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10 CFR 50.75(f)(1)
10 CFR 50.82(a)(8)(v)

CNRO2021-00004

March 25, 2021

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

Subject: Decommissioning Funding Status Report per 10 CFR §50.75(f)(1) and
10 CFR 50.82(a)(8)(v) -- Entergy Nuclear Operations, Inc.

Big Rock Point Nuclear Plant
NRC Docket No. 50-155
License No. DPR-6

Indian Point Nuclear Generating
Stations 1, 2, & 3
NRC Docket Nos. 50-3, 50-247, & 50-286
License Nos. DPR-5, DPR-26, & DPR-64

Palisades Nuclear Power Plant
NRC Docket No. 50-255
License No. DPR-20

10 CFR 50.75(f)(1) requires each power reactor licensee to report to the NRC by March 31, 1999, and every two years thereafter with certain exceptions, on the status of its decommissioning funding for each reactor, or share of a reactor, that it owns. Additionally, any licensee for a plant that is within 5 years of the projected end of its operation, or where conditions have changed such that it will close within 5 years (before the end of its licensed life), or that has already closed (before the end of its licensed life), or that is involved in a merger or an acquisition shall submit this report annually. 10 CFR 50.82(a)(8)(v) requires licensees of shutdown sites to report to the NRC annually, by March 31, on the status of decommissioning financial assurance for those sites. On behalf of Entergy Nuclear Indian Point 2, LLC (Indian Point 1 & 2), Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Palisades, LLC (Palisades and Big Rock Point), Entergy Nuclear Operations, Inc. (ENOI) hereby submits the information requested for power reactors operated by ENOI. The reports provided in Enclosures 1 through 8 for the licensed facilities addressed by this filing, were prepared in accordance with NUREG-1307 (Reference 1) and NRC Regulatory Issue Summary 2001-07 (Reference 2). The Minimum Funding Assurance calculation worksheets, (not required for this filing) derived from Datasheet 4 of LIC-205, Rev. 6 (Reference 3), are provided in Enclosure 9 for the convenience of the reviewer.

The estimated minimum decommissioning fund values were determined using the NRC's methodology in NUREG-1307, Rev. 18 (Reference 1).

The trust fund amounts reported for each facility in the responses to item 3 represent the market value of decommissioning trust funds as of December 31, 2020 net of any material current income tax liability on realized gains, interest, dividends and other income of the trusts. The trusts for the following plants had estimated balances on their 2020 tax liabilities, not reflected in the trust fund balances, as follows (in thousands):

Indian Point 1	\$	0
Indian Point 2	\$	0
Indian Point 3	\$	0
Palisades	\$	300

In accordance with guidance provided by the NRC Staff in April 2014 requests for additional information (Accession No. ML14120A273) that "future 10 CFR 50.75(f) reports should clearly delineate estimated reactor and Independent Spent Fuel Storage Installation (ISFSI) decommissioning costs," the information in Enclosures 1, 2, 3, 5, and 7 includes line item 2 identifying the ISFSI decommissioning obligation, from the most recent 10 CFR 72.30 filing (escalated). This obligation is also accounted for in the Excess/Shortfall calculations for each plant in Enclosure 9 (or Enclosure 8 for Indian Point 1).

The aforementioned worksheets, using the December 31, 2020 trust fund balances and parent guarantee amount, indicate that all of the plants covered by this submittal met or exceeded the NRC's funding requirements. Accordingly, the licensees conclude that no further action is required at this time to demonstrate adequate funding assurance for decommissioning the plants covered by this submittal.

There are no new commitments made in this letter. Should you have any questions or require additional information, please contact me at 601-368-5102.

