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VIA ELECTRONIC FILING

Ms. Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
Betty Easley Conference Center
2540 Shumard Oak Boulevard, Room 110
Tallahassee, FL 32399-0850

Re: Docket No. 20180160-EI
FPL's Responses to Staff's First Data Request

Dear Ms. Stauffer:

Enclosed are Florida Power & Light Company's responses to Staff's First Data Request (Nos. 1-16) in Docket No. 20180160-EI.

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

Sincerely,

s/ Maria J. Moncada
Maria J. Moncada

Enclosures
cc: Riley Doherty

:6890974

QUESTION:

Please discuss and show that revenues received under the VSP Rider support the revenue requirement associated with the completed projects for each year since 2015.

RESPONSE:

See Attachment No. 1 to this response for the Voluntary Solar Program (VSP) Revenue Requirement for each year since 2015. As shown on Line H of the attachment, the Voluntary Customer Contributions in each year since 2015 have supported the Base Retail Revenue Requirement calculated on Line G.

VSP PROGRAM REVENUE REQUIREMENT - PILOT PERIOD

	<i>Actual</i>	<i>Actual</i>	<i>Actual</i>	<i>Estimated</i> ⁽¹⁾	
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	
Participant Contribution (\$/month)	\$9.00	\$9.00	\$9.00	\$9.00	
Number of Participants at Year End	2,397	12,651	26,674	40,550	
Cumulative Capacity (kW)	0	250	315	2,305	
M&C and G&A as % of total revenues ⁽²⁾	1%	20%	20%	20%	
In Thousands (000)					
Retail Base Impact:					
<u>Operating Costs</u>					
A. Depreciation	\$0 (3)	\$144	\$283	\$607	\$1,035
B. O&M (Maintenance, Marketing, G&A)	\$34	\$156	\$477	\$713	\$1,380
C. Other (Property taxes, Insurance, Taxes Other Than Income Taxes, ITC Amort)	\$0	(\$11)	\$8	(\$50)	(\$53)
<u>Capital Costs</u>					
D. VSP Program Average Rate Base ⁽⁴⁾	\$419	\$1,500	\$6,761	\$16,329	
E. Pre Tax Rate of Return ⁽⁵⁾	12.37%	11.67%	11.84%	10.48%	
F. Debt & Equity Return on Rate Base	D * E	\$52	\$175	\$800	\$1,711
		\$2,738			
G. Retail Base Revenue Requirements	A + B + C + F	\$86	\$464	\$1,569	\$2,981
		\$5,100			
H. Voluntary Customer Contribution		\$85	\$708	\$2,298	\$3,626
		\$6,717			
I. Net Retail Base Revenue Requirements	G - H	\$1	(\$244)	(\$730)	(\$645)
		(\$1,617)			
<u>Retail Clause Impact:</u>					
J. System Fuel & Emissions Savings ⁽⁶⁾	\$0	\$2	\$4	\$38	\$43
<u>Net Impact:</u>					
K. Net Impact to All Customers	I - J	\$1	(\$246)	(\$733)	(\$682)
		(\$1,660)			

(1) Amounts reflect actuals through June 2018 and forecast data for July -December 2018.

(2) Includes marketing, communication, and program administration costs.

(3) Depreciation and Other (Insurance) were incorrectly reported on Exhibit B filed in response to Staff's First Set of Data Requests, Data Request No. 2 Amended in Docket No. 20170212-EI.

(4) Represents the average of the beginning and ending totals of the following: net plant in service, CWIP, and estimated accumulated deferred income taxes.

(5) 2015 and 2016 are based on the amounts reflected on FPL's December ESR at the mid-point ROE of 10.5%, while 2017 is based on Exhibit KO-20 filed in FPL's most recent base rate filing with an ROE of 10.55% as approved in Docket No. 160021-EI, Order No. PSC-16-0560-AS-EI. 2018 is based on Exhibit KO-20 as well, and has been adjusted for new tax rates for Tax Cuts and Jobs Act.

(6) Amount calculated using fuel factor equivalent to an annual average of FPL's Cogen Monthly Average Avoided Energy Costs in the year site was placed in service, as filed with the Commission in FPL's Hourly Avoided Energy Cost Report in Dockets 160000-OT and 20170000-OT.

