

1 I N D E X

2 WITNESSES

3 NAME: PAGE NO.

4 JEFFREY SWARTZ

Examination by Mr. Bernier 401

5 Prefiled testimony inserted 404

Examination by Mr. Rehwinkel 414

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1 P R O C E E D I N G S

2 (Transcript follows in sequence from
3 Volume 2.)

4 COMMISSIONER CLARK: Thank you, guys. Y'all
5 really can go this time.

6 (Parties excused by the Commission left the
7 courtroom.)

8 MS. BROWNLESS: Okay. At this time, with
9 regard to witness testimony, I believe that FP&L
10 and FIPUG have a statement that they would like to
11 make regarding the excusal of FP&L's SOBRA
12 witnesses.

13 COMMISSIONER CLARK: Okay. We will start with
14 FPL.

15 MS. MONCADA: Thank you, Commissioners, Ms.
16 Putnal and Mr. Moyle, representing FIPUG, have been
17 kind enough, and I thank them for working with FPL
18 to reach the stipulation that has allowed for us to
19 reach an agreement whereby FIPUG waives the
20 cross-examination of FPL's witnesses. And in
21 exchange, we will read a short stipulation into the
22 record.

23 COMMISSIONER CLARK: Okay.

24 MS. MONCADA: FPL acknowledges that FIPUG
25 takes the position that, one, Section 366.06

1 Florida Statutes requires the Commission to
2 determine that the SoBRA projects are needed and
3 prudent. Two, that the use of the fuel clause to
4 consider SoBRA recovery is inappropriate. And,
5 three, FPL's use of a third party's carbon cost
6 projections is uncorroborated hearsay.

7 These position have been raised in FIPUG's
8 appeal of Order PSC-20180028-FOF-EI in Florida
9 Supreme Court Case No. SC18-226.

10 FPL disagrees with FIPUG's positions as
11 reflected in its answer brief filed in Florida
12 Supreme Court Case No. SC18-226, and to the extent
13 FIPUG maintains these positions in this proceeding,
14 which it does.

15 FIPUG agrees to waive its cross -- waive its
16 right to cross-examine FPL witnesses William F.
17 Brannen, Juan Enjamio, Stephanie Castaneda and
18 Tiffany Cohen.

19 The parties acknowledge that FIPUG's agreement
20 to forego cross-examination of FPL witnesses does
21 not amount to a waiver of its respective positions
22 in this proceeding, including the positions
23 previously identified, or any appeal hereof, or in
24 the appeal pending before the Florida Supreme
25 Court, Case No.s SC18-226.

1 FPL will not suggest or argue before the
2 Commission or other judicial tribunal, including
3 but not limited to the Florida Supreme Court, that
4 FIPUG's waiver of its right to cross-examine FPL
5 witnesses in this matter supports FPL's current or
6 future appellate position related to the issues
7 identified previously, or otherwise acts as a
8 waiver of any FIPUG position, or that such waiver
9 of cross-examination disadvantages FIPUG's current
10 or future appellate position related to the issues
11 previously identified.

12 That is all.

13 COMMISSIONER CLARK: Okay. Thank you very
14 much.

15 And FIPUG?

16 MS. PUTNAL: Thank you. Just to confirm that
17 that is correct.

18 COMMISSIONER CLARK: Okay. Thank you.

19 All right. I guess now we are back to opening
20 statements. FPL, yes, ma'am.

21 MS. MONCADA: There are no -- FPL waives its
22 opening statements. Everything has been
23 stipulated, and except for the issues previously
24 enumerated by Ms. Brownless, there are no witnesses
25 for FPL, and FPL's attorney would like to be

1 excused.

2 COMMISSIONER CLARK: I kind of thought that
3 was coming.

4 All right. You are excused. Thank you so
5 much.

6 MS. MONCADA: Thank you, Commissioners.

7 (Ms. Moncada was excused by the Commission and
8 left the courtroom.)

9 COMMISSIONER CLARK: FIPUG.

10 MS. PUTNAL: Thank you. FIPUG has no
11 questions for the witness, and would also like to
12 be excused.

13 COMMISSIONER CLARK: Okay.

14 MS. PUTNAL: Thank you.

15 COMMISSIONER CLARK: Without objection, FIPUG
16 is excused as well.

17 MS. BROWNLESS: Excuse me. Ms. Putnal, before
18 you go, since you are asking to be excused, do you
19 wish to brief your SoBRA issues?

