



Dianne M. Triplett
DEPUTY GENERAL COUNSEL

April 15, 2019

VIA ELECTRONIC FILING

Mr. Adam J. Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Crystal River Unit 3 – DEF Annual Report to NRC; *Undocketed*

Dear Mr. Teitzman:

Pursuant to and in compliance with Rule 25-6.04365(6), F.A.C., please find attached for filing on behalf of Duke Energy Florida, LLC, (“DEF”), recent correspondence to the Nuclear Regulatory Commission (“NRC”) providing DEF’s Annual Decommissioning and Irradiated Fuel Management Financial Status Report for 2018.

Thank you for your assistance in this matter. If you have any questions, please feel free to contact me at (727) 820-4692.

Sincerely,

/s/ Dianne M. Triplett

Dianne M. Triplett

DMT/cmck
Attachment



Crystal River Nuclear Plant
15760 W. Power Line Street
Crystal River, FL 34428
Docket 50-302
Docket 72-1035
Operating License No. DPR-72

10 CFR 50.82
10 CFR 50.75

March 27, 2019
3F0319-01

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

Subject: Crystal River Unit 3 – Annual Decommissioning and Irradiated Fuel Management
Financial Status Report for 2018

- References:
1. NRC to CR-3 letter dated March 13, 2013, "Crystal River Unit 3 Nuclear Generating Plant Certification of Permanent Cessation of Operation and Permanent Removal of Fuel from the Reactor" (ADAMS Accession No. ML13058A380)
 2. CR-3 to NRC letter dated December 2, 2013, "Crystal River Unit 3 – Post-Shutdown Decommissioning Activities Report" (ADAMS Accession No. ML13340A009)
 3. NRC to CR-3 letter dated January 26, 2015, "Crystal River Unit 3 Nuclear Generating Plant – Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.75(h)(2)" (ADAMS Accession No. ML14247A545)
 4. NRC to CR-3 letter dated March 11, 2015, "Crystal River Unit 3 Nuclear Generating Plant Post-Shutdown Decommissioning Activities Report" (ADAMS Accession No. ML14321A751)
 5. CR-3 to NRC letter dated June 28, 2018, "Crystal River Unit 3 - 2018 Decommissioning Cost Estimate" (ADAMS Accession No. ML18178A181)

Dear Sir:

In accordance with 10 CFR 50.75(f)(1), 10 CFR 50.82(a)(8)(v), 10 CFR 50.82(a)(8)(vi), and 10 CFR 50.82(a)(8)(vii), Duke Energy Florida, LLC, (DEF) is submitting the annual status of decommissioning funding, status of funding for managing irradiated fuel, and the financial assurance status report for 2018. In Reference 1, the NRC acknowledged Crystal River Unit 3 Nuclear Generating Plant (CR-3) certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. In Reference 2, DEF submitted its Post-Shutdown Decommissioning Activities Report (PSDAR) containing a site-specific Decommissioning Cost Estimate (DCE) pursuant to 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(8)(iii). Accordingly, a status of decommissioning funding pursuant to 10 CFR 50.75(f)(1), a financial assurance status report pursuant to 10 CFR 50.82(a)(8)(v) and 10 CFR 50.82(a)(8)(vi), and a report on the status of the funding for managing irradiated fuel pursuant to 10 CFR 50.82(a)(8)(vii) are required to be submitted by March 31 of each year.

In Reference 3, the NRC provided its approval of the CR-3 exemption request to use the funds from the CR-3 Decommissioning Trust Funds for Irradiated Fuel Management and Site Restoration Costs. The financial assurance demonstration performed in this submittal has been prepared consistent with that exemption request. In Reference 4, the NRC found that the PSDAR contained the necessary information required by 10 CFR 50.82(a)(4)(i) and was consistent with the guidance of Regulatory Guide 1.185.

In Reference 5, DEF submitted an updated site-specific DCE that reflects current plant conditions, assumptions pertaining to the disposition of the nuclear unit and relevant industry experience in undertaking such projects. This update was performed at the request of Duke Energy management to verify sufficient funds remain to continue to demonstrate financial assurance and was not performed to satisfy any NRC regulation. The cash flows in this updated DCE are being used by DEF as the basis for demonstrating funding status in this Annual Decommissioning and Irradiated Fuel Management Financial Status Report, submitted pursuant to 10 CFR 50.75 (f)(1) and 10 CFR 50.82(a)(8)(v) – (vii).

