

Docket No. 170009-EI: Nuclear Cost Recovery Clause.

Duke Energy Florida, LLC.

Levy Units 1 & 2 Construction Project

Witness: **Direct Testimony of Carl Vinson**, Appearing on behalf of
the staff of the Florida Public Service Commission

Date Filed: June 20, 2017

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **COMMISSION STAFF**

3 **DIRECT JOINT TESTIMONY OF**

4 **CARL VINSON**

5 **DOCKET NO. 170009-EI**

6 **June 20, 2017**

7

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

9 A. My name is Carl Vinson. My business address is 2540 Shumard Oak Boulevard,
10 Tallahassee, Florida 32399-0850.

11 **Q. By whom are you employed?**

12 A. I am employed by the Florida Public Service Commission (Commission) as the
13 Supervisor of the Performance Analysis Section within the Office of Auditing and
14 Performance Analysis.

15 **Q. What are your current duties and responsibilities?**

16 A. I direct and oversee performance of audits and investigations of Commission-regulated
17 utilities, focusing on the effectiveness of management and company practices, adherence to
18 company procedures, and the adequacy of internal controls. Each year since 2008, members of
19 my staff and I have conducted audits of Duke Energy Florida, LLC (DEF) project
20 management internal controls for the Levy Nuclear Plant construction and Crystal River 3
21 Nuclear Plant Extended Power Uprate projects. These audits were all performed under my
22 direct supervision.

23 **Q. Please describe your educational and relevant experience.**

24 A. I earned a Bachelor of Science in Finance from Stetson University in 1980. I have
25 worked for the Commission for twenty-seven years conducting operations audits and

1 investigations of regulated utilities. Prior to my employment with the Commission, I worked
2 for five years at Ben Johnson Associates, a consulting firm serving public utility commissions
3 and offices of public counsel across the country.

4 **Q. Have you filed testimony in any other dockets involving electric utilities before**
5 **the Commission?**

6 A. Yes. I filed similar testimony regarding audits of DEF and FPL project management
7 internal controls in Docket Nos. 080009-EI and 090009-EI. I also filed testimony in Docket
8 No. 050045-EI addressing Florida Power & Light Company's vegetation management,
9 lightning protection, and pole inspection processes.

10 **Q. Please describe the purpose of your testimony in this docket.**

11 A. My testimony presents the attached audit report entitled *Review of Duke Energy*
12 *Florida, LLC Project Management Internal Controls for Levy Nuclear Plant* (Exhibit CV-1).
13 This audit is completed each year to assist the Commission in the annual evaluation of nuclear
14 cost recovery filings. The audit report describes key project events and contract activities for
15 the Levy Nuclear Plant project. It also evaluates project management internal controls
16 employed by DEF to close out and disposition remaining project assets.

17 **Q. Please summarize the areas examined by your review.**

18 A. The primary objective of this audit was to assess and evaluate key project
19 developments, along with the organization, management, internal controls, and oversight
20 processes used by DEF.

21 **Q. Are you sponsoring any exhibits?**

22 A. Yes, three exhibits are attached to my testimony. Exhibit CV-1 presents the audit
23 report for the present cost recovery cycle. Exhibits CV-2 and CV-3 present the analogous
24 audit reports previously filed by Commission audit staff in Docket Nos. 150009-EI and
25 160009-EI, respectively. These audit reports are provided for completeness to assist with the

1 disposition of issues the Commission deferred from those prior nuclear cost recovery
2 proceedings. These 2016 and 2015 audit reports were filed as attachments to Commission
3 audit staff witnesses' testimony, and were both prepared under my direction and supervision.

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

5 A. Yes.

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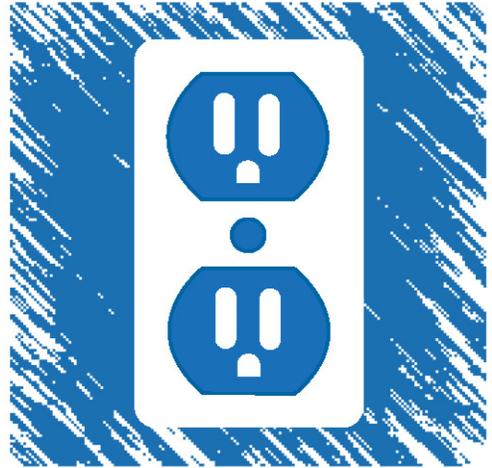
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Review of Duke Energy Florida, LLC Project Management Internal Controls for Levy Nuclear Plant

June 2017

BY AUTHORITY OF
The Florida Public Service Commission
Office of Auditing and Performance Analysis

**Review of
Duke Energy Florida, LLC
Project Management
Internal Controls
for
Levy Nuclear Plant**

R. Lynn Fisher
Government Analyst II
Project Manager

Jerry Hallenstein
Senior Analyst

June 2017

**By Authority of
The State of Florida
Public Service Commission
Office of Auditing and Performance Analysis**

PA-17-01-001

TABLE OF CONTENTS

CHAPTER		Page
1.0	EXECUTIVE SUMMARY	
1.1	Levy Nuclear Project Status at a Glance	1
1.2	Audit Execution.....	1
1.3	Commission Audit Staff Observations.....	3
2.0	LEVY NUCLEAR PROJECT	
2.1	EPC Contract Litigation Status.....	5
2.2	Long Lead Equipment Dispute Resolution and Close-Out Costs.....	5
2.3	Remaining Licensing Activities and Staffing Changes	6
2.4	Audits and Quality Assurance Reviews	7
2.5	Contractor Selection and Management	8

1.0 Executive Summary

1.1 Levy Nuclear Project Status at a Glance

- ◆ Duke Energy Florida, LLC (DEF) received the Combined Operating Licenses (COLs) for Levy Units 1&2 (LNP or Levy) on October 20, 2016.
- ◆ No 2016 LNP COL-related costs are submitted in Docket No.170009-EI for the Nuclear Cost Recovery Clause (NCRC) pursuant to the 2013 stipulation.
- ◆ DEF continued wind-down activities for LNP during 2016, including settlement of remaining obligations under a long-lead equipment (LLE) contract.
- ◆ In December 2016, the U.S. District Court Western District of North Carolina issued a Memorandum of Decision regarding the Engineering, Procurement, and Construction (EPC) contract litigation between DEF and Westinghouse Electric Company. Both parties issued appeals in early 2017. On May 23, 2017, the bankruptcy court lifted the stay but has yet to release the necessary funds for Westinghouse to continue its appeal.
- ◆ In 2017, DEF began what it believes are required Nuclear Regulatory Commission (NRC) post-COL actions to update Levy 1&2 licenses.

1.2 Audit Execution

1.2.1 Purpose and Objectives

This audit addresses project internal controls and management oversight used by DEF in managing the Levy Units 1&2 project during 2016. The objective of this audit is to provide an independent account of project activities and to evaluate internal project controls. Information in this report may be used by the Commission to assess the reasonableness of DEF cost-recovery requests.

Commission audit staff published previous reports in 2008 through 2016, reviewing project management internal controls of DEF's cost-recovery requests. These previous reports are available on the Commission website at www.floridapsc.com.

1.2.2 Scope

The period of this review is January 2016 to May 2017. The internal controls assessed were related to the following key areas of project activity:

- ◆ Planning
- ◆ Management and organization
- ◆ Cost and schedule controls
- ◆ Contractor selection and management
- ◆ Auditing and quality assurance

Comprehensive controls are essential for successful project management. They are ineffective if not actively emphasized by management, embraced by the organization, and subject to oversight and revision. Proper internal controls minimize and enhance risk mitigation and management, and aid efficient reasoned decision making.

Risk must be timely and accurately identified, with adequate safeguards created, vetted, and actively employed to control schedule and cost. Prudent decision making results from effective communication, adherence to clearly defined procedures, and vigilant management oversight.

The primary standard used by Commission audit staff for review of DEF internal controls associated with the Levy Units 1&2 project is the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and *Internal Control - Integrated Framework*. Staff's audit work is performed in compliance with Standards 2000 through 2500. This set of standards was developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Staff's internal control assessments focused on the COSO framework's five key interrelated elements of internal control:

- ◆ Control environment
- ◆ Risk assessment
- ◆ Control activities
- ◆ Information and communication
- ◆ Monitoring

To maximize operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations, all five components must be present and functioning in concert to conclude that internal controls are effective.

1.2.3 Methodology

Initial field data collection for this review occurred during December 2016 through January 2017. Additional data collection, analysis, and report writing were completed during February through May 2017. The information compiled in this report was gathered via staff review of document requests, on-site interviews of key company personnel, and filed testimony within Docket No. 170009-EI.

