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May 27, 2014

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Ann Cole, Director
Office of the Commission Clerk
Commission Recording & Filing
2540 Shumard Oak Blvd
Tallahassee, FL 32399

**In Re: Petition for Determination of Cost Effective Generation Alternative to Meet
Need Prior to 2018 for Duke Energy Florida, Inc.**

Dear Ms. Cole:

Duke Energy Florida, Inc. will be filing in a new docket the following 8 documents:

1. Duke Energy Florida, Inc.'s Petition for Determination of Cost Effective Generation Alternative to Meet Need Prior to 2018;
2. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Benjamin M.H. Borsch with Exhibits BMHB-1 through BMHB-11 with the referenced testimony and exhibits attached (non-confidential version);
3. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Kevin Delehanty with Exhibits KD-1 through KD-4 with the referenced testimony and exhibits attached (non-confidential version);
5. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Mark E. Landseidel with Exhibits MEL-1 through MEL-8 with the referenced testimony and exhibits attached;
7. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Julie Solomon with Exhibits JS-1 through JS-12 with the referenced testimony and exhibits attached;
8. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Ed Scott with Exhibits ES-1 through ES-3 with the referenced testimony and exhibits attached (non-confidential version).

Sincerely,

CARLTON FIELDS JORDEN BURT, P.A.

/s/ Blaise N. Gamba
Blaise N. Gamba
On behalf of Duke Energy Florida, Inc.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination)	
of Cost Effective Generation Alternative)	DOCKET NO. _____
to Meet Need Prior to 2018 for Duke)	Submitted for filing: May 27, 2014
Energy Florida, Inc.)	
_____)	

DUKE ENERGY FLORIDA, INC.’S PETITION FOR DETERMINATION OF COST EFFECTIVE GENERATION ALTERNATIVE TO MEET NEED PRIOR TO 2018

Pursuant to Rules 25-22.080 and 25-22.081, Florida Administrative Code (“F.A.C.”), and in accordance with the 2013 Revised and Restated Stipulation and Settlement Agreement approved by the Commission on November 12, 2013 in Order No. PSC-13-0598-FOF-EI in Docket No. 130208-EI (the “2013 Settlement Agreement”), Duke Energy Florida, Inc. (“DEF” or the “Company”) respectfully petitions the Florida Public Service Commission (“FPSC” or the “Commission”) for an affirmative determination that DEF has a need for additional generation capacity prior to 2018 and that DEF’s Suwannee Simple Cycle and Hines Chillers Power Uprate projects are the most cost effective generation alternatives to meet that need.

The Suwannee Simple Cycle and the Hines Chillers Power Uprate projects are the most cost effective options to fulfill DEF’s capacity and energy needs prior to 2018. The Suwannee Simple Cycle project leverages use of existing land, gas, and transmission infrastructure at the Company’s existing Suwannee power plant site and will have low air emissions using proven combustion turbine technology. In addition, the F class combustion turbine technology that will be placed in commercial service with the Suwannee Simple Cycle project is well suited to peaking capacity needs with both fast start capability and high reliability.

The Hines Chillers Power Uprate project meets the Company’s need for reliable peaking capacity through an increase in the efficient power output of the existing natural-gas fired, combined cycle power plants located at the Hines Energy Complex (“HEC”), providing

customers the savings associated with achieving reliable summer peaking capacity at combined cycle generation efficiency without having to build additional peaking capacity at another site on DEF's system.

In support of this Petition DEF is submitting the direct testimony and exhibits of DEF witnesses Benjamin Borsch, Kevin Delehanty, Mark Landseidel, and Ed Scott as well as expert witness Julie Solomon, with Navigant Consulting, Inc.

I. PRELIMINARY INFORMATION.

1. The Petitioner's name and address are:

Duke Energy Florida, Inc.
299 1st Avenue North
St. Petersburg, Florida 33701

2. Any pleading, motion, notice, order, or other document required to be served upon DEF or filed by any party to this proceeding should be served upon the following individuals:

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II. PRIMARILY AFFECTED UTILITY.