The attachments to this letter contain the information required by the above regulations for DEF. The report contains the following required information:

- (1) The amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c), (While DEF is identifying this amount because it is specified in 10 CFR 50.75(f)(1), it does not appear applicable to a plant that has permanently ceased operation, has submitted a site specific cost estimate, and is engaged in decommissioning.)
- (2) The amount of decommissioning funds accumulated to the end of the calendar year preceding the date of this report,
- (3) A schedule of annual amounts remaining to be collected,
- (4) The assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections,
- (5) Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v),
- (6) Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report,
- (7) Any material changes to trust agreements or financial assurance contracts,
- (8) The amount spent on decommissioning, both cumulative and over the previous calendar year,
- (9) The remaining balance of any decommissioning funds,
- (10) The amount provided by other financial assurance methods being relied upon,
- (11) An estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year,
- (12) The decommissioning criteria upon which the estimate is based,
- (13) If the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated are not greater than a 2 percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated costs to complete the decommissioning, the financial assurance status report must include additional financial assurance to cover the estimated cost of completion,
- (14) The amount of funds accumulated to cover the cost of managing the irradiated fuel,

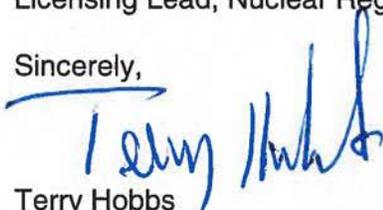
- (15) The projected cost of managing irradiated fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy, and
- (16) If the funds accumulated do not cover the projected cost (of irradiated fuel), a plan to obtain additional funds to cover the cost.

The adjustment factors for labor rates and energy costs used in Item (1) for the calculation in 10 CFR 50.75(c)(2) are determined using the December 2018 indices from the U.S. Department of Labor, Bureau of Labor Statistics. The adjustment factor for the cost of low-level waste burial charges used in Item (1) for the calculation in 10 CFR 50.75(c)(2) is determined using NUREG-1307, Revision 17, "Report on Waste Burial Charges."

There are no new regulatory commitments associated with this letter.

If you have any questions regarding this submittal, please contact Mr. Mark Van Sicklen, Licensing Lead, Nuclear Regulatory Affairs, at (352) 501-3045.

Sincerely,



Terry Hobbs
General Manager, Decommissioning

TDH/mvs

Attachments:

- Attachment 1 – Duke Energy Florida, Crystal River Unit 3 Funding Status Report
- Attachment 2 – Crystal River Unit 3, Estimate of Costs to Complete
Decommissioning and Financial Assurance Demonstration

xc: NMSS Project Manager
Regional Administrator, Region I

DUKE ENERGY FLORIDA, LLC

DOCKET NUMBER 50 - 302 / LICENSE NUMBER DPR - 72

ATTACHMENT 1

**DUKE ENERGY FLORIDA,
CRYSTAL RIVER UNIT 3 FUNDING STATUS REPORT**

NRC Decommissioning Funding Status Report
Report Dated as of December 31, 2018
Duke Energy Florida
Crystal River Unit 3
100% Ownership

Item #	Crystal River Unit 3
10 CFR 50.75(f)(1) - Status of decommissioning funding	
1	1a. The amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c);
	\$ 474,162,767
	1b. The amount of decommissioning funds estimated to be required for remaining License Termination costs.
	\$ 746,689,950 ¹
2	The amount of decommissioning funds accumulated to the end of the calendar year preceding the date of the report;
	\$ 666,240,035 ^{2,3}
3	A schedule of the annual amounts remaining to be collected;
	None
4	The assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections;
	inflation 2.8% ⁴
	qualified rate of return 5.10% ⁴
5	Any contracts upon which the licensee is relying pursuant to paragraph 10 CFR 50.75(e)(1)(v);
	None
6	Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and
	None
7	Any material changes to trust agreements.
	None
10 CFR 50.82(a)(8)(v) - Financial assurance status report	
8	(A) The amount spent on decommissioning, both cumulative and over the previous calendar year,
	\$ 17,786,730 ⁵ - Previous calendar year
	\$ 96,542,812 ⁶ - Cumulative
9	The remaining balance of any decommissioning funds, and
	\$ 666,240,035 ^{2,3}
10	The amount provided by other financial assurance methods being relied upon;
	None
11	(B) An estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and
	See Attachment 2
12	The decommissioning criteria upon which the estimate is based;
	Unrestricted Release
13	(C) Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and
	None
14	(D) Any material changes to trust agreements or financial assurance contracts.
	None
10 CFR 50.82(a)(8)(vi)	
15	If the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2 percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning, the financial assurance status report must include additional financial assurance to cover the estimated cost of completion.
	As demonstrated in Attachment 2, funds accumulated cover estimated cost of completion.
10 CFR 50.82(a)(8)(vii) - Report on the status of funding for managing irradiated fuel	
16	(A) The amount of funds accumulated to cover the cost of managing the irradiated fuel;
	As demonstrated in Attachment 2, funds accumulated cover estimated cost of completion.
17	(B) The projected cost of managing irradiated fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy; and
	See Attachment 2
18	(C) If the funds accumulated do not cover the projected cost, a plan to obtain additional funds to cover the cost.
	As demonstrated in Attachment 2, funds accumulated cover projected cost of managing irradiated fuel, with the noted exception of DEF's portion of ISFSI capital construction costs as described in the update to Irradiated Fuel Management Program pursuant to 10CFR50.54(bb) (ADAMS Accession No. ML13440A008).

