

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**In re: Nuclear Cost Recovery
Clause**

DOCKET NO. 160009-EI
Submitted for filing: March 1, 2016

REDACTED

**DIRECT TESTIMONY OF CHRISTOPHER M. FALLON
IN SUPPORT OF ACTUAL COSTS**

**ON BEHALF OF
DUKE ENERGY FLORIDA, LLC**

IN RE: NUCLEAR COST RECOVERY CLAUSE

BY DUKE ENERGY FLORIDA, LLC

FPSC DOCKET NO. 160009-EI

DIRECT TESTIMONY OF CHRISTOPHER M. FALLON

1 **I. INTRODUCTION AND QUALIFICATIONS.**

2 **Q. Please state your name and business address.**

3 A. My name is Christopher M. Fallon. My business address is 526 South Church
4 Street, Charlotte, North Carolina 28202.

5
6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by Duke Energy Corporation (“Duke Energy”) as Vice President
8 of Nuclear Development. Duke Energy Florida, LLC (“DEF” or the “Company”)
9 is a fully owned subsidiary of Duke Energy.

10
11 **Q. Please summarize your educational background and work experience.**

12 A. I received Bachelor of Science and Master of Science degrees in electrical
13 engineering from Clemson University in 1989 and 1990, respectively. I am also a
14 licensed professional engineer in North Carolina. I began my career with Duke
15 Energy’s predecessor company Duke Power in 1992 as a power quality engineer.
16 After a series of promotions, I was named manager of transmission planning and
17 engineering studies in 1999, general manager of asset strategy and planning in
18 2006, and the managing director of strategy and business planning for Duke
19 Energy starting in 2007. In this role, I had responsibility for developing the

1 strategy for the company's operating utilities, commercial support for operating
2 utility activities such as acquisition of generation assets and overseeing Requests
3 for Proposals for renewable generation resources, and major project/initiative
4 business case analysis. In 2009, I was named Vice President, Office of Nuclear
5 Development for Duke Energy. In that role, I was responsible for furthering the
6 development of new nuclear generation in the Carolinas and Midwest. This
7 included identifying and developing nuclear partnership opportunities, as well as
8 integrating and advancing Duke Energy's plans for the proposed Lee Nuclear
9 Station in Cherokee County, South Carolina. I was promoted to my current
10 position on July 1, 2012. As Vice President of Nuclear Development, I am
11 responsible for the Levy nuclear power plant project ("LNP").

12
13 **II. PURPOSE AND SUMMARY OF TESTIMONY.**

14 **Q. What is the purpose of your direct testimony?**

15 A. My direct testimony presents and supports the LNP actual costs incurred in 2015.
16 These costs were incurred for the LNP wind-down following DEF's decision not
17 to proceed with construction of the LNP in summer 2013 and DEF's termination
18 of the Engineering, Procurement, and Construction ("EPC") Agreement with
19 Westinghouse Electric Company LLC ("WEC") and Stone & Webster, Inc.
20 ("S&W") (together the "Consortium") in January 2014. DEF is presenting the
21 Company's LNP wind-down costs incurred from January 2015 through December
22 2015, and seeking a prudence determination for DEF's 2015 LNP project
23 management, contracting, and cost controls. The Company relies on the
24 information included in this testimony in the conduct of its affairs.

1 Pursuant to Rule 25-6.0423(7), F.A.C., and Florida Public Service Commission
2 (“PSC” or the “Commission”) Order No. PSC-13-0598-FOF-EI, approving the
3 Revised and Restated Stipulation and Settlement Agreement (“2013 Settlement
4 Agreement”), DEF is allowed to recover its prudent site selection costs, pre-
5 construction costs, and construction costs for the LNP. However, pursuant to the
6 stipulation approved by the Commission in Order No. PSC-15-0521-FOF-EI,
7 DEF has agreed to include all known LNP costs and credits in the 2017 True-up
8 filing for consideration and review in the 2017 NCRC docket for use in setting the
9 2018 NCRC factor. As such, DEF is presenting its 2015 LNP costs for
10 informational purposes only and is not seeking a prudence determination in this
11 docket.

12
13 **Q. Do you have any exhibits to your testimony?**

14 **A.** Yes, I am sponsoring the following exhibits to my testimony:

- 15 • Exhibit No. ____ (CMF-1), the confidential August 4, 2015 Recommendation
16 for disposition of the Levy Nuclear Plant Variable Frequency Drives.