Respectfully,



Phil Couture

PC/ljs/chm

- Enclosures:
- 1) ENOI Status of Decommissioning Funding – Indian Point 1
For Year Ending December 31, 2020 – 10 CFR 50.75(f)(1) and
10 CFR 50.82(a)(8)(v)
 - 2) ENOI Status of Decommissioning Funding – Indian Point 2
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 3) ENOI Status of Decommissioning Funding – Indian Point 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 4) ENOI Calculation of Minimum Amount – Indian Point 1, 2 & 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 5) ENOI Status of Decommissioning Funding – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 6) ENOI Calculation of Minimum Amount – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 7) ENOI Status of Decommissioning Funding – Big Rock Point
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 8) ENOI IP1 DTF Balance Based on Decommissioning Funding Assurance Plan
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)
 - 9) ENOI Minimum Financial Assurance Calculation Worksheets

- References:
- 1) NUREG-1307, "Report on Waste Burial Charges," Revision 18, dated
January 2021
 - 2) NRC Regulatory Issue Summary (RIS) 2001-07, Rev. 1, "10 CFR 50.75
Reports and Recordkeeping for Decommissioning Planning"
 - 3) NRC LIC-205, Rev. 6, Procedures for NRC's Independent Analysis of
Decommissioning Funding Assurance for Operating Nuclear Power
Reactors and Power Reactors in Decommissioning, Date April 10, 2017

cc: NRC Region I Regional Administrator
NRC Region III Regional Administrator

NRC Project Manager, Indian Point 1
NRC Project Manager, Indian Point 2 / 3
NRC Project Manager, Palisades
NRC Project Manager, Entergy Fleet

NRC Sr. Resident Inspector, Indian Point 2 / 3
NRC Sr. Resident Inspector, Palisades

Enclosure 1

CNRO2021-00004

**ENOI Status of Decommissioning Funding – Indian Point 1
For Year Ending December 31, 2020 – 10 CFR 50.75(f)(1) and 10 CFR 50.82(a)(8)(v)**

ENOI Status of Decommissioning Funding – Indian Point 1
For Year Ending December 31, 2020 – 10 CFR 50.75(f)(1) and 10 CFR 50.82(a)(8)(v)

Plant Name: **Indian Point Nuclear Generating Unit No. 1**

10 CFR 50.75(f)(1)

1. Minimum Financial Assurance (MFA)	\$606.15 million [Note1]
2. ISFSI Obligation as of 12/31/20	\$1.79 million [Note2]
3. Decommissioning Trust Fund Total as of 12/31/20	\$631.25 million
4. A schedule of the annual amounts remaining to be collected	None
5. Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections	2% annual real rate of return per 10 CFR 50.75(e)(1)(i)
6. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v)	None
7. Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report	None
8. Any material changes to trust agreements	None

Note 1: This amount is based upon total SAFSTOR expenditures for radiological remediation and license termination set forth in the updated Decommissioning Funding Assurance Plan and SAFSTOR analysis that are provided in Table 8-1 in Enclosure 8. (Calculation of the NRC Minimum Amount is provided in Enclosure 4.)

Note 2: From Entergy's Decommissioning Funding Plans (10 CFR 72.30) dated December 17, 2018 (Accession No. ML18351A478), escalated at 3% per annum to account for inflation. Total ISFSI obligation for Indian Point 1&2 is \$10.76M with \$8.97M attributable to Indian Point 2 and \$1.79M attributable to Indian Point 1, all in 2020\$ (totals may not foot due to rounding).

ENOI Status of Decommissioning Funding – Indian Point 1
For Year Ending December 31, 2020 – 10 CFR 50.75(f)(1) and 10 CFR 50.82(a)(8)(v)

Plant Name: **Indian Point Nuclear Generating Unit No. 1**

10 CFR 50.82(a)(8)(v)

- | | |
|--|---|
| 1. Cumulative decommissioning spending | \$136 million [Note 1] |
| 2. 2020 decommissioning spending | \$12.4 million [Note 1] |
| 3. Fund Balance | See above in
10 CFR 50.75
information |
| 4. No other financial assurance mechanism is being relied upon, but costs through 12/31/2020 have been funded by operations, and not the decommissioning fund. | |
| 5. Estimated costs to complete from latest estimate | \$606.15 million [Note 2] |
| 6. Estimate is based on unrestricted release of the site per 10 CFR 20.1402 | |
| 7. Modifications to financial assurance since last report | See above in
10 CFR 50.75
information |
| 8. Any material changes to trust agreements | See above in
10 CFR 50.75
information |

Note 1: Entergy Nuclear Operations, Inc. (Entergy) does not possess records that would permit determination of charges to Indian Point 1 (IP1) prior to its acquisition in September 2001 by Entergy Nuclear Indian Point 2, LLC. The costs presented here represent those costs charged in 2020 and the total costs that have been assigned to IP1 since 2001. Entergy has not fully determined what portion of those costs would be considered “decommissioning” costs as that term is defined in 10 CFR 50.2. Cumulative and 2020 decommissioning spending only consists of costs related to license termination.