3. DEF is the utility primarily affected by the proposed power plant. DEF is an investor-owned electric utility, regulated by the Commission, and is a wholly owned subsidiary of Duke Energy Corporation. The Company's principal place of business is located at 299 1st Ave. N., St. Petersburg, Florida 33701.

4. DEF serves approximately 1.7 million retail customers in Florida. Its service area comprises approximately 20,000 square miles in 29 of the state's 67 counties, encompassing the densely populated areas of Pinellas and western Pasco Counties and the greater Orlando area in Orange, Osceola, and Seminole Counties. DEF supplies electricity at retail to approximately 350 communities and at wholesale to Florida municipalities, utilities, and power agencies in the State of Florida.

5. DEF serves an area that is now recovering from the Great Recession of late 2008 and 2009. Economic conditions support customer and energy demand growth and that is what DEF is now experiencing in its service area. As a result, DEF expects higher population and economic growth over the next ten years. DEF projects that its annual customer growth will average 1.4 percent between 2013 and 2022. Summer firm demand is expected to increase by 3.8 percent from 2014 to the summer of 2016, with the projected ten-year period summer net

firm demand annual growth at 1.4 percent. Net energy for load (“NEL”) is expected to improve too, with a 3.3 percent growth rate from 2014 to the summer of 2016 and an average annual growth rate of 1.4 percent for the ten-year period. More detail on the Company’s demand and energy forecast, and the methodology used to develop them, is included in Chapter 2 of the Company’s most recent Ten Year Site Plan (“TYSP”) filed with the Commission in April, 2014 and submitted in support of this Petition as an exhibit to the direct testimony of Benjamin Borsch.

6. The Company currently has a total summer net generation capacity resource of 11,275 MegaWatts (“MW”). This generation capacity resource includes utility purchased power (413 MW), non-utility purchased power (1,704 MW), combustion turbine (2,471 MW), fossil steam (3,410 MW), and combined cycle plants (3,277 MW). A more detailed description of DEF’s generation resources is set forth in Schedule 1 and Table 3.1 in the Company’s 2014 TYSP included as an exhibit to the direct testimony of Benjamin Borsch in this proceeding.

7. The Company’s total Demand-Side Management (“DSM”) resources are shown in Schedules 3.1, 3.2, and 3.3 in the Company’s 2014 TYSP included as an exhibit to the direct testimony of Benjamin Borsch in this proceeding. These resources include non-dispatchable DSM, interruptible load, and dispatchable load control resources. The Company’s DSM programs and measures are described in more detail in Chapter 2 in the Company’s 2014 TYSP.

8. The Company is part of a nationwide interconnected power network that enables interconnected utilities to exchange power. DEF’s transmission system includes approximately 5,000 circuit miles of transmission lines. The Company’s distribution system includes approximately 18,000 circuit miles of overhead distribution conductors and approximately 13,000 of circuit miles of underground distribution cable.

III. PROPOSED COMBUSTION TURBINE AND POWER UPRATE PROJECTS.

A. Suwannee Simple Cycle Combustion Turbine Project.

9. The Suwannee Simple Cycle project is a state-of-the-art, combustion turbine generation project. Two dual fuel F class combustion turbine generators will be purchased and installed together with two generator step-up transformers to generate an estimated 320 MW of electric power for DEF's customers. The Suwannee Simple Cycle project will also include fuel oil and demineralized water storage tanks, and related balance of plant facilities, and it will be located at the Company's existing Suwannee power plant site in Suwannee County, Florida. The Suwannee site has existing combustion turbines fired by gas and oil and existing steam units with supporting pipeline and transmission infrastructure.

