Cumulative amount spent on decommissioning in accordance with 10 CFR 50.82(a)(8)(v)(A).	\$3,269 (f)
	Reimbursed from the decommissioning trust fund	\$0
	Not yet reimbursed from the decommissioning trust fund	\$3,269 (g)
11	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, 2015.	N/A (h)
12	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 and Spent Fuel Management Report for Peach Bottom Atomic Power Station Unit 1 (December 31, 2015 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), and 50.82(a)(8)(iii) and (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, 2015.

Decommissioning expenditures prior to the year the SSCE update was prepared (historical expenditures) are not included in the estimated total cost of decommissioning in the final SSCE report. Also, the amount reported does not include cash flows from the SSCE for the 2015 annual radiological costs because EGC considers the SSCE estimated cost for 2015 decommissioning activities to be historical expenditures at the time the 2016 decommissioning funding assurance report is generated.

Decontamination and dismantlement of Peach Bottom Unit 1 will take place beginning in 2033, coinciding with the decommissioning of Peach Bottom Unit 2.

- (b) The trust fund amount is the amount allocated for Radiological Decommissioning only. EGC has no past-due tax payments owed on the decommissioning trust fund activities as of December 31, 2015. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis, and EGC subsequently obtains reimbursement from the trust fund on a periodic basis, when the funds are sufficient to demonstrate minimum funding assurance. The trust fund amount complies 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, 2015.
- (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

### **ATTACHMENT 3 (Continued)**

#### **Annual Radiological Decommissioning Funding Assurance and Spent Fuel Management Report for Peach Bottom Atomic Power Station Unit 1 (December 31, 2015 dollars, thousands)**

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, 2013, and allows for the collection of annual payments from ratepayers of \$2,118 K through 2032.

- (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 P. R. Simpson (EGC) to the NRC, "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 2015 is consistent with the amount budgeted at the station. Even though the amount exceeds the projected 2015 expense total of \$198 (thousands of dollars) from the site-specific cost estimate, it is immaterial to the overall funding assurance analysis. The \$237 (thousands of dollars) difference between actual and projected is the result of activities to address water intrusion and asbestos abatement that were scoped in and approved above baseline budget.

The amount spent on decommissioning in 2015 represents the 2015 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

Prior to reimbursement from the decommissioning trust fund, decommissioning expenses are reviewed to confirm they are legitimate decommissioning expenses. During this review of the amount spent on decommissioning from 2006 through 2014, both exclusions from and additions to the amount spent were identified. Exclusions were primarily spending associated with Peach Bottom Units 2 and 3 that was incorrectly coded to Peach Bottom Unit 1. Additions were primarily spending associated with decommissioning cost estimates. As a result of these changes in the amount spent, the cumulative amount spent on decommissioning here is greater than the 2015 spend (as provided in Item 9) plus the value reported in the

**ATTACHMENT 3 (Continued)**

**Annual Radiological Decommissioning Funding Assurance and  
Spent Fuel Management Report for  
Peach Bottom Atomic Power Station Unit 1  
(December 31, 2015 dollars, thousands)**

March 31, 2015 submittal (Letter from P. R. Simpson (EGC) to the NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations," dated March 31, 2015).

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

Prior to reimbursement from the decommissioning trust fund, decommissioning expenses are reviewed to confirm they are legitimate decommissioning expenses. During this review of the amount spent on decommissioning from 2006 through 2014, both exclusions from and additions to the amount spent were identified. Exclusions were primarily spending associated with Peach Bottom, Units 2 and 3, that was incorrectly coded to Peach Bottom, Unit 1. Additions were primarily spending associated with decommissioning cost estimates. As a result of these changes in the amount spent, the amount not yet reimbursed here is greater than the 2015 spend (as provided in Item 9) plus the value reported in the March 31, 2015 submittal (Letter from P. R. Simpson (EGC) to the NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations," dated March 31, 2015).

- (h) Peach Bottom Atomic Power Station 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, and therefore 10 CFR 50.82(a)(8)(vii) does not apply.