Note 2: This amount is based upon total SAFSTOR expenditures for radiological remediation and license termination set forth in the updated Decommissioning Funding Assurance Plan and SAFSTOR analysis that are provided in Table 8-1 in Enclosure 8 (Calculation of the NRC Minimum Amount is provided in Enclosure 4). This estimate does not include 2020 spending because current costs are being paid out of operating funds.

Enclosure 2

CNRO2021-00004

**ENOI Status of Decommissioning Funding – Indian Point 2
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

ENOI Status of Decommissioning Funding – Indian Point 2
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)

Plant Name: **Indian Point Nuclear Generating Unit No. 2**

- | | |
|---|---|
| 1. Minimum Financial Assurance (MFA) estimated per 10 CFR 50.75(b) and (c) (2020) | \$529.89 million ^[Note 1] |
| 2. ISFSI Obligation as of 12/31/20 | \$8.97 million ^[Note 2] |
| 3. Decommissioning Trust Fund Total as of 12/31/20 | \$793.73 million ^[Note 3] |
| 4. A schedule of the annual amounts remaining to be collected | None |
| 5. Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections | 2% annual real rate of return per 10 CFR 50.75(e)(1)(i) |
| 6. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v) | None |
| 7. Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report | None |
| 8. Any material changes to trust agreements | None |

Note 1: Calculation of the NRC Minimum Amount is provided in Enclosure 4.

Note 2: From Entergy's Decommissioning Funding Plans (10 CFR 72.30) dated December 17, 2018 (Accession No. ML18351A478), escalated at 3% per annum to account for inflation. Total ISFSI obligation for Indian Point 1&2 is \$10.76M with \$8.97M attributable to Indian Point 2 and \$1.79M attributable to Indian Point 1, all in 2020\$ (totals may not foot due to rounding).

Note 3: Includes provisional fund balance of \$36.79 million.

Enclosure 3

CNRO2021-00004

**ENOI Status of Decommissioning Funding – Indian Point 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

ENOI Status of Decommissioning Funding – Indian Point 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)

Plant Name: **Indian Point Nuclear Generating Unit No. 3**

1. Minimum Financial Assurance (MFA) estimated per 10 CFR 50.75(b) and (c) (2020\$)	\$529.89 million ^[Note 1]
2. ISFSI Obligation as of 12/31/20	\$10.76 million ^[Note 2]
3. Decommissioning Trust Fund Total as of 12/31/20	\$990.7 million
4. A schedule of the annual amounts remaining to be collected	None
5. Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections	2% annual real rate of return per 10 CFR 50.75(e)(1)(i)
6. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v)	None
7. Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report	None
8. Any material changes to trust agreements	None

Note 1: Calculation of the NRC Minimum Amount is provided in Enclosure 4.

Note 2: From Entergy's Decommissioning Funding Plans (10 CFR 72.30) dated December 17, 2018 (Accession No. ML18351A478), escalated at 3% per annum to account for inflation.

Enclosure 4

CNRO2021-00004

**ENOI Calculation of Minimum Amount – Indian Point 1, 2 & 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

**ENOI Calculation of Minimum Amount – Indian Point 1, 2 & 3
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

Entergy Nuclear Indian Point 2, LLC: 100% ownership interest of Indian Point 1 & 2
Entergy Nuclear Indian Point 3, LLC: 100% ownership interest of Indian Point 3
Plant Location: Buchanan, New York
Reactor Type: Pressurized Water Reactor (“PWR”)
Indian Point Unit 1 Power Level: <3,400 MWt (615 MWt)
Indian Point Unit 1 PWR Base Year 1986\$: \$85,560,000
Indian Point Unit 2 Power Level: <3,400 MWt (3,216 MWt)
Indian Point Unit 2 PWR Base Year 1986\$: \$103,300,800
Indian Point Unit 3 Power Level: <3,400 MWt (3,216 MWt)
Indian Point Unit 3 PWR Base Year 1986\$: \$103,300,800
Labor Region: North
Waste Burial Facility: Generic Disposal Site