10. The Suwannee Simple Cycle project will leverage use of existing land, gas, and transmission infrastructure at the site, minimizing the need to purchase or build this infrastructure for the project. Thus, the only land that must be purchased is an additional 24 acres located adjacent to the site for an additional buffer area. Additionally, the project will use existing transmission infrastructure at the site as much as possible. One of the F class combustion turbines will be connected to the existing 115kV transmission switchyard and the other F class combustion turbine will be connected to the existing 230kV transmission switchyard. Limited transmission network upgrades estimated at \$15.7 million are needed to reliably integrate the additional generation to the electric grid. Natural gas will be supplied to the two F class combustion turbines by the Florida Gas Transmission ("FGT") pipeline and a local gas lateral to the existing site metering and regulating station on site. The existing steam units will be retired, thus modernizing the fleet and reducing the site environmental impacts.

11. The Suwannee Simple Cycle Project will provide DEF with approximately 320MW peaking generation capacity from utility industry proven F class combustion turbines. The Suwannee Simple Cycle Project is expected to have an average summer full load heat rate and operate at a capacity factor range consistent with its peaking generation capacity role on DEF's system. The plant will have low air emissions using proven dry, low NOx combustors with water injection when operating on fuel oil. The F class combustion turbine technology is well suited to peaking capacity needs with both fast start capability and high reliability.

12. DEF estimates that it will cost approximately \$197 million, including the Allowance for Funds Used During Construction ("AFUDC"), to build the Suwannee Simple Cycle project. This estimate includes the cost to purchase the combustion turbine generators and step-up transformers, along with other equipment for the project; the engineering, procurement, and construction contract costs to build the project; owner costs; and the transmission switchyard and transmission network upgrades to connect the project to the grid. The estimated incremental annual fixed operation and maintenance ("O&M") cost for the Suwannee Simple Cycle project is \$1.4 million. There are also variable O&M costs to operate the Suwannee Simple Cycle plant in the approximate amount of \$700,000. The Suwannee Simple Cycle project is scheduled for commercial operation in June 2016.

B. Hines Chillers Power Uprate Project.

13. The Hines Chillers Power Uprate project involves the installation of a chiller system on all four existing natural-gas fired, combined-cycle power blocks, Hines Units 1-4, located at the HEC in Polk County, Florida. Hines Units 1-4 are four 2x1 F class combined cycle power blocks with a total installed capacity of approximately 1,900MW. The Hines Chillers Power Uprate project will increase the summer capacity by approximately 220MWs.

14. The Hines Chillers Power Uprate project consists of chiller modules for the existing HEC power block units, a large chilled water storage tank, an auxiliary power system, pumps and chilled water supply and return piping, and gas turbine air inlet chiller coils. The project will also involve modifications of the existing air inlet ducts on the HEC power block units. The installation of the chiller system on the existing HEC power block units is designed to cool the gas turbine inlet air. Cooling the gas turbine inlet air significantly increases the combined cycle plant summer capacity of each HEC power block while maintaining combined cycle fuel efficiency. The result is an uprate of approximately 220MW in the output of the HEC summer capacity.

15. The Hines Chillers Power Uprate project meets the Company's need for reliable capacity by the summer of 2017 through an increase in the summer capacity of the existing natural-gas fired, combined cycle power plants located at the HEC. Existing generation and site infrastructure will support this power uprate. As a result, DEF is able to achieve an increase of approximately 220MW in its summer capacity by utilizing an existing site and power block, saving customers the increased costs and time of building new generation at another existing site or a Greenfield site to achieve the same reliable summer capacity. The project will provide additional combined cycle summer capacity and fuel efficiency saving customers fuel costs. The Hines Chillers Power Uprate Project further achieves this significant increase in the Company's summer capacity with a minimal increase in the fixed and variable O&M costs at HEC and a much lower fixed and variable O&M cost for the same amount of capacity for a new power plant at an existing or Greenfield site. There are no additional transmission costs associated with the Hines Chillers Uprate Project. These are uprates to the existing HEC power

blocks which are supported by the existing transmission system connecting the HEC to DEF's system.

16. The estimated cost of the project is \$160 million. There will be only a minimal increase in the fixed and variable O&M costs at the HEC associated with the Hines Chillers Uprate Project. The Hines Chillers Uprate Project will be placed in service by June 2017.