20 MS. PUTNAL: Yes. FIPUG would like to reserve
21 the right to brief the issues in the stipulation.
22 Thank you.

23 MS. BROWNLESS: Okay. Thank you.

24 And would you also reserve the right to brief
25 the FP&L issues?

1 MS. PUTNAL: Yes. Thank you.

2 MS. BROWNLESS: Thank you.

3 COMMISSIONER CLARK: Okay. So both of those
4 issues, you are reserving the right to brief on,
5 okay.

6 (Ms. Putnal was excused by the Commission and
7 left the courtroom.)

8 COMMISSIONER CLARK: Very good. Any of the
9 rest of you guys want to call it quits? No.

10 All right. We are here, we might as well go,
11 okay. Just checking.

12 COMMISSIONER GRAHAM: Going, going, gone.

13 COMMISSIONER CLARK: Going once.

14 All right. Mr. Bernier, do you want to begin
15 with openings -- have we taken care of all of your
16 matters. Everybody good? All right.

17 MS. BROWNLESS: And, Your Honor, you need to
18 swear in your witness.

19 COMMISSIONER CLARK: Yes, as soon as we get to
20 him, we will. We are going to start with opening
21 statements, first.

22 Mr. Bernier.

23 MR. BERNIER: Thank you, Mr. Chairman.

24 Good evening, Commissioners. I believe it's
25 evening time now. As Ms. Brownless has indicate,

1 the remaining issues for DEF are Issues 1B and the
2 associated fallout issues.

3 Issue 1B essentially asks whether DEF should
4 be permitted to recover the replacement power costs
5 incurred during the spring 2017 outage at the
6 Bartow combined cycle steam turbine. Because the
7 testimony and exhibits of Mr. Swartz demonstrate
8 that DEF was prudent in its actions leading up to
9 the outage, and to restore the unit to service as
10 quickly as reasonably possible, DEF should be
11 permitted to recover these prudently incurred
12 costs.

13 That is all. Thank you.

14 COMMISSIONER CLARK: Okay. OPC.

15 MR. REHWINKEL: Thank you, Commissioners.

16 The Public Counsel takes vigorous issue with
17 Duke's request to recover \$11 million of
18 replacement power costs for an outage at the Bartow
19 unit in 2017. It is our opinion, and I believe the
20 testimony will show today, that despite Duke's
21 claim that they acted prudently, the issue about
22 causation for the failure that led to at least \$11
23 million in costs for Duke's customers to be
24 recovered in fuel were the fault of someone that
25 was within the control of Duke Energy.

1 You will hear testimony, and you will see a
2 fair amount of confidential information that
3 supports the Public Counsel's position on this that
4 basically consists of a lot of finger pointing and
5 no proof that the company acted prudently to
6 prevent these costs from being imposed on the
7 customers. And for that reason, we will ask you to
8 disallow these costs as being imprudently incurred.

9 We ask you to pay close attention to the
10 confidential information that you will hear today.
11 We will have to -- because of the circumstances we
12 are presented with the confidential framing of
13 information, we will have to be discrete and work
14 around the information, but it will be important,
15 and the public will be watching, just make sure
16 that the information is digested by the Commission
17 and considered by you, because they will not be
18 able to see that information.

19 So we ask you to take that into consideration
20 as you consider the evidence today, as well as when
21 you deliberate.

22 Thank you.

23 COMMISSIONER CLARK: Thank you.

24 Mr. Brew.

25 MR. BREW: Thank you, and good evening.

1 PCS agrees that the \$11 million in replacement
2 and power costs for the two-month outage last year
3 shouldn't be allowed through the clause. In fact,
4 the 11 million is not the whole story, which is
5 something we will discuss.

6 For those of us that have been around the
7 block a few times on these matters, when there is a
8 forced outage at a plant, we all get little snippets
9 of engineering speak. And usually the engineers
10 and operators will have gotten together with the
11 manufacturer, they have diagnosed the problem and
12 they fixed it. That's not the case here.