10CFR50.75(c)(2) Escalation Factor Formula:

0.65(L) +0.13(E) +0.22(B)

	<u>Factor</u>
L=Labor (North)	3.11 ¹
E=Energy (PWR)	2.26 ²
B=Waste Burial-Vendor (PWR)	12.793 ³

PWR Escalation Factor:

0.65(L) +0.13(E) +0.22(B)= 5.12976

1986 PWR Base Year \$ Escalated:

Indian Point 1: \$85,560,000 * Factor = \$438,884,739
Indian Point 2 & 3: \$103,300,800 * Factor = \$529,887,151

¹ Bureau of Labor Statistics, Series Report ID: CIU201000000210i (4th Quarter 2020)
² Bureau of Labor Statistics, Series Report ID: wpu0543 and wpu0573 (December 2020) (Preliminary)
³ Nuclear Regulatory Commission: NUREG-1307 Revision 18, Table 2-1 (2021)

Enclosure 5

CNRO2021-00004

**ENOI Status of Decommissioning Funding – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

**ENOI Status of Decommissioning Funding – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

Plant Name:	Palisades Nuclear Plant	
1. Minimum Financial Assurance (MFA) estimated per 10 CFR 50.75(b) and (c) (2020\$)		\$486.73 million ^[Note 1]
2. ISFSI Obligation as of 12/31/20		\$8.48 million ^[Note 2]
3. Decommissioning Trust Fund Total as of 12/31/20		\$553.84 million
4. A schedule of the annual amounts remaining to be collected		None
5. Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections		2% annual real rate of return per 10 CFR 50.75(e)(1)(i)
6. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v)		None
7. Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report		None
8. Any material changes to trust agreements		None

Note 1: Calculation of the NRC Minimum Amount is provided in Enclosure 6

Note 2: From Entergy's Decommissioning Funding Plans (10 CFR 72.30) dated December 17, 2018 (Accession No. ML18351A478), escalated at 3% per annum to account for inflation.

Enclosure 6

CNRO2021-00004

**ENOI Calculation of Minimum Amount – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

**ENOI Calculation of Minimum Amount – Palisades
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

Entergy Nuclear Palisades LLC.: 100% ownership interest
Plant Location: Covert, Michigan
Reactor Type: Pressure Water Reactor (“PWR”)
Power Level: < 3,400 MWt (2565 MWt)
PWR Base Year 1986\$: \$97,572,000
Labor Region: Midwest
Waste Burial Facility: Generic Disposal Site

10CFR50.75(c)(2) Escalation Factor Formula:

$$0.65(L) + 0.13(E) + 0.22(B)$$

	<u>Factor</u>
L=Labor (Midwest)	2.89 ⁴
E=Energy (PWR)	2.26 ⁵
B=Waste Burial-Vendor (PWR)	12.793 ⁶

PWR Escalation Factor:

$$0.65(L) + 0.13(E) + 0.22(B) = 4.98843$$

1986 PWR Base Year \$ Escalated:

$$\$97,572,000 * \text{Factor} = \$486,730,814$$

⁴ Bureau of Labor Statistics, Series Report ID: CIU201000000230i (4th Quarter 2020)

⁵ Bureau of Labor Statistics, Series Report ID: wpu0543 and wpu0573 (December 2020) (Preliminary)

⁶ Nuclear Regulatory Commission: NUREG-1307 Revision 18, Table 2-1 (2021)

Enclosure 7

CNRO2021-00004

**ENOI Status of Decommissioning Funding – Big Rock Point
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

ENOI Status of Decommissioning Funding – Big Rock Point
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)

Plant Name:	Big Rock Point ISFSI	
1. Amount of decommissioning funds required from most recent estimate (2020\$).	\$2.7 million	[Note 1]
2. Decommissioning Funding Assurance Method.	Parent Guarantee (\$5 million)	
3. A schedule of the annual amounts remaining to be collected	None	
4. Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections	Escalation rate: 3%	Rate of earnings: n/a
5. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v)	None	
6. Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report	None	
7. Any material changes to trust agreements	None	

Note 1: From Entergy's Decommissioning Funding Plans (10 CFR 72.30) dated December 17, 2018 (Accession No. ML18351A478), escalated at 3% per annum to account for inflation.