QUESTION:

What percentage is the operation and maintenance cost on this program and please discuss, if any, maintenance issues that have come up as a result of storms and hurricanes.

RESPONSE:

See the table below for the requested operation and maintenance (O&M) cost information (\$ thousands) for the Voluntary Solar Program. O&M includes operations maintenance and rents.

	<i>Actual</i> <u>2015</u>	<i>Actual</i> <u>2016</u>	<i>Actual</i> <u>2017</u>	<i>Estimated</i> ⁽¹⁾ <u>2018</u>
Voluntary Customer Contribution	\$85	\$708	\$2,298	\$3,626
O&M (Maintenance & Rent)	\$0	\$5	\$18	\$31
O&M % of Voluntary Customer Contributions	0%	1%	1%	1%

(1) Amounts reflect actuals through June 2018 and forecast data for July -December 2018.

Storm related damages have been very minimal to date. There were no recorded damages in 2016 during Hurricane Matthew, and the following two sites incurred storm related damages in 2017 due to high winds from Hurricane Irma:

- 1.) Young at Art Museum Broward County parking canopy had two solar panels lift out due to uplift from high winds. Total repair cost of approximately \$2,600.
- 2.) One solar tree at Boynton Beach Oceanfront Park rotated on its axis from high winds. A post-storm evaluation identified a manufacturer's design flaw. This solar tree was disassembled post-storm and replaced under the manufacturer's warranty with a more robust design. As a result of this damage, all existing trees were inspected and repaired by the manufacturer to the improved design.

QUESTION:

Please discuss how FP&L prepares the solar facilities in anticipation of a tropical storm or a hurricane.

RESPONSE:

The SolarNow sites are built to comply with all local building and wind code requirements. At this time, there are no specific pre-storm preparations done at these sites. Through regular maintenance and inspection, FPL ensures the facilities are operational and safe. The organization utilizes post-storm inspections to determine if a storm causes any damage and if any future pre-storm actions are necessary.

QUESTION:

Please refer to section 7 of this petition. Please list all installed, under construction, and ready for construction projects and their site, the associated size of each project in kW and energy produced in kWh.

RESPONSE:

Please see Attachment No. 1 to this data request.