Specific information requested or reviewed by Commission audit staff includes:

- ◆ Policies and procedures
- ◆ Organizational charts
- ◆ Contract requests for proposal
- ◆ Project Timelines
- ◆ Vendor and contract change orders and updates
- ◆ Internal and external audit reports

1.3 Commission Audit Staff Observations

During 2016, LNP project wind-down activities included pursuit of the COLs for Levy Units 1&2, ongoing EPC contract litigation with Westinghouse, and resolution of long-lead equipment issues. The following observations were noted:

- ◆ Commission audit staff identified no concerns regarding DEF Levy project management activities during 2016.
- ◆ Commission audit staff believes project management oversight and internal controls were adequate to successfully complete 2016 contract and project wind-down activities.
- ◆ Commission audit staff believes DEF's 2016 actions supporting the Levy project wind-down and completion were reasonable efforts that minimize total project costs, comply with contractual obligations, and meet the requirements of the 2013 and 2015 Commission-approved stipulations.
- ◆ Commission audit staff believes the 2016 staffing reductions and organizational changes DEF made were reasonable and reflect proper resource and cost management.

2.0 Levy Nuclear Project

In July 2013, DEF management decided to cancel Levy Nuclear Project (LNP) construction but continued efforts toward receiving NRC approval of the COL for Units 1&2. The Florida Public Service Commission approved a settlement agreement, in Docket No. 130208-EI, allowing DEF to pursue the Levy COL. However, the settlement agreement did not allow recovery of COL costs within the Nuclear Cost Recovery Clause (NCRC).

2.1 EPC Contract Litigation Status

In January 2014, DEF began conducting negotiations with Westinghouse to close-out its EPC contract. While DEF was able to resolve contract issues with other project vendors, it was unable to resolve the Westinghouse contractual dispute regarding cancellation costs for the EPC contract.

As a result, both companies filed lawsuits asking for financial compensation. DEF sought a \$54 million Long Lead Equipment (LLE) refund and Westinghouse sought \$512 million in termination fees and contract costs.

On December 22, 2016, The United States District Court, Western District of North Carolina ruled in the Duke Energy Florida, Inc. vs. Westinghouse Electric Company, LLC case. The court awarded Westinghouse \$34.25 million in EPC contract termination fees and interest. Additionally, the court concluded that DEF owed nothing of the remaining \$352 million invoiced by Westinghouse as compensation for direct costs and unpaid partial milestone payments for the Levy Project.

In January and February 2017, the parties appealed the District Circuit court's decision. According to DEF, both parties are appealing all adverse judgements against their positions. The appeals case was reportedly scheduled to begin in April 2017. However, the court ordered a stay of the case due to the bankruptcy of Westinghouse Electric Company. DEF believes the appellate case could be delayed until as late as 2020.

Due to the stay, the impact of litigation costs, court-awarded payments, and other associated costs will continue to be delayed and not fully known. Therefore, it is possible DEF may request recovery of some Levy project costs associated with the District Court and appeals litigation and other project activities in the future.

2.2 Long-Lead Equipment Dispute Resolution and Close-Out Costs

In January 2014, DEF cancelled the Westinghouse EPC contract. At that time, much of the Levy Nuclear Project LLE was in various stages of fabrication by vendors. Other items had been ordered through Westinghouse, but materials had not yet been purchased, and the manufacturing process had not begun.

As part of the wind-down activities for the LNP project, DEF developed the LNP Long Lead Equipment Disposition Plan for items procured through the Westinghouse EPC contract. After review and evaluation, DEF management decided to dispose of all Levy items under the EPC contract, considering possible re-use at another Duke Energy plant, sale to another AP1000 group owner or Westinghouse sub-contractor, or sale for salvage/scrap value.

In December 2015, as part of the disposition of remaining LLE, DEF management decided to transfer the variable frequency drive equipment to Units 4 and 5 at the Crystal River 3 Energy Complex. The company's written decision justification documented the transfer of the variable frequency flow equipment. The justification noted the internal transfer, reuse, and refurbishment of the equipment for Crystal River Units 4&5 was significantly greater than other offers received for the equipment.

As of 2016, five Levy LLE items remained in dispute. Westinghouse had paid contractors for the steam generator tubing and materials, the reactor vessel internals, the turbine generator, and the reactor cooling pumps. In October 2016, DEF and Westinghouse negotiated the net value of the remaining disputed LLE contract amounts not within the District Court litigation and DEF made final payment to Westinghouse.

DEF has identified certain litigation costs that will be incurred by the Levy project in 2017 and beyond. Although the District Court ruled on the Duke-Westinghouse EPC contract in December 2016, the final litigation costs were subject to adjustment. Further uncertainty of litigation costs are associated with the appeals case and the delay caused by the Westinghouse bankruptcy. According to DEF, these events will create additional legal costs to be submitted through the NCRC in future years. These 2017 and beyond litigation costs represent attorney fees and expenses to outside counsel for the initial District Court case and the bond required to appeal the decision to the Circuit Court of Appeals.

2.3 Remaining Licensing Activities and Staffing Changes

Pursuant to the 2013 and 2015 Commission-approved stipulation agreements, no DEF 2016 COL costs are being requested for recovery through the NCRC. Though these costs are not requested for recovery, DEF continues to report them to the Commission as information.

2.3.1 Remaining Licensing Activities

Under the Commission-approved settlement in Docket No. 130208-EI, DEF agreed to continue its efforts to obtain the Levy Combined Operating License (COL). On October 20, 2016, DEF's licensing efforts culminated in the NRC issuance of individual COLs for Levy Units 1&2.

In late 2016, DEF established the Nuclear Development Licensing Plan for Levy Nuclear Plant Post-COL licensing activities. A second revision document, dated November 16, 2016, outlines the Post-COL Licensing activities to be undertaken for the Levy Unit 1&2 COLs.

According to the licensing plan, Duke identified the update of Levy Units 1&2 COLs as the last remaining Levy licensing task to be completed. During 2017 and beyond, the Duke Nuclear

Engineering team expects to update the Levy COLs with requests to the NRC for License Amendment Requests (LARs) and departures, required by the construction of other AP1000 projects.

In early 2017, DEF re-directed its focus toward updating the Levy COLs to reflect current AP1000 Design Control Document revisions, and SCANA and Vogtle construction modifications. DEF management has stated that currently approximately 90 percent of the update work is ready for submission.

DEF management believes a substantial number of these changes will be submitted to the NRC in 2017. DEF will rely on construction submissions made previously to the NRC by Georgia Power and SCANA. The use of these changes as a reference is expected to ensure timely NRC approval of the COL updates. The Duke Nuclear Engineering department expects to accelerate the Post-COL submissions and plans to submit approximately two years' worth of LARs in one year.

2.3.2 Staffing Changes

As the Levy licensing effort continued during 2016, DEF reduced employee and contractor staffing for the Levy Combined Operating License Application. According to the company, after DEF received the Levy Units 1&2 COLs in October 2016, the number of personnel required for the project was reduced from just over seven full-time equivalents in January 2016 to approximately four. As of the first quarter of 2017, the number of FTEs remained at approximately four.

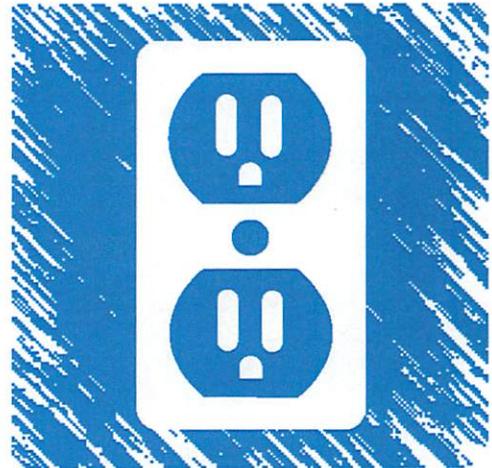
After receiving the Levy COLs in October 2016, DEF management recognized that the nature of work called for a change in project reporting. At that time, DEF modified the Levy project organizational structure from reporting directly to the Executive Vice President & Chief Operating Officer to the Nuclear Engineering Department. More specifically, the Manager of COLs for the William States Lee (North Carolina) and Levy (Florida) projects reports to the General Manager of Nuclear Engineering, who reports directly to the Vice President of Nuclear Engineering. This organization will complete the final licensing task of updating the Levy COLs. The company noted that as of April 1, 2017 there were no project management charges made to the Levy NCRC project. To date, DEF has not estimated the level of staffing required to complete the post-COL update process. As previously mentioned, there are no Levy COL-related costs being requested for recovery by DEF in the 2016 NCRC proceeding.

2.4 Audits and Quality Assurance Reviews

There were no internal and external audits completed during 2016 relevant to the LNP project. Similarly, there were no quality assurance reviews completed on any long-lead equipment or LNP project assets.

2.5 Contractor Selection and Management

The Commission audit staff requested existing (open) and new contracts, updated work authorizations, and contract change orders related to the Levy project. Audit staff identified no issues of concern regarding contract management or contract change orders during 2016.



