

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination) DOCKET NO. _____
of Need for Citrus County Combined)
Cycle Power Plant) Submitted for filing: May 27, 2014

DUKE ENERGY FLORIDA, INC.'S NOTICE OF FILING

Duke Energy Florida, Inc. ("DEF" or the "Company") hereby gives notice of filing the Direct Testimony of Amy Dierolf with Exhibits AD-1 and AD-2 in support of DEF's Petition for Determination of Need for the Citrus County Combined Cycle Power Plant.

Respectfully submitted this 27th day of May, 2014.

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

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

DOCKET NO. _____

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**DIRECT TESTIMONY
OF AMY DIEROLF**

**ON BEHALF OF
DUKE ENERGY FLORIDA, INC.**

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IN RE: PETITION FOR DETERMINATION OF NEED

BY DUKE ENERGY FLORIDA

FPSC DOCKET NO. _____

DIRECT TESTIMONY OF AMY DIEROLF

1 **I. INTRODUCTION AND QUALIFICATIONS.**

2 **Q. Please state your name, employer, and business address.**

3 A. My name is Amy Dierolf and I am employed by Duke Energy Corporation. My
4 business address is 299 First Avenue North, St. Petersburg, Florida 33733.

5
6 **Q. Please tell us your position with Duke Energy and describe your duties and
7 responsibilities in that position.**

8 A. I am a Lead Environmental Specialist for Duke Energy Corporation. In this role, I am
9 responsible for siting, licensing and permitting of new projects for Duke Energy
10 Florida, Inc. (“DEF” or the “Company”). As a part of my responsibilities, I have
11 project management oversight over the preparation and submittal of the Site
12 Certification Application (“SCA”) for the Citrus County Combined Cycle power plant.
13 The SCA is required for all new power plants in Florida meeting the criteria of the
14 Power Plant Siting Act (“PPSA”), Sections 403.501-518, Florida Statutes, and Chapter
15 62-17 Florida Administrative Code (“F.A.C.”). The PPSA serves as the single license
16 required in the State of Florida for the construction of new power plants. It
17 consolidates the review of all agencies and local governments under one approval. It

1 does not include federal permits delegated to the state, but these applications are
2 submitted at the same time as the SCA application.

3
4 **Q. Please summarize your educational background and employment experience.**

5 A. I have a Bachelor of Science degree from Baldwin Wallace College (now University),
6 a Master's of Science in Environmental Science and a Master's of Public
7 Administration from Indiana University. I have been employed with Duke Energy
8 (then Florida Power Corporation and Progress Energy) since 1991. During my time at
9 Duke Energy, I have been responsible for conducting environmental training and
10 audits, and the siting, licensing and permitting of new transmission lines, substations
11 and power plants.

12
13 **II. PURPOSE AND SUMMARY OF TESTIMONY.**

14 **Q. What is the purpose of your testimony in this proceeding?**

15 A. I am testifying on behalf of the Company in support of its Petition for Determination
16 of Need for the Citrus County Combined Cycle power plant. I will generally
17 describe the site and explain the environmental benefits of the site and the Citrus
18 County Combined Cycle power plant the Company plans to build and operate at the
19 site. I will also generally describe the environmental approval process for the Citrus
20 County Combined Cycle Power Plant project.

1 **Q. Are you sponsoring any sections of DEF's Need Study?**

2 A. Yes. I am sponsoring the environmental considerations and conditions section of the
3 Need Study.

4
5 **Q. Are you sponsoring any exhibits to your testimony?**

6 A. Yes. I am sponsoring the following exhibits to my testimony:

- 7 • Exhibit No. ____ (AD-1), a list of the permits or licenses DEF will obtain for
- 8 the Citrus County Combined Cycle power plant; and
- 9 • Exhibit No. ____ (AD-2), a copy of the estimated schedule for submittal and
- 10 approval of the SCA for the Citrus County Combined Cycle power plant.

11 Each of these exhibits was prepared under my direction and control, and each is true
12 and accurate.

13
14 **Q. Please summarize your testimony.**

15 A. The site chosen for the proposed combined cycle power plant in Citrus County is
16 beneficial from an environmental perspective because it is adjacent to existing DEF
17 power plants and, as such, the project will be able to leverage existing facilities and
18 minimize further impacts to land and water on the site. The Citrus County Combined
19 Cycle Power Plant is a highly efficient natural gas-fired generation plant that will
20 provide clean generation for DEF and its customers. Additionally, I am confident that
21 DEF's schedule for receipt of the necessary permits and licenses for the Citrus County
22 Combined Cycle Power Plant project is reasonable, there are no impediments to

1 receipt of the necessary permits and licenses, and that such approvals will be timely
2 received.