13 We are in the sixth year of an ongoing problem
14 with a low pressure turbine. The fifth event, the
15 one that occurred in February of 2017, is by far
16 the most serious. You had, effectively, a piece of
17 a blade thrown around at 4,000 RPMs inside a
18 turbine which is generally not a good condition to
19 see.

20 And we deferred the clause question from last
21 year to this year so that Duke can do the root
22 cause analysis and we would have some answers.
23 Well, we don't. We have a root cause analysis that
24 assigns blame as long as it's not Duke's, but you
25 don't have a definitive solution. You don't have a

1 proposed action plan. You don't have a final
2 solution. So to borrow a car analogy from Mr.
3 Moyle, if you had a car -- if you were driving a
4 car with a five-speed manual transmission, and you
5 drove it for a couple of years and suddenly it
6 stopped -- started popping out of fifth gear, you
7 took did into the dealer to get it fixed. And a
8 few months later it was doing it again, and you got
9 it in, you got it fixed, you paid to have it fixed.
10 After about the fifth time, you go to the dealer
11 again where it popped out on the middle of the
12 highway for you, and the dealer says, we are
13 working on it. For the time being, just drive it
14 in fourth.

15 That's what we are looking at here, is apart
16 from the \$11 million in replacement fuel costs for
17 those two months, you have had over a year of the
18 plant operating well below its power rating, and
19 you don't have a solution. We don't know when.

20 So there is a lot more to be addressed here
21 than is covered in Duke's testimony and the root
22 cause analysis that haven't satisfied remotely
23 their burden of proof and the costs shouldn't be
24 allowed.

25 Thank you.

1 COMMISSIONER CLARK: Mr. Wright.

2 MR. WRIGHT: Briefly, Mr. Chairman and
3 Commissioners.

4 We concur with the comments made by Mr.
5 Rehwinkel and Mr. Brew, and their analysis. This
6 \$11 million should not be allowed for recovery, nor
7 should the going forward consequences of Duke's
8 imprudence.

9 Thank you very much.

10 COMMISSIONER CLARK: All right. So if Mr.
11 Swartz, if you would, stand let me swear you in.

12 Whereupon,

13 JEFFREY SWARTZ

14 was called as a witness, having been first duly sworn to
15 speak the truth, the whole truth, and nothing but the
16 truth, was examined and testified as follows:

17 COMMISSIONER CLARK: Thank you. Okay, Mr.
18 Bernier.

19 MR. BERNIER: Thank you, Mr. Chairman.

20 EXAMINATION

21 BY MR. BERNIER:

22 **Q Good evening, Mr. Swartz.**

23 **Would you please state your name and business**
24 **address for the record?**

25 **A My name is Jeffrey Swartz. And my business**

1 address is 299 First Avenue North, St. Petersburg,
2 Florida.

3 **Q And by whom are you employed, and in what**
4 **capacity?**

5 A I am employed by Duke Energy Florida. I am
6 the Vice-President of Generation.

7 **Q And did you cause to be filed confidential**
8 **testimony and one confidential exhibit in this docket on**
9 **March 2nd, 2018?**

10 A Yes.

11 **Q Do you have a copy of your testimony and**
12 **exhibit with you today?**

13 A I do.

14 **Q Do you have any corrections to that testimony?**

15 A Yes. I have one correction. On page 3, at
16 line 21, I explained that the exhibit was initially
17 marked confidential due to an ongoing claims process.
18 That process has now concluded. However, DEF has been
19 informed by the original equipment manufacturer that it
20 considers the information contained in the report to be
21 proprietary and confidential, therefore the information
22 still requires confidential treatment.

23 **Q Thank you, Mr. Swartz.**

24 MR. BERNIER: Mr. Chairman, at this time, I
25 would ask that Mr. Swartz's prefiled direct

1 testimony, dated March 2nd, be inserted into the
2 record as though read.

3 COMMISSIONER CLARK: Okay. So done.

4 (Prefiled testimony inserted.)

