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May 27, 2014

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

In Re: Petition for Determination of Need for Citrus County Combined Cycle Power Plant

Dear Ms. Cole:

Duke Energy Florida, Inc. will be filing in a new docket the following 9 documents:

1. Duke Energy Florida, Inc.'s Petition for Determination of Need for the Citrus County Combined Cycle Power Plant;

2. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Benjamin M.H. Borsch with Exhibits BMHB-2 through BMHB-14 with the referenced testimony and exhibits attached;

3. Duke Energy Florida, Inc.'s Notice of Filing the Need Determination Study as Exhibit BMHB-1 to the Direct Testimony of Benjamin M.H. Borsch with the referenced exhibit attached (non-confidential version);

4. 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 Amy Dierolf with Exhibits AD-1 through AD-2 with the referenced testimony and exhibits attached;

6. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Mark E. Landseidel with Exhibits MEL-1 through MEL-5 with the referenced testimony and exhibits attached;

7. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Jeffrey Patton with Exhibits JP-1 through JP-4 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); and

9. Duke Energy Florida, Inc.'s Notice of Filing the Direct Testimony of Alan S. Taylor with Exhibit AST-1 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 Need for Citrus County Combined Cycle Power Plant	)))	DOCKET NO. _____ Submitted for filing: May 27, 2014

DUKE ENERGY FLORIDA, INC.'S PETITION FOR DETERMINATION OF NEED FOR THE CITRUS COUNTY COMBINED CYCLE POWER PLANT

Pursuant to Section 403.519, Florida Statutes, and Rules 25-22.080 and 25-22.081, Florida Administrative Code ("F.A.C."), Duke Energy Florida, Inc. ("DEF" or the "Company") respectfully petitions the Florida Public Service Commission ("FPSC" or the "Commission") for an affirmative determination of need for its Citrus County Combined Cycle Power Plant. The Citrus County Combined Cycle Power Plant will be a state-of-the-art, natural gas-fired, combined cycle power plant with an expected summer rating of 1,640 MegaWatts ("MW") and an expected winter rating of 1,820 MW when completed in December 2018. The Citrus County Combined Cycle Power Plant will be located at a new power plant site adjacent to the Company's Crystal River Energy Complex ("CREC") in Citrus County, Florida. The Citrus County Combined Cycle Power Plant will enable the Company to meet the reliability needs of DEF's customers, it will provide a superior source of efficient, cost-effective power to DEF's customers during its life, it will expand the Company's natural gas fuel supply diversity, and it adds flexibility to the energy production resources on the DEF system. There simply is no more cost-effective, viable generation resource to meet DEF's capacity needs beginning in 2018 to provide reliable power to DEF's customers.

In support of this Petition DEF is submitting the direct testimony and exhibits of Benjamin Borsch, Kevin Delehanty, Amy Dierolf, Mark Landseidel, Jeff Patton, Ed Scott, and the testimony and exhibits of independent consultant, Alan Taylor, with Sedway 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 35 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 that hit Florida particularly hard and has dampened the DEF historical growth rate. Economic conditions now support customer and energy demand growth and that is what we DEF is now experiencing in its service area. As a result, DEF projects that its annual customer growth will average 1.4 percent between 2013 and 2022. The projected ten-year period summer net firm demand growth annual rate is 1.4 percent. Net energy for load ("NEL") is expected to improve too, with an average annual growth rate of 1.4 percent. DEF expects higher population and economic growth over the next ten years. 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 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 circuit miles of underground distribution cable.

III. PROPOSED ELECTRICAL POWER PLANT.

9. The Citrus County Combined Cycle Power Plant will be a state-of-the-art, natural gas-fired, combined cycle power plant with an expected summer rating of 1,640 MW and an expected winter rating of 1,820 MW when completed. Construction of 820 MW of the 1,640 MW plant will be complete by May 2018, with the remaining 820 MW complete by December 2018. The Plant will also have a high availability on DEF's system, with an expected equivalent forced outage rate of approximately 2 percent. The Citrus County Combined Cycle Power Plant

modernizes the DEF generation fleet with a highly efficient and highly flexible, cost effective combined cycle plant.

