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August 26, 2019

VIA HAND DELIVERY
Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket No. 20190001-EI **REDACTED**

Dear Mr. Teitzman:

I enclose for filing in the above docket Florida Power & Light Company's ("FPL") Request for Confidential Classification of Information Provided in Response to Office of Public Counsel's First Request for Production (No. 1). The request includes Exhibits A, B (two copies), C and D.

Exhibit A consists of the confidential documents, and all the information that FPL asserts is entitled to confidential treatment has been highlighted. Exhibit B is an edited version of Exhibit A, in which the information FPL asserts is confidential has been redacted. Exhibit C is a justification table in support of FPL's Request for Confidential Classification. Exhibit D is the declaration in support of FPL's request.

Please contact me if you or your Staff has any questions regarding this filing.

COM ___
AFD 1 Exh B
APA ___
ECO ___
ENG ___
GCL ___
IDM ___
CLK ___

Sincerely,

Maria Jose Moncada

Enclosure
cc: Counsel for Parties of Record (w/ copy of FPL's Request for Confidential Classification)

:7443192

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Fuel and purchase power cost recovery clause with generating performance incentive factor	Docket No: 20190001-EI Date: August 26, 2019

FLORIDA POWER & LIGHT COMPANY'S REQUEST FOR CONFIDENTIAL CLASSIFICATION OF INFORMATION PROVIDED IN RESPONSE TO THE OFFICE OF PUBLIC COUNSEL'S FIRST REQUEST FOR PRODUCTION (No. 1)

Pursuant to Section 366.093, Florida Statutes, and Rule 25-22.006, Florida Administrative Code, Florida Power & Light Company ("FPL") requests confidential classification of certain information provided in response to the Office of Public Counsel's ("OPC") First Request for Production (No. 1), ("Confidential Discovery Response"). In support of its Request, FPL states as follows:

1. On July 22, 2019, OPC served its First Request for Production (No. 1) on FPL. FPL's Response to OPC's Request for Production (No. 1), contains information of a confidential nature within the meaning of Section 366.093(3), Florida Statutes.

2. FPL served its responses to First Request for Production (No. 1) on August 22, 2019. This request is being filed in order to request confidential classification of the Confidential Discovery Responses consistent with Rule 25-22.006, Florida Administrative Code.

3. The following exhibits are made a part of this request:

a. Exhibit A consists of a copy of the Confidential Discovery Responses on which all information that FPL asserts is entitled to confidential treatment is highlighted.

b. Exhibit B consists of an edited version of the Confidential Discovery Responses on which all information that FPL asserts is entitled to confidential treatment is redacted.

c. Exhibit C is a table containing a page-and-line identification of the information highlighted in Exhibit A. Exhibit C also references the specific statutory basis for the claim of confidentiality and identifies the declarant who supports the requested classification.

d. Exhibit D is the declaration of Lisa Fuca in support of this Request.

4. FPL submits that the highlighted information in Exhibit A is proprietary confidential business information within the meaning of Section 366.093(3), Florida Statutes. This information is intended to be and is treated by FPL as private, and its confidentiality has been maintained. Pursuant to Section 366.093, such information is entitled to confidential treatment and is exempt from the disclosure provisions of the public records law. Thus, once the Commission determined that the information in question is proprietary confidential business information, the Commission is not required to engage in any further analysis or review such as weighing the harm of disclosure against the public interest in access to the information.

5. As the declaration included in Exhibit D indicates, the Confidential Discovery Responses provided by FPL relates to the competitive interests of FPL and its vendors, the disclosure of which would impair their competitive interests. This information is protected by Section 366.093(3)(e), Fla. Stat.

6. Upon a finding by the Commission that the Confidential Information remains proprietary and confidential business information, the information should not be declassified for at least eighteen (18) months and should be returned to FPL as soon as it is no longer necessary for the Commission to conduct its business. *See* § 366.093(4), Fla. Stat.

WHEREFORE, for the above and foregoing reasons, as more fully set forth in the supporting materials, Florida Power & Light Company respectfully requests that its Request for Confidential Classification be granted.

