

State of Florida



## Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** June 5, 2014  
**TO:** Carlotta Stauffer, Commission Clerk, Office of Commission Clerk  
**FROM:** Devlin Higgins, Public Utility Analyst III, Division of Economics  
**RE:** 140057-EI - Petition of Duke Energy Florida, Inc. for approval of Nuclear Decommissioning Cost Study.

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Would you be so kind as to add the attached data and document request responses, titled DEF's response to Florida Public Service Commission Staff's Second Data Request (Nos. 1-6) and Request for Documents (No. 1), in the above docket file. Thank you very much.

COMMISSION  
CLERK

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

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In re: Petition of Duke Energy Florida, Inc.  
for approval of Nuclear Decommissioning  
Cost Study

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Docket No. 140057-EI  
Submitted for Filing: July 21, 2014

**DUKE ENERGY FLORIDA, INC.'S NOTICE OF SERVICE**

Duke Energy Florida, Inc. ("DEF") hereby gives notice of service of DEF's Response to the Florida Public Service Commission Staff's Second Data Request (Nos. 1-6) and Request for Documents (No. 1).

Respectfully submitted,

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/s/ Blaise N. Gamba  
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY a true and correct copy of the foregoing has been furnished to counsel and parties of record as indicated below via electronic and U.S. Mail this 21<sup>st</sup> day of July, 2014.

/s/ Blaise N. Gamba  
Attorney

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RE: DOCKET NO. 140057-EI –  
PETITION FOR APPROVAL OF 2014 NUCLEAR DECOMMISSIONING STUDY,  
BY DUKE ENERGY FLORIDA, INC.

DEF'S RESPONSES TO DATA REQUEST 2  
DUE: JULY 21, 2014

Data Requests

1. For the purposes of the following request, please refer to the Site-Specific Decommissioning Cost Estimate for the Crystal River Unit 3 Nuclear Generating Plant (Document No. P23-1680-001, Rev. 0), prepared by TLG Services, Inc., page x of xx. Please provide a copy of information contained in "Building Construction Cost Data," published by R.S. Means, that the Company relied upon for estimating costs presented in Duke's 2014 Decommissioning Study.

**RESPONSE:**

The decommissioning cost estimates prepared by TLG Services rely upon unit factors to generate the costs for the decontamination, removal and the waste packaging of the majority of plant equipment, components and commodities. The unit factor concept was originally presented in the Department of Energy's "Decommissioning Handbook," published in 1980, and subsequently in greater detail in a report developed for the Atomic Industrial Forum (now NEI) in 1986 ("Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036). While these early factors have been updated and augmented over time, the unit factor method still provides a demonstrable basis for establishing reliable cost estimates.

Unit factors are based upon typical productivity rates for a particular type of activity and/or commodity. Productivity can be adjusted by applying "work difficulty factors" for the inefficiencies associated with radiological remediation and dismantling and demolition activities. The adjustments are used to reflect the working conditions of a particular facility or for a specific task.

Unit factors are applied against an inventory (components, equipment and commodities) assembled for a particular facility (from a plant data base or from drawing takeoffs) to generate the cost of decontamination, removal and waste packaging. The unit factors are also used to accrue craft hours that can be used to schedule particular tasks or work activities.

Establishing the appropriate set(s) of unit factors for a particular facility or location requires two major inputs; labor costs and equipment and material prices. Labor costs are typically based on existing site labor agreements. Equipment and material prices

are, for the most part, based upon industry publications such as the "Building Construction Cost Data," published annually by R.S. Means. The R.S. Means publication provides labor costs, equipment costs (purchase, rental, and operating) and unit factors for common construction and demolition activities. The publication also provides City Cost Indexes for the regional adjustment of national prices.

The output file provided with this response in Bates range 14NDS-FPSCDR2-1-000001 through 14NDS-FPSCDR2-1-000629 identifies the average Crystal River labor rates used to construct the unit factors and the work difficulty factors (labor adjustments) associated with this set of factors. The activity descriptions and calculated cost for each factor is then provided for both contaminated components and commodities and non-contaminated components and commodities. Equipment and consumables include footnotes that are listed at the end of the file with the appropriate references. The majority of references are from the R.S. Means ("RSM") electronic data base for which specific line numbers are provided.

2. For the purposes of the following request, please refer to DEF's responses to Staff's First Data request, No. 15(a.). How much in total have DEF's (to include FPC and PEF) customers paid for ultimate disposal of spent nuclear fuel for CR3 per the Nuclear Waste Policy Act of 1982?