10. The Citrus County Combined Cycle Power Plant will be an advanced class gas turbine, 4 by 2 combined cycle configuration, which includes four combustion turbines ("CTGs"), four heat recovery steam generators ("HRSGs"), two steam turbines ("STGs"), and six generator step-up transformers ("GSUs"). This plant generates electricity in two stages, first by firing the CTGs, and second by using the hot gas from the CTGs to produce steam through the HRSGs which is fed into the STGs to generate additional electricity. This combined-cycle capability makes the most of the input fuel, by burning it and using the waste heat from that process, to generate electricity and, therefore, is a very efficient plant design to produce electrical energy. In addition, the plant will have moderate duct firing capability, which means 50 to 100 MW of duct fired output of each 820 MW power block will be available as cost effective peaking capacity. The Citrus County Combined Cycle Power Plant will also include cooling towers, pumps, tanks, power distribution centers, a water treatment building, and an administration building.

11. The Citrus County Combined Cycle Power Plant will be fueled by natural gas as the single fuel source for the Plant. The natural gas will be supplied by the Sabal Trail Transmission LLC ("Sabal Trail") pipeline through a gas lateral to the Plant. DEF has contracted with Sabal Trail for 300,000 MMBtu/day of firm gas transportation capacity on the Sabal Trail pipeline to support the Plant's natural gas needs. Sabal Trail is a new Greenfield interstate natural gas pipeline project that originates in Alabama, extends through Georgia, and ends in Central Florida. Other gas pipelines into Florida will be available as additional resources in the event of a supply disruption on the Sabal Trail pipeline. DEF will have additional receipt-

only interconnects between Sabal Trail and Florida Gas Transmission Company, LLC ("FGT"). In the event of a pipeline disruption or curtailment on Sabal Trail, these interconnects would allow DEF the ability to utilize its FGT contracts or market supply to deliver gas supply to the Citrus County Combined Cycle Plant. These alternative gas transportation options provide additional, back-up gas transportation and gas supply reliability at the Citrus County Combined Cycle Plant for the Company and its customers. The fuel gas supply for the Plant is discussed in more detail in the direct testimony of Mr. Landseidel and Mr. Patton filed in support of this Petition in this proceeding.

12. The Citrus County Combined Cycle Power Plant adds natural gas supply diversity to DEF's system. The Sabal Trail pipeline allows DEF to access abundant unconventional and conventional on-shore natural gas supplies for the Citrus County Combined Cycle Power Plant. As a result, DEF achieves one of the primary objectives of fuel diversity, namely, ensuring that fuel is readily available at a cost-effective price. Additionally, DEF's access to these natural gas supplies for the Citrus County Combined Cycle Power Plant and the gas transportation pipeline interconnections achieves the second primary objective of fuel diversity, that is, ensuring a reliable supply in the event of fuel supply interruptions. DEF, therefore, has reasonably achieved the benefits of fuel diversity with the addition of the Citrus County Combined Cycle Power Plant to its system. These benefits are discussed in more detail in the direct testimony of Mr. Patton, Mr. Delehanty, and Mr. Borsch filed in support of this Petition in this proceeding.

13. The Citrus County Combined Cycle Power Plant will be located on a 400 acre parcel in Citrus County, Florida, adjacent to the Company's existing CREC approximately 8 miles from Crystal River, Florida, and approximately 100 miles north of St. Petersburg, Florida. The location of the Citrus County Combined Cycle Power Plant near the CREC allows the

Company to use existing infrastructure at the CREC to support the proposed plant. For example, locating this power plant adjacent to the CREC allows the Company to use the existing CREC intake canal for sea water makeup for the Citrus County Combined Cycle Power Plant cooling towers and the existing CREC water wells for process makeup water for the plant. The Company also will use existing roads into the CREC for access to the Citrus County Combined Cycle Power Plant for construction of the plant and operation of the facility. These benefits are discussed in more detail in the direct testimony of Mr. Landseidel filed in support of this Petition in this proceeding.

14. The cost to build the Citrus County Combined Cycle Power Plant is estimated to be $1,350 million (nominal), plus $164 million (nominal) for Allowance for Funds Used During Construction ("AFUDC"), for a total cost of $1,514 million (nominal). This includes the cost of equipment; the Engineering, Procurement, and Construction ("EPC") contract; transmission; licensing; and internal costs such as construction management and start-up costs. The estimated incremental annual fixed operation and maintenance ("O&M") cost for the Citrus County Combined Cycle Power Plant is approximately $11.3 million, based on the estimate for 2019. Variable O&M costs vary as a function of unit generation and as such they are expected to be higher the more the plant operates. The estimated variable O&M is approximately $24.8 million based on the estimate for 2019 considering a 70 percent capacity factor. Over the life of the Citrus County Combined Cycle Power Plant the plant is expected to operate in a capacity factor range of approximately 50 percent to almost 90 percent.