Respectfully submitted,

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By: Lynne D. Adams
for Maria Jose Moncada
Florida Bar No. 773301

CERTIFICATE OF SERVICE
Docket No. 20190001-EI

I HEREBY CERTIFY that a true and correct copy of FPL's Request for Confidential Classification* has been furnished by electronic service this 26th day of August 2019 to the following:

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By: Lynne A. Adams
for Maria Jose Moncada
Florida Bar No. 773301

* The exhibits to this Request are not included with the service copies. A redacted copy of the Confidential Response was served with FPL's Response to OPC's First Request for Production (No. 1). Copies of Exhibits C and D are available upon request.

EXHIBIT B

REDACTED

5) The EPU generator upgrade specification [D21] describes technical requirements for the stator windings and insulation:

The stator coils shall be gas inner-cooled, single turn, half coils wound in open slots and secured in place by Kevlar coated molded glass-epoxy wedges. Each stator coil shall be made up of two half coils shaped on a former and joined together after assembly in the slots.

The stator coils shall be composed of solid copper strands in insulated ventilation tubes. Each stator coil strand shall be made of annealed tough pitch copper wire. All individual strands shall be insulated with a double thickness of continuous filament Dacron-Glass fibers having suitable thermal properties, high thermal stability and high abrasion resistance.

The coils shall utilize the latest stator coil construction materials, which include internal and external voltage grading material to improve the dielectric performance.

A glass backed mica paper tape and epoxy resin, rated for Class F insulation (155°C hot spot temperature limit) and working to Class B (130°C hot spot temperature limit) shall be used to provide the ground wall insulation of the stator coils superior dielectric and mechanical properties. The vacuum-pressure-impregnation (VPI) process shall be utilized.

The glass-backed mica paper tape shall be machine-applied over the entire length of the coil, straight part and end arms.

Prior to vacuum pressure impregnation, each coil shall be subject to a pre-heat cycle that removes residual moisture.

The coils shall be placed into an impregnation pan that shall be inserted into a tank, where a vacuum shall be drawn prior to introduction of the epoxy impregnation resin. Following impregnation, the coils shall be wrapped with a release film barrier and then placed into presses for curing in an oven.

6) The Siemens generator documentation [D22] includes a topical description of the Armature Coils:

[redacted]

7) Division of responsibility for EPU generator modification activities was specified within EC 246457 [D19]. The OEM was selected to perform various activities including the generator rewind and testing:

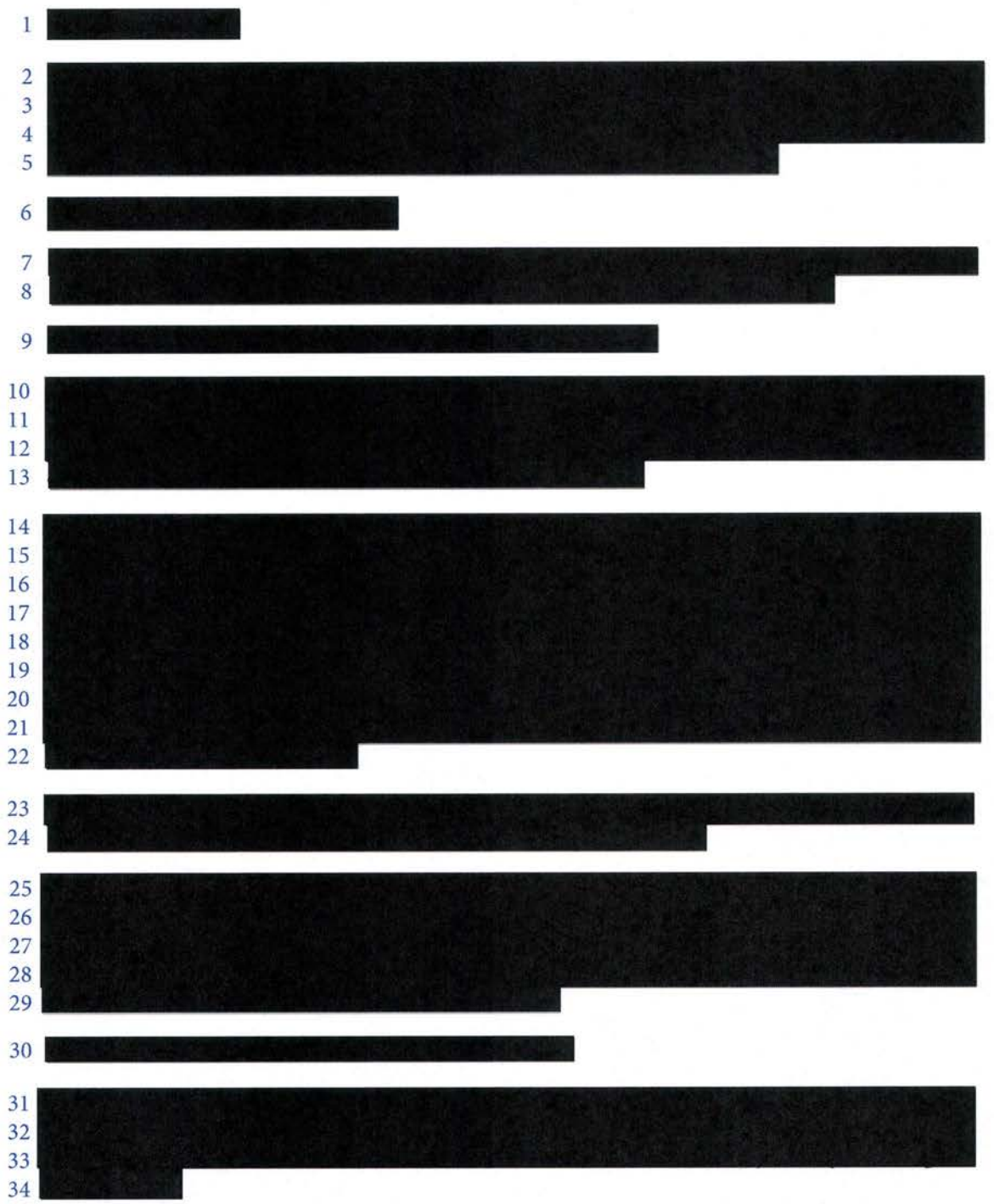
The work performed by the OEM is as follows:

1. *Replacement of the Main Generator Rotor and all associated removal including:*
   a. *Removing existing rotor from the 62 foot elevation to a transporter located at the 19.5 foot elevation by use of the turbine gantry crane.*
   b. *Lifting the replacement rotor from the 19.5 foot elevation to the 62 foot elevation by use of turbine gantry crane.*
2. *Rewinding of the Main Generator Stator and associated tests.*
3. *Replacement of the Exciter rotor and modification of Exciter and Generator coupling*
4. *Design and installation of new terminal board, TB-57*
5. *Removal of existing RTDs and installation of replacement RTDs.*
6. *Wiring of RTDs to the terminal strip in RTD Terminal Board TB-57 for customer interface.*
7. *Removal of existing FOVM vibration sensors and installation of replacement FOVM vibration sensors.*
8. *Removal of existing FOVM conduit boxes and installation of replacement FOVM conduit boxes internal to the Main Generator skirt.*
9. *Removal of existing stator slot couplers and installation of replacement stator slot couplers and associated wiring for IRIS partial discharge system.*
10. *Removal of existing termination box and installation of the external termination box for IRIS on the Main Generator housing.*
11. *Removal of the existing flux probe and associated wiring and installation of one replacement flux probe and one new flux probe and associated wiring.*
12. *Installation of the casing glands and the BNC connectors for the flux probes.*

8) The EPU modification activities to upgrade the St Lucie Unit 1 Generator were performed onsite between November 2011 and April 2012. [D10,D13,D23] Siemens performed the rewind and core replacement modification activities. Siemens work processes and procedures were used. As described in the customer report [D23] activities were grouped into "modules":

[redacted]

9) The 2012 customer report [D23] summarizes the process for inspecting, installing, and testing the bottom coils into the stator during Module 06 of the rewind. Two bottom coils (#35 and #42) were noted with minor damage during this process and were repaired. High potential test at 84kVdc was performed on the bottom coils after installation (before top coil install) with satisfactory results:



10)Minor damage to the insulation of two stator bars was noted after installation of bottom coils for the EPU modification [D23]. The coils with damage were located in slot #35 and slot #42 and repaired in place [D41]. No mention of any damage to bottom coil 17 was found.

