#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination	)	DOCKET NO. 140110-EI
of Need for Citrus County Combined	)	
Cycle Power Plant	)	Submitted for Filing
	_)	August 13, 2014

## CALPINE CONSTRUCTION FINANCE COMPANY, L.P.'S NOTICE OF SERVICE OF COMPLETE EXHIBIT JS-2 TO THE DIRECT TESTIMONY OF JOHN L. SIMPSON, P.E.

Calpine Construction Finance Company, L.P. ("Calpine")
hereby provides Notice of Service of Complete Exhibit JS-2 of
the Direct Testimony of John L. Simpson, P.E., which was filed
with the Clerk's Office on July 15, 2014. Page 6 of 7 of JS-2
was inadvertently omitted during the scanning process before
the document was filed. Calpine just learned of the missing
page and is now resubmitting a complete copy of Exhibit JS-2 to
the Direct Testimony of John L. Simpson, P.E.

Respectfully submitted this 13th day of August, 2014.

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### CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing was furnished to the following, by electronic delivery, on this  $\underline{13th}$  day of August, 2014.

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# Ten Year Power Plant Site Plan 2013-2022

Submitted To:

Florida Public Service Commission

> Miami, Florida April 2013

> > DOCUMENT NUMBER-DATE

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Table I.A.1: Capacity Resource by Unit Type (as of December 31, 2012)

Unit Type/ Plant Name	Location	Number of Units		Summer <u>MW</u>
Nuclear St. Lucle "	that his and the same		A11	4.000
	Hutchinson Island, FL	2	Nuclear	1,832
Turkey Point Total Nuclea	Florida City, FL	2	_ Nuclear	1,501 3,333
l Otal Mucies	ir.	•		3,333
Coal Steam				
Scherer	Monroe County, Ga	1	Coal	642
St. John's River Power Park 2/	Jacksonville, FL	2	Coal	254
Total Coal Steam	n;	3	_	896
Combined-Cycle 3/				
Fort Myers	Fort Myers, FL	1	Gas	1.432
Manatee	Partish. FL	i	Gas	1,111
Martin	Indiantown, FL	3	Gas	2,079
Sanford	Lake Monroe, FL	2	Gas	1.946
Lauderdale	Dania, FL	2	Gas/Oil	884
Putnam	Palatka, FL	2	Gas/Oil	498
Turkey Point	Florida City, FL	1	Gas/Oil	1,148
West County	Palm Beach County, FL	3	Gas/Oil	3.657
Total Combined Cycle	):	15		12,755
Oil/Gas Steam				
Manatee	Parrish, FL	2	Oil/Gas	1.621
Martin	Indiantown.FL	2	Oil/Gas	1.652
Port Everglades	Port Everglades. FL	2	Oil/Gas	761
Turkey Point 4/	Florida City, FL	2	Oil/Gas	788
Total Oil/Gas Steam		8		4,822
man Markham (MM)				-
Gas Turbines(GT) Fort Myers (GT)	Fort Myers, FL	12	Oil	648
Lauderdale (GT)	Dania. FL	24	Gas/Oil	840
Port Everglades (GT)	Port Everglades, FL	12	Gas/Oil	420
Total Gas Turbines/Diesels		48	_ Gaaron .	1,908
Combustion Turbines 3/				
Fort Myers	Fort Myers, FL	2	Gas/Oil	316
Total Combustion Turbines	9	2		316
PV				
DeSoto 5/	DeSoto, FL	1	Solar Energy	25
Space Coast <sup>5/</sup>	Brevard County, FL	1	Solar Energy	10
Total PV	-	2		35
	as of Decamber 31, 2012 = as of December 31, 2012 =	82 80		24,065 24,030

<sup>1/</sup> Total capability of St. Lucie 1 is 981/1,003 MW. FPL's share of St. Lucie 2 is 843/862. FPL's ownership share of St. Lucie Units 1 and 2 is 100% and 85%, respectively.