Enclosure 8

CNRO2021-00004

**ENOI IP1 DTF Balance Based on Decommissioning Funding Assurance Plan
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

**ENOI IP1 DTF Balance Based on Decommissioning Funding Assurance Plan
For Year Ending December 31, 2020 - 10 CFR 50.75(f)(1)**

On October 23, 2008, Entergy Nuclear Indian Point 2, LLC (ENIP2) submitted a preliminary decommissioning cost analysis to the NRC in conjunction with its spent fuel management plan under 10 CFR 50.75(f)(3) and 10 CFR 50.54(bb) (Accession No. ML083040378, as supplemented by ENIP2's reply to RAIs on July 15, 2009 (Accession No. ML092050204)). The preliminary decommissioning cost analysis contained separate site-specific decommissioning cost estimates for Indian Point 1 and Indian Point 2. The estimates were subsequently found to be reasonable by the NRC on March 17, 2010 (Accession No. ML100280544).

Pursuant to Regulatory Guide 1.159, Revision 2, adjustment to the site-specific cost estimates should be made at least once a year for the effects of inflation. Adjustment to site-specific cost estimates for the effects of technological and status changes should be made according to the amount of change experienced, as appropriate, but in no event, less than once every 5 years. As such, ENIP2 has updated the aforementioned estimates consistent with the requirements of Regulatory Guide 1.159, Revision 2.

ENIP2 has determined that use of a SAFSTOR analysis shows that there is presently reasonable assurance that adequate funds will be available for the decommissioning process in compliance with NRC decommissioning funding assurance rules.

Pursuant to 10 CFR 50.75(e)(1)(i), "A licensee that has prepaid funds based on a site-specific estimate under § 50.75(b)(1) of this section may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate." ENIP2 understands that a facility-specific analysis may be used for demonstrating the adequacy of decommissioning funds, provided that "the NRC-required cost estimate for decommissioning costs as defined in 10 CFR 50.2 is equal to or greater than the amount stated in the formulas in 10 CFR 50.75(c)(1) and (2) as the basis for justifying a higher than minimum funding level." (Regulatory Guide 1.159 Rev. 2, Section 1.1.1) ENIP2 also understands that NRC should be provided the analysis, and that the analysis should include data for each year of the analysis.

The updated Indian Point 1 site-specific decommissioning cost estimate is based on a period of safe storage that is specifically described in the estimate, namely storage until 2073, at which time the plant decommissioning will be completed, and the site released for alternative use without restriction. Table 8-1 below provides the annual license termination costs computed in the updated estimate. These costs to date have been funded by operations, and not by the decommissioning fund. The decommissioning trust fund (DTF) ending balance is escalated each year by the 2% real growth figure allowed pursuant to 10 CFR 50.75(e)(1)(i).

Table 8-1		
NRC License Termination Cost (\$ millions)		
	2020 \$ Unit 1 Radiological	Ending DTF Balance
2021	1.065	642.809
2022	4.259	651.405
2023	4.259	660.174
2024	4.271	669.106
2025	4.259	678.229
2026	4.259	687.534
2027	4.259	697.025
2028	4.271	706.695
2029	4.259	716.569
2030	4.259	726.641
2031	4.259	736.914
2032	4.271	747.381
2033	4.259	758.070
2034	4.259	768.971
2035	4.259	780.091
2036	4.271	791.422
2037	4.259	802.991
2038	4.259	814.791
2039	4.259	826.828
2040	4.271	839.093
2041	4.259	851.616
2042	4.259	864.388
2043	4.259	877.417
2044	4.271	890.694
2045	4.259	904.248
2046	4.259	918.074
2047	4.259	932.176
2048	4.271	946.548
2049	4.259	961.220
2050	4.259	976.185
2051	4.259	991.449
2052	4.271	1,007.007
2053	4.259	1,022.887
2054	4.259	1,039.086
2055	4.259	1,055.608
2056	4.271	1,072.449