Review of Duke Energy Florida Inc.'s Project Management Internal Controls for Nuclear Plant Uprate and Construction Projects

June 2015

BY AUTHORITY OF
The Florida Public Service Commission
Office of Auditing and Performance Analysis

REDACTED

Docket No. 170009-EI
Review of Project Management Internal Controls
Exhibit CV-2, Page 2 of 21

**Review of
Duke Energy Florida's
Project Management
Internal Controls
for
Nuclear Plant Uprate and
Construction Projects**

**William "Tripp" Coston
Public Utility Analyst IV
Project Manager**

June 2015

**By Authority of
The State of Florida
Public Service Commission
Office of Auditing and Performance Analysis**

PA-15-01-001

REDACTED

Docket No. 170009-EI
Review of Project Management Internal Controls
Exhibit CV-2, Page 4 of 21

TABLE OF CONTENTS

CHAPTER		Page
1.0	EXECUTIVE SUMMARY	
1.1	At a Glance	1
1.2	Audit Execution	1
1.3	Audit Staff Observations	3
2.0	LEVY NUCLEAR PROJECT	
2.1	EPC Cancellation Progress	5
2.2	Asset Disposition	6
2.3	NRC Licensing.....	8
2.4	Levy Construction Close-Out Costs	10
3.0	CRYSTAL RIVER 3 EXTENDED POWER UPRATE PROJECT	
3.1	EPU Corporate Investment Recovery Plan Execution.....	11
3.2	Listed Bid Event Approach for Disposition.....	12
3.3	Public Auction Approach for Disposition.....	13
3.4	EPU Siemens Component Disposition	14

TABLE OF EXHIBITS

EXHIBIT	Page
1. Duke Energy Florida Inc.'s – Westinghouse Contract Litigation Trial Schedule	5
2. Duke Energy Florida Inc.'s LNP Long Lead Equipment Disposition.....	6
3. LNP NRC COLA Review Schedule	9
4. Company Initiated Listed Bid Events – EPU Assets 2014	12
5. Transfers to Duke Affiliates—EPU Assets 2014.....	13
6. Major Installed EPU-Assets to be Abandoned in Place.....	14
7. Remaining EPU-Equipment Considered for Disposition	15

1.0 Executive Summary

1.1 At a Glance

Levy Nuclear Project (LNP)

- ◆ Nuclear Regulatory Commission LNP Combined Operating License (COL) application review schedule has been extended to mid-2016 due to final AP1000 design-related issues.
- ◆ Duke Energy Florida, Inc. (DEF) performed analyses to assess the process for disposing of certain contracted long-lead equipment for the Levy Nuclear Project.
- ◆ DEF and the Westinghouse Electric Company, LLC continued litigation of the Engineering Procurement and Construction (EPC) contract cancellation. The final outcome of this litigation will impact the company's overall project costs.

Crystal River 3 Extended Power Uprate (EPU)

- ◆ The company's Investment Recovery Project (IRP) group dispositioned all of the remaining Crystal River Unit 3 (CR3) EPU assets except the remaining Siemens components.
- ◆ The CR3 *EPU assets* were a part of a larger decision process for the overall disposition of all CR3 assets. The dispositioning decisions were made on the basis of what was best for maximizing the most efficient and highest recovery value for all CR3 assets.
- ◆ The CR3 EPU asset disposition process was executed in compliance with Duke Energy Florida's Investment Recovery governance process.
- ◆ All CR3 EPU asset dispositions should be completed by August 2015.

1.2 Audit Execution

1.2.1 Purpose and Objective

This audit addresses DEF's project internal controls and management oversight for Levy Units 1 & 2 and the dispositioning of the Extended Power Uprate assets for Unit 3 located at the Crystal River Energy Complex. The primary objective of this audit is to provide an independent account of project activities and to evaluate internal project controls. Information in this report may be used by the Florida Public Service Commission (Commission) to assess the reasonableness of DEF's cost-recovery requests.

Commission audit staff published previous reports in 2008 through 2014; each entitled *Review of Duke Energy Florida, Inc.'s Project Management Internal Controls for Nuclear Plant Uprate and Construction Projects*. These reports are available on the Commission website at www.floridapsc.com/publications.

1.2.2 Scope

The period of this review is January 2014 to May 2015. Staff examined the adequacy of DEF's project management and internal controls for these projects. The internal controls assessed were related to the following key areas of project activity:

- ◆ Planning
- ◆ Management and organization
- ◆ Cost and schedule controls
- ◆ Contractor selection and management
- ◆ Auditing and quality assurance

Comprehensive controls are essential for successful project management. However, adequate and comprehensive controls are ineffective if not actively emphasized by management, embraced by the organization, and subject to oversight and revision. Proper internal controls minimize risk, enhance its mitigation and management, and aid efficient, reasoned decision making.

Risk must be timely and accurately identified. Sufficient safeguards created, vetted, and in place will help prevent and mitigate risk. Prudent decision making results from well-defined processes that address identified risks, expectations, and cost. Effective communication, adherence to clear procedures, and vigilant oversight are also essential to ensure prudent project decisions.

Commission audit staff's review places primary importance on internal controls found in the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and in the *Internal Control - Integrated Framework* developed by the Committee of Sponsoring Organizations of the Treadway Commission. The framework states that an internal control should consist of five interrelated components:

- ◆ Control environment
- ◆ Risk assessment
- ◆ Control activities
- ◆ Information and communication
- ◆ Monitoring

To maximize operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations, all five components must be present and functioning to conclude that internal controls are effective.

1.2.3 Methodology

Initial planning, research, and data collection for this review occurred during January 2015. Additional data collection, analysis, and report writing were conducted in January through May 2015. The information compiled in this report was gathered via company responses to audit staff document requests, onsite visits to the Crystal River Energy Complex and the DEF St.

Petersburg office, and interviews with key project personnel. Audit staff also reviewed testimony, discovery, and other filings in Docket No. 150009-EI. A large volume of information was collected and analyzed by audit staff. Specific information collected from DEF included the following categories:

- ◆ Policies and procedures
- ◆ Organizational structures
- ◆ Contract requests for proposal
- ◆ Contractor bids
- ◆ Bid evaluation analyses
- ◆ Contracts
- ◆ Change orders
- ◆ Internal audit reports and quality assessment reviews

1.3 Audit Staff Observations

1.3.1 Levy Nuclear Plant

The company continues its legal dispute with Westinghouse over the cancelation of the EPC contract for the Levy plants. This has limited DEF's abilities when working to disposition the Long Lead Equipment (LLE) secured under the EPC contract. During 2014, the company worked with Westinghouse to resolve, discontinue, terminate, or sell the assets purchased through third-party vendors. Presently, the dispositions of all LLE assets, with the exception of the VFD's, were either resolved or being addressed through the EPC cancelation litigation. The remaining open item is noted in section 2.2.

It is difficult to assess the overall approach of DEF's disposition choices due to the legal issues with Westinghouse. In each case, the company was reliant on Westinghouse to be the intermediary for the dispositioning, and all the items were part of the overall contract in dispute. Prior to the cancelation of the EPC, the company made the decision to halt manufacturing of several components at its current milestone payments and negotiate a settlement for the remaining fees. In these cases the company justified its decisions through proper documentation.

The company is still working to obtain the Combined Operating License from the NRC. The application timeline has slipped due to several NRC design concerns for the AP1000. These are issues for Westinghouse to resolve; the Levy application can only be issued once the NRC approves acceptable design modifications.

1.3.2 CR3 Extended Power Uprate

The company moved forward with its planned dispositioning of the eligible CR3 assets in 2014 and 2015. This was performed using Duke Energy's corporate investment recovery guidance procedures. The completion of this effort will allow the company to work with the NRC on the decommissioning plan.

The company dispositioned CR3 equipment via internal transfers, listed bid events, and a public auction. This was in accordance with the latitude given to the recovery team through the investment recovery guidance procedures. After considering all internal transfers, the

company's disposition approach evolved, starting with a listed bid approach and shifting to a public auction. Under the listed bid process, the company listed assets for a designated timeframe, allowing bids to be submitted, considered, and accepted. After evaluation, management made the decision in second quarter 2014 to shift to a public auction approach. The public auction approach allowed the company to divest the majority of remaining assets through a one time, publicized event. Factors considered for this decision included the time, resources, and costs needed to continue with the list bid approach.

The company states that both approaches yielded the same result—the ability to disposition EPU-related assets at the current market value. The company believes that it received the appropriate market value for each asset sold. An overriding consideration is the understanding that, while many nuclear plants contain similar components, the equipment in question is often designed to specification for the intended generating unit. As such, many of the high-valued assets were only marketable at salvage-value.