<sup>2/</sup> Capabilities shown represent FPL's output share from each of the units (approx. 92.5% and exclude the Orlando Utilities Commission (OUC) and Florids Municipal Power Agency (FMPA) combined portion of approximately 7.44776% per unit. Represents FPL's ownership share: SJRPP coal: 20% of two units).

<sup>3/</sup> The Combined Cycles and Combustion Turbines are broken down by components on Table 1.A.2.

<sup>4/</sup> Turkey Point 2 is currently operating as a synchronous condenser. If needed, can be converted back to a generating unit per the existing Title V operating permit through the end of 2013 and is not accounted for in Reserve Margin Calculation.

<sup>5/</sup> The 25 MW of PV at DeSoto and the 10 MW of PV at Space Coast are considered as non-firm generating capacity and the capacity from these units has been removed from the "System Firm Generation" row at the end of the table.

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being to minimize FPL's projected levelized system average electric rate (i.e., a Rate Impact Measure or RIM methodology). In cases in which the DSM contribution was assumed as a given and the only competing options were new generating units and/or purchase options, comparisons of competing resource plans' impacts on electricity rates and on system revenue requirements will yield identical outcomes in regard to the relative rankings of the resource options being evaluated. Consequently, the competing options and resource plans in such cases can be evaluated on a system cumulative present value revenue requirement (CPVRR) basis.

Other factors are also included in FPL's evaluation of resource options and resource plans. While these factors may have an economic component or impact, they are often discussed in quantitative, but non-economic, terms such as percentages, tons, etc. rather than in terms of dollars. These factors are often referred to by FPL as "system concerns" that include (but are not limited to) maintaining/enhancing fuel diversity in the FPL system, system emission levels, and maintaining a regional balance between load and generating capacity, particularly in the Southeastern Florida counties of Miami-Dade and Broward. In conducting the evaluations needed to determine which resource options and resource plans are best for FPL's system, the non-economic evaluations are conducted with an eye to whether the system concern is positively or negatively impacted by a given resource option or resource plan. These, and other, factors are discussed later in this chapter in section III.C.

### Step 4: Finalizing FPL's Current Resource Plan

The results of the previous three fundamental steps are typically used to develop the current resource plan. This plan is presented in the following section.

### III.B Projected Incremental Resource Additions/Changes

FPL's projected incremental generation capacity additions/changes for 2013 through 2022 are depicted in Table III.B.1. These capacity additions/changes result from a variety of actions that primarily consist of: (i) changes to existing units (which are frequently achieved as a result of plant component replacements during major overhauls and through other uprates to existing capacity), (ii) changes in the amounts of purchased power being delivered under existing contracts as per the contract schedules or by entering into new purchase contracts, (iii) the modernizations of FPL's existing Cape Canaveral, Riviera Beach, and Port Everglades sites by the removal of the steam

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generating units that were previously, or are currently, on the sites and the addition of one new, very fuel-efficient CC generating unit at each site, (iv) upgrades to the CTs at a number of existing combined cycle plants, (v) the switching of Turkey Point 1 and 2 from generation to synchronous condenser operation, and (vi) the addition of the new Turkey Point Unit 6 nuclear unit in 2022 (i.e., the year currently projected at the time this document is being finalized to be the earliest practical in-service date for this new nuclear unit).

Although the DSM additions that are consistent with the FPSC's directions regarding FPL's DSM program implementation are not explicitly presented in this table, these DSM additions have been fully accounted for in all of FPL's resource planning work reflected in this document. The FPSC's directions regarding FPL's DSM program implementation address the years through 2019. For planning purposes in this document, FPL currently projects an additional 100 MW (Summer) of DSM per year for the subsequent three years (2020 through 2022) addressed in this Site Plan. In addition, the projected MW reductions from these DSM additions are reflected in the projected reserve margin values shown in the table below and in Schedules 7.1 and 7.2 presented later in this chapter. (Subsequent analyses, particularly analyses that will be conducted in preparation for the 2014 DSM Goals docket, will ultimately determine the actual levels of DSM that FPL should implement in the 2015 through 2022 time frame.)

