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Duke Energy Florida, Inc.

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VIA ELECTRONIC FILING

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Petition of Duke Energy Florida, Inc. for Approval to Construct an Independent Spent Fuel Storage Installation and an Accounting Order to Defer Amortization Pending Recovery from the Department of Energy ; Docket No. 140113-EI*

Dear Ms. Stauffer:

Please find enclosed for electronic filing on behalf of Duke Energy Florida, Inc. ("DEF"), DEF'S Response to Staff's First Data Request (Nos. 1-13).

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,

s/Matthew R. Bernier
Matthew R. Bernier
Senior Counsel
Matthew.Bernier@duke-energy.com

MRB/mw
Enclosures

cc: Keino Young, Florida Public Service Commission

**DUKE ENERGY FLORIDA, INC.'S RESPONSES TO
STAFF'S FIRST DATA REQUEST (NOS. 1 - 13)
Docket No. 140113-EI**

1. On page 4 of the petition, second paragraph, DEF states that it “engaged a number of internal experts to analyze the options.” Please provide copies of all studies, reports, or materials received from or provided to such experts, as well as any other documentation of the findings and opinions of any external experts DEF engaged. Also, please provide minutes of any meetings held regarding this matter, vote sheets, and any other materials used in or generated as a result of such meetings.

RESPONSE:

An agenda was developed and utilized for the meeting (see attached). There were no specific studies or reports handed out at the meeting. The meeting was conducted in an open brainstorming format. Data was collected, evaluated, and then formalized into the “Spent Fuel Management Options Analysis Report”.

2. Please refer to Delowery testimony, Exhibit No. MRD-1, page 3 of 51, last paragraph. The witness states that dismantlement of the spent fuel pool prior to the removal of all spent fuel from the site would adversely impact DEF’s ability to remediate dry storage problems and to repackage fuel onsite for transportation, and that in order to mitigate these risks DEF plans to “maintain the ability to recover the functionality of the spent fuel pool (or other approved contingency) until all fuel is removed from the site.”
 - a) Please explain in detail how the functionality of the spent fuel pool will be maintained, and provide copies of all evaluations, reports, studies, and similar examples of how such functionality could be accomplished.

RESPONSE:

DEF will maintain the spent fuel pool and crane structures so that the ability to recover the functionality of the spent fuel pool will be feasible. Once the ISFSI has been constructed and the spent fuel transferred to dry cask storage, the spent fuel pool will be drained, readied for long-term dormancy, and maintained in a recoverable condition.

3. Please refer to Exhibit No. MRD-1, page 2 of 51. The third paragraph states “In addition, a new single failure-proof fuel handling crane was purchased...” Please provide detailed information regarding the crane, including cost information.
 - a) Will the crane be used for any purpose other than transferring fuel from the spent fuel pool to the dry storage configuration?
 - b) What is the cost for the upgrade to the crane?

RESPONSE:

DEF contracted with Konecranes for design, supply of materials and equipment, fabrication, on-site construction, testing, inspection, shipping, documentation, licensing, training, and analyses needed to provide a complete Type 1, Single Failure Proof 130-ton top running bridge trolley and crane, along with a 15-ton single failure proof auxiliary hoist.

The crane shall be constructed and tested in accordance with the Type 1, "single failure proof" requirements of NUREG 0612, NUREG 055, and ASME NOG-1 and will be reviewed by the Nuclear Regulatory Commission.

- a) Yes, this crane will be utilized for SAFSTOR 1 activities such as the removal and re-installation of the equipment hatch covers and for hoisting materials and equipment up to the spent fuel floor from the loading bay.
 - b) The cost for the fabrication, installation, and testing of the crane and necessary rail repair is approximately \$4.8M. In addition, structural upgrades are required for the Auxiliary Building in order to support the use of this crane. These costs are approximately \$25M and include adding vertical brace stiffeners, vertical braces, base plates, beam end connections, crane bracket modifications, purlin bolts, horizontal braces, upper and lower moment connections, crane girder angles, and crane girder clips. These modifications are required for the support structure for the loads associated with the upgraded crane.
4. Exhibit MRD-1, at pages 26 and 32, contains a chart entitled "Cumulative NPV Dry Storage vs. Wet Storage." Please explain the reason(s) that, for the three-year period from 2015 to 2018, there appears to be no incremental costs for the wet storage option.