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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DIRECT TESTIMONY OF

3 JEFFREY SWARTZ

4 ON BEHALF OF

5 DUKE ENERGY FLORIDA

6 DOCKET NO. 20180001-EI

7 MARCH 2, 2018

8

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

10 A. I am employed by Duke Energy Florida (“DEF” or the “Company”) as Vice President
11 – Generation.

12

13 **Q. What are your responsibilities in that position?**

14 A. As Vice President of DEF’s Generation organization, my responsibilities include
15 overall leadership and strategic direction of DEF’s power generation fleet. My major
16 duties and responsibilities include strategic and tactical planning to operate and
17 maintain DEF’s non-nuclear generation fleet; generation fleet project and additions
18 recommendations; major maintenance programs; outage and project management;
19 retirement of generation facilities; asset allocation; workforce planning and staffing;
20 organizational alignment and design; continuous business improvements; retention
21 and inclusion; succession planning; and oversight of hundreds of employees and
22 hundreds of millions of dollars in assets and capital and operating budgets.

23

1 **Q. Please describe your educational background and professional experience.**

2 A. I earned a Bachelor of Science degree in Mechanical Engineering from the United
3 States Naval Academy in 1985. I have 17 years of power plant and production
4 experience in various managerial and executive positions within Duke Energy
5 managing Fossil Steam Operations, Combustion Turbine Operations and Nuclear
6 Plant Operations. While at Duke Energy I have managed new unit projects from
7 construction to operation, and I have extensive contract negotiation and management
8 experience. My prior experience also includes nuclear engineering and operations
9 experience in the United States Navy and project management, engineering,
10 supervisory and management experience with a pulp, paper and chemical
11 manufacturing company.

12

13 **Q. What is the purpose of your testimony?**

14 A. The purpose of my testimony is to provide the Commission with information related
15 to the Bartow Steam Turbine (ST) forced outage that occurred from February 9, 2017
16 through April 8, 2017, including background information on the event that led to the
17 outage, an explanation of DEF's responsive actions, a presentation of DEF's root
18 cause analysis and findings, and an explanation of DEF's reasonable and prudent
19 restoration actions.

20

21 **Q. Please provide a summary of your testimony.**

22 A. On February 9, 2017, the Bartow steam turbine was removed from service due to an
23 indication of a sodium leak into the steam water cycle. During this shutdown, DEF

1 discovered a failed LP turbine rupture disk. The disk had been breached by a foreign
2 object that caused a hole in the rupture diaphragm. DEF performed an inspection of
3 the Bartow Steam Turbine (“ST”) and discovered damage to the ST’s L-0 blades (and
4 determined part of an L-0 blade ruptured the LP turbine rupture disk), resulting in a
5 forced outage to the ST that lasted until April 8, 2017 (while the ST was off-line, the
6 Bartow combustion turbines (“CTs”) remained available to run in simple cycle
7 mode).

8 DEF performed a Root Cause Analysis (“RCA”) that determined the cause of the L-0
9 blade failure is [REDACTED]. After investigation, the
10 RCA Team determined that [REDACTED]
11 [REDACTED] both in the remainder of Duke Energy Corporation’s (“Duke Energy”) ST fleet
12 and elsewhere in the industry. Therefore, the failure of the Bartow ST’s L-0 Blades
13 was caused by events beyond DEF’s control, and DEF could not have reasonably
14 prevented the failure from occurring. DEF’s actions prior to and in the wake of the
15 blade failure were reasonable and prudent.

16
17 **Q. Are you sponsoring any exhibits?**

18 A. Yes. I am sponsoring the DEF RCA Report, attached as Exhibit No. __ (JS-1).
19

20 **Q: Is the RCA considered confidential by the Company?**

21 A: Yes. The RCA and portions of my testimony discussing the RCA’s findings are
22 confidential due to the ongoing claims process with the blades’ manufacturer and the
23 potential for insurance claims. In order to protect these rights, this information has

1 been treated by the Company as proprietary confidential business information and has
2 not been made publicly available.

3

4 **Q. Please summarize the events leading up to the 2017 Bartow event.**

5 A. Bartow is a 4x1 Combined Cycle (“CC”) Station with a ST manufactured by
6 Mitsubishi Hitachi Power Systems (“MHPS”). The ST was purchased from a
7 company that intended to use it for a 3x1 CC with a gross output of 420MW. The ST
8 was never delivered to that third party but instead remained with MHPS in a
9 warehouse in Japan until DEF purchased the unit in 2006.