17 I will also be co-sponsoring the cost portions of the 2015 Detail Schedule, and
18 sponsor Appendices D and E, which are included as part of Exhibit No. ____
19 (TGF-1) to Mr. Thomas G. Foster’s direct testimony in this proceeding.

20 Appendix D is a description of the major tasks and reflects expenditure variance
21 explanations. Appendix E is a list of the contracts executed in excess of \$1.0
22 million and provides details for those contracts.

23 All of these exhibits, schedules, and appendices are true and accurate.

24

1 **Q. What is the current status of the LNP?**

2 A. The Company elected not to complete construction of the LNP pursuant to the
3 nuclear cost recovery statute and rule, Section 366.93(6), Florida Statutes, and
4 Rule 25-6.0423(7), F.A.C., as amended, with its execution of the 2013 Settlement
5 Agreement. Subsequently, DEF commenced development of the process to start
6 winding down the LNP in an orderly fashion, which was fully put in place after
7 the Commission voted to approve the 2013 Settlement Agreement. In January
8 2014, because DEF was unable to obtain the LNP Combined Operating License
9 (“COL”) from the Nuclear Regulatory Commission (“NRC”) by January 1, 2014,
10 DEF terminated the EPC Agreement with the Consortium.

11 The LNP wind down process involves the disposition of the LNP Long
12 Lead Equipment (“LLE”) and the resolution of remaining costs under the EPC
13 Agreement with the Consortium. DEF developed and implemented a LLE
14 Disposition Plan and, pursuant to that Plan, DEF has been able to disposition or
15 will soon disposition the LNP LLE.

16 As discussed in my March 2, 2015 testimony, DEF paid S&W its
17 remaining costs after DEF terminated the EPC Agreement in January 2014 and
18 resolved all costs and issues with S&W under the EPC Agreement. DEF
19 attempted to resolve, but was unable to resolve any remaining issues with WEC
20 under the EPC Agreement. WEC demanded substantial additional costs from
21 DEF for terminating the EPC Agreement. These claims, and DEF’s claims
22 against WEC under the EPC Agreement, will be resolved in the lawsuit DEF filed
23 against WEC in March 2014 in the United States District Court for the Western

1 District of North Carolina, currently required to be ready to begin trial in
2 September 2016.

3 The only remaining LNP work is to support obtaining the LNP Combined
4 Operating License (“COL”) from the NRC. Throughout 2015 DEF continued
5 with the work necessary to obtain the LNP COL including environmental
6 permitting work necessary to obtain the Section 404 permit from the United States
7 Army Corps of Engineers (“USACE”), which was received December 28, 2015.
8 DEF, however, is not seeking cost recovery in this proceeding for costs incurred
9 in 2015 to obtain the LNP COL.

10

11 **Q. Please summarize your testimony.**

12 A. DEF prudently incurred necessary wind-down costs for the LNP in 2015, but as
13 discussed above, DEF is not seeking a prudence determination related to those
14 costs at this time. DEF incurred only those contractually committed or necessary
15 costs for the LNP wind-down activities in 2015; DEF appropriately minimized
16 these costs pursuant to the 2013 Settlement Agreement. DEF has prudently
17 managed the LNP in 2015, consistent with merged policies and procedures that
18 implement Duke Energy best practices, that in substance are similar to the project
19 management, contracting and cost control policies and procedures previously
20 audited by the Commission Staff and reviewed and approved by the Commission.

21

22 **III. 2015 LNP WIND-DOWN COSTS.**

23 **Q. What were the total LNP actual 2015 costs?**

1 A. As can be seen in Appendix D of Exhibit No. ___(TGF-1), total actual LNP costs
2 for 2015, excluding the carrying costs on the unrecovered investment balance,
3 were approximately [REDACTED]. These costs represent DEF's prudent project
4 management costs offset by the [REDACTED] received for the sale of certain LNP
5 LLE. **REDACTED**

6
7 **Q. Please describe the LNP wind-down activities and costs.**

8 A. DEF's 2015 LNP wind-down activities involved continued LLE disposition.
9 Costs for these wind-down activities were incurred for the re-purposing of the
10 LNP variable frequency drives (VFDs) for use by DEF at Crystal River Units 4
11 and 5.