15. The only transmission work that is necessary for the Citrus County Combined Cycle Power Plant is the switchyard and transmission bus line work to actually connect that plant with the existing DEF transmission facilities that are already connected to DEF's transmission

system and the electric power grid in Florida. One 820 MW block of the 1,640 MW Citrus County Combined Cycle Power Plant will be connected to the existing 500 kV transmission system located at the CREC effectively replacing the generation from the retired Crystal River ("CR") Unit 3 nuclear unit ("CR3"). The other Plant power block will be connected to the CREC 230kV transmission system, effectively replacing the CR Unit 1 ("CR1") and CR Unit 2 ("CR2") generation when those coal-fired plants are retired. These transmission interconnection costs are included in the total Citrus County Combined Cycle Power Plant project cost. The transmission costs and benefits of the Plant are discussed in more detail in the direct testimony of Mr. Scott filed in support of this Petition in this proceeding.

16. When the Citrus County Combined Cycle Power Plant achieves commercial operation it will be one of the most efficient and flexible generation plants on DEF's system. The Citrus County Combined Cycle Power Plant will enable the Company to meet the reliability needs of its customers, it will provide a superior source of efficient, cost-effective power to DEF's customers during its life, and it adds flexibility to the energy production resources on the DEF system.

IV. DEF'S NEED FOR THE CITRUS COUNTY COMBINED CYCLE POWER PLANT.

17. DEF needs additional generating capacity by the summer of 2018 to maintain system reliability and integrity, and to meet its commitment to maintain a 20 percent Reserve Margin. The Commission established this Reserve Margin threshold for the investor-owned utilities in peninsular Florida in Order No. PSC-99-2507-S-EU. The Citrus County Combined Cycle Power Plant allows DEF to satisfy its commitment to maintain a minimum 20 percent Reserve Margin by the summer of 2018 and beyond. The addition of the Citrus County Combined Cycle Power Plant will increase DEF's summer peak Reserve Margin to about 20.4

percent in 2018 and 23.6 percent in 2019. Without the addition of the Citrus County Combined Cycle Power Plant, DEF's summer peak Reserve Margin will fall to 11.7 percent in 2018 and to 6.9 percent in 2019.

18. DEF selected the Citrus County Combined Cycle Power Plant as its next planned generating unit ("NPGU") to meet this reliability need in the summer of 2018 after carefully evaluating system needs and planning options through the Company's ongoing resource planning process. 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. This planning process is 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.

19. 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.

20. By the summer of 2018, when 820 MW of the Citrus County Combined Cycle Power Plant is projected to first come on-line, the summer peak demand is projected to grow to 9,439 MW and by the next summer, when the Citrus County Combined Cycle Power Plant is expected to be fully operational, the summer peak demand will reach 9,813 MW. This is an annual growth in peak summer demand of approximately 1.4 percent. This peak summer demand growth results in a summer Reserve Margin of 11.7 percent by 2018 without additional resources to DEF's system. This result is depicted in an exhibit to the Direct Testimony of Mr. Borsch.

21. The NEL is also projected to grow over the same time period. The NEL growth is projected to be 41,995 gigawatt-hours ("GWh") by the summer of 2018 and 43,013 GWh by the summer of 2019. This is a 1.4 percent growth rate. The growth in demand and energy is primarily a result of increasing customer growth and improving economic conditions in Florida.

More information regarding the demand and energy forecasts, and the methodology used to develop them, is included in the Company's Need Determination Study and in Chapter 2 of the Company's 2014 TYSP.

22. Generation facility retirements also contribute to the Company's reliability needs in the summer of 2018. In February 2013, the Company decided to retire its CR3 nuclear power plant at the CREC, which had provided approximately 790 MW in summer capacity. The Company also plans to retire its oldest coal-fired generation plants, CR1 and CR2, located at the CREC with the addition of the Citrus County Combined Cycle Power Plant to DEF's system. CR1 and CR2 are 1960's vintage coal-fired generation with a combined summer capacity of about 740 MW. The United States Environmental Protection Agency and the Florida Department of Environmental Protection established air emission standards and limits that affect the continued operation of CR1 and CR2 beyond 2018 without substantial investment in new environmental compliance equipment and measures for CR1 and CR2. As a result, the Company plans to retire CR1 and CR2 in 2018 when the Citrus County Combined Cycle Power Plant achieves commercial operation. These retirements alone account for over 1,500 MW of summer generation capacity on DEF's system. In addition, the Company plans to retire its oldest peaking units, built in the 1960s and early 1970s, and its three 1950s vintage steam generation plants at the Company's Suwannee power plant site prior to 2018. These retirements account for another 260 MW of summer generation capacity. The reasons and plans for these generation facility retirements are further discussed in the testimony of Mr. Borsch and the Company's Need Determination Study.