10 Before the ST was purchased, DEF contracted with MHPS to evaluate the ST design
11 conditions and to update heat balances for a 4x1 CC configuration. CC units blend
12 steam from the CTs as they start-up and/or shut-down with steam to the ST. These
13 blending events result in brief periods of higher steam temperatures and flows into the
14 condenser below the ST L-0 blades, a common occurrence for CC units.

15 Since commissioning of the Bartow ST in 2009, there have been five (5) events
16 involving L-0 blade failures and/or replacements. The latest blade failure occurred
17 when a “loss of mass” event resulted in a blade fragment traveling through the Low
18 Pressure Turbine rupture disk diaphragm.

19

20 **Q. What actions did DEF take in response to the February 2017 failure?**

21 A. The Company took three primary actions in the wake of the event: a root cause team
22 was established to investigate the incident and prepare a root cause analysis; a

1 restoration team was formed to bring the unit back on-line; and a team was formed to
2 evaluate a long-term solution for Bartow.

3

4 **Q. Please describe the process DEF followed to ascertain the root cause of the event.**

5 A. DEF created a RCA Team consisting of internal experts to investigate and determine
6 the root cause of the event. The RCA Team consisted of seven individuals with
7 expertise in engineering, operations and process, and human performance.

8

9 Following industry standard procedures, the RCA Team employed specific tools used
10 to determine potential root cause(s) including: interviews, event and causal factor
11 review (“E&CF”), flawed barrier analysis, change analysis, component analysis,
12 visual inspections of the equipment, photographs taken following the event,
13 engineering calculations and measurements, and detailed review of outage reports and
14 maintenance logs.

15 **REDACTED**

16 **Q. Please describe the RCA Team’s conclusio**

17 A. The DEF RCA Team determined that the root cause of the failures in the ST L-0 40”
18 blades is

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

1 Notwithstanding the alternative causes hypothesized by the OEM, [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]

7

8 **Q. Did the RCA Team consider alternative potential root causes?**

9 A. Yes, DEF evaluated potential factors in the operation of the unit as well as specific
10 design factors unique to these blades, each of which was ultimately rejected as the
11 cause of the fifth failure and as the overall cause of all five failures. [REDACTED]
12 [REDACTED]
13 [REDACTED]

14

15 **Q. Why did the RCA Team reject these theories?**

16 A. The detailed rationale for rejecting these competing theories are contained in the
17 RCA, but in general (and with the exception of the [REDACTED]
18 [REDACTED] DEF was unable to find a correlation between any of the
19 individual factors and the blades' failures. However, it should be noted that DEF [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]

1

2 **Q. What restoration process did DEF follow to bring the Bartow ST back into**
3 **service?**

4 A. It's important to recall that the four Bartow CTs were able to continue operation in
5 simple cycle mode (i.e., without operation of the ST) notwithstanding the blade
6 failure. DEF worked with the OEM to identify and implement an interim solution
7 that would allow the ST to resume operation, ultimately resulting in the installation of
8 a pressure plate in place of the L-0 blades on March 22, 2017. The plate allows the
9 ST to operate increasing the energy output of Bartow above what was possible in
10 simple cycle mode. As mentioned above, the ST returned to service on April 8, 2017.
11 DEF is currently in the process of evaluating potential long-term solutions to the L-0
12 blade issue.

13

14 **Q. Could DEF have reasonably prevented the event and the ensuing outage at**
15 **Bartow?**

16 A. No, the outage was caused by circumstances beyond DEF's reasonable control, as
17 demonstrated by the RCA. DEF was not at fault.

18

19 **Q. Did DEF act reasonably and prudently to restore Bartow to service in a timely**
20 **fashion?**

21 A. Yes, DEF took reasonable and prudent steps to develop a restoration team and
22 guiding processes to restore the Bartow ST to service. The restoration team followed

1 those processes and the unit was successfully brought back on line in a timely
2 manner.

3

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

5 A. Yes.

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1 MR. BERNIER: And with that, we tender Mr.
2 Swartz for cross-examination.