Table III.B.1: Projected Capacity Changes for FPL

Projected Capacity Changes for FPL (1)				
		Net Capacity Changes (MW)		
Year	Projected Capacity Changes	Winter (2)	Summer <sup>(3)</sup>	
2013	Changes to Existing Purchases (4)	(545)	(425)	
1	Port Everglades Units 3 & 4 retired for Modernization	(765)	(761)	
	Turkey Point Unit 2 operation changed to synchronous condenser	(394)	(392)	
	Sanford Unit 5 CT Upgrade	-	9	
	Turkey Point Unit 4 Uprate - Completed	_	115	
ļ	Turkey Point Unit 4 Uprate - Outage (5)	(717)	-	
	Sanford Unit 4 CT Upgrade		16	
	Manatee Unit 2	(3)	_	
	Scherer Unit 4	(28)	-	
	Cape Canaveral Next Generation Clean Energy Center (6)	_	1,210	
	Manatee Unit 1 ESP - Outage (7)	(822)		
	Martin Unit 1 ESP - Outage (7)		(826)	
2014	Sanford Unit 5 CT Upgrade	19	10	
	Cape Canaveral Next Generation Clean Energy Center (6)	1,355	_	
	Changes to Existing Purchases (4)	22	37	
	Manatee Unit 1 ESP - Outage (7)	822		
	Sanford Unit 4 CT Upgrade	16		
	Vero Beach Combined Cycle (8)	46	44	
	Martin Unit 1 ESP - Outage (7)	(832)	826	
	Martin Unit 2 ESP - Outage <sup>(7)</sup>	***	(826)	
	Manatee Unit 3 CT Upgrade		19	
	Turkey Point Unit 5 CT Upgrade	1 -	33	
	Turkey Point Unit 4 Uprate - Completed (5)	115		
	Riviera Beach Next Generation Clean Energy Center (6)	<del></del>	1,212	
2015	Manatee Unit 3 CT Upgrade	39	20	
	Martin Unit 1 ESP - Outage <sup>(7)</sup>	832	-	
	Martin Unit 2 ESP - Outage <sup>(7)</sup>		826	
	Turkey Point Unit 5 CT Upgrade	33	_	
	Changes to Existing Purchases (4)	70	70	
	Ft. Myers Unit 2 CT Upgrade	_	51	
	Riviera Beach Next Generation Clean Energy Center (6)	1,344	<del></del>	
	Changes to Existing Purchases (4)	(858)	(928)	
	Ft. Myers Unit 2 CT Upgrade	51	_	
	Port Everglades Next Generation Clean Energy Center (6)	l	1,277	
	Turkey Point Unit 1 operation changed to synchronous condenser	(398)	(396)	
	Changes to Existing Purchases (4)	(37)	(37)	
- 1	Vero Beach Combined Cycle (6)	(46)	(44)	
	Port Evergiades Next Generation Clean Energy Center (6)	1,429	` <u>_</u>	
	Changes to Existing Purchases (4)	(388)	(381)	
2019	<u> </u>		757.5	
2020	. \$ 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6			
2021	Changes to Existing Purchases <sup>(4)</sup>	180	180	
2022	Turkey Point Nuclear Unit 6 (6)		1,100	
	ALTON CONTRACT STREET	A	-1	

<sup>(1)</sup> Additional information about these resulting reserve margins and capacity changes are found on Schedules 7 & 8 respectively.

<sup>(2)</sup> Winter values are forecasted values for January of the year shown.

<sup>(3)</sup> Summer values are forecasted values for August of the year shown.

<sup>(4)</sup> These are firm capacity and energy contracts with QF, utilities, and other entities. See Table I.B.1 and Table I.B.2 for more details.

<sup>(5)</sup> Outages for uprate work.

<sup>(6)</sup> All new unit additions are scheduled to be in-service in June of the year shown. All additions assumed to start in June are included in the Summer reserve margin calculation starting in that year and in the Winter reserve margin calculation starting with the next year.

<sup>(7)</sup> Outages for ESP work.

<sup>(8)</sup> This unit will be added as part of the agreement that FPL will serve Vero Beach's electric load starting January, 2014.
This unit is expected to be retired within 3 years.