Table 8-1		
NRC License Termination Cost (\$ millions)		
	2020 \$ Unit 1 Radiological	Ending DTF Balance
2057	4.259	1,089.638
2058	4.259	1,107.172
2059	4.259	1,125.056
2060	4.271	1,143.286
2061	4.259	1,161.892
2062	4.259	1,180.870
2063	4.259	1,200.228
2064	4.271	1,219.962
2065	31.333	1,213.028
2066	68.725	1,168.564
2067	115.792	1,076.143
2068	124.361	973.305
2069	17.988	974.783
2070	18.194	976.085
2071	18.194	977.412
2072	18.244	978.716
2073	8.973	989.318
Total	606.154	

As can be seen from the information provided in Table 8-1, the required funding for SAFSTOR decommissioning, \$606.15 million, is greater than the NRC formula amount per 10 CFR 50.75(b) and (c) of \$438.88 million, therefore, the site-specific analysis complies with the requirement from Regulatory Guide 1.159 section 1.1.1 previously discussed. The foregoing SAFSTOR analysis shows that when the December 31, 2020 DTF balance is escalated at the allowable rate and compared against the annual figures for the SAFSTOR period, that an approximately \$989 million surplus exists at the end of the decommissioning project. The present value of this surplus is approximately \$346 million in 2020 dollars ($\$989 \text{ million} / (1.02)^{(2073-2020)}$). This surplus is sufficient to cover the spent fuel management costs for Indian Point 1 as reflected in Reference 1, Enclosure 1, of approximately \$56 million, as well as ISFSI decommissioning costs shown in Enclosure 1 from this filing, if not paid for by spent fuel litigation proceeds. Accordingly, ENIP2 concludes that no further action is required at this time to demonstrate adequate funding assurance for decommissioning Indian Point 1.

Reference 1: Letter, Status of Funding for Managing Irradiated Fuel for Year Ending December 31, 2020 – 10 CFR 50.82(a)(8)(vii), CNRO2021-00007, filed March 25, 2021.

Enclosure 9

CNRO2021-00004

ENOI Minimum Financial Assurance Calculation Worksheets

ENOI Minimum Financial Assurance Calculation Worksheets

Plant name: Indian Point Energy Center, Unit 1

Year of Biennial: Month 12 Day 31 Year 2020
Termination of Operation: 9 28 2013

	MWth	1986\$	ECl	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	615	\$85,560,000	144.0	2.16	0.65	3.11	2.038	2.559	0.13	2.26	0.22	12.793

NRC Minimum: \$438,884,739 **Site Specific:** \$606,154,000 From Table 8-1

Licensee:	% Owned:	Amount of NRC Minimum/Site Specific:	Amount in Trust Fund:
Entergy	100.00%	\$606,154,000	\$631,248,474

Note: See Enclosure 8 for adequacy of the trust fund.

ENOI Minimum Financial Assurance Calculation Worksheets

Plant Name: Indian Point Entergy Center, Unit 2

Year of Biennial: Month 12 Day 31 Year 2020
Termination of Operation: 4 30 2020

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	3216	\$103,300,800	144.0	2.16	0.65	3.11	2.038	2.559	0.13	2.26	0.22	12.793

NRC Minimum: \$529,887,151 **Site Specific:**

Licensee:	% Owned:	Amount of NRC Minimum/Site Specific:	Amount in Trust Fund:
Entergy	100.00%	\$529,887,151	\$793,729,179

**Step 1:
Earnings Credit:**

Trust Fund Balance:	Real Rate of Return per year	Years Left in License	Total Real Rate of	Total Earnings:	
\$793,729,179	2%	0.00	1.00000	\$793,729,179	Total Earnings = Trust Fund balance x (1+RRR)^Years left in license

Step 2:

Accumulation:

Value of Annuity per year	Real Rate of Return per year	Years of Annuity:	Total Annuity:
\$0	2%	0	\$0