3 COMMISSIONER CLARK: All right. Mr.
4 Rehwinkel.

5 COMMISSIONER BROWN: Summary?

6 MR. BERNIER: I suppose we could ask him to do
7 his summary before we tender. Are so used to
8 waiving those.

9 BY MR. BERNIER:

10 Q Mr. Swartz, if you have a summary, would you
11 please read it at this time.

12 MR. BERNIER: And thank you, Mr. Rehwinkel.

13 THE WITNESS: Good evening, Commissioners. My
14 name is Jeff Swartz, as we covered, and I am the
15 Vice-President of Generation for Duke Energy
16 Florida.

17 I am here today to support the prudence of
18 DEF's actions leading up to and in response to the
19 spring 2017 outage the Bartow combined cycle steam
20 turbine and its support of DEF's request for
21 recovery of replacement power costs associated with
22 that outage.

23 In short, the root cause analysis attached to
24 my March testimony shows that the cause of the L0
25 blade failure was beyond DEF's reasonable control.

1 DEF reached this conclusion after analyzing each of
2 the operational factors proposed as potential
3 causes by the original equipment manufacturer, or
4 OEM, as well as original factors put forward by
5 DEF. After extensive analysis, DEF determined that
6 none of the postulated factors adequately explained
7 the blade failures experienced in the steam
8 turbine.

9 I would also like to add that because of DEF's
10 thorough ongoing preventive maintenance and
11 monitoring programs, these blade failures were all
12 identified before more significant steam turbine
13 damage occurred, which could have been much more
14 extensive outages of months longer than what was --
15 what had happened.

16 DEF and the OEM determined that the most
17 prudent short-term solution was to install a
18 pressure plate in place of the two L0 rows of low
19 pressure turbine blades, thereby allowing the steam
20 turbine to continue in operation while a long-term
21 solution was analyzed, selected and implemented.
22 We expect to have the long-term solution finalized
23 and implemented in the fall of 2019.

24 Because DEF's actions leading up and in
25 response to the spring 2017 steam turbine outage at

1 the Bartow combined cycle were reasonable and
2 prudent, DEF should be allowed to recover the
3 reasonable replacement power costs associated with
4 that outage.

5 I look forward to answering any questions you
6 may have.

7 Thank you.

8 MR. BERNIER: I will now retender Mr. Swartz
9 for cross-examination.

10 COMMISSIONER CLARK: Mr. Rehwinkel.

11 MR. REHWINKEL: Thank you, Mr. Chairman.

12 EXAMINATION

13 BY MR. REHWINKEL:

14 Q And good evening, Mr. Swartz.

15 My name is Charles Rehwinkel, Deputy Public
16 Counsel, and I am here to ask you questions on behalf of
17 Duke's customers.

18 Mr. Swartz, so we understand your role here, I
19 would like to discuss your job title and
20 responsibilities that are shown on page 1 of your
21 testimony. And before we get into your testimony, I am
22 going to be asking you questions from your complete
23 confidential version of your testimony. Before we -- do
24 you understand that?

25 A Yes, sir.

1 **Q Okay.**

2 MR. REHWINKEL: Mr. Chairman, before we get
3 underway, I have given the staff three exhibits to
4 pass out, and I have provided counsel for Duke and
5 Mr. Swartz a copy of those three exhibits. I have
6 a confidential exhibit that I would propose to pass
7 out at the appropriate time rather than having it
8 out until it's necessary.

9 COMMISSIONER CLARK: No objection.

10 MR. REHWINKEL: So I will hold on to that one,
11 but I have given a copy of the exhibit to Mr.
12 Swartz, as well as Mr. Bernier.

13 BY MR. REHWINKEL:

14 **Q Do you have all four?**

15 A Yes, sir, I do.

16 **Q Thank you.**

17 MR. REHWINKEL: With your -- it's your
18 pleasure, Mr. Chairman. We can identify exhibits
19 or --

20 COMMISSIONER CLARK: We will identify them as
21 we go through -- as you call them out.

22 MR. REHWINKEL: Okay.

23 BY MR. REHWINKEL:

24 **Q All right. Mr. Swartz, on page 1, you**
25 **indicate that -- line 16 through 18 -- you indicate that**

1 within DEF, which is Duke Energy Florida, correct?

2 A That's correct.

3 Q You are the person with primary responsibility
4 for the operation and maintenance of the generation
5 fleet, is that right?

