



**Nebraska Public Power District**

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NLS2013068  
June 27, 2013

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

Subject: Response to Nuclear Regulatory Commission Request for Additional Information  
Re: 2013 Decommissioning Funding Status Report  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- References:
1. Email from Lynnea Wilkins, U.S. Nuclear Regulatory Commission, to Edward L. McCutchen, Nebraska Public Power District, dated June 3, 2013, "Request for Additional Information for Cooper Nuclear Station Re: Decommissioning Funding Status Report (TAC No. MF1225)"
  2. Letter from David W. Van Der Kamp, Nebraska Public Power District, to the U.S. Nuclear Regulatory Commission, dated March 21, 2013, "Decommissioning Funding"

Dear Sir or Madam:

The purpose of this letter is for Nebraska Public Power District to submit a response to requests for additional information (RAI) from the Nuclear Regulatory Commission (NRC) (Reference 1). The RAI requested information in support of the NRC's review of the Decommissioning Funding letter for Cooper Nuclear Station (Reference 2).

Responses to the specific RAI questions are provided in the Attachment. There are no regulatory commitments made in this submittal.

Should you have any questions concerning this matter, please contact me at (402) 825-2904.

Sincerely,

David W. Van Der Kamp  
Licensing Manager

A001  
NRR

NLS2013068

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Attachment: Response to Nuclear Regulatory Commission Request for Additional Information  
Re: 2013 Decommissioning Funding Status Report

cc: Regional Administrator w/ attachment  
USNRC - Region IV

Cooper Project Manager w/ attachment  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/ attachment  
USNRC - CNS

NPG Distribution w/o attachment

CNS Records w/ attachment

**Attachment**

**Response to Nuclear Regulatory Commission Request for Additional Information Re:  
2013 Decommissioning Funding Status Report  
Cooper Nuclear Station, Docket No. 50-298, DPR-46**

The Nuclear Regulatory Commission (NRC) requests for additional information (RAI) regarding the 2013 Decommissioning Funding Status Report are shown in italics. The Nebraska Public Power District (NPPD) responses to the requests are shown in block font.

*RAI #1: Minimum Decommissioning Funding Assurance Calculation*

*By letter dated March 31 [sic], 2013, NPPD reported an amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c) that is greater than the amount calculated by the NRC staff.*

*According to 10 CFR 50.75(f)(1), the amount provided in the DFS report should be "the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c)."*

*Please provide the labor, energy, and burial factors used in the calculation of the minimum requirement for decommissioning financial assurance.*

**NPPD Response:**

The escalation factors for Labor, Energy, and Waste Burial in NPPD's March 2013 submittal were calculated by applying the methodology reflected in the sample calculations in NUREG-1307, Revision 15, using Bureau of Labor Statistics (BLS) Midwest Regional data for the Fourth Quarter, or December 2012, as appropriate, and as available at the time of filing.

**Indices**

**Labor**

U.S. Department of Labor - Bureau of Labor Statistics Employment Cost Index (ECI)  
Total Compensation Private Industry (Midwest Region)  
Labor Adjustment Factor = Base Adjustment Factor (2005 Base) x Fourth  
Quarter, 2012 ECI/100  
Labor = 2.08 x 115.9/100 = 2.411

(The Sample Labor Adjustment Factor used in NUREG-1307, Revision 15,  
utilized First Quarter 2012 BLS data)

Energy

U.S. Department of Labor - Bureau of Labor Statistics Producer Price Index

Industrial Electric Power

- December, 2012 = 213.0 (p) and January, 1986 = 114.2

Light Fuel Oils

- December, 2012 = 302.6 (p) and January, 1986 = 82.0

At the time of filing the March report, only preliminary data were available for December, 2012 Energy Factors.