Site	City	Count	Project Status	Commercial Operations Year	Total Capacity (kW _{ac})	Program as of 8/31/2018 Metered Energy (kWh)
Broward Young at Arts	Davie	Broward	Complete	2016	100.0	36,263
Palm Beach Zoo	West Palm Beach	Palm Beach	Complete	2016	100.0	232,020
Palmetto Estuary Park	Palmetto	Manatee	Complete	2016	50.0	144,092
				2016 Total	250.0	412,375
Brevard Zoo	Melbourne	Brevard	Complete	2017	10.2	3,846
Frost Museum	Miami	Dade	Complete	2017	6.8	2,395
Tropical Park	Unincorporated	Dade	Complete	2017	5.1	575
Oceanfront Park Beach	Boynton Beach	Palm Beach	Complete	2017	6.8	9,757
Babcock Ranch (Trees)	Babcock Ranch	Charlotte	Complete	2017	11.9	64,030
Palm Bay City Hall / Police HQ	Palm Bay	Brevard	Complete	2017	5.1	3,488
DeSoto County Administration Building	Arcadia	Desoto	Complete	2017	6.8	6,016
Port Canaveral - Jetty Park	Port Canaveral	Brevard	Complete	2017	6.8	3,625
Port Canaveral - Exploratory Tower	Port Canaveral	Brevard	Complete	2017	5.1	5,988
				2017 Total	64.6	99,720
Babcock Ranch 3-pac (Rooftop)	Babcock Ranch	Charlotte	Complete	2018	110.7	107,249
Zoo Miami (trees)	Unincorporated	Dade	Complete	2018	8.5	3,862
Ft Mellon Park	Sanford	Sanford	Complete	2018	6.8	2,396
Naples Zoo at Caribbean Gardens	Naples	Collier	Complete	2018	205.8	103,210
Imaginarium Science Center	Fort Myers	Lee	Complete	2018	62.2	50,869
Stars Recreation Center	Fort Myers	Lee	Complete	2018	56.0	21,250
Centennial Park	Fort Myers	Lee	Complete	2018	5.1	972
Roberto Clemente Park test	Fort Myers	Lee	Complete	2018	6.8	4,582
Barrier Free Park	Boynton Beach	Palm Beach	Complete	2018	50.4	43,892
Baileys Brother Park	Punta Gorda	Charlotte	Complete	2018	7.6	4,290
Hector House Plaza	Punta Gorda	Charlotte	Complete	2018	4.2	2,374
Punta Gorda City Hall	Punta Gorda	Charlotte	Complete	2018	46.0	25,001
Downtown Stuart - Kiwanis Youth Park	Stuart	Martin	Complete	2018	176.0	18,806
Brightline - Ft Lauderdale Station	Ft Lauderdale	Broward	Complete	2018	6.8	32
Ann Dever Park	Englewood	Charlotte	Complete	2018	5.1	2,286
CSE Canopy Demo	West Palm Beach	Palm Beach	Complete	2018	20.2	4,042
Museum of Discovery & Science (trees)	Ft Lauderdale	Broward	Complete	2018	3.4	843
Girl Scouts Camp Honi Hanta	Bradenton	Manatee	Complete	2018	3.4	1,400
Barracuda Bay Park	Riviera Beach	Palm Beach	Complete	2018	6.8	2,419
Sunrise Park	Port Charlotte	Charlotte	Complete	2018	47.4	0
Charlotte Sports Park	Port Charlotte	Charlotte	Complete	2018	28.4	8,525
Central Park/City Hall	Palm Coast	Flagler	Complete	2018	5.1	0
Community Center	Palm Coast	Flagler	Complete	2018	55.0	20,951
City of Palm Beach Gardens Aquatic Complex	Palm Beach Gardens	Palm Beach	Complete	2018	6.8	984
Holland Park	Palm Coast	Flagler	Complete	2018	36.0	2,514
Babcock Ranch Wellness Center (Rooftop)	Babcock Ranch	Charlotte	Complete	2018	105.0	5,326
Charnow Park	Hollywood	Broward	Complete	2018	5.1	815
Oceanfront Park Beach Phase 2	Boynton Beach	Palm Beach	In Construction	2018	199.9	
Jessica Clinton Park	Port Saint Lucie	St. Lucie	In Construction	2018	100.0	
Arts Park	Hollywood	Broward	In Construction	2018	6.8	
West of Convention Center (Howard Park)	West Palm Beach	Palm Beach	In Construction	2018	5.1	
Joseph R Russo Athletic Complex	Palm Beach Gardens	Palm Beach	In Construction	2018	32.0	
Laishley Park	Punta Gorda	Charlotte	In Construction	2018	56.0	
LaBelle High School	LaBelle	Hendry	In Construction	2018	6.8	
Riverfront Memorial Park	South Daytona	Volusia	In Construction	2018	3.4	
Reed Canal Park	South Daytona	Volusia	In Construction	2018	6.8	
Rotary Park	Hollywood	Broward	In Construction	2018	1.7	
Train Depot	Fort Myers	Lee	In Construction	2018	10.2	
Zoo Miami (pavilion)	Unincorporated	Dade	In Construction	2018	49.6	
Recreation Center (canopy)	Coconut Creek	Broward	In Construction	2018	45.3	
Satellite Beach Pelican Beach Park	Satellite Beach	Brevard	In Construction	2018	25.0	
Girl Scouts Headquarters	Sarasota	Sarasota	In Construction	2018	35.0	
St. Augustine Distillery	St Augustine	St Johns	In Construction	2018	5.0	
Charlotte County Schools - Charlotte Technical Colle	Port Charlotte	Charlotte	In Construction	2018	3.4	
South Florida Science Museum	West Palm Beach	Palm Beach	In Construction	2018	6.8	
North Collier Regional Park	Naples	Collier	In Construction	2018	242.0	
Kennedy Space Center Visitor Center	Cape Canaveral	Brevard	In Construction	2018	17.0	
Brightline - West Palm Station	West Palm Beach	Palm Beach	Released for Construction	2018	6.8	
Sebastian River Park	Sebastian	Indian River	Released for Construction	2018	45.0	
Palm Beach International Airport	West Palm Beach	Palm Beach	Released for Construction	2018	65.5	
				2018 Total	2,055.6	438,890
				Grand Total	2,370.2	950,985