IV. DEF'S ENERGY AND CAPACITY NEED FOR THE SUWANNEE SIMPLE CYCLE AND HINES CHILLERS POWER UPRATE PROJECTS.

17. The Company faced resource planning decisions leading up to and early in 2013 that affected the Company's near-term reliability need for generation capacity in the ten-year planning period. As a result, during the Company's annual resource planning analysis, the Company identified substantial generation capacity needs in the near term, beginning in 2016. This analysis was first reflected in the Company's 2013 TYSP. The Company's continuing resource planning process and analysis that resulted in its 2014 TYSP confirmed this need beginning in 2016. DEF needs the Suwannee Simple Cycle Project and the Hines Chillers Power Uprate Project by the summer of 2016 and 2017, respectively, to meet its 20 percent Reserve Margin commitment and to serve its customers' future electrical power needs in a reliable and cost-effective manner.

18. DEF plans its resources in a manner consistent with utility industry planning practices, and employs both deterministic and probabilistic reliability criteria in the resource planning process. The Company plans its resources to satisfy a minimum 20 percent Reserve Margin criterion and a maximum Loss of Load Probability ("LOLP") criterion. The Company's 20 percent minimum Reserve Margin commitment was established for investor-owned utilities in peninsular Florida in Order No. PSC-99-2507-S-EU.

19. The Company plans its resource needs in an Integrated Resource Planning (“IRP”) process in which the Company seeks to optimize its supply-side options along with its demand-side options into a final, integrated optimal plan, designed to deliver reliable, cost-effective power to DEF’s customers. The Company evaluates the relationship of demand and supply against the Company’s reliability criteria to determine if additional capacity is needed during the planning period. The generation plan is optimized after including cost-effective DSM programs to establish the most cost-effective overall plan, which becomes the Company’s Integrated Optimal Plan. This optimal plan is presented to the Commission in April each year in the Company’s annual TYSP filing. The April 2014 TYSP is included as an exhibit to the direct testimony of Mr. Borsch.

20. The IRP process begins with the Company’s examination of key planning forecasts and assumptions, including forecasts of customer growth, energy consumption, and peak demand, in order to assess the Company’s future generation capacity needs. DEF developed and analyzed forecasts for long-range electric energy consumption, customer growth, peak demand, and system load shape for the next ten years based on its own internal expertise and information from respected, independent, industry sources. These forecasts draw on the collection of certain input data, such as population growth, fuel prices, interest and inflation rates, and the development of economic and demographic assumptions, that are employed in several models and methodologies that incorporate forecasting techniques, such as econometric modeling and direct contact with customers. All of these models and methodologies used by the Company are well-accepted and widely used in the electric utility industry. The specific methodologies and forecasts are discussed in more detail in Chapter 2 of the Company’s 2014 TYSP included as an exhibit to Mr. Borsch’s testimony. The Company regularly updates its load

forecast during the course of the year and for the development of the resource plan presented in the Company's annual TYSP, as explained in more detail in the Company's 2014 TYSP.

21. The Company will experience load growth as the Florida economy recovers from the last recession. DEF expects both more customers and growth in energy demand in the near term, through 2017. The Company's summer firm demand is expected to grow to 9,149 MW by the summer of 2016, a 3.8 percent increase from 2014, and to 9,307 MW by the summer of 2017. NEL is projected to grow to 41,098 GWh in 2016, a 3.3 percent increase from 2014, and to 41,375 GWh in 2017. The demand and energy forecasts are discussed in more detail in Chapter 2 of the Company's 2014 TYSP. This growth, especially in summer peak demand on the Company's system, is one factor in the Company's need for additional generation.