6 A Yes, sir.

7 Q And that fleet includes the Bartow combined
8 cycle unit, is that right?

9 A It does.

10 Q And that's the unit that we are here to talk
11 about today, is that correct?

12 A Yes, it is.

13 Q How long have you been in this position that
14 you testify to in your testimony?

15 A Approximately six-and-a-half years.

16 Q Okay. And what did you do before that?

17 A Prior to that, I was in other staff positions
18 leading portions of the generation fleet. Prior to
19 that, I was a plant manager at one of the stations, in
20 other operational roles at some other generating
21 stations within the Duke Energy fleet.

22 Q Okay. So prior to the six-and-a-half years,
23 were you in another state, in another operating company?

24 A I have been in Florida jurisdiction for over
25 16 years of my time with Duke Energy. I started with

1 the company in North Carolina for less than a year.

2 Q Okay. Thank you.

3 Now, your responsibility is for the state of
4 Florida's generation fleet only?

5 A Yes, sir.

6 Q Okay. I believe -- is there a Lee unit within
7 the Duke Energy fleet?

8 A I am sorry, I missed the word.

9 Q Lee, is there a Lee unit?

10 A Yes. There are actually two Lee units. There
11 is an HF Lee and a WS Lee.

12 Q Neither of those is in the state of Florida,
13 is that right?

14 A That's correct. One is in North Carolina, and
15 one is in South Carolina.

16 Q Okay. One is nuclear and one is fossil, or
17 are they both fossil?

18 A They are both fossil. I think that the South
19 Carolina Lee was proposed to be nuclear at one point.

20 Q Okay. So you have understanding and
21 familiarity with the operation of this unit, is that
22 right?

23 A By this unit --

24 Q The Lee -- the Lee unit -- is there a Lee
25 combined cycle unit?

1 A There are two Lee combined cycle units.

2 Q **Are you familiar with the operating --**

3 A I am more familiar with one than the other,
4 but in general, yes, I am familiar with the operation.

5 Q **Which one are you more familiar with?**

6 A The HF Lee. And that is the one that is
7 referred to in one of the confidential exhibits.

8 Q **Okay. So the testimony that you filed on**
9 **March 22, 2018, addresses an unplanned forced outage**
10 **that occurred at the Bartow combined cycle generation**
11 **statement as is described in your testimony beginning on**
12 **February 9th, 2017, and which lasted through April 8,**
13 **2017; is that correct?**

14 A Yes, it is.

15 Q **Okay. And can you -- can we agree that when I**
16 **ask you in this hearing about the 2017 outage, that we**
17 **mean the outage that lasted from February to April 2017?**

18 A Yes.

19 Q **Okay. And we can also agree, can we not, that**
20 **Duke incurred approximately \$11 million in replacement**
21 **power costs as a result of the Bartow steam turbine**
22 **being out of service from -- in the 2017 outage?**

23 A Yes, sir.

24 Q **In your testimony, you note that the Bartow**
25 **unit was able to run in simple cycle during that period,**

1 is that right?

2 A That's correct.

3 Q But even in running in simple cycle, the net
4 impact on the fuel clause in terms of replacement power
5 was still \$11 million, is that right?

6 A Yes, sir. That's correct.

7 Q I take it it would follow that had it not been
8 able to operate in simple cycle, directionally the \$11
9 million number would have been greater?

10 A Yes, sir.

11 Q Okay. Can you tell me how much capacity the
12 Bartow unit contributed to satisfy simple load during
13 that two-month period of the 2017 outage?

14 A I don't know exactly how much it contributed.
15 I can describe in general how the makeup of that power
16 block is and give you a feel for that, however.

17 Q Okay. I would appreciate if you would do
18 that.

19 A Okay. It's called the power block at Bartow
20 combined cycle. It's a four on one combined cycle,
21 meaning there are four combustion turbines and one steam
22 turbine. Each combustion turbine has a nominal capacity
23 of approximately 180 megawatts. So just operating in
24 simple cycle without the steam turbine in the process,
25 you could get approximately 720 megawatts from the

1 combustion turbines, and then the steam turbine adds
2 another 400 or so megawatts.

