

Docket No. 2020001-EI  
Cross-Examination  
Hearing Exhibit

Exhibit No.: 2

Proffered by: Public Counsel

Short title: Staff Interrogatory 41 Response

Witness(s): FPL- Coffey

**Florida Power & Light Company  
Docket No. 20190001-EI  
Staff's 5th Set of Interrogatories  
Interrogatory No. 41  
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**QUESTION:**

**For the purpose of Interrogatory Numbers 41-42 and subparts, please refer to Original Sheet Number 6.202.021 of Florida Power & Light Company's GPIF Actual Unit Performance Data Schedule for April 2019, filed on May 20, 2019 (April Performance Report). Please answer the following:**

**The April Performance Report identifies that a full forced outage began at St. Lucie Unit 1 on April 25, 2019 ("Outage").**

- A. Please describe the "UEL Main Generator Ground Fault" that is referenced on Original Sheet Number 6.202.021 of the April Performance Report.**
- B. In easily understandable terms, please describe this Outage event, and the restoration work performed in order to return St. Lucie Unit 1 to full commercial service.**
- C. Please identify the date St. Lucie Unit 1 returned to service from this Outage event.**
- D. Please identify the total number of hours St. Lucie Unit 1 was unavailable due to this Outage event.**
- E. Please identify the Net Summer Capacity (NSC) for St. Lucie Unit 1.**
- F. Please describe the actions FPL took to serve its customers while this base load plant was not operating.**
- G. Please state the replacement power cost attributable to this Outage, and explain how this amount was calculated.**
- H. How did FPL recover the replacement power cost attributable to this Outage?**
- I. Please state the repair cost attributable to this Outage.**
- J. How will FPL recover the repair cost attributable to this Outage?**

**RESPONSE:**

- A. The unplanned energy loss (UEL) was a full forced outage that began on April 25, 2019 at 09:18 AM until the main generator was restored and placed back in service on June 21, 2019 at 01:11 AM. The duration was approximately 57 days.**

The event was initiated by a main generator ground fault. The ground fault activated protective circuits that automatically shut down the nuclear reactor and electrically isolated the main generator.

The main generator could not be returned to service until all repairs were completed.

- B. The outage activities began with electrical testing to identify the extent of main generator damage caused by the ground fault. The location of the damage was determined to be in the stator windings. Subsequent troubleshooting required the removal of the main generator rotor and disassembly of the stator. The repair required a full rewind of the generator. The repair took 49 days to complete which is a vendor record for the shortest ever unplanned generator rewind.**
- C. St. Lucie Unit 1 returned to service on June 21st at 01:11 AM.**

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- D. St. Lucie Unit 1 was unavailable due to this outage event for approximately 1,360 hours. Power ascension to return to 100% power was approximately 34 hours.
- E. St. Lucie Unit 1 Net Summer Capacity (NSC) is 981 MW.
- F. While St. Lucie Unit 1 was not operating, FPL served its customers by utilizing available generation from the balance of its fleet. Additionally, as part of its normal day-to-day activities, FPL actively pursued and executed power purchases in the wholesale power market when market prices were lower than the cost of FPL's own generation.
- G. Please see Attachment 1 to this Interrogatory.
- H. FPL has not yet recovered the replacement power costs associated with this outage event. The replacement power costs are included in actual fuel costs for 2019 and will be recovered through FPL's fuel cost recovery clause factor to be effective commencing January 1, 2020.
- I. The repair cost attributable to this outage was approximately \$29 million.
- J. Inspection and repair costs will be recovered through FPL's base rates.