22. Another driver in the Company's need for additional generation is the retirement of generation capacity on DEF's system. In February 2013, the Company decided to retire its Crystal River Unit 3 nuclear power plant ("CR3"). CR3 accounted for approximately 790 MW of summer generation capacity on DEF's system. The Company's plan for compliance with the United States Environmental Protection Agency ("EPA") Mercury and Air Toxics Standards Rule ("MATS") at Crystal River Unit 1 ("CR1") and Crystal River Unit 2 ("CR2") will result in a reduction in their capacity of approximately 130 MW beginning in the spring of 2016. The Company also plans to retire some of its oldest combustion turbines in its fleet and its three 1950's vintage oil- and gas-fired steam generation plants at the Company's Suwannee power plant site in 2016. These retirements account for 261 MW of summer generation capacity on DEF's system. The Company's generation plant retirements are another primary reason for the Company's generation capacity need in 2016 and 2017 to reliably serve its customers.

23. Together, the Company's current and projected customer and peak demand growth, and its existing and planned plant retirements, demonstrate a need for additional generation capacity in the summer of 2016 and the summer of 2017. The Company evaluated several alternative generation options to meet this need including (i) construction of new generation; (ii) purchases from or acquisitions of existing generation plants owned by other companies; and (iii) power uprate projects at existing generation plants on the Company's system. The Company originally identified a need of up to 1,150 MW of additional generation capacity beginning in 2016 and established a process for Commission review of its evaluation of this need in the Company's 2013 Settlement Agreement. In the 2013 Settlement Agreement, the Company agreed to evaluate and compare the most cost effective alternative to satisfy its generation capacity needs prior to year end 2017 through its IRP methodology and to present this evaluation to the Commission.

24. The Company's decision to complete projects necessary to permit the continued operation of CR1 and CR2 with alternative, low sulfur coal fuel sources to comply with the EPA MATS extends the operation of CR1 and CR2 to 2018. This decision reduces the Company's generation capacity needs commencing in 2016. As a result, the Company no longer needs up to 1,150 MW of generation capacity commencing in 2016. The Company's need now is approximately 280 MW of summer generation capacity commencing in 2016 that increases to 470 MW in the summer of 2017. DEF selected the Suwannee Simple Cycle and Hines Chillers Power Uprate projects to meet this reliability need after carefully evaluating system needs and planning options through the Company's ongoing resource planning process.

25. DEF needs the Suwannee Simple Cycle and Hines Chillers Power Uprate projects in the summer of 2016 and 2017, respectively, to meet its 20 percent Reserve Margin

Commitment. With the installation of the Suwannee Simple Cycle Project in 2016 and the Hines Chillers Power Uprate Project in 2017, the Company's Reserve Margin will be 20.4 percent in the summer of 2016 and 20.7 percent in the summer of 2017, respectively. Without these generation capacity additions, DEF's Reserve Margin will decrease to 16.9 percent in the summer of 2016 and to 14.9 percent by the summer of 2017. DEF maintains its Reserve Margin commitment to ensure reliable electric service to its customers. DEF needs additional generation capacity in the summer of 2016 and the summer of 2017 to meet its obligation to provide reliable electric service to its customers.

V. MAJOR GENERATING ALTERNATIVES EXAMINED AND EVALUATED.

26. Before selecting the Suwannee Simple Cycle and Hines Chillers Power Uprate Projects, DEF examined several alternative generation expansion plans to meet its near-term reliability need, however, the alternative generation expansion plans that could be evaluated were limited by the need to place generation in-service in 2016 and 2017. With this limitation in mind, the Company evaluated generation options to determine those options that were the most cost-effective, screening the options based on cost, fuel sources and availability, technological maturity, and overall resource feasibility within the Company's system.

27. Generation alternatives that passed this screen were included in the Company's economic evaluation in the Strategist and Energy Portfolio Management ("EPM") resource planning production cost computer model. The primary output of this modeling is a Cumulative Present Value Revenue Requirements ("CPVRR") comparison of the generation resource options that satisfied DEF's reliability requirements. The most cost-effective supply-side resources were evaluated and ranked by system revenue requirements. The Suwannee Simple Cycle Project and

the Hines Chillers Power Uprate Project had the lowest CPVRR and were chosen by the Company as its base generation plan to meet the Company's reliability needs in 2016 and 2017.