3
4 **III. DESCRIPTION OF THE SITE, POWER PLANT, AND ENVIRONMENTAL**
5 **IMPACTS.**

6 **Q. Please describe the Citrus County Combined Cycle Power Plant site.**

7 A. The Citrus County Combined Cycle Power Plant site is a 400-acre site adjacent to the
8 Crystal River Energy Center (“CREC”). Power Line Road is on the southern border
9 of the site and an unnamed mining road runs north and south approximately 30 feet
10 from the eastern border of the site. The 400-acre site was previously permitted and
11 intended to be used as mining operation. No mining has occurred on the 400 acre
12 property, but the parcel was permitted by the Florida Department of Environmental
13 Protection (“FDEP”) and the U.S. Army Corps of Engineers (“Corps”) as a limerock
14 mine. Although no mining has occurred on the site, the eastern portions of the site has
15 been used as silviculture multiple times – which is the practice of controlling the
16 establishment, growth, composition, health, and quality of woodlands. There are no
17 existing structures on the 400-acre site and it is undeveloped land.

18
19 **Q. Please generally describe the Citrus County Combined Cycle Power Plant.**

20 A. The Citrus County Combined Cycle Power Plant will be combined cycle power blocks
21 built in stages of 820 MegaWatts (“MW”) each over the course of 2018 for a total of
22 1,640MWs. The plant will be fueled by natural gas with a lateral gas pipeline to the
23 site from the new Sabal Trail gas pipeline in the state. The plant will be cooled by

1 cooling towers that draw their makeup water from the existing CR3 intake structure at
2 the CREC. The plant will be connected to DEF's transmission system at a
3 transmission switchyard located at the site. The current plan is to have a switchyard at
4 the site and tie into the existing transmission line right-of-way immediately south of
5 the site.

6
7 **Q. What are the environmental considerations in choosing to build a combined cycle**
8 **power plant?**

9 A. DEF places a strong emphasis on environmental quality when choosing a resource
10 option, including taking into consideration compliance with current Clean Air Act and
11 other environmental provisions, the ability to be flexible in response to emergent
12 environmental rules, high efficiency (low heat rate), and low air emissions. The Citrus
13 County Combined Cycle Power Plant meets these considerations. The combined
14 cycle technology with natural gas is a cleaner, fossil-fuel generating source enhanced
15 by an efficient technology with a low heat rate. Efficient plants use less fuel per unit
16 of electric energy delivered and therefore create a smaller environmental impact per
17 unit of delivered energy. With regard to air emissions, natural gas is a low sulfur, low
18 nitrogen oxide, low particulate emission plant. In addition to low nitrogen oxide
19 combustor technology in the CTGs, the nitrogen oxide emissions will be controlled by
20 a Selective Catalytic Reduction ("SCR") system located in the HRSGs that will reduce
21 nitrogen oxide emissions even further. Air emissions from the Citrus County
22 Combined Cycle Power Plant will be minimal because plants operating on natural gas
23 are one of the cleanest sources of fossil generation.

1 **Q. What are the environmental impacts of building the Citrus County Combined**
2 **Cycle Power Plant on this site?**

3 A. The construction of the project will impact approximately 10 acres of wetlands on the
4 site. However, these impacts are to wetlands that would have been impacted by the
5 future mining of the property as well. DEF will, to the extent practicable, seek to
6 avoid or minimize all wetland impacts. Those impacts that cannot be avoided will be
7 mitigated. Due to the location and disturbed nature of the site based on prior activities
8 on the site the project is not expected to impact any endangered species. The eagle's
9 nest on the western portion of the site that was previously identified during a
10 preliminary assessment of threatened and endangered species will be protected during
11 construction of the plant.

12
13 **Q. What are the environmental impacts and benefits from building the Citrus**
14 **County Combined Cycle Power Plant at this site?**

15 A. By using this site the Citrus County Combined Cycle Power Plant is using a site which
16 had already been identified and permitted for mining rather than taking over additional
17 raw land. Moreover, by using this site the Company is able to leverage existing
18 facilities and minimize further impacts to land and water on the site. For example, by
19 building the Citrus Combined Cycle Power Plant at this site DEF is able to locate the
20 new power plant so it aligns with DEF's existing power plant facilities, thus reducing
21 land use impacts to the surrounding area. Additionally, the new power plant will be
22 able to use the existing water intake structure from the retired CR3 facility and install
23 a new discharge into the existing discharge canal, consequently avoiding the need to

1 construct a new intake or discharge canal. The new power plant will use existing
2 water allocations for the CR1, 2, and 3 units and will not ask for any additional
3 groundwater for construction and operation. The new power plant will also leverage
4 existing facilities by using the existing rights-of-way for the transmission lines and
5 water pipelines and thus not impacting new property for rights-of-way.