The company does not believe that either approach lent itself to a more advantageous outcome. Given the differences in various assets, Commission audit staff notes that it is difficult to assess whether one approach was more successful in terms of maximizing the sale price. For both approaches, marketing the assets to the appropriate buyers was a key focus. Commission audit staff believes that DEF made appropriate efforts to identify and market its assets to a wide range of potential buyers under each approach. Commission audit staff believes both approaches were reasonable and allowable under the company's written procedures.

The company is still working to disposition components of the high and low pressure turbines purchased for the EPU. The company anticipates completing the negotiations for possible sale [REDACTED] by the end of summer. Audit staff notes that the company continues to incur administrative and maintenance costs for this equipment adding to a need for swift action.

2.0 Levy Nuclear Project

Duke Energy Florida Inc.’s (DEF) decided in July 2013 to cancel the construction schedule for the Levy Nuclear project, while still continuing to seek the Combined Operating License (COL) from the Nuclear Regulatory Commission (NRC.) The Florida Public Service Commission (Commission) approved a settlement in Docket No. 130208-EI allowing DEF to implement this plan.

2.1 EPC Cancellation Progress

Since January 2014, DEF has conducted negotiations with Westinghouse to close-out its Engineering, Procurement, and Construction (EPC) contract. The two companies have not been able to resolve the terms of this cancellation, and are seeking legal resolution. Both companies have filed separate lawsuits in this matter, each asking for financial compensation. DEF is seeking a \$54 million Long Lead Equipment (LLE) refund and Westinghouse is seeking \$512 million for termination fee and termination costs. The current federal court schedule is detailed in **Exhibit 1**.

Duke Energy Florida – Westinghouse Contract Litigation Trial Schedule Duke Energy	
Action	Date
Discovery Completion	August 2015
Expert Reports	June-July 2015
Mediation	August 2015
Dispositive Motions	September 2015
Trial	February 2016

Exhibit 1

Source: Data Request 1.19

Until the case is resolved, DEF management states it is not at liberty to discuss the pending litigation issues. Due to potential harm to the overall resolution, the company has provided details leading up to the lawsuit, and described how the company has worked to resolve issues outside of the specific EPC-related concerns.

The company states the litigation has not halted its efforts towards finalizing its COL application. DEF is reliant on Westinghouse for critical engineering data to proceed with its COL application. Currently, Westinghouse continues to provide DEF with the necessary critical information to assist in pursuing the operating license. DEF management agrees that it is in the best interest of both companies to complete and receive the Levy COL. This topic is further discussed in section 2.3.

2.2 Asset Disposition

The company developed a disposition plan for handling the LLE initiated through the EPC contract. The plan focuses on minimizing the costs and other risks to the company. The Levy management team considered two options when looking at the status of this equipment: disposal or storage. After review and evaluation, management made the decision to dispose of all LLE items under the EPC contract. The approved plan required the team to consider the following options when handling the LLE:

- ◆ Reuse the equipment at another Duke Energy plant
- ◆ Sell equipment for salvage/scrap value
- ◆ Sell equipment to another AP1000 owner group
- ◆ Sell equipment to a Westinghouse sub-contractor.

Exhibit 2 shows the company’s decision for the LLE contracts.

Duke Energy Florida Levy Nuclear Project Long Lead Equipment Disposition					
Contractor/ Equipment	Disposition Date	Original Cost	Paid	Settled Cost	Disposition Decision
Mangiarotti- various equipment components in grouping	11/7/2013				
Tioga-Cooling Loop Piping	1/09/2014				
Doosan-Steam Generators	11/18/2014				
Doosan-Reactor Vessel	11/18/2014				
Toshiba-Turbine/Generator	N/A				
Siemens-Variable Frequency Drives	Pending				
SPX-Squib Valves	12/10/2014				
EMD-reactor coolant pumps	11/18/2014				
Total					

Exhibit 2

Source: Data Request 1.22

Considering these options, during 2014, the company worked with Westinghouse to negotiate the disposition of remaining long-lead items initiated under the EPC contract. At the time of

cancelation, much of this equipment was in various stages of fabrication. Some equipment was fully constructed and maintained in controlled storage facilities. For these key items in storage—the Variable Frequency Drives (VFDs) and the steam generator tubing--the company was paying fees for maintenance and upkeep.

The company notes it has fulfilled its required milestone payments for the LLE since the initial contract inception. In some cases, the company had met all financial obligations for the equipment and this equipment was maintained in storage facilities until future installation. The company did make the decision to take possession of the VFDs, and is in the process of making a decision for long-term resolution of the equipment.



DEF's approach required the company to consider selling or transferring the LLE assets to other nuclear plant owners or other Duke Energy plants. The company considered the possibility of offering these assets for open auction. It determined that there was neither outside demand nor need among Duke Energy affiliates for this equipment. All future AP1000 owners were contacted. The company evaluated these options from late 2013 through April 2014.

The EPC contract contains provisions that, if exercised, allow DEF to assume and possession of individual LLE contracts. In June 2014, the company requested that Westinghouse provide all vendor/manufacture contract terms so DEF could consider the option of assuming and taking possession of the remaining LLE equipment. Assuming the subcontract and taking possession of the equipment would allow DEF the opportunity to make the determination on how to disposition an asset directly with the sub-vendor. If DEF management agreed to take over the vendor contracts, the company would also assume all remaining liability and costs. DEF considered each item individually and determined which items to offer to buy out without taking possession, purchase directly and take possession, or leave to be resolved through the legal resolution of the contract. These options were evaluated for all remaining LLE contracts. A settlement was reached on the following contracts:

- ◆ Mangiarotti equipment (Accumulator tank, PRHR heat exchanger, pressurizer, core makeup tank)
- ◆ Tioga-reactor coolant loop piping
- ◆ SPX-squib valves

After discussions with DEF, 

 To address these concerns, DEF management states that the company adjusted its plan to offer the equipment under an initial general interest listed-bid event in June 2014. This event

was designed to share limited information about each specific asset to potential buyers to give DEF an indication of interest in the equipment.

[REDACTED] The items were listed in a way to let potential bidders know that a follow-up event would occur with more specific details on the equipment for the interested parties. In the end, [REDACTED], eliminating the opportunity to complete the auction process.

The company resolved the disposition of the Mangiarotti Equipment and Tioga-reactor cooling looping piping prior to EPC cancelation through settlement arrangements with Westinghouse and the sub-vendors. For these items, DEF management determined it was best to discontinue the manufacturing process, and agreed upon an amount to be paid for already-incurred time and material costs. In total, the company paid approximately [REDACTED] to resolve these items. After review of company documents, Commission audit staff determined that, given the highly specialized nature of this equipment, the company's approach and decisions were reasonable.

Management made the decision under the EPC contract to assume the SPX-Squib valves. According to DEF, Westinghouse expressed an interest in purchasing this equipment, but the companies could not agree on a contract price. DEF states that in September of 2014,

[REDACTED] No sale was accomplished and company management decided to take possession of the equipment. At this point, DEF had paid approximately [REDACTED] in milestone payments for this equipment. In the end, the company settled with the manufacturer, allowing DEF to recover approximately [REDACTED]. The company believes that the selling back to the manufacturer was the appropriate decision given the limited number of potential buyers.

2.3 NRC Licensing

Under the Commission-approved settlement in Docket No. 130208-EI, DEF agreed to continue its efforts to obtain the Levy Combined Operating License. Though related costs are not included within the NCRC docket, the ability for the project to be completed at a future point in time is contingent upon the issuance of the COL.

Currently, at the NRC, the Levy COL application is the lead for in-process AP1000 COL applications. The NRC is using the Levy application for documenting all pending engineering modifications. The NRC has several open engineering design issues for the AP1000, and the Levy final approval schedule is contingent upon the resolution of these open items. The ongoing condensate return issue is the most impactful open design issue. A follow-up meeting with the NRC on the condensate return issue is scheduled for September 2015.

DEF management does not believe COL issuance will be impacted by these design issues. The company states that Westinghouse and the AP1000 Owner’s Group (APOG) have been working with each other and the NRC to effectively resolve all outstanding issues. DEF management states that the company believes the current issues will be resolved by the proposed changes to the Levy COL application. The specific design issues in question include:

- ◆ Condensate Return
- ◆ Main Control Room Dose Calculations
- ◆ Hydrogen Vent
- ◆ Main Control Room Heat Load

The company continues to work with the U.S. Army Corp of Engineers to finalize the wetland mitigation plan, which is necessary for final 404/10 Permit approval. **Exhibit 3** details events leading to the anticipated COL issue date of May 2016. However, the remaining dates are contingent on Westinghouse resolving open design issues for the AP1000. Currently, the NRC is requiring additional engineering design modifications. The NRC will not move forward on COLA approval until these design issues are resolved. Therefore, the remaining schedule dates are fluid, and most likely will shift.