28. DEF evaluated the potential future supply of firm capacity from purchased power contracts to meet its reliability need in 2016 and 2017. In fact, DEF determined that a short-term power purchase agreement ("PPA") with Southern Company was cost effective and included this purchase in its base generation plan to meet its generation capacity needs commencing in 2016. DEF also evaluated several, other PPAs, and even acquisitions of generation facilities, to determine if they were more cost effective than the Company's self-build new generation Suwannee Simple Cycle and Hines Chillers Power Uprate Projects to meet the Company's capacity needs commencing in 2016.

29. DEF evaluated nine proposals for PPAs or generation facility acquisitions. DEF evaluated all of these proposals by systematically following a structured, orderly evaluation process that evaluated all proposals, including the Company's self-build generation projects, on price and non-price attributes. The first step was to screen the fixed and variable payments or costs for the proposals and perform economic optimization screening analyses. This detailed economic evaluation was performed in stages and included all costs, including transmission cost impacts, in the analysis. If a proposal was economic compared to the Company's self-build generation projects the Company would proceed to the next step in the analysis.

30. The Company's initial detailed economic evaluation compared each proposal to DEF's self-build generation alternatives, the Suwannee Simple Cycle and the Hines Chillers Power Uprates projects. The initial detailed economic optimization analysis was performed using the Strategist optimization model. Inputs to the model include the load and energy forecast and the costs and characteristics (such as heat rates, outage rates, and maintenance requirements) of

the Company's existing generating units and purchase power agreements. Costs and operating characteristics of potential future supply-side resources, which could be generating units or purchases, are also included in the model. The Strategist resource optimization model, therefore, shows the net impact of both the proposed cost and the impact the proposal has on system operating costs. This analysis explicitly examines the relative impacts on system costs for fuel and variable O&M of the other units on DEF's system and any impact on DEF's purchased power costs. The resource plan optimization and fixed costs results from Strategist were then integrated with the detailed production costs from the EPM model to calculate a resulting CPVRR for each proposal alternative and compare them to the Company's Base Generation Plan in the initial detailed economic evaluation. From an economics-only perspective, the lowest cost alternative in CPVRR terms is the optimal resource.

31. In CPVRR terms, in the initial detailed economic evaluation, the Company's Base Generation Plan --- the Suwannee Simple Cycle and Hines Chillers Power Uprate projects -- was found to be less expensive or more cost effective than all the PPA proposals and all but one of the potential generation facility acquisition proposals. The Company's Base Generation Plan was only marginally more expensive than one of the acquisition proposals, but in CPVRR terms over the 30-year study period they were nearly equivalent on an economic basis to the Company. Another potential generation facility acquisition proposal ranked third behind this generation facility acquisition and the Company's Base Generation Plan including its self-build projects.

32. The next step in the economic evaluation was to quantify a number of cost risks with the proposals evaluated in cost sensitivities. These sensitivities included construction cost risk for the self-build projects, and gas transportation contract risks, plant condition and

maintenance risks, and transmission cost risks for the potential generation facility acquisitions. These cost risk sensitivities placed the acquisition proposals in a range where they were possibly close to the cost effectiveness of the self-build projects or substantially less cost effective than the self-build projects. Given this range of possible values, DEF decided to continue its evaluation of the feasibility of the potential generation facility acquisitions by conducting a Federal Energy Regulatory Commission (“FERC”) market screen analysis. The FERC market screen analysis is a required step in obtaining FERC approval under section 203 of the Federal Power Act (“FPA”) for any acquisition of a jurisdictional generation facility.

33. FERC must approve any potential generation facility acquisition by the Company before the Company can complete that acquisition. FERC reviews the proposed transaction to assess its effect on competition in the wholesale market, wholesale rates, and regulation. The FERC market screen, or Competitive Analysis Screen, is part of this review under the Antitrust Agencies’ Horizontal Merger Guidelines adopted by FERC.

34. The Company retained Julie Solomon with Navigant Consulting, Inc. to perform the FERC Competitive Analysis Screen. Both potential generation facility acquisitions failed the FERC Competitive Analysis Screen. The FERC Competitive Analysis Screen, and the results of that analysis, are explained in more detail in the direct testimony of Julie Solomon filed on the Company’s behalf in this proceeding.