3 **Q So when you say 400 or so, what does that**
4 **mean?**

5 A There are many factors that actually go into
6 how much production is coming from the steam turbine.
7 There are other -- I mentioned 180 megawatts for the
8 combined cycle are combustion turbines, but there are
9 other design features that can augment the amount of
10 steam that's being put through the steam turbine that
11 could raise its capacity.

12 So at times it's a little higher than that, at
13 times it's a little lower than that. It also depends on
14 the ambient weather conditions.

15 **Q Okay. Prior to February 9th of 2017, what was**
16 **the name plate rating of the Bartow unit?**

17 A For the steam turbine portion of the block?

18 **Q Yes, the steam turbine.**

19 A 420 megawatts.

20 **Q Okay. Were you ever able to raise that name**
21 **plate rating and operate at a higher than 420-megawatt**
22 **output for the steam turbine?**

23 A Yes. At times we did operate higher than 420.

24 **Q And what was the maximum amount of operational**
25 **output that you were able to generate?**

1 A Subject to check, approximately 445 megawatts.

2 **Q Okay. Was that -- can you tell me the**
3 **timeframe you were able to operate at 445?**

4 A Yes, sir. Generally from the date of
5 commissioning in June of '09 through the spring of 2012,
6 at times we operated as high as approximately
7 445 megawatts.

8 **Q All right. In your testimony, you indicate**
9 **that Duke was not responsible for the cause of the 2017**
10 **outage, is that correct?**

11 A Yes, sir.

12 **Q In fact, in your March 2nd, 2018 testimony,**
13 **you contend -- let me start over again and ask it in a**
14 **different way.**

15 **In fact, in your March 2nd, 2018 testimony,**
16 **you testified at the Commission that the cause of the**
17 **2017 outage was an entity other than Duke?**

18 A I testified that the cause -- well, if you
19 refer to page 3 of my testimony, line 8 and 9, part of
20 the cause is redacted, but if you were to read those two
21 lines, you could see what the testimony says is the
22 cause of the failure.

23 **Q Okay. Well, let's turn to page 3 and look --**
24 **let's look at pages 8 -- I mean, lines 8 through 12**
25 **there, okay?**

1 A Okay.

2 Q All right. On line 9 --

3 COMMISSIONER BROWN: Mr. Chairman, if I may,
4 just for a moment, because we have -- we have
5 redacted versions in our -- in the prefiled
6 testimony. I think it would be helpful for the
7 Commissioners to have the unredacted version when
8 you are asking this line of questioning. I would
9 request staff to provide it to us, if we could.

10 COMMISSIONER CLARK: Agreed.

11 COMMISSIONER BROWN: Thank you.

12 MR. REHWINKEL: I would ask that not only do
13 you have unredacted testimony, but the unredacted
14 exhibit, JS-1. I am going to hold off questioning
15 until you get those.

16 COMMISSIONER CLARK: Thank you.

17 Since we are at a breaking point, and we have
18 got to come back anyway.

19 Let's -- I tell you what, so before he passes
20 all of these out, he is right in the process, we
21 are probably -- it's 6:30, we are probably at a
22 good breaking point before we even start this line
23 of questioning.

24 Mr. Rehwinkel, is it a good point for you?

25 Does that work for you?

1 MR. REHWINKEL: Yeah. I mean, what we just
2 did was just preliminary stuff, so I am good with
3 that.

4 COMMISSIONER CLARK: All right. I think we
5 are going to go with that plan then, and just come
6 back.

7 We will reconvene tomorrow morning at 9:00
8 a.m. Any concerns or questions?

9 We stand adjourned.

10 (Transcript continues in sequence in Volume
11 4.)

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CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, DEBRA KRICK, Court Reporter, do hereby
certify that the foregoing proceeding was heard at the
time and place herein stated.

IT IS FURTHER CERTIFIED that I
stenographically reported the said proceedings; that the
same has been transcribed under my direct supervision;
and that this transcript constitutes a true
transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative,
employee, attorney or counsel of any of the parties, nor
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attorney or counsel connected with the action, nor am I
financially interested in the action.

DATED this 8th day of November, 2018.



DEBRA R. KRICK
NOTARY PUBLIC
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EXPIRES JULY 27, 2020