11)IEEE standard 95 [D43] describes the recommended practice for testing the insulation of AC machines using high direct voltage (hipot), including acceptance proof testing for new equipment and maintenance proof testing equipment that has been in service:

[redacted]

12)ANSI C50.10 [D44] specifies the standard test voltages for acceptance testing:

[redacted]

13) The 2012 customer report [D23] summarizes the final testing performed on the stator during Module 13 after the rewind, which included dc high potential testing. The test was performed consistent with IEEE 95 using a test voltage of 76.5kVdc:

[redacted]

14) The testing performed on the Unit 1 generator windings during the 2012 rewind process subjected the insulation of stator bar B17 to an initial installation high potential test of 84 kVdc with satisfactory results, and a final high potential test of 76.5kVdc with satisfactory results. The final test satisfies IEEE 95 using a test voltage of 76.5kVdc based on (2E+1)*1.7 as described in ANSI C50.10 for dc test voltage, where E=22kV (rated line-to-line voltage of the generator). Therefore, the Unit 1 acceptance proof testing met the applicable industry standards for acceptance testing new equipment.

15) Warranty replacement of RTDs was performed during the Fall 2013 refueling outage. This scope included a maintenance high potential test in addition to routine Generator Crawl-Through Inspection.

[redacted]

...

[redacted]

...

[redacted]

16) Routine Generator Crawl-Through Inspection was performed by Siemens during refueling outages in Spring 2015, Fall 2016, and Spring 2018. These each included inspection of the turbine end winding.

Spring 2015 Inspection [D33]:

[redacted]

Fall 2016 Inspection [D34]:

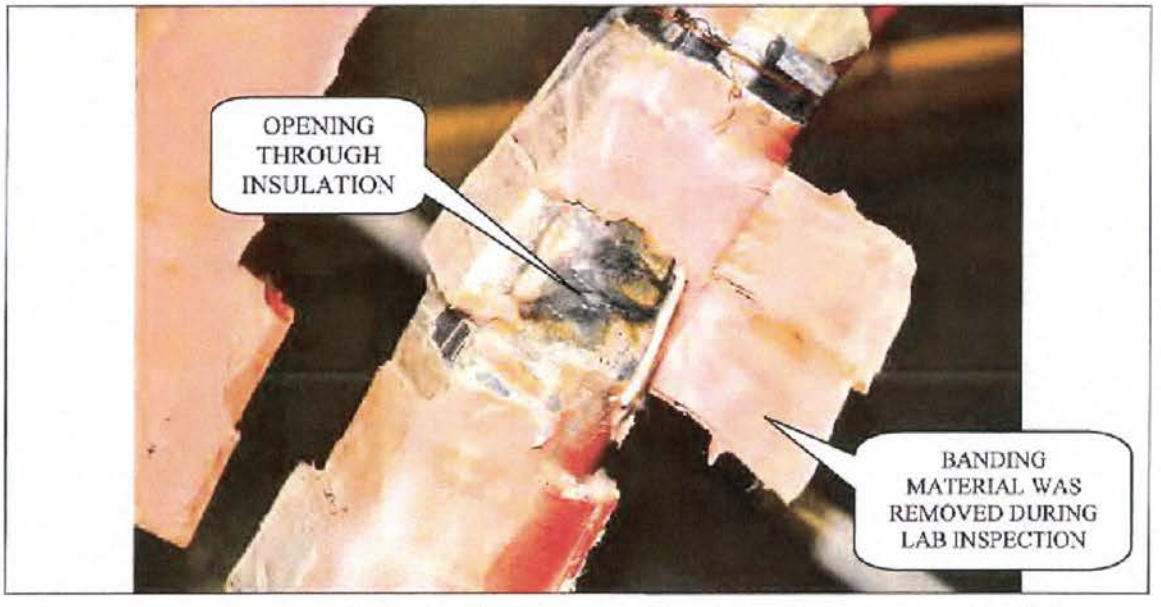
[redacted]

Spring 2018 Inspection [D35]:

[redacted]