**ATTACHMENT 3 (Continued)**

**Annual Radiological Decommissioning Funding Assurance and  
Spent Fuel Management Report for  
Peach Bottom Atomic Power Station Unit 1  
(December 31, 2015 dollars, thousands)**

<b>Year</b>	<b>Radiological Decommissioning Cost*</b>	<b>BOY Trust Fund Value</b>	<b>BOY Trust Fund Value Less Cost**</b>	<b>First Half Contributions</b>	<b>Trust Fund Earnings</b>	<b>Second Half Contributions</b>	<b>EOY Trust Fund Value</b>
2016	\$201	\$92,515	\$92,313	\$1,059	\$2,801	\$1,059	\$ 97,232
2017	\$201	\$97,232	\$97,031	\$1,059	\$2,943	\$1,059	\$102,092
2018	\$201	\$102,092	\$101,891	\$1,059	\$3,088	\$1,059	\$107,097
2019	\$201	\$107,097	\$106,896	\$1,059	\$3,239	\$1,059	\$112,253
2020	\$201	\$112,253	\$112,051	\$1,059	\$3,393	\$1,059	\$117,562
2021	\$201	\$117,562	\$117,362	\$1,059	\$3,553	\$1,059	\$123,032
2022	\$201	\$123,032	\$122,831	\$1,059	\$3,717	\$1,059	\$128,666
2023	\$201	\$128,666	\$128,465	\$1,059	\$3,886	\$1,059	\$134,468
2024	\$201	\$134,468	\$134,267	\$1,059	\$4,060	\$1,059	\$140,444
2025	\$201	\$140,444	\$140,243	\$1,059	\$4,239	\$1,059	\$146,600
2026	\$201	\$146,600	\$146,399	\$1,059	\$4,424	\$1,059	\$152,941
2027	\$201	\$152,941	\$152,740	\$1,059	\$4,614	\$1,059	\$159,472
2028	\$201	\$159,472	\$159,270	\$1,059	\$4,810	\$1,059	\$166,198
2029	\$201	\$166,198	\$165,997	\$1,059	\$5,012	\$1,059	\$173,127
2030	\$201	\$173,127	\$172,926	\$1,059	\$5,220	\$1,059	\$180,263
2031	\$201	\$180,263	\$180,062	\$1,059	\$5,434	\$1,059	\$187,614
2032	\$201	\$187,614	\$187,412	\$1,059	\$5,654	\$1,059	\$195,184
2033	\$35,963	\$195,184	\$159,221	\$-	\$4,777	\$-	\$163,998
2034	\$54,170	\$163,998	\$109,828	\$-	\$3,295	\$-	\$113,122
2035	\$62,518	\$113,122	\$50,604	\$-	\$1,518	\$-	\$52,122
2036	\$45,655	\$52,122	\$ 6,467	\$-	\$194	\$-	\$ 6,661
2037	\$40,511	\$6,661	\$ (33,850)	\$-	\$-	\$-	\$ (33,850)
2038	\$2,222	\$(33,850)	\$(36,071)	\$-	\$-	\$-	\$(36,071)
<b>Total</b>	<b>\$244,457</b>						

\*Column 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



## ATTACHMENT 4

### Annual Radiological Decommissioning Funding Assurance Report for Oyster Creek Nuclear Generating Station (December 31, 2015 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	\$619,694
2	Site-specific cost amount per 10 CFR 50.75(b)(4)	\$1,072,116 (a)
3	The amount of decommissioning trust funds accumulated as of December 31, 2015	\$836,446 (b)
4	Schedule of the annual amounts remaining to be collected.	\$0
5	Assumptions used regarding rates of escalation, earnings, and other factors used in funding projections	2% (c)
6	There are no contracts relied upon pursuant to 10 CFR 50.75(e)(1)(v).	
7	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).	
8	There are no material changes to the trust fund agreements.	

- (a) This is based on the SAFSTOR scenario from the site-specific cost estimate, and is greater than the formula cost amount under 10 CFR 50.75(c), as required by 10 CFR 50.75(b)(1). The site-specific estimate has been previously provided in a letter from J. Barstow (EGC) to the NRC dated March 30, 2016 (TLG Report E16-1726-001, Revision 0, "Decommissioning Cost Analysis for the Oyster Creek Nuclear Generating Station," March 2016). The 2016 dollars in the SSCE are identified as December 31, 2015 dollars herein.
- (b) The trust fund amount is the amount allocated for Radiological Decommissioning only. EGC has no past-due tax payments owed on the decommissioning trust fund activities as of December 31, 2015. Periodic payments of estimated income taxes are made by EGC during the year on a quarterly basis, and EGC subsequently obtains reimbursement from the trust fund on a periodic basis, when the funds are sufficient to demonstrate minimum funding assurance. The trust fund amount complies 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, 2015.
- (c) A 2% annual real rate of return is used as allowed by 10 CFR 50.75(e)(1)(i).
- (d) For purposes of this report, permanent termination of operations (shutdown) is expected on December 31, 2019. This date is based on the State of New Jersey Administrative Consent Order, dated December 9, 2010.