12 DEF's LLE disposition objectives in its Disposition Plan are consistent
13 with the 2013 Settlement Agreement. DEF's objectives are to disposition the
14 LNP LLE in a manner that (i) minimizes the financial costs and risks of the LLE
15 disposition to DEF's customers; (ii) minimizes other costs to DEF and its
16 customers; and (iii) evaluates the potential future use of the LNP LLE for other
17 AP1000 power plant projects. This includes minimizing LLE evaluation costs
18 and purchase order or contract termination costs, minimizing the risks of financial
19 loss associated with the LNP LLE, and maximizing the LNP LLE disposition cash
20 value.

21
22 **Q. Please explain DEF's disposition of the VFDs?**

23 A. DEF evaluated various disposition options consistent with DEF's LLE
24 Disposition Plan. DEF previously canvassed Duke Energy affiliates and

1 contacted external utilities through WEC and on its own for any interest in
2 acquiring the completed VFDs. These contacts included utilities with existing or
3 potential AP1000 nuclear power plant projects and the Original Equipment
4 Manufacturer. None of these entities expressed an interest in acquiring the VFDs.
5 DEF also offered the VFDs for sale on RAPID, a utility industry parts sales
6 website, and held a bid event on February 15, 2015 for the VFDs utilizing Power
7 Advocate bidding/sourcing software to further canvas the market. None of these
8 efforts were successful.

9 However, while pursuing external options for dispositioning the VFDs,
10 DEF also continued working to identify an internal transfer or sale option that
11 could benefit DEF's customers. Ultimately, DEF determined that the VFDs
12 could be repurposed for use at Crystal River Units 4 & 5. This option was
13 selected as it presented the best available option for DEF's customers, as
14 explained further in Exhibit No. __ (CMF-1).

15
16 **Q. To summarize, were all of the wind-down costs that the Company incurred**
17 **in 2015 for the LNP reasonable and prudent?**

18 A. Pursuant to the terms of the stipulation approved by the Commission in last year's
19 NCRC docket, DEF will not seek a prudence determination related to these costs
20 until May 1, 2017; the LNP costs discussed herein are provided for informational
21 purposes only. However, the specific costs for the LNP contained in the 2015
22 Detail schedules, which are attached as exhibits to Mr. Foster's testimony, reflect
23 the reasonable and prudent wind-down costs DEF incurred for LNP work in 2015.

1 DEF took reasonable steps in 2015 to minimize the LNP work and wind-down
2 costs.

3

4 **Q. What is the status of DEF's lawsuit with WEC?**

5 A. On February 16, 2016, the court issued an order modifying the case schedule.
6 Discovery is ongoing and is now scheduled to end on June 10, 2016, affirmative
7 and rebuttal expert reports are due April 8, and May 6, respectively, and
8 dispositive motions are due on July 11, 2016. The Court ordered the case to be
9 ready for trial on September 19, 2016.

10

11 **IV. LNP COMBINED OPERATING LICENSE APPLICATION UPDATE.**

12 **Q. Can you summarize the Combined Operating License Application process?**

13 A. Yes. There are three parts to the NRC Combined Operating License Application
14 ("COLA") review process. All three parts must be complete before the NRC will
15 issue a COL. The three parts of the NRC COLA review process are: (1) the
16 environmental review process; (2) the safety review process; and (3) the formal
17 hearing process. DEF also must obtain environmental permits for the LNP COL.

18

19 **Q. What is the status of the LNP NRC COLA review process?**

20 A. The environmental review for the LNP COLA was complete when DEF received
21 the LNP final environmental impact statement ("FEIS") on April 27, 2012. The
22 remaining two parts of the NRC COLA review process for the LNP are
23 incomplete.

1 All site-specific issues for the LNP COLA have been resolved, however
2 the Final Safety Evaluation Report (“FSER”) for the LNP COL has not been
3 issued. The Advanced Safety Evaluation Report (“ASER”) for the LNP COLA
4 was initially completed with no open items, however, significant subsequent
5 design changes due to WEC design errors were identified by WEC that now
6 require revisions to the ASER to incorporate these design changes before NRC
7 review can be finalized. This work must be completed before NRC review and
8 issuance of the FSER for the LNP COL. Resolution of these design changes are
9 now the critical path items to completion of the NRC review and issuance of the
10 LNP COL. DEF currently projects to receive the ASER in March 2016, the FSER
11 in June 2016, and the COL in or around October 2016.