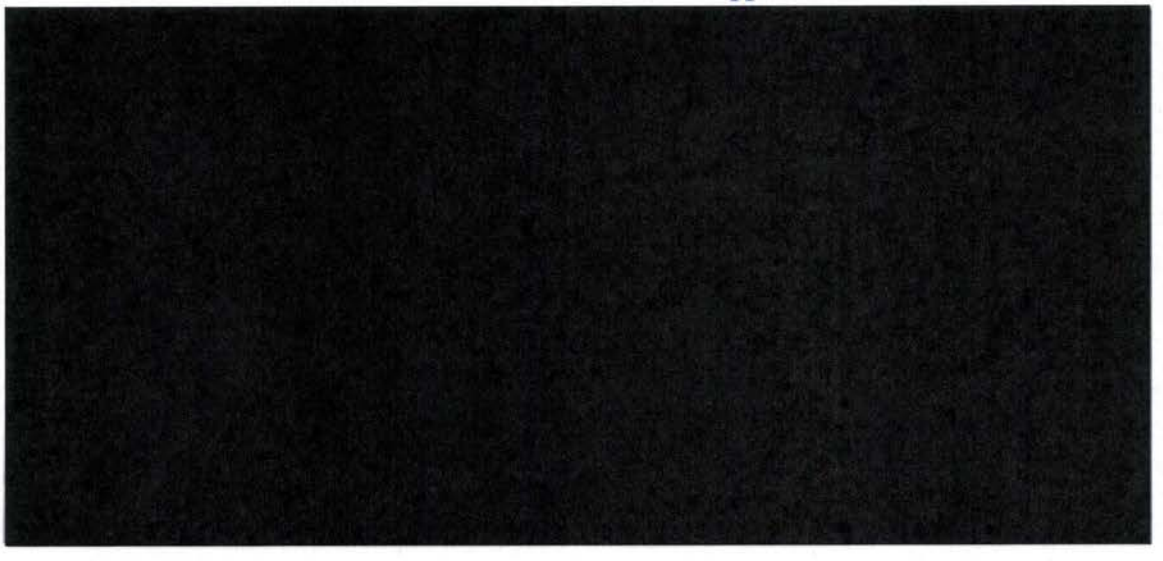
24) Various materials removed from the stator were retained and transferred to Siemens for further testing and analysis in accordance with a testing plan [D31]. These materials included stator bar B17 and four additional stator bars that were removed whole to serve as test specimens.

After examination of B17 it was observed [D38, O5] that the fault current track to ground followed a path along the OCP layer originating at a small opening through the insulation that was located under spacer banding material:



The bar was cut approximately 9" on either side of the fault area and a CT scan was performed on the specimen. The CT imaging shows that the opening to a narrowing hole straight through the insulation to the ICP layer with no obvious involvement of the underlying copper strands.

A



25)A review of the ground fault [D42] was provided by FPL Power Generation Division staff supporting the St Lucie Unit 1 generator rewind and investigation activities. The PGD staff concluded that a "magnetic termite" was the most likely cause for the fault, but this conclusion was not definitive.

Based on the extent of core work performed during the 2012 rewind, the most likely root cause is an introduction of ferrous foreign material

...

No definitive root cause was identified due to the damage at the failure location

The opinion was based on visual characteristics of the fault in comparison with similar events after consultation with peers, but could not be claimed as definitive. This evidence supporting the presence of a magnetic terminate is circumstantial. No remains of any metallic or ferrous object (foreign or native) were found at the puncture site. Additionally, the location of the puncture under banding material applied using an epoxy provides conflicting evidence against the presence of a magnetic termite. The damaging activity of a ferromagnetic particle is generally prevented when the particle is captured / restrained by epoxy.

26)A Siemens internal analysis of the St Lucie stator ground fault is in progress. Siemens has shared a root cause statement [D45] based on this analysis work to date.

1 [redacted]
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6. Operating Experience

An INPO OE search was completed for generator ground faults.