RESPONSE:

There is no incremental cost difference due to the spent fuel pool being required during this time period for both options.

5. DEF's petition lists the following three options for spent fuel storage: dry storage, wet storage, offsite storage.
- a) What are the costs given for the various plans incremental to the wet storage option?
 - b) What are the costs for the various storage options incremental to keeping the spent fuel in its present location?

RESPONSE:

- a) Offsite storage was determined to not be a viable option due to no off site location being available. For dry storage the associated costs are documented in the “Spent Fuel Storage Decision Crystal River Nuclear Plant Initial Business Case”.
- b) The costs associated with the storage options are documented in the “Spent Fuel Storage Decision Crystal River Nuclear Plant Initial Business Case”.

6. What is the cost of maintaining the spent fuel pool (wet storage) until it is either no longer possible to do so, or until the litigation with DOE is resolved?

RESPONSE:

In DEF’s analysis resulting in the selection of dry cask storage as the most cost-effective storage option, DEF evaluated the costs of dry cask storage versus the costs of maintaining the spent fuel in wet storage. The results of that analysis are presented in the testimony and exhibits of Mike Delowery and discussed in DEF’s petition.

Once the ISFSI has been constructed and the spent fuel transferred to dry cask storage, the spent fuel pool will be drained, readied for long-term dormancy, and maintained in a recoverable condition until all spent fuel has been removed from the site (estimated date of 2036). There are no specific incremental estimated costs associated with maintaining the spent fuel pool in a recoverable manner. This is due to the fact that the spent fuel pool will be part of the overall plant structures being maintained under the SAFSTOR dormancy program. These costs are incorporated in the Site Specific Decommissioning Cost Estimate.

7. Has the plan chosen for dry storage been previously approved and/or implemented by any other entity in the US? If so, by whom was it approved and by whom was it implemented and where?

RESPONSE:

Yes, the first dry storage installation in the United States was licensed by the Nuclear Regulatory Commission (NRC) in 1986 at the Surry Nuclear Power Plant in Virginia. There are approximately 71 NRC licensed facilities. Duke Energy has NRC licensed facilities at Brunswick, Catawba, McGuire, Oconee, and Robinson. Other Florida sites include St. Lucie and Turkey Point.

8. Can the unused fuel be sold or transferred for use elsewhere, in order to offset the cost of long-term storage of the spent fuel? Please explain the reason(s) unused fuel must be stored as if it were spent fuel.

RESPONSE:

DEF does not plan to store unused fuel as part of this ISFSI project. DEF has sent out a Request for Proposal for the unused fuel at CR3. DEF plans to sell these assemblies and any funds received would be a credit against the CR 3 Regulatory Asset account.

9. Please state whether onsite dry storage is permanent. How long can the spent fuel remain in the dry storage condition chosen by DEF?

RESPONSE:

Onsite dry storage in an ISFSI is not considered permanent storage. 10 CFR Part 72.42 Duration of license; renewal states:

- (a) Each license issued under this part must be for a fixed period of time to be specified in the license. The license term for an ISFSI must not exceed 40 years from the date of issuance. The license term for a Monitored Retrievable Storage Installation (MSR) must not exceed 40 years from the date of issuance. Licenses for either type of installation may be renewed by the Commission at the expiration of the license term upon application by the licensee for a period not to exceed 40 years and under the requirements of this rule.

DEF is also making the assumption that DOE will have picked up all the fuel at CR 3 by 2036.

10. Refer to Exhibit No. MRD-1, page 6 of 51. Regarding the differing professional opinion (DPO) of Steve Nesbit, at page 4 of 51 of the Exhibit, DEF states that the “concerns identified in the DPO have been addressed...” Please provide detailed information regarding how these concerns have been addressed and ostensibly eliminated. Also, how long has Mr. Nesbit been employed by DEF? Why did his assessment not change the outcome of the selection process?