Using the sample calculations in NUREG-1307, Revision 15, for guidance, results in the following Energy Factor:

$$\text{Energy} = [(213.0/114.2) \times .54] + [(302.6/82.0) \times .46]$$

$$\text{Energy} = 1.007 + 1.698$$

$$\text{Energy} = 2.705$$

(The sample Energy Adjustment Factor calculation in NUREG-1307, Revision 15, used March 2012 BLS data.)

Waste Burial

NUREG-1307, Revision 15 (most current available data)

Generic Low Level Waste Disposal Site (Combination of Compact-Affiliated and Non-Compact Facility) - Boiling Water Reactor (BWR) = 14.160

The escalation values for Labor, Energy, and Waste Burial are then incorporated into the given formula for the Escalation Factor.

$$\text{Escalation Factor} = (.65 \times \text{Labor} + .13 \times \text{Energy} + .22 \times \text{Waste Burial})$$

$$= .65 \times 2.411 + .13 \times 2.705 + .22 \times 14.160$$

$$= 1.567 + 0.352 + 3.115$$

$$= 5.034$$

Final Decommissioning Funding Calculation, in accordance with 50.75 (BWR):

$$5.034 \times (104 + .009(2419 \text{ MWth}))^1 =$$

$$5.034 \times 125.8 = \$633.277 \text{ million}$$

The amount reported in the NPPD's March 21, 2013, report was \$633.277 million.

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<sup>1</sup> Base formula amount, in accordance with 10 CFR 50.75(c)(1)(ii), for Cooper Nuclear Station (2,419 MW thermal BWR).

RAI #2: Citation for Real Rate of Return

*Within its DFS report, NPPD reported that its assumed annual real rate of return is 2.5 percent. This assumption was approved on June 13, 2008, through a Board of Directors Resolution. According to the licensee, the assumption for a 2.5 percent real rate of return is based on a:*

*3 percent rate of escalation in decommissioning costs, and  
5.5 percent rates of earnings on decommissioning funds post-tax.*

*10 CFR 50.75(f)(1) states in part:*

*the information in [the DFS] report must include [. . .] 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...*

*Please provide the citation (e.g., an Order by the rate-regulatory authority) by the regulatory entity that allows for the assumptions used regarding rates of escalation in decommissioning costs, rate of earnings on decommissioning funds and rates of other factors assumed within the DFS report. If there has been no change to the Board Resolution, dated June 13, 2008, that was submitted in the NPPD July 14, 2011, RAI response, please so state.*

NPPD Response:

There has been no change to the Board Resolution, dated June 13, 2008, that was submitted by NPPD as part of the July 14, 2011, RAI response.

RAI #3: Constant dollars

*Within its DFS report, NPPD included a table of its "Schedule of Future Annual Fund Earnings and Decommissioning Cost Escalation," where the values have been escalated by the District's assumption of a 5.5 rates of earnings on decommissioning funds, and a 3 percent rate of escalation on the funding requirement beginning in 2034. The licensee stated that:*

*[t]he above amounts reflect the current projected annual contributions (including fund earnings) necessary to fully fund the decommissioning trust by the end of the operating license (license expiration January 18, 2034), and taking into account a pro rata credit during the dismantlement period (recognizing both cash expenditures and earnings) over the first seven years after shutdown (see 10 CFR 50.75(e)(1)(ii)).*

*As stated within 10 CFR 50.75(e)(1)(ii):*

*[l]icensees certifying only to the formula amounts . . . can take a pro-rata credit during the dismantlement period (i.e., recognizing both cash expenditures and earnings the first 7 years after shutdown).*

*Please provide all figures included in the "Schedule of Future Annual Fund Earnings and Decommissioning Cost Escalation," table in constant 2012 dollars.*

NPPD Response:

**Schedule of Future Annual Fund Earnings and Decommissioning Cost Escalation  
(Constant 2012 dollars)**

| <b>Year</b> | <b>Beginning Balance</b> | <b>Funding Contribution</b> | <b>Funding Requirement*<br/>Year-Beginning</b> | <b>Fund Interest</b> | <b>Ending Balance</b> | <b>NRC<br/>Minimum Requirement</b> |
|-------------|--------------------------|-----------------------------|--|----------------------|-----------------------|------------------------------------|
| 2013        | \$527,537,606            | -                           |  | \$29,014,568         | \$556,552,174         | \$633,277,000                      |
| 2014        | \$540,341,917            | -                           |  | \$29,718,805         | \$570,060,722         | \$633,277,000                      |
| 2015        | \$553,457,012            | -                           |  | \$30,440,136         | \$583,897,147         | \$633,277,000                      |
| 2016        | \$566,890,434            | -                           |  | \$31,178,974         | \$598,069,408         | \$633,277,000                      |
| 2017        | \$580,649,911            | -                           |  | \$31,935,745         | \$612,585,656         | \$633,277,000                      |
| 2018        | \$594,743,355            | -                           |  | \$32,710,885         | \$627,454,240         | \$633,277,000                      |
| 2019        | \$609,178,874            | -                           |  | \$33,504,838         | \$642,683,712         | \$633,277,000                      |
| 2020        | \$623,964,769            | -                           |  | \$34,318,062         | \$658,282,831         | \$633,277,000                      |
| 2021        | \$639,109,545            | -                           |  | \$35,151,025         | \$674,260,570         | \$633,277,000                      |
| 2022        | \$654,621,912            | -                           |  | \$36,004,205         | \$690,626,117         | \$633,277,000                      |
| 2023        | \$670,510,794            | -                           |  | \$36,878,094         | \$707,388,887         | \$633,277,000                      |
| 2024        | \$686,785,327            | -                           |  | \$37,773,193         | \$724,558,520         | \$633,277,000                      |
| 2025        | \$703,454,874            | -                           |  | \$38,690,018         | \$742,144,892         | \$633,277,000                      |
| 2026        | \$720,529,022            | -                           |  | \$39,629,096         | \$760,158,118         | \$633,277,000                      |
| 2027        | \$738,017,590            | -                           |  | \$40,590,967         | \$778,608,558         | \$633,277,000                      |
| 2028        | \$755,930,638            | -                           |  | \$41,576,185         | \$797,506,823         | \$633,277,000                      |
| 2029        | \$774,278,469            | -                           |  | \$42,585,316         | \$816,863,785         | \$633,277,000                      |
| 2030        | \$793,071,636            | -                           |  | \$43,618,940         | \$836,690,576         | \$633,277,000                      |
| 2031        | \$812,320,948            | -                           |  | \$44,677,652         | \$856,998,600         | \$633,277,000                      |
| 2032        | \$832,037,476            | -                           |  | \$45,762,061         | \$877,799,537         | \$633,277,000                      |
| 2033        | \$852,232,560            | -                           |  | \$46,872,791         | \$899,105,351         | \$633,277,000                      |
| 2034        | \$872,917,816            | -                           | \$90,468,142                                   | \$43,034,732         | \$825,484,406         |                                    |
| 2035        | \$801,441,171            | -                           | \$90,468,143                                   | \$39,103,517         | \$750,076,545         |                                    |
| 2036        | \$728,229,655            | -                           | \$90,468,143                                   | \$35,076,883         | \$672,838,395         |                                    |
| 2037        | \$653,241,160            | -                           | \$90,468,143                                   | \$30,952,516         | \$593,725,533         |                                    |
| 2038        | \$576,432,557            | -                           | \$90,468,143                                   | \$26,728,043         | \$512,692,456         |                                    |
| 2039        | \$497,759,666            | -                           | \$90,468,143                                   | \$22,401,034         | \$429,692,557         |                                    |
| 2040        | \$417,177,240            | -                           | \$90,468,143                                   | \$17,969,000         | \$344,678,097         |                                    |

\* Reflects full funding of decommissioning costs, based on the NRC minimum requirement, assuming immediate dismantlement over the seven years following plant shutdown.