Step 3:

Decom Period:

Total Earnings:	Real Rate of Return per year	Decom Period:	Total Real Rate of	Total Earnings for Decom:	
\$793,729,179	2%	7	0.14869	\$59,008,076	Total Earnings for Decom = (1/2) x Total Earnings x [(1+RRR)^Decom period - 1]

Total of Steps 1 - 3:	Total = Total Earnings + Total Earnings for Decom
\$852,737,256	

Excess (Shortfall)	\$ 322,850,105	to NRC minimum
	\$ (8,970,794)	Less ISFSI
	\$ -	Parent Co Guaranty
	\$ 313,879,311	Total Excess Financial Assurance

ENOI Minimum Financial Assurance Calculation Worksheets

Plant name: Indian Point Energy Center, Unit 3

Year of Biennial: Month 12 Day 31 Year 2020
Termination of Operation: 4 30 2021

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	3216	\$103,300,800	144.0	2.16	0.65	3.11	2.038	2.559	0.13	2.26	0.22	12.793

NRC Minimum: \$529,887,151 **Site Specific:**

Licensee:	% Owned:	Amount of NRC Minimum/Site Specific:	Amount in Trust Fund:
Entergy	100.00%	\$529,887,151	\$990,708,315

**Step 1:
Earnings Credit:**

Trust Fund Balance:	Real Rate of Return per year	Years Left in License	Total Real Rate of	Total Earnings:	
\$990,708,315	2%	0.33	1.00657	\$997,215,384	Total Earnings = Trust Fund balance x (1+RRR)^Years left in license

Step 2:

Accumulation:

Value of Annuity per year	Real Rate of Return per year	Years of Annuity:	Total Annuity:
\$0	2%	0	\$0

Step 3:

Decom Period:

Total Earnings:	Real Rate of Return per year	Decom Period:	Total Real Rate of	Total Earnings for Decom:	
\$997,215,384	2%	7	0.14869	\$74,135,818	Total Earnings for Decom = (1/2) x Total Earnings x [(1+RRR)^Decom period - 1]

Total of Steps 1 - 3:	\$1,071,351,201	Total = Total Earnings + Total Earnings for Decom
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Excess (Shortfall)	\$ 541,464,051	to NRC minimum
	\$ (10,764,952)	Less ISFSI
	\$ -	Parent Co Guaranty
	\$ 530,699,098	Total Excess Financial Assurance

ENOI Minimum Financial Assurance Calculation Worksheets

Plant name: Palisades Nuclear Plant

Year of Biennial: Month 12 Day 31 Year 2020
Termination of Operation: 5 31 2022

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	2565	\$97,572,000	139.1	2.08	0.65	2.89	2.038	2.559	0.13	2.26	0.22	12.793

NRC Minimum: \$486,730,814 **Site Specific:**

Licensee:	% Owned:	Amount of NRC Minimum/Site Specific:	Amount in Trust Fund:
Entergy	100.00%	\$486,730,814	\$553,835,941

**Step 1:
Earnings Credit:**

Trust Fund Balance:	Real Rate of Return per year	Years Left in License	Total Real Rate of	Total Earnings:	
\$553,835,941	2%	1.42	1.02845	\$569,593,090	Total Earnings = Trust Fund balance x (1+RRR)^Years left in license

Step 2:

Accumulation:

Value of Annuity per year	Real Rate of Return per year	Years of Annuity:	Total Annuity:
\$0	2%	0	\$0

**Step 3:
Decom Period:**

Total Earnings:	Real Rate of Return per year	Decom Period:	Total Real Rate of	Total Earnings for Decom:	
\$569,593,090	2%	7	0.14869	\$42,345,164	Total Earnings for Decom = (1/2) x Total Earnings x [(1+RRR)^Decom period - 1]

Total of Steps 1 - 3:	Total = Total Earnings + Total Earnings for Decom
\$611,938,255	

Excess (Shortfall)	\$ 125,207,441	to NRC minimum
	\$ (8,482,956)	Less ISFSI
	\$ -	Parent Co Guaranty
	\$ 116,724,484	Total Excess Financial Assurance