1.) Sunrise Park and Central Park are operational, but generation tracking issues have been identified repair work is on going

QUESTION:

Please state the amount of fuel savings per kWh the solar facilities provide.

RESPONSE:

FPL estimates the fuel savings based on the company's on peak hourly avoided energy cost as filed with the Florida Public Service Commission monthly. Over the last twelve-month period (September 2017-August 2018) that value has ranged between \$0.01576 to \$0.02706 per kilowatt hour, with a twelve-month average of \$0.02100 per kilowatt hour.

QUESTION:

Please state if there are similar solar based programs anywhere else in the country and how FP&L's growth rate in the program compares to other similar programs.

RESPONSE:

Generally, FPL views SolarNow as a type of voluntary green pricing program. FPL searched for but was unable to locate any available information on growth rates of similar programs. However, below is a table compiled by the National Renewable Energy Lab (NREL) of the "Top 10" utility green power pricing programs in the U.S. by customer participants. FPL's SolarNow program was not included in NREL's research but SolarNow's participation of 33,407 (as of August 31, 2018) would rank it "6" if it were included.

Top Green Power Program Participants (NREL)¹ (as of December 2017)		
Rank	Utility	Green Power Participants
1	Portland General Electric	173,856
2	PacifiCorp	120,423
3	Xcel Energy	113,772
4	Sacramento Municipal Utility District	71,873
5	Puget Sound Energy	46,211
6	Dominion Energy	27,779
7	DTE Energy	22,425
8	Austin Energy	17,557
9	National Grid	16,955
10	Avangrid NYSEG and RG&E	15,539

¹ Source: <https://www.nrel.gov/analysis/assets/pdfs/utility-green-power-ranking.pdf>

QUESTION:

Has FP&L considered credits to the customers with this program?

RESPONSE:

The SolarNow program as approved and implemented allows those customers who wish to support the development of solar within local communities to do so. These projects are small and promote solar education and awareness within the community. Per the program design, the solar generation produced serves the grid and benefits all customers (participants and non-participants alike). As such, it is important to recognize that these projects are not cost effective and that the participant contributions are offsetting the net revenue requirements (revenue requirements minus system benefits) of the program thus ensuring non-participants are not subsidizing the program. Avoiding subsidization by non-participants is an important tenant of the program and offering a participant credit would undermine this aspect of the program.

FPL recognizes that the solar energy landscape has changed since this program was first introduced, and as stated in its petition, FPL is in the final development stages of a new voluntary shared solar program that leverages the cost effectiveness of large-scale universal solar generation. This new program will allow participants to subscribe to kilowatts of capacity from cost-effective large-scale solar facilities and receive bill credits based on actual solar generation. FPL anticipates petitioning for approval of this new program in 2019.

QUESTION:

Please discuss what customers are most interested in this type of program and provide any information on demographics FP&L has on the participants.

RESPONSE:

FPL's voluntary solar program, known as FPL SolarNow, participants are altruistic by nature, environmentally-minded individuals with strong concerns for the well-being of their communities. The participants are looking for ways to minimize their impact on the planet, while protecting the world their children and grandchildren will inherit.

To these customers, the FPL SolarNow program provides an easy way to help advance the use of solar in Florida by supporting the development of solar energy projects in local communities. FPL has identified the following key characteristics and behaviors of customer segments that participate in the program.