Event Start	Event End	Seq. #	Event Title	MW Loss	Outage Hours	MWh Loss	Replacement Cost (\$/MWh)	Replacement Cost (\$)	SL1 Fuel Cost (\$/MWh)	Nuclear Fuel Cost (\$)	Net Replacement Cost (\$)
4/25/2019 9:18	5/1/2019 0:00	1	UT UEL Main	981.00	134.70	132,141	\$19.93	\$2,633,304	\$5.40	\$714,188	\$1,919,117
5/7/2019 0:00	6/1/2019 0:00	2	Generator Ground	981.00	744.00	729,864	\$19.25	\$14,047,035	\$5.40	\$3,944,733	\$10,102,302
6/1/2019 0:00	6/21/2019 1:11	3	Fault	981.00	481.18	472,041	\$18.52	\$8,739,971	\$5.40	\$2,551,263	\$6,188,708
6/21/2019 1:11	6/22/2019 11:30	4	Power Ascension	336.72	34.32	11,555	\$18.52	\$213,946	\$5.40	\$62,452	\$151,494
<b>Total</b>					<b>1,394.20</b>	<b>1,345,600.66</b>		<b>\$25,634,257</b>		<b>\$7,272,636</b>	<b>\$18,361,621</b>

April 2019 - A4 Data	
SL1 Fuel Cost	SL1 Heat Rate
0.52	10,357
SL1 \$/MWh	
\$5.405	

April 2019 - A3 Data						
Fuel	MWh	% Mix	Fuel Cost \$	\$/MWh	Demand \$	Rev. Fuel Cost \$
Heavy Oil	15,428	0.20%	\$1,968,602	\$127.60	\$0	\$1,968,602
Light Oil	6,830	0.09%	\$1,001,213	\$146.59	\$0	\$1,001,213
Coal	186,421	2.45%	\$5,444,667	\$29.21	\$0	\$5,444,667
Gas	7,405,223	97.26%	\$219,361,512	\$29.62	\$76,045,902	\$143,315,610
<b>Total</b>	<b>7,613,902</b>	<b>100.00%</b>	<b>\$227,775,994</b>		<b>\$76,045,902</b>	<b>\$151,730,092</b>

May 2019 - A3 Data						
Fuel	MWh	% Mix	Fuel Cost \$	\$/MWh	Demand \$	Rev. Fuel Cost \$
Heavy Oil	26,474	0.29%	\$3,299,209	\$124.62	\$0	\$3,299,209
Light Oil	7,266	0.08%	\$899,256	\$123.76	\$0	\$899,256
Coal	268,083	2.90%	\$7,705,798	\$28.74	\$0	\$7,705,798
Gas	8,939,365	96.73%	\$243,296,912	\$27.22	\$77,344,351	\$165,952,561
<b>Total</b>	<b>9,241,188</b>	<b>100.00%</b>	<b>\$255,201,176</b>		<b>\$77,344,351</b>	<b>\$177,856,825</b>

June 2019 - A3 Data						
Fuel	MWh	% Mix	Fuel Cost \$	\$/MWh	Demand \$	Rev. Fuel Cost \$
Heavy Oil	27,792	0.30%	\$3,540,260	\$127.38	\$0	\$3,540,260
Light Oil	9,113	0.10%	\$1,283,074	\$140.79	\$0	\$1,283,074
Coal	221,108	2.37%	\$6,765,450	\$30.60	\$0	\$6,765,450
Gas	9,086,126	97.24%	\$237,476,593	\$26.14	\$76,055,970	\$161,420,623
<b>Total</b>	<b>9,344,139</b>	<b>100.00%</b>	<b>\$249,065,376</b>		<b>\$76,055,970</b>	<b>\$173,009,406</b>

Fuel	MWh	% Mix	Fuel Cost \$	\$/MWh	Demand \$	Rev. Fuel Cost \$	WA \$/MWh
Heavy Oil	27,792	0.30%	\$3,540,260	\$127.38	\$0	\$3,540,260	\$0.36
Light Oil	9,113	0.10%	\$1,283,074	\$140.79	\$0	\$1,283,074	\$0.14
Coal	221,108	2.37%	\$6,765,450	\$30.60	\$0	\$6,765,450	\$0.72
Gas	9,086,126	97.24%	\$237,476,593	\$26.14	\$76,055,970	\$161,420,623	\$17.28
<b>Total</b>	<b>9,344,139</b>	<b>100.00%</b>	<b>\$249,065,376</b>		<b>\$76,055,970</b>	<b>\$173,009,406</b>	<b>\$18.52</b>