23. It is the net impact of the Company's expected load growth and generation facility retirements that drive the need for additional generation capacity on DEF's system by the

summer of 2018 to meet the Company's reliability needs. Through the Company's IRP process DEF developed the Company's Base Generation Expansion Plan to meet this need. The Plan includes the addition of the Suwannee Simple Cycle Project, involving the construction of two new combustion turbine units at the existing Suwannee power plant site in 2016, and the Hines Chillers Power Uprate project at the Hines Energy Complex by 2017. These projects are described in DEF's separate petition filed simultaneously with this Petition to the Commission to determine that these are the most cost-effective generation alternatives to meet DEF's reliability need prior to 2018. The Plan includes the construction of the Citrus County Combined Cycle Power Plant at the new Citrus County site adjacent to the CREC as the NPGU in 2018. DEF's present Determination of Need Petition, its separate petition to determine the most cost-effective alternative to meet its capacity needs prior to 2018, and its April 2014 TYSP are all consistent with the Company's IRP process and the resulting Company Base Generation Expansion Plan.

V. MAJOR GENERATING ALTERNATIVES EXAMINED AND EVALUATED.

A. DEF's Selection of its Next Planned Generating Unit.

24. In selecting the Citrus County Combined Cycle Power Plant as its NPGU, DEF reviewed, evaluated and ultimately rejected other conventional, advanced, and renewable generation resources as potential capacity addition alternatives. DEF's Base Generation Expansion Plan takes into account its future supply of firm capacity from purchased power contracts, as well as its own existing and committed generating units that will be in service during the study period. DEF also examined alternative generation expansion scenarios when it identified the need for additional generation capacity in 2018 in its IRP process. Supply-side resources were screened to identify the most cost-effective generation resources. DEF pre-screened the options that did not warrant more detailed cost-effectiveness analysis based on

industry information and experience and DEF's own information and experience with the generation options.

25. Generation alternatives that passed the initial screening were considered viable generation capacity alternatives and were included in the next step of the IRP process. That step involved an economic evaluation of the generation alternatives in a computer model called Strategist. Strategist is an electric utility industry standard resource optimization program. Strategist models DEF's system and determines the combination or combinations of future resource additions that meet system reliability criteria while satisfying system constraints at the most cost-effective total production cost for DEF's system. The primary output of Strategist is the Cumulative Present Value Revenue Requirements ("CPVRR").

26. The most cost-effective supply-side resource or combinations of resources are evaluated and the various generation plans are ranked by system revenue requirements, or the CPVRR results. Each of these resource combinations was ranked based on cost performance over both the study period, which includes end effects, and the planning period. Generally, the generation plans with the lowest CPVRR are chosen as resource plan candidates for the Energy Portfolio Management ("EPM") model to further evaluate the production cost results. EPM is a detailed production cost model which models system behavior at an hourly level with more detailed operating constraints. DEF combines the EPM production cost results with the fixed cost outputs from Strategist to create final rankings. Generally, the generation plan with the lowest CPVRR over the study period is chosen as the Base Generation Expansion Plan. In this case, the Base Generation Expansion Plan includes the Citrus County Combined Cycle Power Plant as the NPGU.

27. Demand-side resources are also generally evaluated in much the same manner as supply-side resources. Strategist is up-dated with the cost and load impact parameters for the potential demand-side resources that survive the initial screening process. The Strategist model screens these demand-side resources on an individual basis against supply-side generation avoided units to determine the benefit or detriment to the DEF system from adding the demand-side resource to DEF's system. Strategist will calculate the benefits and costs for each demand-side resource and produce reports that provide the ratios for the Rate Impact Measure ("RIM"), Total Resource Cost Test ("TRC"), and the Participant Test. Cost-effective demand-side resources are implemented and included in the EPM model to determine the Integrated Optimal Resource Plan that produces the Base Generation Expansion Plan.

28. DEF included the demand-side resources in its current DSM Plan, as modified by the Commission, in its Strategist model runs to determine the Base Generation Expansion Plan. These DSM programs extend through the end of this year when new DSM goals for the next ten years will be approved by the Commission in Docket No. 130200-EI. After the goals are set, the Company will submit, for Commission consideration and approval, a DSM plan with programs and measures designed to meet those goals. The Company's currently-approved programs, and expected program achievements, are included in the analysis and do not replace or offset the need for additional supply-side generation resources in 2018.