- **Environmentally-minded “Create a better tomorrow”**
 - Key Characteristics:
 - Middle aged (highest percent of 45-64 year olds)
 - Primarily Caucasian (79%)
 - Higher income customers (50% with income of \$75K+)
 - Majority own their home in Florida (88%)
 - Segment with highest proportion in the Sarasota designated market area (DMA)
 - Distinctive attitudes and behaviors:
 - Strongly support using more solar power to meet energy demand over the next decade
 - Almost all consider the environmental impact of their actions at least “some of the time” and the segment most likely to say “all of the time”
 - Segment most likely to agree that alternative energy sources will help the environment and to be looking out for ways to protect the environment
 - Highest percentage selecting “to create a better tomorrow for future generations” as their primary motivation for supporting solar energy
- **Environmentally-minded “Support solar because it’s the right thing to do”**
 - Key Characteristics:
 - Younger segment (highest percent of 18-34 year olds)
 - Segment with highest proportion of Hispanic customers (33%)
 - A majority are renters (63%)
 - Segment with largest proportion of Democrats (44%)
 - Distinctive attitudes and behaviors:

- Almost all consider the environmental impact of their actions at least some of the time
- Segment most likely to agree that climate change is real and also agree that alternative energy sources will help the environment and we should be looking for ways to protect the environment
- Highest percentage selecting “to do my part to protect the environment” as their primary motivation for supporting solar energy, although “to create a better tomorrow for future generations” is a motivation as well
- Support solar energy primarily to provide a better tomorrow for future generations/do their part to protect the environment

QUESTION:

What type of solar projects (solar trees, canopies, etc.) are the customers preferring?

RESPONSE:

The solar canopy is their preferred solar project because it generates more power and offers the additional function of providing shade for parked cars in Florida.

Based on feedback from program participants, the initial solar structures deployed through the FPL SolarNow program, solar canopies and trees, were well received. Continuing to find new and innovative ways to bring more solar energy projects to the communities FPL serves is important. Space limitations and other restrictions at the host locations help to determine the type of installation that works best. Program participants especially liked solar canopies because of the added benefit of providing shaded seating for patrons and parked cars. Solar trees were also well received by participants for their artistic appearance. The fact they also provided benefits of shade and, depending on location, seating, and serve as a convenient charging station, elicited positive feedback.

QUESTION:

Please discuss how long customers typically stay on the VSP Rider (since the term of service is one month).

RESPONSE:

The SolarNow program has seen consistent enrollment growth over the period of May 1, 2015 through August 31, 2018. On average the monthly new enrollments have more than offset the number of participants who have elected to unsubscribe. As of August 31, 2018, approximately 42,905 FPL accounts have participated in this voluntary community solar program, of which 80% are still enrolled with an average enrollment duration of 13.2 months. The remaining 20% of the participating accounts have unsubscribed from the program and this group has an average enrollment duration of 6.5 months.

QUESTION:

How are you ensuring that one class of customers is not subsidizing a solar project?

RESPONSE:

As stated in FPL's original petition (Docket No. 140070-EI), to ensure non-participants are not subsidizing the program, participant contributions are used to cover FPL's net revenue requirements (revenue requirements minus avoided fuel and emissions costs resulting from the electric production). This is done by managing the program financials such that the cumulative present value of revenue requirements over the pilot period is near zero. FPL forecasts expected enrollment to determine if there will be enough participant contributions to construct additional program assets, thus ensuring projects are only added that can be financially supported through participant contributions. To date, FPL has successfully managed the program as described, and as demonstrated in Attachment 1 to FPL's response to Data Request No. 1, row K shows a favorable net impact to all customers of \$1,660,000.

QUESTION:

Please discuss whether or not FP&L wants to make this a permanent program.

RESPONSE:

FPL is currently exploring the interaction between running this program, SolarNow, contemporaneously with a new voluntary shared solar program. Potentially, these programs may cater to different customer groups. The purpose of extending this program for an additional 12 months is to allow FPL to more fully evaluate whether the two programs can be successful within the same marketplace at the same time.

QUESTION:

Please refer to section 8 of FP&L's petition filed in Docket no. 20170212-EI. FP&L stated that it is developing and intends to present a community shared solar program¹ for Commission approval within the next year (meaning 2018). Please explain the reason(s) for the delay for this large-scale program.