RESPONSE:

With respect to the resolution of the specific concerns raised in the Differing Professional Opinion, DEF resolved the concern to “resolve key uncertainties to the extent practical” by refining the cost estimates for both the wet and dry storage options. Specifically, DEF compared the costs estimated for operations and maintenance with other decommissioning sites and against the final CR3 Site-Specific Decommissioning Cost Estimate that was developed by TLG Services, Inc. (internationally recognized consulting resource in the commercial nuclear decommissioning and decontamination industry). The final report was evaluated and it was concluded that the financial evaluation did not require any updating. In addition, to address the concern with not having the fuel pool available should repackaging be required, DEF will maintain the pool and crane structures so as to be able to recover the functionality of the spent fuel pool. DEF will be utilizing NRC approved DSCs that are also being utilized at other utilities. Should repackaging of DSCs be required, this would be an industry issue and would not be limited to just CR3.

DEF employs many subject matter experts from diverse backgrounds to evaluate and make decisions such as the one documented in Exhibit No. MRD-1. This allows for a robust and thorough dialogue to ensure that all opinions and information have been considered when making complex decisions. DEF management engaged with several subject matter experts and refined its analysis to reflect the input of those experts. The Differing Professional Opinion in the analysis is provided to document a differing opinion to the overall team's recommendation. This mechanism allows employees to express their opinions in good faith and informs management to consider varying inputs prior to making a final decision. This is not uncommon within the nuclear industry and it is promoted to support a culture of transparency. However, as explained above, the remainder of the team believed that the issues raised in the Differing Professional Opinion were appropriately addressed, and the dry storage option remained the most cost-effective. Additional delay in making this decision would result in higher long term operations and maintenance costs due to the need to maintain spent fuel pool cooling equipment plus higher expected security costs that are required due to the fuel still being in the pool. Also, since the February 2013 decision to decommission CR3, no better information has been presented that would impact this decision.

Mr. Nesbit has been employed by the Company for 32 years.

11. Please provide the minutes of any meetings held on this matter, as well as copies of vote sheets and any materials provided in or generated as a result of such meetings.

RESPONSE:

Please see response to Data Request number 10.

For the following questions, please refer to Exhibit No. (MJO-2).

12. How was the \$18.1 million amount for unrecovered AFUDC determined? In your response, please include all calculations for this amount, and provide the reason for the accrual period chosen.

RESPONSE:

The CR3 regulatory asset (both the ISFSI portion and the portion subject to cap) is accruing AFUDC consistent with the 2013 Revised and Restated Stipulation and Settlement Agreement (RRSSA), Exhibit 10, line 17 (also shown in the Direct Testimony of Marcia J. Olivier, Exhibit MJO-1). The \$18.1 million AFUDC amount, shown in Exhibit MJO-2, line 5 is a hypothetical estimate for illustration purposes only of the cumulative AFUDC on the ISFSI portion of the CR3 regulatory asset for the period 2013-2016. Paragraph 5e in the RRSSA states that DEF will begin recovering the CR3 regulatory asset; "Effective the earlier of the first billing cycle for January 2017 or the expiration of the Levy Nuclear Project ("LNP") cost recovery charge..."

The \$18.1 million in Exhibit MJO-2, line 5 is labeled as "Unrecovered AFUDC" because AFUDC cannot be recovered through lawsuits against the DOE. Therefore, the actual

accumulated AFUDC will remain in the CR3 regulatory asset as “Unrecovered AFUDC” to be recovered consistent with DEF’s petition filed in this docket. As of March, 2014, DEF has accrued \$3 million of AFUDC on the ISFSI construction dollars spent to date. This amount is reported on Schedule 6 attached to DEF’s March 2014 Earnings Surveillance Report. AFUDC will continue to be recorded monthly based on the balance of the CR3 regulatory asset multiplied by 6% divided by 12 months, as shown in RRSSA, Exhibit 10, line 17, and will continue to be reported quarterly on Schedule 6 attached to DEF’s Earnings Surveillance Reports.