A	B
INPO TR4-38 July 2004	Topical Report - Review of Main Generator Failures
OE #102142 November 1990	South Texas Unit 1 Reactor Trip Due to a Generator Ground Fault Relay Actuation Caused by a Stator Coil End Turn Failure
OE #103441 December 1990	Braidwood Unit 1 REACTOR TRIP CAUSED BY MAIN GENERATOR PHASE C GROUND FAULT
1 [redacted]	
OE #287412 November 1988	Sequoyah Unit 1 TURBINE TRIP (POWER> 50%) A MAIN GENERATOR GROUND FAULT CAUSED A TURBINE TRIP WHICH CAUSED A REACTOR TRIP BECAUSE REACTOR POWER WAS ABOVE 50%. THE GROUND FAULT WAS CAUSED BY INSULATION BREAKDOWN ON THE "C" PHASE STATOR BAR T-17
OE #312004 (WANO) February 2014	Novovoronezh 5 Protection Actuation on a Ground Fault in Turbine Generator Stator Winding Caused a Main Generator Trip and Subsequent Unit Load Reduction
2 [redacted]	

Additional External OE was identified by PGD staff. Two presentations regarding generator failures having some similarity to the St Lucie Unit 1 ground fault were reviewed.

Detroit Edison (DTE) "Inleakage of H2 into Stator Water Cooling" [D36] September 2009	Fermi 2 generator shutdown due to H2 leakage into water cooled stator. Caused by magnetic termite wormhole discovered in stator produced by small steel particle.
Electrabel Belgium "EPRI Generation Workshop Rome, April 2013"	500MW Jeumont generator (Westinghouse design) trip via earth fault relay after failure of stator winding bottom bar. Although no physical evidence presence of domestic or foreign object cannot be eliminated.

Brief review of certain OE is provided below. Based on the information reviewed to date there is no OE directly relevant to the event.

[redacted]

EXHIBIT C

JUSTIFICATION TABLE

EXHIBIT C

COMPANY: Florida Power & Light Company

TITLE: List of Confidential Documents

DOCKET NO.: 20190001-EI

DOCKET TITLE: Fuel and Purchased Power Cost Recovery Clause with Generating Performance Incentive Factor

SUBJECT: FPL's Response to OPC's First Request for Production

DATE: August 26, 2019

OPC's 1st POD	Description	No. of Pgs.	Conf (Y/N)	Line No./ Col. No.	Florida Statute 366.093(3) Subsection	Declarant
Request No. 1	Root Cause Report	72	N	Pgs. 1 – 21	(e)	L. Fuca
			Y	Pg. 22, Lns. 1-9		
			Y	Pg. 23, Lns. 1-20		
			Y	Pg. 24, Lns. 1-34		
			Y	Pg. 25, Lns. 1-26		
			Y	Pg. 26, Lns. 1-8		
			Y	Pg. 27, Lns. 1-16		
			Y	Pg. 28, Lns. 1-18		
			N	Pgs. 29 – 31		
			Y	Pg. 32, Block A		
			Y	Pg. 33, Lns. 1-12		
			N	Pgs. 34 – 36		
			Y	Pg. 37, Cols. A and B, Rows 1 and 2		
			Y	Pg. 38, Lns. 1-34		
			N	Pgs. 39 – 72		

EXHIBIT D

DECLARATIONS

EXHIBIT D

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Fuel and Purchase Power Cost Recovery Clause with Generating Performance Incentive Factor	Docket No: 20190001-EI

DECLARATION OF LISA FUCA

1. My name is Lisa Fuca. I am currently employed by Florida Power & Light Company ("FPL") as Principal Business Analyst, Nuclear Business Operations. I have personal knowledge of the matters stated in this written declaration.

2. I have reviewed the documents and information included in Exhibit A to FPL's Request for Confidential Classification. The documents and materials in Exhibit A which are asserted by FPL to be proprietary confidential business relate to competitive interests of third parties. Specifically, the confidential documents contain information provided pursuant to FPL's contracts that prohibit FPL from disclosing the subject data. Disclosure of this information would impair FPL's efforts to contract with third parties for their services on favorable terms in the future, to the detriment of FPL's customers. To the best of my knowledge, FPL has maintained the confidentiality of this information.

3. Consistent with the provisions of the Florida Administrative Code, such materials should remain confidential for a period of eighteen (18) months. In addition, they should be returned to FPL as soon as the information is no longer necessary for the Commission to conduct its business so that FPL can continue to maintain the confidentiality of these documents.

4. Under penalties of perjury, I declare that I have read the foregoing declaration and that the facts stated in it are true to the best of my knowledge and belief.

Lisa Fuca

Lisa Fuca

Date: 8/23/19