Levy Nuclear Project NRC COLA Review Schedule	
Environmental Review	Status
Phase 1 – Environmental Impact Statement (EIS) scoping summary report issued	Completed- May 2009
Phase 2 – Draft EIS issued to the Environmental Protection Agency (EPA)	Completed - August 2010
Phase 3 – Responses to public comments on draft EIS completed	Completed – April 2012
Phase 4 – Final EIS issued to the EPA	Completed - April 2012
Safety Review	Status
Phase A – Requests for Additional Information (RAIs) and Supplemental RAIs	Completed - March 2010
Phase B – Advanced Final Safety Evaluation Report (SER) without Open Items	Completed - September 2011
Phase C – Advisory Committee on Reactor Safeguards (ACRS) Review of Advanced Final SER	Completed – January 2012
ACRS Final Review Complete	Projected—November 2015
Phase D – Final SER	Projected – January 2016
COL Hearing and Approval	Status
Formal Hearing	Projected – March 2016
Final Order – COL	Projected –May 2016

Exhibit 3

Source: DEF Response to Staff Data Request LNP DR 2.1

DEF does not believe the litigation issues with the EPC contract will impact its cooperation with Westinghouse in addressing the open engineering issues. Management believes that with the two AP1000 projects under construction in the United States, it is in Westinghouse’s best interest to resolve these issues timely. DEF states that it believes that Westinghouse is working on the issues, but that the response timeline has not been as efficient as possible.

2. 4 Levy Construction Close-Out Costs

In 2014, the company states it incurred an estimated [REDACTED] in wind-down costs for the company's effort to terminate the EPC contract with Westinghouse. The company notes that these costs were required for the following efforts:

- ◆ Tioga long-lead equipment resolution
- ◆ Final payments for the Stone & Webster work completed under the EPC
- ◆ Storage, insurance, and monitoring of the LLE (complete and in current production)
- ◆ DEF labor involved with LLE disposition
- ◆ Westinghouse support necessary to negotiate LLE resolution
- ◆ Regulatory and administrative costs

These actions are required to finalize the termination of the EPC contract. Audit staff reviewed these costs and believes the actions supporting the request were reasonable to minimize total costs and comply with contractual obligations.

3.0 Crystal River 3 Extended Power Uprate Project

During 2014, Duke Energy Florida Inc.'s (DEF) Investment Recovery Project (IRP) team continued the process of disposing of certain assets from the Crystal River Unit 3 (CR3), including remaining assets from the Extended Power Uprate project. Originally, DEF expected to complete the EPU portion of the investment recovery project by December 31, 2014. However, the company is still evaluating the options for its Siemens components including the Low Pressure and High Pressure turbines. The IRP team identified limited opportunities to transfer assets within Duke Energy, and then used listed bid events and a public auction to divest itself of most of the targeted CR3 assets.

In making its decisions on the best course of action for disposition of assets, the IRP team considered feasible approaches to disposition of both the EPU-related and non-EPU related items. There was a much greater volume of non-EPU CR3 components than EPU-related components offered for sale. Therefore, while the EPU assets were a factor, the company's decision considered the dispositioning of all CR3 assets.

3.1 EPU Corporate Investment Recovery Plan Execution

Through this process, the company was able to close out the EPU project. The company was able to disposition the major components purchased for this project. In addition to the major assets purchased for the uprate project, secondary EPU project assets such as tents and tools were also included in the disposition sale.

The organizational structure for the IRP team did not change during 2014. Towards the end of 2014, needed resources declined. For the remainder of 2015, the company has committed two part-time staff members to manage and support the completion of EPU assets disposition. The company is in the process of completing a self-assessment of the IRP process.

The corporate-approved Investment Recovery Plan outlined the approach the IRP team used for the disposition all of CR3 assets. This plan allowed the IRP team the flexibility to implement a program for divesting this equipment in an effective and timely manner. Specific plan components included:

- ◆ Organization
- ◆ Schedule Management
- ◆ Cost Management
- ◆ Risk Management
- ◆ Reporting

To maximize the overall recovery amount, the IRP team evaluated various approaches to marketing and selling available assets. The company assessed the total inventory of the CR3 unit, developed a listing of these assets and evaluated the marketability of each asset. The plan also required the company to assess any potential use for these assets within Duke Energy.

3.2 Listed Bid Event Approach for Disposition

In the spring of 2014, the IRP team conducted a series of specialized listed bid events for certain EPU assets. The events were online offerings that advertised equipment to targeted potential electric industry buyers. These included resources such as industry websites and industry publications. Offers were handled through a closed bid process. The items and events were offered throughout the industry via targeted marketing and industry-focused websites. Marketing included print advertisements in trade publications, and on industry websites.

The IRP team managed these events with coordination from Duke Energy Corporate Procurement. Concurrently, the IRP group hosted similar bid events for non-EPU CR3 assets. As shown on **Exhibit 4**, the company hosted 11 EPU-related bid events yielding sales revenues of \$1,032,418. For the EPU assets, the company finalized four bid events during March 2014, four during April 2014, and three during May 2014. Lot groupings included EPU-related items such as storage equipment, cooling tower components, construction tools, and motors.

Company Initiated Listed Bid Events CR3 EPU Assets 2014			
Asset	Cost	Sale Amount	Month Sold
Tent, Lighting, Structural Members			March 2014
3500 HP Motors—(3) Lube Oil Skids—(2)			March 2014
Tent with tools and materials			March 2014
Fire Cabinets—(8)			March 2014
Gantry Crane			April 2014
Cooling Tower (all)			April 2014
Sealand-(1)			April 2014
Sealand-(4)			April 2014
Relief Valves			May 2014
Relief Valves			May 2014
AKPD 5 stage Pumps—(34)			May 2014
Total	\$15,341,111	\$1,032,418	11 Bid Events

Exhibit 4

Source: Data Request 1.5

IRP management states that leading up to these bid events, the team organized and grouped items for maximum bid interest and value. Management stated that when determining the order of items to list, the company considered the logistics of how and where the assets were housed on the site. This approach allowed the company to move larger items off-site first and free-up space on the site.

One large asset sold through this process was the Cooling Tower equipment. The company received several bids for this equipment, and accepted the highest bid for the entire lot. This equipment was one of the largest assets sold, and a portion of the proceeds were credited back through the NCRC.

Prior to initiating the listed bid events, the IRP team provided a listing of assets for internal distribution within Duke Energy. The IRP team was able to transfer four assets within the company using this process. The sale and proceeds comported with the requirement to transfer the assets at book value, as shown in **Exhibit 5** which details these transactions.

Transfers to Duke Energy Affiliates CR3 EPU Assets 2014			
Asset	Cost	Sale Amount	Month Sold
Blade Vibration Sensor and Sensor Adapter	██████	██████	February 2014
Sealand—two	██████	██████	April 2014
Gang Boxes—(2) Fire Safe Chest Carts—(5) Various tools	██████	██████	April 2014
Gang Boxes—(4) Carts—(4) Various tools	██████	██████	April 2014
Total	\$36,336	\$35,972	4 Events

Exhibit 5

Source: Data Request 1.5

3.3 Public Auction Approach for Disposition

In mid-2014, the company made the decision to shift its approach from a listed bid event process to a public auction for the remaining EPU and non-EPU assets. Management states its rationale for this decision was the challenge and cost of working the high volume of equipment through the bid event process. Management states that substantial additional resources would be needed to fully process all the equipment through the listed bid event approach. The company believed that the additional costs for hiring resources for this disposal method would negatively impact any additional revenue obtained through this approach.

In March 2014, Southern California Edison conducted a public auction of its non-nuclear assets from its San Onofre Nuclear Generating Station. DEF sent representatives to this event to assess its success and determine whether this approach would be a viable option for its remaining CR3 assets. After reviewing the process and discussions with Southern California Edison, DEF believed this approach was viable, and that the event garnered enough public interest to support the effort. The IRP team made a proposal that the company use the one-time, public auction approach for the remaining assets. This recommendation was presented and approved by senior management. Commission audit staff believes the decision to shift from a listed bid event approach to a public auction was reasonable.

The company issued a Request for Proposals to twelve large and small auction groups. Proposals were received from five auction companies and two finalists were brought in for on-site presentations. Management states the company chose to limit the number of potential vendors due to the specialized nature of conducting a large-scale industrial auction. DEF states that these

auction companies had experience in large-industrial based auctions, and demonstrated successful marketing to buyers interested in industrial equipment. The contract executed with the selected vendor specified the auction approach and the budget. According to DEF, compensation for expenses and commissions were in keeping with standard investment recovery practices.