13. Does the settlement amount of \$125.5 million include any litigation costs associated with DEF’s action against the U.S. Department of Energy (DOE)?

RESPONSE:

No, a simplifying assumption was made in the hypothetical example for illustration purposes only in Exhibit MJO-2 that all dollars spent, excluding AFUDC, on the ISFSI construction project would be recovered from the DOE. The cost of litigation as well as any amounts not recovered from the DOE would remain in the CR3 regulatory asset to be recovered consistent with DEF’s petition in this docket.



ISFSI Decision (K-T like) Analysis Review

5/13/13 – 5/14/13

Location: SAB War Room, CR3
Meeting Lead: Ray Allen
Safety/HU: Volunteer
Recorder: Annemarie Hooper

Attendees

Ray Allen, Magdy Bishara, Jimmy Glenn, Kristin Guenther, Patricia Haines, Kevin Houston, David Mayes, Craig Miller, Rounette Nader, Steve Nesbit, Mary Shipley, Franklin Verbos, Gary Walden, Ted Williams, Ken Wilson, Keith Henshaw

Monday, 5/13/13

11:30 a.m. – 12:00 p.m.	<i>(Lunch)</i>
12:00 p.m. – 12:15 p.m.	Welcome/Safety/HU - Fleet Safety Message / HU Theme Focus
12:15 p.m. – 1:15 p.m.	Criterion 1 – Safety - Fuel Damage Dose, Construction Accident
1:15 p.m. – 2:15 p.m.	Criterion 2 – Regulatory Risk - NRC Approval, FPSC Approval, FDOT Approval
2:15 p.m. – 2:30 p.m.	<i>(Break)</i>
2:30: p.m. – 4:00 p.m.	Criterion 3 - Station Benefits - Engineering, Operations, Maintenance

Tuesday, 5/14/13

8:00 a.m. – 8:15 a.m.	Welcome/Safety/HU - Fleet Safety Message / HU Theme Focus
8:15 a.m. – 9:15 a.m.	Criterion 4 – Cost - NPV / Project Impact
9:15 a.m. – 9:30 a.m.	<i>(Break)</i>
9:30 a.m. – 10:30 a.m.	Criterion 5 – Schedule - Duration to Implement
10:30 a.m. – 11:30 a.m.	Summary and Conclusion
11:30 a.m. – 12:00 p.m.	<i>(Lunch)</i>
Afternoon	Stakeholder Discussions

Meeting Effectiveness

Atmosphere	Comfortable, informal, relaxed, group participation, sincere display of positive emotions and enthusiasm
Communication	Open, honest, candid, active listening, no side conversations, or interruptions
Conflict Management	Problems addressed openly and directly, listened to all views, objectively clarified issues and sought solutions
Mutual Respect/Trust	Addressed people with respect/courtesy, praised contribution/achievement, showed interest in team success
Teamwork	Authority for decisions shared, collected input/opinions from everyone, worked diligently to reach consensus
Meeting Management	Agenda prepared, attendees on time, appropriate audience, focused, items discussed in detail, productive, action items assigned, meeting length appropriate, adjourned on time



ISFSI k-T Analysis Review Team members

Jay Verbos	Overall Lead from Corporate Office
Gary Walden	ISFSI PM at ONS, (transportation issues)
Kevin Houston	Fuel Supply Manager
Mary Shipley	Investment Engineering
Roulette Nader	Decommissioning Funding SME
Steve Nesbit	Director, Nuclear Policy and Support
Jimmy Glenn	Manager of Fuel Management and Design
Ted Williams	CR3 Design Engineering Manager
David Mayes	CR3 Major Projects Engineer
Patti Haines	CR3 Major Projects Engineer
Ken Wilson	CR3 Licensing
Craig Miller	CR3 Design Engineer
Magdy Bishara	CR3 Design Engineering Manager
Ray Allen	CR3 Design Engineering Supervisor
Keith Henshaw	CR3 Lead Project Engineer
Annemarie Hooper	CR3 Administrative Assistant
Bill Flanagan	k-T discussion facilitator