



RS-16-040

10 CFR 50.75(f)
10 CFR 72.30(b)

February 4, 2016

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

Braidwood Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456, STN 50-457, and 72-73

Byron Station, Unit 2
Renewed Facility Operating License No. NPF-66
NRC Docket Nos. STN 50-455 and 72-68

Subject: Report on Status of Decommissioning Funding for Braidwood Station, Units 1 and 2 and Byron Station, Unit 2

- References:
1. Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations," dated March 31, 2015
 2. Letter from U. S. NRC to Patrick R. Simpson (Exelon Generation Company, LLC), "Braidwood Station Units 1 and 2, and Byron Station, Units 1 and 2 U. S. Nuclear Regulatory Commission Analysis of Exelon Generation's Decommissioning Funding Status Report," dated January 20, 2016

In Reference 1, Exelon Generation Company, LLC (EGC) identified that Braidwood Station, Units 1 and 2 and Byron Station, Unit 2, did not meet the minimum funding assurance criteria under 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," as of December 31, 2014. In Reference 2, the NRC acknowledged that EGC had not provided decommissioning assurance as required in the regulations at 10 CFR 50.75 for Braidwood Station, Units 1 and 2 and Byron Station, Unit 2. The NRC instructed EGC to correct any decommissioning funding shortfalls in a timely manner and report compliance to the NRC on or before March 31, 2017. The purpose of this letter is to advise the NRC that the funding shortfalls for Braidwood Station, Units 1 and 2, and Byron Station, Unit 2, have been resolved and to report compliance with the funding assurance requirements of 10 CFR 50.75 as of January 31, 2016.

Subsequent to identification of the funding shortfalls referenced in References 1 and 2, the NRC approved the renewed facility operating licenses for Braidwood Station, Units 1 and 2 effective January 27, 2016 and for Byron Station, Unit 2 effective November 19, 2015. When the renewed license operating periods are credited in the decommissioning funding

assurance calculations for Braidwood Station, Units 1 and 2, and Byron Station, Unit 2, the minimum funding assurance criteria in 10 CFR 50.75 are met.

Attachments 2, 3, and 4 contain the updated funding status reports for Braidwood Station, Units 1 and 2 and Byron Station, Unit 2, respectively. This information shows that Braidwood Station, Units 1 and 2 and Byron Station, Unit 2 meet decommissioning funding assurance requirements using the NRC formula cost amount. The calculation of the NRC formula cost amounts provided in Attachments 2, 3, and 4 assumes the labor, energy, and burial factors described in Attachment 1.

In addition to reporting the updated status of decommissioning funding assurance for these reactors in accordance with 10 CFR 50.75, Attachments 2, 3, and 4 report the updated status of decommissioning funding assurance for the Braidwood Station, Units 1 and 2 and Byron Station, Unit 2 independent spent fuel storage installation (ISFSI) in accordance with 10 CFR 72.30, "Financial assurance and recordkeeping for decommissioning." With respect to the other information required by 10 CFR 72.30(b) and (c), there has been no change from the information provided in Reference 1.

EGC uses the formula cost amount or the site-specific decommissioning cost estimates to demonstrate adequacy of funding to meet regulatory requirements. EGC has not made a final decision as to which decommissioning option to pursue and recognizes that the chosen option must meet NRC requirements for decommissioning funding.

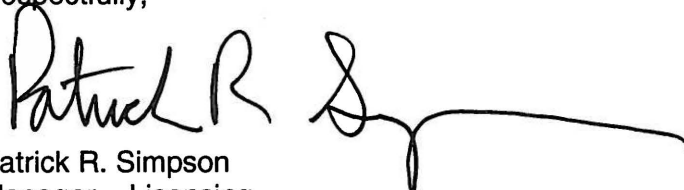
There were no disbursements from the decommissioning trust funds other than those for allowed administrative costs and other incidental expenses of the funds in connection with the operation of the funds per 10 CFR 50.75(h)(1)(iv).

This letter completes the actions necessary to resolve all shortfalls identified in Reference 1.

There are no regulatory commitments contained within this letter.

If you have any questions concerning this letter, please contact Mr. Timothy A. Byam at (630) 657-2818.