12
13 **Q. What is the status of the formal hearing process for the LNP COLA?**

14 A. One part of the two-part formal hearing process for the LNP COLA was
15 completed in March 2013 when the NRC Atomic Safety Licensing Board
16 (“ASLB”) issued its ruling on the remaining contested contention to the LNP
17 COLA regarding the environmental impacts of dewatering and salt drift as a result
18 of the LNP. Following an evidentiary hearing in October and November 2012,
19 and the submission of Findings of Fact and Conclusions of Law in December
20 2012, the NRC ASLB unanimously resolved all issues in DEF’s favor in March
21 2013. The ASLB concluded that the LNP FEIS complied with all legal and
22 regulatory requirements.

23 The second part of the two-part formal hearing process is the LNP COLA
24 mandatory hearing before the NRC Commissioners. DEF is currently anticipating

1 the mandatory hearing will be held in or around August 2016, but the projection is
2 premised on the receipt of the FSER along the projected timeline discussed above.
3 Any delays in receiving the ASER or FSER will impact this projection as well.
4

5 **Q. What is the status of the environmental permits for the LNP COL?**

6 A. DEF continued its work with the USACE for the Section 404 permit for the Levy
7 site in 2015. The USACE Section 404 permit allows for and regulates the
8 construction of structures in wetlands and regulated waterways. USACE review
9 and finalization of the proposed Wetland Mitigation Plan (“WMP”), which is
10 needed for the Section 404 Permit, was resolved in 2015. Issuance of the Section
11 404 permit for the LNP occurred on December 28, 2015. While this work
12 continued in 2015, the 2015 costs associated with this work are not included in
13 the NCRC.
14

15 **V. PROJECT MANAGEMENT, CONTRACTING, AND COST OVERSIGHT.**

16 **Q. Can you explain the Company’s 2015 LNP project management, contracting,
17 and cost control oversight policies and procedures?**

18 A. Yes. Nuclear Development (“ND”) is responsible for the LNP management. As
19 a result, ND is responsible for the process of implementing best practices and
20 lessons learned for the LNP and other nuclear development projects. ND has
21 implemented or adopted policies and procedures for the management of the LNP
22 that reflect the collective experience, knowledge, and best practices of Duke
23 Energy and the nuclear utility industry.
24

1 **Q. Are the Company's 2015 LNP project management, contracting, and cost**
2 **control oversight policies and procedures reasonable and prudent?**

3 A. Yes, they are. The LNP 2015 project management, contracting, and cost control
4 policies and procedures are substantially the same as the collective policies and
5 procedures that have been vetted in the annual project management audit in this
6 docket and previously approved as prudent by the Commission. *See* Order No.
7 PSC-09-0783-FOF-EI (Nov. 19, 2009); Order No. PSC-11-0095-FOF-EI (Feb. 2,
8 2011); Order No. PSC-11-0547-FOF-EI (Nov. 23, 2011); Order No. PSC-12-
9 0650-FOF-EI (Dec. 11, 2012); Order No. PSC-14-0617-FOF-EI (Oct. 27, 2014);
10 and Order No. PSC-15-0521-FOF-EI (Nov. 5, 2015). We believe, therefore, that
11 the LNP project management policies and procedures are consistent with best
12 practices for capital project management in the industry and continue to be
13 reasonable and prudent.

14
15 **Q. Has DEF implemented a process to ensure that costs related to the LNP COL**
16 **are not included in the NCRC pursuant to the terms of the 2013 Settlement?**

17 A. Yes, from a project team perspective, DEF has always segregated project costs
18 incurred by specific project code. This did not change for 2015 and the project
19 team continued and will continue to charge COL-related labor, NRC fees, vendor
20 invoices and all other COL-related cost items to the applicable COL project
21 codes. The Regulatory Accounting and Regulatory Strategy groups ensure that
22 the COL-related project codes and associated costs incurred in 2014 and beyond
23 are not included in the Company's NCRC Schedules, and thus not presented for

1 nuclear cost recovery. These COL-related costs will, however, continue to be
2 tracked for accounting purposes consistent with the 2013 Settlement Agreement.

3

4 **Q. Does this conclude your testimony?**

5 A. Yes, it does.



MEMORANDUM

Date: August 4, 2015

To: Chris Fallon, Vice President -- Nuclear Development

cc: NDDocumentInbox@duke-energy.com

From: Lawrence Denney, Nuclear Regulated Generation & Commercial Support Manager

Subject: Recommendation for disposition of the Levy Nuclear Plant Variable Frequency Drives

Background

Following the Florida Public Service Commission's approval of the 2013 Revised and Restated Stipulation and Settlement Agreement in November 2013, Duke Energy Florida ("DEF") began disposing of long-lead equipment purchased for the Levy Nuclear Project ("Levy") under DEF's Engineering, Procurement & Construction ("EPC") agreement. One of the components of long-lead equipment remaining to be disposed of is the eight Variable Frequency Drives ("VFDs"). The manufacturing of the VFDs had been completed at the time of the cancellation of the EPC agreement in January, 2014, and they are being stored by Siemens, the manufacturer of the VFDs.