6
7 **Q. What environmental permits are necessary for the construction and operation of**
8 **the Citrus County Combined Cycle Power Plant?**

9 A. Exhibit No. ___ (AD-1) to my direct testimony lists the necessary permits for the
10 construction and operation of the Citrus County Combined Cycle Power Plant that will
11 be obtained through the SCA approval process pursuant to the Florida PPSA.

12
13 **Q. Does the Company have a schedule to obtain the necessary permits to construct**
14 **and operate the Citrus County Combined Cycle Power Plant?**

15 A. Yes. Exhibit No. ___ (AD-2) to my direct testimony contains the estimated schedule
16 to obtain the necessary permits to construct and operate the Citrus County Combined
17 Cycle Power Plant.

18
19 **IV. CONCLUSION.**

20 **Q. Will the Company be able to obtain all necessary permits to build and operate**
21 **the Citrus County Combined Cycle Power Plant?**

22 A. Yes. In my opinion, the Company will successfully obtain all necessary permits to
23 build and operate the Citrus County Combined Cycle Power Plant through the SCA

1 approval process.

2
3 **Q. Are you aware of any reason why the SCA would not be approved for the Citrus**
4 **County Combined Cycle Power Plant?**

5 A. No I am not. A phase 1 environmental assessment was conducted on the property and
6 no recognized environmental condition exist that would preclude the development of
7 the Citrus County Combined Cycle Power Plant. A preliminary assessment was also
8 completed on the wetlands and threatened and endangered species and nothing was
9 identified that would affect construction.

10
11 **Q. Does this conclude your direct testimony?**

12 A. Yes it does.

13

2018 Citrus Combined Cycle – Permits List

Permit Required	Issued By
PPSA Site Certification (includes state, local permitting and authorizations) <ul style="list-style-type: none"> • 401 Water Quality Certification • Domestic Wastewater • Industrial Wastewater (non-NPDES) • Water Use Permit • Environmental Resource Permit (ERP) • Spill Prevention Control Measures Permit • Local Construction Permits/Requirements • State Wildlife Permits 	Florida Department of Environmental Protection (FDEP)
Water Discharge to Surface Waters (NPDES) Permit	FDEP as delegated by the Environmental Protection Agency
Prevention of Significant Deterioration (PSD) Air Construction Permit	FDEP as delegated by the Environmental Protection Agency
Air: Title V Operating Permit	FDEP as delegated by the Environmental Protection Agency
Clean Water Act Section 404 Permit	US Army Corps of Engineers
Environmental Resource Permit (ERP) ¹	FDEP
Clean Water Act Section 404 Permit ¹	US Army Corps of Engineers
Federal Aviation Administration Permit	FAA
Comprehensive Plan Amendment	Citrus County
Zoning Atlas Change	Citrus County

Footnote

1- A separate ERP and Clean Water Act 404 permit modification will be needed to separate the permits from the existing landowner to Duke Energy

Key Dates in the Anticipated Schedule for Review of Site Certification Application for Duke Energy Florida's Citrus Combined-Cycle Plant¹	
Date	Requirement/Deadline
Aug. 1, 2014	DEF files the SCA
Sept. 2, 2014	AGENCIES submit recommendations regarding the completeness of the SCA to DEP.
Sept. 10, 2014	DEP issues 1st Completeness Determination on the SCA.
Oct. 10, 2014	DEF files additional information in response to DEP's 1st determination
Oct. 21, 2014	CITRUS COUNTY issues its determination of land use/zoning consistency for power plant site and associated facilities that are not exempt from the definition of "development."
October 2014	PSC to issue Agency Report/Need Determination.
Nov. 3, 2014	DEP issues 2nd Completeness Determination on the plant and non-transmission portion of the SCA (if necessary)
Dec. 3, 2014	DEF files additional information in response to DEP's 2nd determination (if necessary)
Dec. 26, 2014	DEP issues 3rd Completeness Determination on the SCA (assumes SCA complete).
Jan. 5, 2015	ALJ conducts hearing on the challenge to the determination of land use consistency, if one (schedule assumes a 2-day hearing).
February 5, 2015	ALJ issues Recommended Order from hearing on land use consistency.
March 31, 2015	SITING BOARD hearing on land use consistency.
April 6, 2015	AGENCIES issue reports as to matters within their jurisdiction.
May 5, 2015	DEP files Project Analysis
June 17, 2015 June 23, 2015	ALJ conducts hearing on Site Certification (schedule assumes a 5-workday hearing)
August 14, 2015	ALJ issues Recommended Order on Site Certification
October 13, 2015	SITING BOARD hearing on Site Certification.
October 19-23, 2015	Governor signs the Siting Board Order

¹ This is an anticipated schedule of key dates only. Not all Power Plant Siting Act (PPSA) deadlines are reflected on this schedule. The DEP is responsible for preparing and filing the schedule for review of the Project, and the assigned administrative law judge issues the order establishing the schedule. The dates shown here are, therefore, estimated and subject to change.