**ATTACHMENT 4 (Continued)**

**Annual Radiological Decommissioning Funding Assurance Report for  
Oyster Creek Nuclear Generating Station  
(December 31, 2015 dollars, thousands)**

<b>Year</b>	<b>Site Radiological Decommissioning Cost</b>	<b>ISFSI Radiological Decommissioning Cost</b>	<b>BOY Trust Fund Value</b>	<b>BOY Trust Fund Value Less Cost</b>	<b>Trust Fund Earnings</b>	<b>EOY Trust Fund Value</b>
2016*	\$3,155	-	\$836,446	\$833,291	\$16,666	\$849,957
2017*	\$3,146	-	\$849,957	\$846,811	\$16,936	\$863,747
2018*	\$3,146	-	\$863,747	\$860,601	\$17,212	\$877,813
2019*	\$3,146	-	\$877,813	\$874,667	\$17,493	\$892,160
2020	\$80,876	-	\$892,160	\$811,284	\$16,226	\$827,510
2021	\$70,799	-	\$827,510	\$756,711	\$15,134	\$771,845
2022	\$7,501	-	\$771,845	\$764,343	\$15,287	\$779,630
2023	\$7,501	-	\$779,630	\$772,129	\$15,443	\$787,571
2024	\$7,522	-	\$787,571	\$780,049	\$15,601	\$795,650
2025	\$7,302	-	\$795,650	\$788,348	\$15,767	\$804,115
2026	\$7,106	-	\$804,115	\$797,009	\$15,940	\$812,949
2027	\$7,106	-	\$812,949	\$805,843	\$16,117	\$821,959
2028	\$7,126	-	\$821,959	\$814,834	\$16,297	\$831,130
2029	\$7,106	-	\$831,130	\$824,024	\$16,480	\$840,504
2030	\$7,106	-	\$840,504	\$833,398	\$16,668	\$850,066
2031	\$7,106	-	\$850,066	\$842,960	\$16,859	\$859,819
2032	\$7,126	-	\$859,819	\$852,693	\$17,054	\$869,747
2033	\$7,106	-	\$869,747	\$862,641	\$17,253	\$879,893
2034	\$7,106	-	\$879,893	\$872,787	\$17,456	\$890,243
2035	\$7,106	-	\$890,243	\$883,136	\$17,663	\$900,799
2036	\$7,093	-	\$900,799	\$893,706	\$17,874	\$911,580
2037	\$7,074	-	\$911,580	\$904,506	\$18,090	\$922,596
2038	\$7,074	-	\$922,596	\$915,523	\$18,310	\$933,833
2039	\$7,074	-	\$933,833	\$926,759	\$18,535	\$945,295
2040	\$7,093	-	\$945,295	\$938,201	\$18,764	\$956,965
2041	\$7,074	-	\$956,965	\$949,892	\$18,998	\$968,890
2042	\$7,074	-	\$968,890	\$961,816	\$19,236	\$981,052
2043	\$7,074	-	\$981,052	\$973,978	\$19,480	\$993,458
2044	\$7,093	-	\$993,458	\$986,365	\$19,727	\$1,006,092
2045	\$7,074	-	\$1,006,092	\$999,018	\$19,980	\$1,018,999
2046	\$7,074	-	\$1,018,999	\$1,011,925	\$20,238	\$1,032,163
2047	\$7,074	-	\$1,032,163	\$1,025,090	\$20,502	\$1,045,591
2048	\$7,093	-	\$1,045,591	\$1,038,498	\$20,770	\$1,059,268
2049	\$7,074	-	\$1,059,268	\$1,052,194	\$21,044	\$1,073,238
2050	\$7,074	-	\$1,073,238	\$1,066,165	\$21,323	\$1,087,488
2051	\$7,074	-	\$1,087,488	\$1,080,414	\$21,608	\$1,102,022
2052	\$7,093	-	\$1,102,022	\$1,094,929	\$21,899	\$1,116,828
2053	\$7,074	-	\$1,116,828	\$1,109,754	\$22,195	\$1,131,949
2054	\$7,074	-	\$1,131,949	\$1,124,875	\$22,498	\$1,147,373
2055	\$7,074	-	\$1,147,373	\$1,140,299	\$22,806	\$1,163,105