Attachment 1 Footnotes:

1 Total amount of License Termination costs (Column A) in Attachment 2.

2 Amount is net of 2018 tax obligations.

3 Represents (a) the full fund balance of DEF's qualified and non-qualified decommissioning funds, which, in accordance with the NRC exemption request approval (ADAMS Accession No. 14247A545), can also be used for Spent Fuel Management and Site Restoration costs, and (b) 100% of the funds held by the City of Tallahassee on behalf of DEF, which pursuant to NRC order (ADAMS Accession No. ML020670117) will only be used for NRC radiological decommissioning.

4 Represents values approved by the Florida Public Service Commission in Order No. PSC-14-0702-PAA-EI, issued December 22, 2014, which became effective and final pursuant to Order No. PSC-15-0067-CO-EI, issued on January 23, 2015.

5 Represents the amount actually disbursed from the fund in calendar year 2018 for License Termination costs, not the costs incurred in calendar year 2018. Disbursed amounts in 2018 include costs incurred between November 2017 and September 2018. Outstanding license termination costs of \$1,229,164 for October, November and December 2018 are expected after December 31, 2018.

6 Represents the cumulative amount actually disbursed from the fund as of December 31, 2018 for License Termination costs, not the cumulative costs incurred as of December 31, 2018. Outstanding license termination costs of \$1,229,164 for October, November and December 2018 are expected after December 31, 2018.

DUKE ENERGY FLORIDA, LLC

DOCKET NUMBER 50 - 302 / LICENSE NUMBER DPR - 72

ATTACHMENT 2

**CRYSTAL RIVER UNIT 3,
ESTIMATE OF COSTS TO COMPLETE DECOMMISSIONING AND
FINANCIAL ASSURANCE DEMONSTRATION**

Crystal River Unit 3
Attachment 2 - Financial Assurance Demonstration
December 31, 2018