A factor in selecting the chosen vendor was its global marketing presence. One asset—the EPU-related Low Pressure turbines—was potentially the highest value sale opportunity, and DEF believed that there was potential for a sale to an overseas company. The selected vendor proposed and used a mix of printed advertising in both industry publications and flyers at industry conferences, targeted calls to potential buyers, social media to industry groups, and general advertising to the public and non-industry bidders such as salvage dealers. DEF believes that this marketing effort reached a global 100,000 potential bidders. Commission audit staff believes the company’s justifications for selecting this vendor were reasonable.

The auction was held September 24 through 26, 2014, with bids accepted via the Internet and phone. The auction was a sell-all event with no price reserves on lots. DEF reserved the right to reject the final bid only if the company believed that the sale price was below the cost of removal from the unit or site.

In total, the auction included 100 bidders, and the company sold 50 lots/groupings of EPU-assets. The total collected for these items was approximately \$90,500. The original cost for these assets was approximately \$5,229,212, not including the original cost for the NUS Rapid Cool Down System equipment which was not broken out separately in its contract.

Several large installed items offered did not sell through the closed-bid or public auction process. For this equipment, the company made the decision in January 2015 to discontinue sales efforts and to abandon in-place during decommissioning. This equipment is highly-specialized with limited marketability and the salvage value would not support the cost for removal. These assets and their original value are shown in **Exhibit 6**.

Major Installed EPU-Assets to be Abandoned In Place	
Equipment	Value
Stator Core and Rewound Generator Rotor	[REDACTED]
Feedwater Heat Exchangers	[REDACTED]
Belly Drain Heat Exchangers	[REDACTED]
Isophase Bus Duct Cooling Skid	[REDACTED]
Moisture Separator Reheaters	[REDACTED]

Exhibit 6

Source: Data Request 3.1

3.4 EPU Siemens Components Disposition

Certain Siemens components did not sell during the auction. These are one-of-a-kind specialized components with limited marketability. In one case, [REDACTED] The details of this were [REDACTED]

discussed in the Commission audit report in the Docket No. 120009-EI. [REDACTED]

[REDACTED] DEF made the decision to list the equipment in the auction, in hopes of selling the entire component set.

[REDACTED] The equipment and components [REDACTED] are shown in **Exhibit 7** and are currently installed or housed in the CR3 unit.

Remaining EPU-Equipment Considered for Disposition	
Components	Original Equipment Cost
High Pressure Turbine and Equipment (uninstalled)	[REDACTED]
Turbine Lubricating Oil Cooler Tube Bundles	[REDACTED]
Siemens Exciter (installed)	[REDACTED]
Siemens Hydrogen Cooler (installed) ¹	[REDACTED]
Siemens Low Pressure Turbine Rotors, Blades, Cylinders, and parts (uninstalled)	[REDACTED]

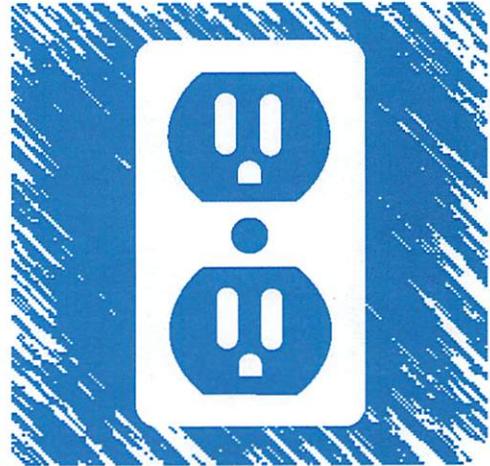
Exhibit 7

Source: Data Request 3.2

[REDACTED]

The company is in the process of closing out its Investment Recovery Program for CR3. The company will continue to maintain the remaining Siemens equipment [REDACTED]. The company will continue to maintain monthly maintenance and administrative costs for the EPU project. The company believes the project will be closed in fall 2015, with costs continuing through that time.

¹ The cost provided for the Hydrogen Cooler is a subset of the overall Generator work. The company estimated the amount attributed for this equipment.



Review of Duke Energy Florida, LLC Project Management Internal Controls for Nuclear Plant Up-rate and Construction Projects

June 2016

BY AUTHORITY OF
The Florida Public Service Commission
Office of Auditing and Performance Analysis

REDACTED

Docket No. 170009-EI
Review of Project Management Internal Controls
Exhibit CV-3, Page 2 of 16

**Review of
Duke Energy Florida, LLC
Project Management
Internal Controls
for
Nuclear Plant Uprate and
Construction Projects**

**Jerry Hallenstein
Senior Analyst
Project Manager**

**R. Lynn Fisher
Government Analyst II**

June 2016

**By Authority of
The State of Florida
Public Service Commission
Office of Auditing and Performance Analysis**

PA-16-01-001

REDACTED

TABLE OF CONTENTS

CHAPTER	Page
1.0 EXECUTIVE SUMMARY	
1.1 Projects at a Glance	1
1.2 Audit Execution	2
1.3 Commission Audit Staff Observations.....	3
2.0 LEVY NUCLEAR PROJECT	
2.1 EPC Contract Litigation Status.....	5
2.2 Asset Disposition	5
2.3 NRC Licensing	7
2.4 Levy Construction Close-Out Costs	8
3.0 CRYSTAL RIVER 3 EXTENDED POWER UPRATE PROJECT	
3.1 EPU Investment Recovery Plan Execution	9
3.2 EPU Project Closeout.....	10

TABLE OF EXHIBITS

EXHIBIT	Page
1. Duke Energy Florida, LLC Westinghouse Contract Litigation Revised Trial Schedule..	5
2. Duke Energy Florida, LLC LNP Long Lead Equipment Disposition.....	6
3. Duke Energy Florida, LLC LNP NRC COLA Review Schedule	8

1.0 Executive Summary

1.1 Projects at a Glance

Levy Nuclear Project

- ◆ No 2015 COL-related costs are presented for Nuclear Cost Recovery Clause (NCRC) recovery, pursuant to the 2013 stipulation.
- ◆ DEF continued wind-down activities for LNP during 2015.
- ◆ DEF dispositioned LNP long-lead variable frequency drive equipment.
- ◆ LNP Combined Operating License (COL) schedule was extended due to final AP1000 design-related issues.
- ◆ The Engineering Procurement and Construction (EPC) contract litigation between DEF and Westinghouse Electric Company is scheduled for trial in October 2016. The outcome of this litigation, the impact on final disposition of remaining Long Lead Equipment (LLE), and final recoverable costs of the LNP project are not fully known at this time.

Crystal River 3 Extended Power Uprate

- ◆ The CR3 Investment Recovery Project closed on April 30, 2015.
- ◆ DEF continued wind-down activities for CR3 EPU assets during 2015.
- ◆ All net proceeds (\$1.7 million) from the sale and transfer of EPU-related assets are to be returned to customers.
- ◆ All IRP team members have been released or reassigned to other parts of the company.
- ◆ All remaining installed EPU equipment has been abandoned in place and no other potential EPU sales are currently being evaluated.
- ◆ The CR3 *EPU assets* were a part of a larger decision process for the overall disposition of all CR3 assets. Dispositioning decisions were executed in compliance with Duke Energy Florida's Investment Recovery governance process and were made on the basis of what would maximize the recovery value for all CR3 assets.

1.2 Audit Execution

1.2.1 Purpose and Objectives

The purpose of this audit was to assess DEF's project management oversight and dispositioning of long-lead equipment (LLE) for the Levy Nuclear Power Project (LNP) and to provide an update and assessment of the investment recovery project for the Crystal River Energy Complex Unit 3 (CR3) Regulatory Assets.

Each year, from 2008 to date, Commission audit staff has conducted an audit that focused on project internal controls and management oversight for DEF's Levy and Crystal River nuclear projects. Information in each of these reports is used by the Florida Public Service Commission (FPSC or Commission) to assess the reasonableness of DEF's cost-recovery requests. These audits are available on the Commission website. The primary objective of this audit is to provide an independent account of project activities and to evaluate DEF's 2015 internal project controls.

1.2.2 Scope

Planning, research and data collection for this review was performed in December 2015 through May 2016. The internal controls assessed were related to the following key areas of project activity:

- ◆ Planning
- ◆ Management and organization
- ◆ Cost and schedule controls
- ◆ Auditing and quality assurance

Comprehensive controls are essential for successful project management. However, adequate and comprehensive controls are ineffective if not actively emphasized by management, embraced by the organization, and subject to oversight and revision. Proper internal controls minimize risk, enhance its mitigation and management, and aid efficient, reasoned decision making.

Risk must be timely and accurately identified, with adequate safeguards created, vetted, and actively in use to provide prevention or mitigation. Prudent decision making also plays a key role in project management, resulting from well-defined processes addressing identified project risks, expectations, and cost. Effective communication, adherence to clear procedures, and vigilant oversight are also essential to ensure prudent project decisions.