**ATTACHMENT 4 (Continued)**

**Annual Radiological Decommissioning Funding Assurance Report for  
Oyster Creek Nuclear Generating Station  
(December 31, 2015 dollars, thousands)**

<b>Year</b>	<b>Site Radiological Decommissioning Cost</b>	<b>ISFSI Radiological Decommissioning Cost</b>	<b>BOY Trust Fund Value</b>	<b>BOY Trust Fund Value Less Cost</b>	<b>Trust Fund Earnings</b>	<b>EOY Trust Fund Value</b>
2056	\$7,093	-	\$1,163,105	\$1,156,012	\$23,120	\$1,179,132
2057	\$7,074	-	\$1,179,132	\$1,172,058	\$23,441	\$1,195,500
2058	\$7,074	-	\$1,195,500	\$1,188,426	\$23,769	\$1,212,194
2059	\$7,074	-	\$1,212,194	\$1,205,120	\$24,102	\$1,229,223
2060	\$7,093	-	\$1,229,223	\$1,222,130	\$24,443	\$1,246,572
2061	\$7,074	-	\$1,246,572	\$1,239,499	\$24,790	\$1,264,289
2062	\$7,074	-	\$1,264,289	\$1,257,215	\$25,144	\$1,282,359
2063	\$7,074	-	\$1,282,359	\$1,275,285	\$25,506	\$1,300,791
2064	\$7,093	-	\$1,300,791	\$1,293,698	\$25,874	\$1,319,572
2065	\$7,074	-	\$1,319,572	\$1,312,498	\$26,250	\$1,338,748
2066	\$7,074	-	\$1,338,748	\$1,331,674	\$26,633	\$1,358,308
2067	\$7,074	-	\$1,358,308	\$1,351,234	\$27,025	\$1,378,259
2068	\$7,093	-	\$1,378,259	\$1,371,165	\$27,423	\$1,398,589
2069	\$7,074	-	\$1,398,589	\$1,391,515	\$27,830	\$1,419,345
2070	\$7,074	-	\$1,419,345	\$1,412,272	\$28,245	\$1,440,517
2071	\$7,074	-	\$1,440,517	\$1,433,443	\$28,669	\$1,462,112
2072	\$7,093	-	\$1,462,112	\$1,455,019	\$29,100	\$1,484,119
2073	\$7,074	-	\$1,484,119	\$1,477,046	\$29,541	\$1,506,586
2074	\$7,074	-	\$1,506,586	\$1,499,513	\$29,990	\$1,529,503
2075	\$44,228	-	\$1,529,503	\$1,485,275	\$29,706	\$1,514,981
2076	\$104,427	-	\$1,514,981	\$1,410,554	\$28,211	\$1,438,765
2077	\$173,252	\$892	\$1,438,765	\$1,264,621	\$25,292	\$1,289,913
2078	\$140,843	\$3,786	\$1,289,913	\$1,145,284	\$22,906	\$1,168,190
2079	\$67,860	\$934	\$1,168,190	\$1,099,396	\$21,988	\$1,121,384
2080**	\$153	-	\$1,121,384	\$1,121,230	\$22,425	\$1,143,655
2081**	\$84	-	\$1,143,655	\$1,143,571	\$22,871	\$1,166,442
<b>Total***</b>	<b>\$1,072,116</b>	<b>\$5,612</b>				

\*Costs in 2016, 2017, 2018, and prior to permanent shutdown in 2019 are for decommissioning planning and do not include any physical decommissioning work.

\*\*Costs in 2080 and 2081 are administrative expenses associated with submitting a final report to the NRC following license termination and do not include any physical decommissioning work.

\*\*\*Columns may not add due to rounding.