29. DEF also performed the IRP process evaluations necessary for the Commission's current DSM goals docket and, based on the results of those analyses, DEF concluded that the Company's determination that it needs additional supply-side generation capacity in 2018 to meet its reliability needs will not be affected by the outcome of that docket. Over the next ten years the Company's proposed conservation goals are generally lower than the existing set of

goals, reflecting less available savings from demand-side resources. All other things being equal, this change causes an increase in DEF's firm winter and summer peak demand and, therefore, further establishes the need for the Citrus County Combined Cycle Power Plant NPGU to meet DEF's reliability need in 2018.

30. DEF's projected DSM goals result from the successful implementation of cost-effective DSM programs by the Commission and the Company for the past thirty years to reduce energy demand and consumption and avoid generation. DEF's Commission-approved DSM programs have resulted in over a billion dollars in customer energy savings by achieving reductions in energy consumption and demand savings that have effectively eliminated the need for the Company to build and operate approximately 18 peaking power plants. These substantial reductions in energy consumption and demand necessarily result in diminishing future energy consumption and demand reductions from more costly future energy efficiency programs and measures. In addition, customers are increasingly implementing their own energy efficiency measures, on their own initiative or as a result of other incentives, like building code changes for new customer construction, that make it more difficult and costly for the utility to achieve the next incremental increase in energy efficiency and demand reduction. For these reasons, DEF expects that its proposed DSM goals for the next ten years will be accepted by the Commission. As a result, the proposed DSM goals will have no impact on the Company's reliability need in 2018 because there are no DSM measures that can offset the need for additional generation capacity beginning in 2018 at a cost effective rate for DEF's customers.

31. The CPVRR economic analyses favor natural-gas fired, combined cycle generation to meet the Company's generation reliability needs. There simply are no other commercially available, utility-scale generation facility resources that can feasibly be added to

DEF's system to meet DEF's generation capacity needs. Building new coal-fired generation or nuclear generation capacity in Florida is not feasible at this time given environmental constraints and the existing legislative and regulatory framework. There also is a limited outlook for cost-effective renewable resources to meet DEF's reliability needs. Renewable resources, such as wind and solar, are not commercially available on a utility-scale for generation capacity at a cost-effective price. DEF has held open a Request for Renewables ("RFR") for renewable generation resources for years and DEF has not received a utility-scale, commercially viable wind or solar renewable proposal that has actually achieved commercial operation. DEF will continue to solicit renewable projects through its RFR, however, large scale, commercially viable and economic generation capacity renewable projects cannot be reasonably expected at this time.

32. As a result, the Citrus County Combined Cycle Power Plant offers benefits to DEF and its customers that cannot be obtained with other generation alternatives. These benefits include a proven technology, high efficiency, an abundant fuel supply, low environmental emissions, and high cost-effectiveness. For these reasons, many utilities and non-utility developers prefer natural gas-fired, combined cycle power plants for new generation capacity additions. The Citrus County Combined Cycle Power Plant is an extremely cost-effective generation addition to DEF's system that will provide DEF's customers reliable, adequate generation at a reasonable price for electricity.

B. <u>2018 Request For Proposal ("RFP") Process and Proposals.</u>

33. After selecting the Citrus County Combined Cycle Power Plant as its NPGU, in accordance with the Commission Bid Rule, Rule 25-22.082, F.A.C., DEF issued the 2018 RFP on October 8, 2013. The 2018 RFP solicited proposals for other generation capacity resources that might prove superior as a supply-side alternative to the Company's Citrus County Combined

Cycle Power Plant NPGU. The 2018 RFP is included as an appendix to the Need Study exhibit to the direct testimony of Mr. Borsch and the process followed in issuing the 2018 RFP and the evaluation of the responses to that RFP are described in detail in Mr. Borsch's direct testimony.

34. DEF implemented the 2018 RFP process by providing public notice of the RFP issuance on September 24, 2013. The public notice was published in newspapers of state and national circulation, and in trade publications and periodicals, consistent with the Bid Rule. DEF also held a RFP Pre-Issuance meeting, consistent with the Bid Rule, on October 2, 2013 to discuss the requirements of the 2018 RFP. Draft versions of the RFP Solicitation Document and Response Package were made available for downloading from the 2018 RFP web site.