35. Failure of the FERC Competitive Analysis Screen means that FERC likely will not approve the generation facility acquisition transaction without mitigation of the market screen failures. This meant that the Company would have to build additional transmission facilities to expand the transmission import capability to mitigate the screen failures at substantial cost to the Company and its customers. The results of the detailed economic analyses

of these potential generation facility acquisitions did not warrant the substantial costs for these transmission system network upgrades. The Company decided, then, based on the FERC market screen results and the results of its own economic analyses, that these potential generation facility acquisitions were not cost effective for the Company's customers and should not be considered further by the Company.

36. As a result of the Company's economic and FERC market screen analyses the Company did not reach the additional stages in its evaluation of these potential generation facility acquisitions. The next step was the evaluation of the technical feasibility and viability of the proposed acquisitions through a qualitative analysis of such non-price attributes as the physical condition and maintenance of the plants, site environmental impacts and compliance, insurance, and indemnity obligations, among other qualitative factors, that must be evaluated. Further steps included developing mitigation plans for any identified risks in this qualitative analysis and the negotiation of terms and conditions to mitigate those risks. The Company determined that this further qualitative review of the generation facility acquisition proposals was unnecessary. The most cost effective generation option to meet customer reliability needs prior to 2018 based on the quantitative analysis and the FERC market screen analysis is the Company's self-build generation plan.

37. The Company also continually evaluates the timelines for new technologies, including renewable energy source and technologies, as part of its IRP process. The Company has a Request for Renewables ("RFR") that continuously solicits proposals for renewable energy projects. However, no commercially available, economically feasible renewable generation resource currently exists to displace or defer DEF's generation capacity needs commencing in the summer of 2016. Additionally, no proposal for a renewable energy project has been received

in response to the Company's RFR that will displace or defer the Company's generation capacity needs in 2016 and 2017.

38. The Company's Base Generation Expansion Plan includes the PPA with the Southern Company for generation capacity commencing in 2016, the Suwannee Simple Cycle Project in the summer of 2016, and the Hines Chillers Power Uprate Project in the summer of 2017. The Suwannee Simple Cycle and Hines Chillers Power Uprate Projects are the most cost-effective generation options, based on price and non-price attributes, to meet the Company's reliability needs in the summers of 2016 and 2017.

VI. VIABLE NON-GENERATING ALTERNATIVES.

39. In addition to conducting an extensive analysis of supply-side alternatives, DEF also analyzed viable non-generating, demand-side alternatives before determining that the Suwannee Simple Cycle and Hines Chillers Power Uprate projects were the most cost effective resource option to meet DEF's needs. Energy conservation and direct load control programs are always a part of the Company's IRP process and the Company's current DSM programs were considered in connection with the Company's near term generation capacity need commencing in 2016. The Company's DSM programs, however, cannot replace or defer the Company's need for additional generation on its system to meet the Company's capacity needs commencing in 2016. Current DSM programs were essentially set forth in the DSM Plan approved by the Commission in Order No. PSC-11-0347-PAA-EG in August 2011.

VII. ADVERSE CONSEQUENCES OF DELAY.

40. If the Suwannee Simple Cycle and Hines Chillers Power Uprate projects are delayed, DEF would not be able to satisfy its minimum 20 percent Reserve Margin planning criterion by the summer of 2016 and 2017, respectively, in the most reliable and cost-effective

manner. This would expose DEF's customers to a risk of interruption of service in the event of unanticipated forced outages or other contingencies for which DEF maintains reserves. Even without an interruption in service, without the Suwannee Simple Cycle and Hines Chillers Power Uprate projects, DEF would be forced to enter into more costly PPAs to meet this near-term reliability need. As a result, DEF's customers would be subject to higher costs to serve their reliability needs for additional generation capacity in the summer of 2016 and 2017.