The primary standard used by Commission audit staff for review of DEF internal controls associated with the LNP and CR3 projects is the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and *Internal Control - Integrated Framework*. Staff's audit work is performed in compliance with Institute of Internal Auditors Performance Standards 2000 through 2500. This set of standards was developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Staff's internal control assessments focused on the COSO framework's five key, interrelated elements of internal control:

- ◆ Control environment
- ◆ Risk assessment

- ◆ Control activities
- ◆ Information and communication
- ◆ Monitoring

To maximize operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations, all five components must be present and functioning in concert to conclude that internal controls are effective.

1.2.3 Methodology

Initial planning, research, and data collection for this review occurred during January 2016. Additional data collection, analysis, and report writing were conducted during February through May 2016. The information compiled in this report was gathered via staff review of company responses to document requests, and review of testimony, discovery, and other filings in Docket No. 160009-EI. Specific information reviewed by staff includes:

- ◆ Policies and procedures
- ◆ Organizational structures
- ◆ Contract requests for proposal
- ◆ Contractor bids
- ◆ Bid evaluation analyses
- ◆ Contracts
- ◆ Change orders
- ◆ Internal audit reports and quality assessment reviews

1.3 Commission Audit Staff Observations

Commission audit staff identified no concerns regarding Duke Energy Florida, LLC (DEF) Levy Nuclear Project (LNP) activities in 2015 and the final disposition of Crystal River Unit 3 (CR3) Extended Power Uprate (EPU) assets. Below are audit staff's key observations based on 2015 events.

1.3.1 Levy Nuclear Plant

During 2015, DEF continued LNP project wind-down activities, including litigation, dispositioning of LNP assets, and pursuit of the Combined Operating License (COL).

The Westinghouse litigation against DEF delays final disposition of the remaining LNP Long Lead Equipment (LLE) procured under the EPC contract. The final schedule, and NCRC-related costs for the LNP close-out, cannot be accurately predicted until the EPC contract litigation has completed.

DEF completed disposition of the LNP variable frequency drive equipment, through an internal transfer to Units 4 and 5 at the Crystal River Complex. Disposition documentation evidences the transfer decision, and compliance with company guidelines and procedures. Commission audit staff believes that the transfer of these LNP assets was in the best interest of the company and its ratepayers.

DEF continued efforts to obtain the Levy NRC COL, and estimates the COL will be received in the last quarter of 2016. COL costs are not requested for recovery in 2015, pursuant to the Commission approved stipulation agreement.

1.3.2 CR3 Extended Power Uprate

On April 30, 2015, DEF closed the CR3 Investment Recovery Project. The Investment Recovery Project organization supporting the disposition of the CR3 assets was disbanded and all general reporting and key performance indicators used by management to monitor the Investment Recovery Project ended.

The company believes that it received the appropriate market value for each CR3 asset sold. An overriding consideration is the understanding that, while many nuclear plants contain similar components, the equipment in question is often designed to specification for the intended generating unit. As such, many of the high-valued assets were only marketable at salvage-value.

Commission audit staff believes that DEF made appropriate efforts to identify and market its assets to a wide range of potential buyers. Commission audit staff believes DEF's dispositioning steps were reasonable and allowable under the company's written procedures.

2.0 Levy Nuclear Project

DEF decided in July 2013 to cancel the construction schedule for the Levy Nuclear Project, while continuing to seek the NRC COL. The Florida Public Service Commission (FPSC or “Commission”) approved a settlement agreement in Docket No. 130208-EI allowing DEF to pursue this plan.

2.1 EPC Contract Litigation Status

Since January 2014, DEF has conducted negotiations with Westinghouse to close-out its Engineering, Procurement, and Construction (EPC) contract. While DEF was able to resolve contract issues with other project vendors, it was unable to resolve the Westinghouse contractual dispute regarding cancellation costs for the EPC contract.

Both companies have filed separate lawsuits, each asking for financial compensation from the other. DEF is seeking a \$54 million Long Lead Equipment (LLE) refund and Westinghouse is seeking \$512 million in termination fees and contract costs. The Western District Federal Court of North Carolina originally scheduled the case to be heard beginning in February 2016. However, the court modified the hearing schedule in February 2016, and currently the trial is scheduled to begin in October 2016. **Exhibit 1** shows the modified schedule dates for the case.

Duke Energy Florida Westinghouse Contract Litigation Revised Trial Schedule	
Action	2016
Discovery Completion	June 2016
Expert Reports	April/May 2016
Dispositive Motions	July 2016
Trial	October 2016

Exhibit 1

Source: DEF Responses to Data Request 1.19

The company has limited discussion of litigation details to the schedule and description of company activities for LLE asset disposition outside of specific EPC-related contractual issues. The company continues efforts to finalize the Levy COL, but remains reliant on Westinghouse for critical engineering data. Currently, Westinghouse continues to provide DEF and the NRC with necessary critical technical revision information for pursuing the COL. However, Westinghouse delays in providing updated design revision information in 2015 slipped the estimated completion date for the Levy COL to late in 2016.

2.2 Asset Disposition

At the time DEF cancelled the EPC contract, much of the LLE was in various stages of fabrication by vendors.

In January 2014, as part of the wind-down activities for the LNP project, DEF developed the Levy Nuclear Plant Long-lead Equipment Disposition Plan for LLE procured through the EPC contract. After review and evaluation, DEF management decided to dispose of all LLE items under the EPC contract, considering possible reuse at another Duke Energy plant, sale to another AP1000 group owner or Westinghouse sub-contractor, or sale for salvage/scrap value.

In December 2015, DEF management decided to transfer the variable frequency drive LLE to Units 4 and 5 at the Crystal River 3 Energy Complex. The company provided written justification of its decision to transfer the variable frequency flow equipment, noting that the value of the internal transfer, reuse, and refurbishment of the equipment for Crystal River Units 4&5 was significantly greater than other offers received.

Exhibit 2 provides a summary of the DEF decisions made for dispositioning LNP LLE through 2015.

Duke Energy Florida LNP Long Lead Equipment Disposition					
Contractor/ Equipment	Disposition Date	Original Cost	Paid	Settled Cost	Disposition Decision
Mangiarotti- various equipment components in grouping	11/7/13	[REDACTED]	[REDACTED]	[REDACTED]	Settlement minimized ongoing costs
Tioga-Cooling Loop Piping	1/09/14	[REDACTED]	[REDACTED]	[REDACTED]	Settlement minimized ongoing costs
Doosan-Steam Generators	11/18/14	[REDACTED]	[REDACTED]	[REDACTED]	Review of PO
Doosan-Reactor Vessel	11/18/14	[REDACTED]	[REDACTED]	[REDACTED]	Review of PO
Toshiba- Turbine/Generator	N/A	[REDACTED]	[REDACTED]	[REDACTED]	Litigation Claim
Westinghouse Reactor Vessel Internals	N/A	[REDACTED]	[REDACTED]	[REDACTED]	Litigation Claim
Siemens-Variable Frequency Drives	12/28/15	[REDACTED]	[REDACTED]	[REDACTED]	Internal Transfer Sale
SPX-Squib Valves	12/10/14	[REDACTED]	[REDACTED]	[REDACTED]	Purchased by outside source.
EMD-reactor coolant pumps	11/18/14	[REDACTED]	[REDACTED]	[REDACTED]	Review of PO
Total		[REDACTED]	[REDACTED]	[REDACTED]	

Exhibit 2

Source: DEF Responses to Data Request DR-1 LNP-9b

As shown in the exhibit, five LLE items remain in a pending status. Two items are pending litigation claims, and three items are pending review of purchase orders. The status of these five items will be resolved through the completion of the EPC contract litigation, and will impact final LNP project costs. The estimated completion of the trial, now scheduled to begin in October 2016, is unknown.

2.3 NRC Licensing

Under the Commission-approved settlement in Docket No. 130208-EI, DEF agreed to continue its efforts to obtain the Levy Combined Operating License (COL). Though LNP COL-related costs are not currently being recovered within the NRC docket, the ability to recover LNP costs at a future point in time is contingent upon the issuance of the COL.

DEF confirms that Westinghouse and the AP1000 Owner's Group (APOG) have been working with each other and the NRC to effectively resolve all outstanding design and technical issues. DEF management states that the company believes the current issues will be resolved by the proposed changes to the Levy COL application. The specific design issues in question include:

- ◆ Condensate Return
- ◆ Main Control Room Dose Calculations
- ◆ Main Control Room (MCR) Heat Load
- ◆ Hydrogen Vent in containment
- ◆ Plant Monitoring System IEEE compliance

DEF finalized the wetland mitigation plan, and received U.S. Army Corp of Engineer final 404 Permit approval in December 2015. This leaves the remaining issues with the Westinghouse AP1000, and the NRC final hearing as the last obstacles to receiving the COL.