35. The 2018 RFP was issued on October 8, 2013. Consistent with the Bid Rule, a Bidders' Conference meeting was held on October 18, 2003 to provide interested parties the opportunity to ask questions and seek additional information or clarification about the 2018 RFP documents and solicitation process. At both the RFP Pre-Issuance Meeting and the Bidders' Meeting, potential RFP participants could and did participate in the meeting. The RFP documents were revised or clarified, taking into account the questions or comments at these meetings. All questions and answers were also posted on the 2018 RFP website with transcripts of the meetings for potential RFP participants.

36. The Bid Rule allows potential bidders to file objections to the RFP for alleged violations of the Bid Rule within ten (10) days of the issuance of the RFP. No objections were filed with the Commission regarding the 2018 RFP for the Citrus County Combined Cycle Power Plant NPGU.

37. DEF also retained Alan Taylor with Sedway Consulting, Inc. as an independent monitor for the 2018 RFP to ensure the 2018 RFP process was fair and impartial and that the

2018 RFP solicitation documents were clear, fair, and consistent with the Commission Bid Rule. Mr. Taylor also served as an independent evaluator to ensure that DEF's evaluation of the proposals received in response to the 2018 RFP was fair and impartial and that the Company's selection of the most cost-effective proposal to meet DEF's reliability need in response to the 2018 RFP was reasonable. Mr. Taylor has filed direct testimony in support of the Company's Petition in this proceeding.

38. DEF received six proposals with five variations from third-party bidders and the Company's self-build team proposal for the Citrus County Combined Cycle Power Plant on December 9, 2013. None of the proposals from the third-party bidders met the Company's reliability need for 1,640 MW of summer generation capacity in the year 2018. In fact, all of the third-party bidder proposals combined did not meet the Company's reliability need for generation capacity in 2018.

39. Because none of these third-party bidder proposals individually or collectively met DEF's reliability need in 2018, DEF reasonably could have rejected the proposals for failure to comply with the 2018 RFP without further evaluation and selected the self-build proposal for the Citrus County Combined Cycle Power Plant. DEF decided to continue its evaluation of these third-party proposals, however, to see if there was any combination of them that, individually or collectively with other, undeveloped generic Company power plants, provided customers a more cost effective supply-side generation alternative to the Citrus County Combined Cycle Power Plant NPGU. These combinations, or resource combination scenarios, were quantitatively and qualitatively evaluated against the Company's Base Generation Expansion Plan which included the Citrus County Combined Cycle Power Plant. That evaluation is described in more detail in the direct testimony and exhibits of Mr. Borsch in this proceeding.

C. 2018 RFP Evaluation and Results.

40. DEF began its bid evaluation process by evaluating all proposals against the Threshold Requirements identified in the 2018 RFP solicitation document. The Threshold Requirements represent the minimum requirements that all proposals are required to meet to be evaluated. None of the proposals initially passed the Threshold Requirements screening process without any deficiencies. DEF went back to the bidders with questions to resolve the deficiencies and make sure DEF had everything needed to conduct a thorough bid evaluation. There were some continuing non-conformance issues with some proposals, however, DEF did not eliminate any proposal despite its right under the 2018 RFP to disqualify any proposal for failure to fully conform to the Threshold Requirements. DEF decided to address the non-conformance issues in its qualitative assessment of the risks associated with the bidder proposals.

41. Next, DEF performed an initial economic screening analysis. The screening analysis compared the proposals to each other in terms of $/kW-year cost and the evaluated costs of the proposals were within a reasonable range of each other, so none of the proposals were eliminated from further analysis.

42. The next step was the Technical Evaluation, which addressed the Minimum Technical Requirements in the 2018 RFP solicitation document, or the necessary technical elements of a bidder proposal. The Minimum Technical Requirements are the most important non-price attributes of the generation supply alternatives. Failure to meet one of the Minimum Technical Requirements was grounds for disqualification of the proposal from further consideration in the evaluation process. Like the Threshold Requirements screening, the Minimum Technical Requirements evaluation uncovered issues that needed clarification from all the bidders, although the clarifications did not resolve all issues identified. Because DEF had a

limited number of bidder proposals to evaluate, DEF again elected not to disqualify any proposal from further evaluation, and to consider the remaining issues, as necessary, in any final qualitative evaluation of the proposals after the economic evaluation of the proposals. As a result of this decision, there was no Short List. DEF informed the bidders that DEF was going to continue its evaluation of all bid proposals subject to all requirements of the 2018 RFP.