Respectfully,



Patrick R. Simpson
Manager – Licensing

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Braidwood Station
NRC Senior Resident Inspector – Byron Station

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Attachments:

1. Labor, Energy, and Burial Factors Used in Calculations
2. Radiological Decommissioning Funding Assurance Report for Braidwood Station, Unit 1
3. Radiological Decommissioning Funding Assurance Report for Braidwood Station, Unit 2
4. Radiological Decommissioning Funding Assurance Report for Byron Station, Unit 2

ATTACHMENT 1

Labor, Energy, and Burial Factors Used in Calculations

ATTACHMENT 1

Labor, Energy, and Burial Factors Used in Calculations

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

The current labor cost index used is obtained from the Employment Cost Index, published by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). Specifically, EGC used the Employment Cost Index for total compensation for private industry workers by region. The labor adjustment factor was 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 Factor

Region	Series ID	4Q2015 Index Number	Base L_x	Labor Adjustment Factor (L_x)
Midwest	CIU2010000000230I	122.5	2.08	2.548

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 (PWR) – $E_x(\text{PWR})$	1.759

The waste burial adjustment factor used is taken from Table 2-1 of NUREG-1307, Revision 15, based on 2012 data. The adjustment factor EGC used assumes 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 factor.

Table 3: Waste Adjustment Factors

LLW Burial Site	Reactor Type	Combination of Compact-Affiliated and Non-Compact Facility Waste Adjustment Factor (B_x)
Generic LLW Disposal Site	PWR	13.885

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

ATTACHMENT 2

Radiological Decommissioning Funding Assurance Report
for Braidwood Station, Unit 1

ATTACHMENT 2
Radiological Decommissioning Funding Assurance Report for
Braidwood Station, Unit 1

(January 31, 2016 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	\$518,659
2	Site-specific cost amount per 10 CFR 50.75(b)(4)	N/A
3	Site-specific cost amount per 10 CFR 72.30(b)	\$4,810 (a)
4	The amount of decommissioning trust funds accumulated as of January 31, 2016	\$293,297 (b)
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% (c)
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) and 10 CFR 72.30(e)(1).	
9	There are no material changes to the trust fund agreements.	

(a) This is the site-specific cost estimate for ISFSI radiological decommissioning that was previously provided in a letter from Patrick R. Simpson (EGC) to U. S. NRC, dated March 31, 2015 ("Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations"). The costs have been escalated from 2014 dollars in the letter to January 31, 2016 using a unit specific escalation rate. No other changes have been made to the decommissioning funding plan in the March 31, 2015 letter.

(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 January 31, 2016. 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 funds on a periodic basis, when the funds are sufficient to demonstrate minimum funding assurance. The 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 January 31, 2016.

(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 October 17, 2046.

ATTACHMENT 3

Radiological Decommissioning Funding Assurance Report
for Braidwood Station, Unit 2

ATTACHMENT 3
Radiological Decommissioning Funding Assurance Report for
Braidwood Station, Unit 2

(January 31, 2016 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	\$518,659
2	Site-specific cost amount per 10 CFR 50.75(b)(4)	N/A
3	Site-specific cost amount per 10 CFR 72.30(b)	\$4,816 (a)
4	The amount of decommissioning trust funds accumulated as of January 31, 2016	\$316,857 (b)
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% (c)
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) and 10 CFR 72.30(e)(1).	
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(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 18, 2047.

ATTACHMENT 4

Radiological Decommissioning Funding Assurance Report
for Byron Station, Unit 2

ATTACHMENT 4
Radiological Decommissioning Funding Assurance Report for
Byron Station, Unit 2

(January 31, 2016 dollars, thousands)

1	Formula cost amount per 10 CFR 50.75(c)	\$518,659
2	Site-specific cost amount per 10 CFR 50.75(b)(4)	N/A
3	Site-specific cost amount per 10 CFR 72.30(b)	\$4,688 (a)
4	The amount of decommissioning trust funds accumulated as of January 31, 2016	\$309,864 (b)
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% (c)
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) and 10 CFR 72.30(e)(1).	
9	There are no material changes to the trust fund agreements.	

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- (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 November 6, 2046.