RESPONSE:

FPL delayed the filing for its Shared Solar program in order to better assess market support for the new program. In addition, FPL expects to collect additional data on how the new program would impact the existing SolarNow program and to finalize the design and implementation plans for the Shared Solar program. See also the response to Request No. 12.

¹ Community shared solar is defined by National Renewable Energy Laboratory (NREL) as a solar-electric system that provides power and/or financial benefit to multiple community members; A guide to community Shared Solar: Utility, Private, and Nonprofit Project Development.

QUESTION:

Please discuss if there is any additional land costs associated with these projects and whether FP&L incurs any payments to lease with the host sites for the solar projects.

RESPONSE:

The only land costs associated with the program are for lease payments made to host locations. These lease costs are included in the O&M cost shown in Attachment 1 to FPL's response to Staff's Data Request No. 1.

QUESTION:

Please discuss how FP&L has been marketing the program and if there are any lessons learned regarding best marketing practices.

RESPONSE:

FPL uses a fully integrated, targeted marketing plan to drive program awareness, participation and retention. This includes:

- Targeted monthly email campaigns with incentives designed to reach interested segments
- Information on the program is also included in our internal marketing communication channels such as, monthly eNewsletters, bill inserts, social media, etc.
- Distribute flyers with program information during community events to increase program awareness and generate leads
- Social media and paid search campaigns
- Established program microsite to keep participants informed and engaged
- Monthly blogs are used to establish ongoing dialogue with program participants
- Use program partnerships (host sites) to provide 'value added' offers available only to FPL SolarNow participants
- Monthly program eNewsletters are sent to provide participants with project updates

Key lessons:

- The importance of implementing marketing strategies and communications to reach the right customer, with the right offer, at the right cost and at the right time
- Identifying segments' 'cares or needs' to develop focused messaging that resonates and motivates participation in the program
- Using an integrated marketing approach that includes email-campaigns, bill inserts, community outreach events and social media, helps to increase program awareness and participation
- To drive customers to take action, incentives and remarketing tactics are needed
- It is important to create ties with the communities and host locations
- Keep participants' interest levels high with frequent communications and project updates

QUESTION:

Please complete the table below.

Month	Participants			Total Participant Revenue
	Residential	Commercial	Industrial	
Aug – 17				
Sep – 17				
Oct – 17				
Nov – 17				
Dec – 17				
Jan – 18				
Feb – 18				
Mar – 18				
Apr – 18				
May – 18				
Jun - 18				
Jul – 18				
Aug – 18				

RESPONSE:

Column 1	Participants			Column 5	Column 6
	Column 2	Column 3	Column 4		
Month	Residential (Active Bill Status Only)	Commercial (Active Bill Status Only)	Industrial (Active Bill Status Only)	Total Participants (Active and Final Bill Status)	Total Participant Revenue
Aug – 17	19,712	89	0	23,839	\$204,345
Sep – 17	19,474	89	0	23,569	\$210,330
Oct – 17	22,246	91	0	26,859	\$216,891
Nov – 17	22,920	91	0	27,461	\$228,942
Dec – 17	24,142	94	0	28,424	\$240,066
Jan – 18	24,090	94	0	28,047	\$241,929
Feb – 18	24,935	104	0	28,645	\$243,045
Mar – 18	27,909	271	0	31,739	\$259,308
Apr – 18	29,025	276	0	32,333	\$277,011
May – 18	31,177	638	0	34,646	\$292,257
Jun - 18	32,036	645	0	34,830	\$295,632
Jul – 18	33,106	647	0	35,093	\$300,267
Aug – 18	33,889	651	0	36,024	\$300,663

1) Due to reporting system constraints, columns 2-4 (which breakdown participation by customer type) reflect only those participants that were enrolled during the given month and have active electric accounts with FPL as of the date of this response. Columns 5 and 6 represent total

participation regardless of the participants' current account status. For this reason, the sum of columns 2-4 may not add up to the column 5.

2) As of August 2018, the "Total Participant Revenue" of \$300,663 reported in Column 6 represents 33,407 participants (\$300,663 divided by \$9.00 per participant per month). This calculated enrollment value is lower than the "Total Participants" reported in Column 5 for August 2018, due to billing lag and bill credits that may have been issued during the period.