Due to the nature of the contractual arrangements of the EPC agreement with Westinghouse¹ DEF was required to work with Westinghouse to dispose of the long-lead equipment including the VFDs. The history of the relationship is more fully recounted in the January 12, 2015 memo titled "Status Update for Levy Nuclear Plant Long-lead Equipment Disposition". In short, due to challenges working with Westinghouse in selling the long-lead equipment, DEF took title to the VFDs from Westinghouse by assuming the existing purchase order between Westinghouse and Siemens as provided for in the EPC agreement. Then DEF sought sales opportunities for the VFDs itself. DEF chose this direction because the VFDs were completed and likely had the highest potential re-sale value of the remaining long-lead equipment.

Options

The disposition options pursued were:

Option 1: Sell to Westinghouse

Throughout the wind-down process DEF inquired of Westinghouse about its interest in purchasing the VFDs for use on another AP1000 project and about surveying if there was any interest from its existing or future AP1000 customers. Westinghouse initially confirmed and has maintained that it has no interest in purchasing the VFDs and that there is no interest by its AP1000 customers.

¹ The EPC agreement is executed with the "Consortium," which includes Westinghouse Electronic Company ("Westinghouse") and Stone & Webster, a subsidiary of Chicago Bridge & Iron. Under the EPC agreement, the VFDs were purchased by Westinghouse; therefore, DEF was initially working through Westinghouse for the disposition of the VFDs.

Option 2: Sell to external buyer

DEF pursued three separate avenues to locate an external buyer. First, the VFDs were listed on RAPID², and made available for purchase by other utilities. The VFDs were marketed on RAPID in December of 2014 and again in January of 2015. Several leads were received from RAPID and pursued by DEF's Supply Chain group, but no formal offers were made by utilities for purchase of the drives. Next, a bid event was opened on the VFDs in February 2015 and closed in March 2015. The bid event for the VFDs was open to AP1000 utilities, inventory companies, nuclear equipment manufacturers, and other utilities. Again, no offers or bids were received on the VFDs.

Separately, DEF itself offered to sell the VFDs to other AP1000 customers and applicants. The entities solicited included: Florida Power and Light, Southern Company, South Carolina Electric & Gas, and utilities in China. None expressed interest.

Option 3: Sell to Siemens

Contemporaneously, with the activities to sell the VFDs to an external buyer, DEF was in discussions with the Siemens, the manufacturer of the VFDs, on a potential buy-back offer. Siemens offered \$ [REDACTED] each for the VFDs or \$ [REDACTED] in total. Initially their offer expired on April 9, 2015, however DEF requested an extension to allow time to pursue other resale opportunities. Siemens subsequently extended the validity of their offer to the end of 2015 and [REDACTED]

Option 4: Reuse within DEF or at an affiliated Duke Energy Corporation business or utility

In accordance with its LLE Disposition Plan, DEF's Nuclear Development and Supply Chain groups initially canvassed DEF internally and its affiliated entities for a possible internal transfer or reuse option, as this option potentially had the highest cost benefit for DEF customers. No serious interest was initially received. However, while pursuing other disposition options, DEF was able to continue to investigate the possibility of reusing the VFDs either within DEF or at an affiliated Duke Energy Corporation business or utility. Nuclear Development canvassed the internal sources on several occasions and ultimately it was determined that refurbishment and reuse of the VFDs at Crystal River units 4 & 5 was feasible and was economically beneficial to DEF and its customers. The evaluation of the Crystal River units 4 & 5 team estimated an approximately \$ [REDACTED] transfer cost for Crystal River units 4 & 5 by reuse and refurbishment of the Levy VFDs.

Recommendation:

The value of the transfer and reuse and refurbishment of the VFDs at Crystal River units 4 & 5 is significantly greater than the offer received from Siemens. Therefore, Nuclear Development recommends that the Levy VFDs be transferred to Crystal River units 4 & 5.

² RAPID is a virtual inventory system for searching, purchasing and selling power plant components operated by Curtiss-Wright. See <http://rapidpartsmart.com/>.