43. DEF proceeded with its Initial Detailed Evaluation. In this step, the bid proposals were compared to the Company's Base Generation Expansion Plan which included the Citrus County Combined Cycle Power Plant NPGU. DEF took the estimated costs from the initial economic screening of the third party bidder proposals and converted them into resource plans. This conversion was accomplished by optimization analyses that developed optimal resource plans around each third party bid proposal or combination of bid proposals. Because none of the third party bidder proposals satisfied the Company's reliability need for 1,640 MW of generation in 2018, DEF had to group the third party bidder proposals with generic units to meet the Company's reliability need to determine if there was some combination of them, either individually or collectively, with the generic resources that was superior to the Citrus County Combined Cycle Power Plant NPGU.

44. The optimization analyses were performed using the Strategist and EPM optimization models. The models include costs and characteristics of DEF generation units, purchase power agreements, and future resources, such as construction costs, O&M costs, heat rates, and outage rates, and the models include system load and energy forecasts. Details on the use of these models are contained in the direct testimony of Mr. Borsch in this proceeding. DEF also conducted transmission reviews of the third party bidder proposal optimal resource plans to provide reasonable estimates of the transmission impacts to integrate the bidder proposal

resource plan scenarios into the DEF system. The results of the transmission impacts were included in the optimization analyses for the bidder proposals. Alternative resource plans were developed to meet the projected future customer requirements subject to the 20 percent Reserve Margin constraint, using all possible combinations of resources, and CPVRR results for each combination were generated. Each alternative resource plan was then sorted from lowest to highest cost compared to the costs of the Base Case Generation Expansion Plan, with the lowest cost plan being the optimal plan from an economic or quantitative perspective.

45. DEF also performed a more detailed qualitative assessment of the operational quality, development and commercial feasibility, and project value technical criteria. This was a more in depth analysis of the information about these criteria and the threshold requirements provided by the bidders in the 2018 RFP. In the final evaluation of the proposals there were continuing issues with some bidder proposals, however again, given the limited number of bidder proposals in response to the 2018 RFP, DEF continued to consider these as qualitative risks associated with the proposals. Because all bidder proposal resource plan scenarios relied on unplanned and undeveloped generic units to meet DEF's reliability need, however, all bidder proposals clearly ranked behind the Citrus County Combined Cycle Power Plant based on the 2018 RFP threshold requirements and technical criteria**.**

46. The results of the Initial Detailed Evaluation show the difference in total system CPVRR associated with each alternative bidder proposal resource plan scenario compared to the Base Case Generation Expansion Plan. The lowest cost bidder proposal resource plan scenario was still over $375 million less cost-effective than the Base Case Generation Expansion Plan that included the Citrus County Combined Cycle Power Plant NPGU.

47. Following the Initial Detailed Evaluation the Company also performed the more detailed economic evaluation in the Final Detailed Evaluation to compare the bidder proposal resource scenarios to DEF's Base Case Generation Expansion Plan with the Citrus County Combined Cycle Power Plant NPGU. The Final Detailed Evaluation included more refined financial analyses, which included the cost of imputed debt by determining the additional equity cost related to potential purchased power arrangements for the third party bidder proposals. In CPVRR terms, the Company's Base Case Generation Expansion Plan with the Citrus County Combined Cycle Power Plant was found to be approximately $477 million more cost effective than the least cost alternative bidder proposal resource plan scenario.

48. The results of the Initial and Final Detailed Evaluations of the third-party bidder proposals and the Citrus County Combined Cycle Power Plant NPGU demonstrate that the Citrus County Combined Cycle Power Plant is the most cost-effective alternative for supplying generation to meet the reliability needs of the DEF's customers. As a result, there was no Final List. The Citrus County Combined Cycle Power Plant was found to be clearly superior to the other bidder proposal generation alternatives. DEF announced on May 13, 2014 that the Citrus County Combined Cycle Power Plant was the most cost-effective alternative to serve DEF's customer reliability needs.

49. The Citrus County Combined Cycle Power Plant is a highly efficient, state-of-the-art, natural-gas fired combined cycle generation plant. This high efficiency yields relatively lower production costs than any other option, creating significant relative fuel savings benefits for DEF's customers. The favorable site location adjacent to the CREC, where site infrastructure can be shared with and existing transmission infrastructure can be used for the Plant, adds substantial benefits to this Plant for DEF's customers. No third party bidder in response to the

2018 RFP proposed a plant that came close to matching the benefits of the Citrus County Combined Cycle Power Plant for DEF's customers. All third party bidder proposals fell short of the Company's reliability needs, and when combined with generic, unplanned and undeveloped plants to meet that need, the closest third party bidder proposal resource plan scenario was over $470 million less cost effective for DEF's customers. Based on DEF's internal, rigorous IRP process, and the competitive market process of the 2018 RFP, the Citrus County Combined Cycle Power Plant is the most cost effective generation resource and the right choice for DEF's customers.