Exhibit 3 details events leading to the anticipated COL issue date of October 2016. However, the remaining dates are contingent on Westinghouse resolving open design issues for the AP1000. The NRC will not move forward on COL approval until these design issues are resolved. Therefore, the estimated schedule dates remain fluid, but most likely will not shift greatly at this time.

DEF believes the litigation issues with the EPC contract will not impact its cooperation with Westinghouse in addressing the open engineering issues. DEF believes that with the two AP1000 projects currently under construction in the United States, it is in Westinghouse's best interest to resolve the Design Certification Document issues in a timely manner. DEF states that it believes Westinghouse is working on the issues, but the responses have not always been timely.

Duke Energy Florida Levy Nuclear Project NRC COLA Review Schedule	
Environmental Review	Status
Phase 1 – Environmental Impact Statement (EIS) scoping summary report issued	Completed - May 2009
Phase 2 – Draft EIS issued to the Environmental Protection Agency (EPA)	Completed - August 2010
Phase 3 – Responses to public comments on draft EIS completed	Completed - April 2012
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ACRS Final Review Complete	Completed - April 2016
Phase D – Final SER	Completed - June 2016
COL Hearing and Approval	Status
Formal Hearing	Projected - July 2016
Final Order – COL	Projected - October 2016

Exhibit 3

Source: DEF Response to Data Request DR-1 LNP-1 Appendix 1

2. 4 Levy Construction Close-Out Costs

DEF management provided documents showing that wind-down expenditures were lower than estimated, and revenue from the sale of LLE assets was greater than estimated for 2015. Other wind-down costs were also slightly lower than estimated. Audit staff reviewed these costs and believes DEF’s actions supporting the project wind-down and completion are reasonable efforts to minimize total project costs, comply with contractual obligations, and meet the Commission approved stipulation.

3.0 Crystal River 3 Extended Power Uprate Project

On April 30, 2015, DEF closed out the Investment Recovery Project (IRP) for the disposition of CR3 assets, including the remaining assets from the Extended Power Uprate (EPU) project. Project wind-down costs were incurred throughout 2015 in support of the final EPU sale and internal transfer of CR3 equipment. Proceeds from the sale of EPU equipment in 2015 were offset against the EPU wind-down costs incurred and will be returned to customers. All other remaining, installed EPU equipment was abandoned in place. According to DEF, no other potential EPU sales are currently being evaluated. Future sales, if any, will be evaluated on an individual case basis by the current CR3 plant staff and Duke Energy Supply Chain.

3.1 EPU Investment Recovery Plan Execution

To manage disposition of CR3 assets, DEF initiated an Investment Recovery Project in October 2013. In making its decisions on the best course of action for disposition of assets, the IRP team used a feasible step-wise approach to disposition both EPU-related and non-EPU related items. There was a much greater volume and dollar value of non-EPU CR3 components than EPU-related items. However, to minimize costs and to ensure all asset removal activities are performed in a prudent manner to support the abandonment process, the disposition process for both EPU and non-EPU components were the same.

The CR3 IRP was governed primarily by DEF's *Conduct of CR3 Investment Recovery* and procedure and the *Investment Recovery Project Execution Plan*. To maximize the overall recovery amount, DEF's Investment Recovery Project team evaluated various approaches to marketing and the potential demand for available assets. The plan also required the company to assess any potential use for these assets within Duke Energy. As the IRP concluded in April 2015, all team members have since been released or reassigned to other parts of the company.

The IRP team's strategy was to develop an inventory of CR3 assets, assess the average unit price of each asset, categorized by type of inventory (e.g., motors, wiring, and bolts), and then develop a systematic approach to disposition of assets. The disposition of CR3 equipment was done in accordance with the latitude given to the recovery team through the investment recovery guidance procedures. Under the *Conduct of CR3 Investment Recovery* procedure, all assets were to be disposed in the following manners:

- ◆ To the greatest extent possible, utilize internal inventory transfer to the Duke Energy fleet per Duke Energy's Affiliate Asset Transfer process.
- ◆ Assets not transferred internally would be segregated and bid out. Price quotes would be obtained from distributors, other utilities, resellers, and Original Equipment Manufacturer's (OEMs) to establish the fair market value of assets
- ◆ For remaining assets, utilize auction companies for disposition at salvage or scrap value

The company completed this endeavor using a layered approach of internal notifications, inter-utility publications, targeted listed bid events and a public auction. After considering all internal transfers, the company's disposition approach evolved, starting with a listed bid approach and shifting to a public auction. The company states that both approaches yielded the same result—the ability to disposition EPU-related assets at the current market value.

3.2 EPU Project Closeout

The IRP, including EPU close out, was governed by procedure AI-9010, Conduct of CR3 Investment Recovery. The procedure provides the overall guidance for the execution of transactions for the disposal of assets from CR3, including asset pricing requirements and minimum reviews.

The last remaining stage of the EPU project close-out was the final disposition of EPU-related assets and materials, including the sale of one-of-a-kind specialized Siemens components with limited marketability. For 2015, DEF received approximately \$2.6 million in proceeds. The specifics are listed below and the proceeds were offset against EPU wind-down costs of \$0.9 million incurred in 2015.

- ◆ On May 22, 2015, a contractual agreement was entered into between DEF and Siemens, the Original Equipment Manufacturer (OEM) to buyback CR3 high pressure turbine assets and equipment. DEF received a lump sum payment for [REDACTED] (EPU portion). The original cost for these components was [REDACTED].
- ◆ On July 28, 2015 a contractual agreement was entered into between DEF and D. H. Griffin for the sale of miscellaneous low turbine parts. Proceeds from the sale of equipment to D. H. Griffin were [REDACTED]. The original purchase price is undetermined.
- ◆ On November 10, 2015 an internal transfer (sale) of the Siemens turbine blade vibration monitoring system was completed with Duke Energy Carolina. Proceeds from the sale amounted to [REDACTED].
- ◆ On January 15, 2015, DEF accounted for \$90,519 in proceeds from the 2014 auction.
- ◆ A reclass credit of \$2,533 of CR3 assets to the EPU account was recorded on April 15, 2015, in addition to net proceeds of \$77,444 resulting from an internal transfer (sale) of pipe vibration measurement equipment and a bid event sale of motors.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Nuclear cost recovery clause.

DOCKET NO. 170009-EI

DATED: June 20, 2017

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the testimony of CARL VINSON on behalf of the staff of the Florida Public Service Commission was electronically filed with the Office of Commission Clerk, Florida Public Service Commission, and copies were furnished by electronic mail to the following on this 20th day of June 2017.

Matthew R. Bernier
Duke Energy Florida, LLC
106 East College Avenue, Suite 800
Tallahassee, Florida 32301
Matthew.Bernier@duke-energy.com

Dianne M. Triplett
Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, Florida 33701
Dianne.Triplett@duke-energy.com

J.R. Kelly/Charles J. Rehwinkel/
Erik L. Sayler/Patricia A. Christensen
Office of Public Counsel
111 W. Madison Street, Room 812
Tallahassee, Florida 32399
Kelly.JR@leg.state.fl.us
Rehwinkel.Charles@leg.state.fl.us
Sayler.Erik@leg.state.fl.us
Christensen.Patty@leg.state.fl.us

Jon C. Moyle, Jr.
Florida Industrial Power Users Group
Moyle Law Firm, P.A.
118 North Gadsden Street
Tallahassee, Florida 32301
jmoyle@moylelaw.com

Kenneth Hoffman
Florida Power & Light Company
215 S. Monroe Street, Suite 810
Tallahassee, Florida 32301-1858
Ken.Hoffman@fpl.com

Jessica Cano/Kevin I.C. Donaldson
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408-0420
Jessica.Cano@fpl.com
Kevin.Donaldson@fpl.com

CERTIFICATE OF SERVICE
DOCKET NO. 170009-EI
PAGE 2

Victoria Mendez/Christopher A. Green
Xavier Albán/ Kerri L. McNulty
The City of Miami
444 SW 2nd Avenue
Miami, Florida 33130
vmendez@miamigov.com
cagreen@miami.gov
xealban@miamigov.com
klmcnulty@miamigov.com

George Cavros
Southern Alliance for Clean Energy
120 E. Oakland Park Boulevard, Suite 105
Fort Lauderdale, Florida 33334
george@cavros-law.com

James W. Brew/Laura A. Wynn
White Springs Agricultural Chemicals Inc.
d/b/a PCS Phosphate – White Springs
Stone Mattheis Xenopoulos & Brew, P.C.
1025 Thomas Jefferson Street, NW
Eighth Floor, West Tower
Washington, D.C. 20007
jbrew@smxblaw.com
law@smxblaw.com

/s/ Kyesha Mapp
KYESHA MAPP
SENIOR ATTORNEY
FLORIDA PUBLIC SERVICE COMMISSION
Gerald L. Gunter Building
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850
Telephone: (850) 413-6199
kmapp@psc.state.fl.us