VIII. PROPOSED ISSUES FOR COMMISSION CONSIDERATION.

41. DEF proposes that the issues that must be resolved in this proceeding are as follows:

- a) Whether the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project are needed by DEF to meet its needs for electric system reliability and integrity;
- b) Whether the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project are needed by DEF to continue to provide adequate electricity to its customers at a reasonable cost;
- c) Whether the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project are needed by DEF for fuel diversity and supply reliability;
- d) Whether the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project are the most cost-effective alternatives available to meet Florida's reliability needs;
- e) Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available;

f) Whether DEF has adequately considered the conservation measures taken by the Company or reasonably available to it which might have mitigated the need for the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project; and

g) Given the resolution of the foregoing issues, should the Commission grant DEF an affirmative determination that the Suwannee Simple Cycle Project and Hines Chiller Power Uprate Project are the most cost effective generation alternatives to meet DEF's need prior to 2018.

42. For sake of clarity, at this time DEF is not requesting that the Commission make a determination as to the prudence or the final amount of the costs for the Suwannee Simple Cycle Project and the Hines Chillers Power Uprate Project. Per the 2013 Settlement Agreement, those costs will be considered at a later time when the projects are close to their in-service dates. Accordingly, DEF will be requesting prudence determinations on the actual costs in those future proceedings.

IX. DISPUTED ISSUES OF MATERIAL FACT.

43. DEF is not aware at this time that there will be any disputed issues of material fact in this proceeding. Through its testimony and exhibits, incorporated herein by reference, DEF has demonstrated its generation capacity reliability need for the Suwannee Simple Cycle and Hines Chillers Power Uprate Projects.

44. DEF's Petition is consistent with the provisions of the 2013 Settlement Agreement approved by the Commission in Order No. PSC-13-0598-FOF-EI. DEF has met with the parties to the 2013 Settlement Agreement several times to explain DEF's approach to its generation needs prior to and commencing in 2018. DEF has explained its analyses and its

decision to meet that need consistent with the terms of the 2013 Settlement Agreement. No party to the 2013 Settlement Agreement has expressed to DEF that DEF has not complied with the 2013 Settlement Agreement.

X. CONCLUSION.

45. DEF seeks an affirmative determination that the Suwannee Simple Cycle and Hines Chillers Power Uprate Projects are the most cost effective generation alternatives to meet the Company's need for electric system reliability and integrity and to enable the Company to continue to provide adequate electricity to its customers at a reasonable cost. DEF determined to seek this approval only after conducting a rigorous internal review of supply-side and demand-side options, and after soliciting and evaluating competing proposals submitted by interested third-party suppliers. The Company has attempted to avoid or defer constructing these Projects by considering and pursuing demand-side options and renewable energy sources and technologies reasonably available to it, but the Company has nonetheless concluded that it cannot avoid or defer its need to build these Projects.

46. The Company conducted a careful screening of various other supply-side alternatives as part of its IRP process before identifying the Suwannee Simple Cycle and Hines Chillers Power Uprate projects as its Base Generation Plan to meet its reliability needs in the summers of 2016 and 2017. Further, through the Company's evaluation of market proposals for alternative generation, the Company determined that the Suwannee Simple Cycle and Hines Chillers Power Uprate projects were more cost-effective than any alternative supply-side generation proposal on the market.

47. The Suwannee Simple Cycle Project and the Hines Chillers Power Uprate Project are the best alternatives for maintaining DEF's electric system reliability and integrity, and

providing its customers with adequate electricity at a reasonable cost, by the summer of 2016 and 2017, respectively.

WHEREFORE, for all of the reasons provided in this Petition, as developed more fully in DEF's pre-filed testimony and exhibits, DEF respectfully requests that the Commission grant a favorable determination that the Company needs additional generation capacity in the summer of 2016 and the summer of 2017 to reliably serve its customers, and that the Suwannee Simple Cycle and Hines Chillers Power Uprate Projects are the most cost effective generation alternatives to meet the Company's reliability need.

Respectfully submitted this 27th day of May, 2014.

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