**RESPONSE:**

DEF has paid \$159,599,632.23 in nuclear waste fees (Fees) under the Nuclear Waste Policy Act (NWPA) of which \$13,118,132.17 has been reimbursed by the CR3 co-owners. The Fees are based upon actual kilowatt hours generated from nuclear power and are paid to the Department of Energy (DOE) quarterly. DEF's last payment was made on October 31, 2009. This data request refers to DEF's response to Staff's First Data Request, No. 15(a), which provides the status of litigation brought by DEF against the federal government for breach of contract for the failure of DOE to begin accepting spent nuclear in 1998. However, the amount of damages recovered pursuant such litigation is not based upon the amount of Fees paid; rather, the amount of damages is based upon the additional costs DEF has incurred to store spent nuclear fuel on site. Further, damages awards are paid from the United States Judgment Fund. In *Alabama Power Co. v. United States Department of Energy*, 307 F.3d 1300 (11th Cir. 2002), the Court of Appeals for the Eleventh Circuit ruled that the federal government could not use the Fees to pay for any of the damages that the utilities incur as a result of DOE's delay because on-site storage is not one of the uses of the Fees authorized by the NWPA. The Fees continue to be available to pay for the permanent disposal of spent nuclear fuel by DOE.

3. For the purposes of the following request, please refer to DEF's responses to Staff's First Data request, No. 17. Please provide a copy of the five remaining NRC RAIs regarding the CR3 PSDAR. Please also provide a brief statement clarifying whether any specific RAI responses could materially affect the analysis contained in DEF's 2014 Decommissioning Study.

**RESPONSE:**

**DEF's response to the NRC's Post-Shutdown Decommissioning Activities Report (PSDAR) Requests for Additional Information (RAIs) numbers 1-6 is attached in Bates range 14NDS-FPSCDR2-3-000001 through 14NDS-FPSCDR2-3-000008. None of the RAI responses materially change the analysis contained in DEF's 2014 Decommissioning Study. DEF's assumptions remain the same.**

4. For the purposes of the following request, please refer to Florida Public Service Commission (FPSC) Order No. PSC-12-0225-PAA-EI, Page 10, third paragraph, third sentence. Does DEF have any insight as to what costs the "ISFSI capital costs" are being referred to here?

**RESPONSE:**

**The decommissioning study approved in Order No. PSC-12-0225-PAA-EI assumed DEF would construct and use the ISFSI prior to decommissioning since the study assumed an extension of the operating license to 2036 and there would not have been sufficient space in the fuel pool to hold the additional spent fuel over the extended life of the plant. Therefore, the initial cost to engineer, design and construct the ISFSI and the cost to transfer the fuel during operations were not included in that decommissioning study. The capital costs that were included in that study were for the purchase of DSC's and HSM's to hold the remaining fuel at the time of shutdown (2036). Since DEF is now in shutdown, the current decommissioning study excludes the entire capital cost of the ISFSI, including design, engineering, and procurement, because DEF is applying the 2013 Revised and Restated Stipulation and Settlement Agreement treatment to those capital costs.**

5. Over the past few Proposed Agency Action Decommissioning Study reviews (Dockets Nos. 991931-EG, 050078-EI, 100461-EI) the FPSC has addressed issues pertaining to End-of-Life Nuclear Materials and Supplies (EOL M&S) and the Last Core of Nuclear Fuel (Last Core). The appropriate recovery amounts were analyzed as part of the Decommissioning Study review and the proper accounting is addressed during base rate proceedings. However, with CR3 now permanently off-line, and given certain stipulations in Duke's Revised and Restated Stipulation and Settlement Agreement (primarily Paragraph 5), how does the Company intend to address these two (historically worded) issues:

- a. Should the amortization expense associated with the unrecovered value of Materials and Supplies inventories that will exist at CR3 following plant shut down be revised?
- b. Should the amortization expense associated with the cost of the last core of nuclear fuel for CR3 be revised?
- c. Does the Company believe these two issues are relevant, or need to be addressed, in its instant decommissioning docket?

**RESPONSE:**

**These two issues are no longer relevant in the decommissioning docket. They have been resolved in the 2013 Revised and Restated Stipulation and Settlement Agreement. The entire unrecovered balance of CR3, which includes materials and supplies and nuclear fuel inventories, has been included in the CR3 Regulatory Asset and will be recovered from customers according to the terms of that settlement agreement.**

- 6 For the purposes of the following request, please refer to DEF's responses to Staff's First Data request, Nos. 51 and 54. Is staff correct to assume that the balances of \$51 million for EOL M&S and \$249 million for Last Core of Nuclear fuel will not increase? As in, are these amounts (gross of any salvage) considered final? If not, please explain how these two inventory amounts may increase.

**RESPONSE:**

**These amounts are not final. DEF is in the process of salvaging materials and supplies and nuclear fuel inventories. Any salvage proceeds, net of salvage costs and contract termination costs, will serve to reduce these balances which are included in the CR3 regulatory asset and will be recovered pursuant to the 2013 Revised and Restated Stipulation and Settlement Agreement.**

**Request for Documents**

1. Please provide the accounting work papers that support DEF's responses to Staff's First Data request, Nos. 51 and 54.

**RESPONSE:**

**Please see document produced with Bates number 14NDS-FPSCDR2POD-1-000001. This document is attached to DEF's Earnings Surveillance Report on a quarterly basis.**