	Column A	Column B	Column C	Column D	Column E	Column F
	Annual Expenses	Annual expenses	Annual expenses	Total Expenses	Projected Earnings	End-of-year Fund Balances
					Annual Earnings on Decommissioning Trust Fund at 2%	All Owners Decommissioning Trust Fund Year-End Balance
	License Termination Cost (in thousands)	Spent Fuel Cost (in thousands)	Site Restoration Cost (in thousands)	Total Cost (in thousands)	(in thousands)	(in thousands)
2018						666,240
2019	7,951	11,849	169	19,969	13,125	659,396
2020	7,583	3,040	0	10,623	13,082	661,855
2021	7,561	3,116	0	10,677	13,130	664,308
2022	7,561	3,032	0	10,593	13,180	666,894
2023	7,561	3,032	0	10,593	13,232	669,533
2024	7,583	3,124	0	10,707	13,284	672,109
2025	7,561	3,032	0	10,593	13,336	674,852
2026	7,561	3,032	0	10,593	13,391	677,650
2027	7,561	3,116	0	10,677	13,446	680,419
2028	7,583	3,040	0	10,623	13,502	683,298
2029	7,561	3,032	0	10,593	13,560	686,265
2030	7,561	3,116	0	10,677	13,619	689,206
2031	7,561	3,032	0	10,593	13,678	692,290
2032	7,583	3,040	0	10,623	13,740	695,407
2033	7,561	3,116	0	10,677	13,801	698,531
2034	7,561	3,032	0	10,593	13,865	701,802
2035	7,561	3,032	0	10,593	13,930	705,139
2036	7,583	3,124	0	10,707	13,996	708,427
2037	7,561	8,133	0	15,695	14,012	706,744
2038	4,040	0	0	4,040	14,094	716,799
2039	4,040	84	0	4,124	14,295	726,970
2040	4,051		0	4,051	14,499	737,419
2041	4,040		0	4,040	14,708	748,087
2042	4,040		0	4,040	14,921	758,969
2043	4,040		0	4,040	15,139	770,068
2044	4,051		0	4,051	15,361	781,378
2045	4,040		0	4,040	15,587	792,926
2046	4,040		0	4,040	15,818	804,705
2047	4,040		0	4,040	16,054	816,719
2048	4,051		0	4,051	16,294	828,962
2049	4,040		0	4,040	16,539	841,461
2050	4,040		0	4,040	16,789	854,210
2051	4,040		0	4,040	17,044	867,215
2052	4,051		0	4,051	17,304	880,468
2053	4,040		0	4,040	17,569	893,997
2054	4,040		0	4,040	17,840	907,797
2055	4,040		0	4,040	18,116	921,873
2056	4,051		0	4,051	18,397	936,219
2057	4,040		0	4,040	18,684	950,864
2058	4,040		0	4,040	18,977	965,801
2059	4,040		0	4,040	19,276	981,037
2060	4,051		0	4,051	19,580	996,567
2061	4,040		0	4,040	19,891	1,012,418
2062	4,040		0	4,040	20,208	1,028,587
2063	4,040		0	4,040	20,531	1,045,078
2064	4,051		0	4,051	20,861	1,061,889
2065	4,040		0	4,040	21,197	1,079,046
2066	4,040		0	4,040	21,541	1,096,547
2067	26,489		438	26,927	21,662	1,091,282
2068	66,679		1,402	68,082	21,145	1,044,346
2069	130,730		1,640	132,370	19,563	931,539
2070	108,969		1,240	110,209	17,529	838,859
2071	88,705		868	89,573	15,881	765,168
2072	58,206		337	58,543	14,718	721,343
2073	5,424		26,921	32,345	14,103	703,101
2074	99		19,913	20,012	13,862	696,951
Total¹	\$746,690	\$72,155	\$52,928	\$871,773		

Footnotes next page

Attachment 2 Footnotes:

Column A - Annual Expenses - License Termination Cost - Reflects the License Termination cost portion of the Decommissioning Cost Estimate (DCE) escalated to 2018 dollars at the Consumer Price Index escalation rate of 2.5% for 2018.

Column B - Annual Expenses - Spent Fuel Management Cost - Reflects the Spent Fuel Management cost portion of the Decommissioning Cost Estimate (DCE) escalated to 2018 dollars at the Consumer Price Index escalation rate of 2.5% for 2018.

Column C - Annual Expenses - Site Restoration Cost - Reflects the Site Restoration cost portion of the Decommissioning Cost Estimate (DCE) escalated to 2018 dollars at the Consumer Price Index escalation rate of 2.5% for 2018.

Column D - Annual Expenses - Total Cost - Reflects the sum of the License Termination, Spent Fuel Management and Site Restoration costs.

Column E - Projected Earnings - Reflects earnings on funds remaining in the trusts. Pursuant to 10 CFR 50.82(a)(8)(vi), a 2% real rate of return is used in this financial analysis. The earnings are calculated on the previous year's end-of-year fund balance (Column F) less 50% of the given year's annual expenses.

Column F - End-of-year Fund Balances - Reflects the end-of year fund balance of all funds after all projected earnings are added and projected expenditures are deducted. The 2018 end-of-year fund balance includes 100% of \$7,128,459 in funds held by the City of Tallahassee on behalf of Duke Energy Florida, which pursuant to NRC order (ADAMS Accession No. ML020670117) will only be used for NRC radiological decommissioning.

For the purposes of demonstrating financial assurance in accordance with 10 CFR 50.82(a)(8)(vi), the methodology and assumptions in this analysis are consistent with the March 28, 2014, Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(2) (ADAMS Accession No. ML14098A037), which was approved by NRC on January 26, 2015 (ADAMS Accession No. ML14247A545).

¹ Total may not add due to rounding.