VI. VIABLE NON-GENERATING ALTERNATIVES.

50. In addition to conducting an extensive analysis of supply-side alternatives, DEF also analyzed viable demand-side alternatives before determining that the Citrus County Combined Cycle Power Plant was the most cost effective resource option to meet DEF's needs. As discussed above, DEF included the demand-side resources in its current DSM Plan in its model runs to determine the Base Generation Expansion Plan. DEF also performed the evaluations necessary for the Commission's current DSM goals docket and, based on the results of those analyses, there are no demand-side resources that eliminate or defer the Company's need for additional supply-side generation capacity in 2018. The results of the current DSM goals docket will have no impact on the Company's reliability need in 2018.

VII. ADVERSE CONSEQUENCES OF DELAY.

51. If the Citrus County Combined Cycle Power Plant is delayed, DEF will not be able to meet its 20 percent Reserve Margin requirement in 2018. DEF has retired CR3 and must retire CR1 and CR2 and will do so in 2018. DEF plans other generation retirements necessary to modernize its system and lower the cost to produce electricity to customers. The Florida

economy is recovering, and DEF is again experiencing customer and energy demand growth. DEF, therefore, faces a need for reliable generation in 2018. In addition, the Company's generation plant retirements at the CREC lead to grid reliability issues in the event the addition of generation in the vicinity of Citrus County is delayed beyond 2018. To avoid reliability issues for the Florida electric grid, the Citrus County Combined Cycle Power Plant needs to be built and placed in commercial operation in 2018. Finally, delaying the Citrus County Combined Cycle Power Plant beyond 2018 postpones the benefits to customers from the most cost effective generation to meet the Company's reliability need in 2018, and exposes customers to higher cost power to meet their energy needs. For all these reasons, DEF needs to move forward with and place the Citrus County Combined Cycle Power Plant in commercial operation in 2018.

VIII. PROPOSED ISSUES FOR COMMISSION CONSIDERATION.

52. DEF proposes that the list of issues that must be resolved in this proceeding consistent with the Commission's jurisdiction under Section 403.519, Fla. Stat., are as follows:

a) Whether the Citrus County Combined Cycle Power Plant is needed by DEF to meet its needs for electric system reliability and integrity;

b) Whether the Citrus County Combined Cycle Power Plant is needed by DEF to continue to provide adequate electricity to its customers at a reasonable cost;

c) Whether the Citrus County Combined Cycle Power Plant is needed by DEF for fuel diversity and supply reliability;

d) Whether the Citrus County Combined Cycle Power Plant is the most cost-effective alternative available to meet DEF'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 Citrus County Combined Cycle Power Plant; and

g) Given the resolution of the foregoing issues, should the Commission grant DEF an affirmative determination of need for the Citrus County Combined Cycle Power Plant.

IX. DISPUTED ISSUES OF MATERIAL FACT.

53. 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 Citrus County Combined Cycle Power Plant and that the proposed Plant satisfies the statutory criteria set forth in Section 403.519, Florida Statutes.

54. DEF's Petition is consistent with the provisions of the Revised and Restated Stipulation and Settlement Agreement ("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.

55. DEF seeks an affirmative determination of need for the Citrus County Combined Cycle Power Plant 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 pursuant to the Commission Bid Rule. The Company has attempted to avoid or defer constructing the Plant 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 the Plant.

56. The Citrus County Combined Cycle Power Plant will be a state-of-the-art, highly efficient, environmentally benign unit, and it will be built at a site well suited for expansion of DEF's generation system. The Plant is the most cost-effective alternative available to DEF. It will provide fuel supply diversity, fuel efficiency and operational flexibility, and cost-effectiveness to the Company's generation fleet.

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 of need for the Citrus County Combined Cycle Power Plant. Pursuant to Rule 25-22.080(2), F.A.C., the Company requests the following:

(a) within seven days, the Commission set a date no later than August 25, 2014, for commencement of a hearing on this Petition;

(b) that the Commission give notice of the commencement of the proceeding as required by Rule 25-22.080(3), F.A.C.; and

(c) that the Commission determine that there is a need for the proposed electrical power plant described in this Petition, and file its order making such determination with the Florida Department of Environmental Protection pursuant to Section 403.507(2)(a)2, Florida Statutes.

Respectfully submitted this 27th day of May, 2014.

/s/ James Michael Walls
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