APPENDIX A

REVIEW OF THE

2019 TEN-YEAR SITE PLANS

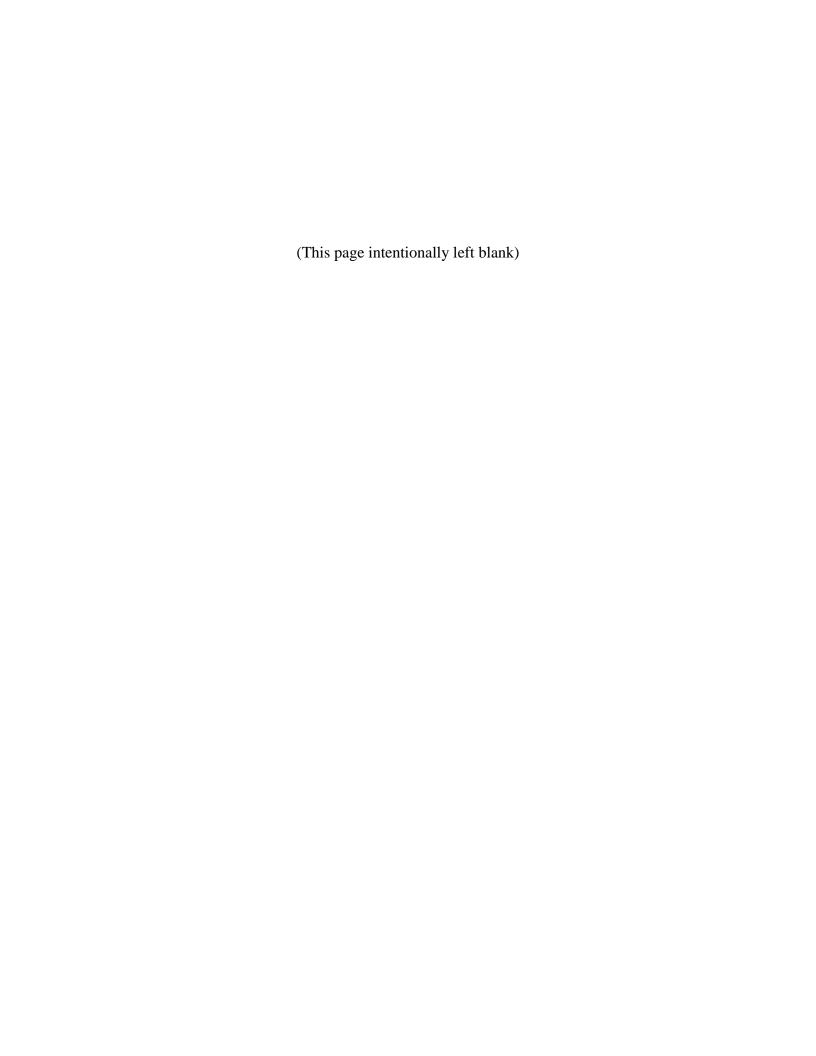
OF FLORIDA'S ELECTRIC UTILITIES



NOVEMBER 2019

Ten-Year Site Plan Comments

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State Agency

Department of Economic Opportunity

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From: Strange, Pam
To: Doug Wright

Cc: Rogers, Scott; Harris, Donna; Eubanks, Ray

Subject: 2019 Ten-Year Site Plans for Florida Electric Utilities

Date: Monday, September 30, 2019 10:45:32 AM

Attachments: 2019 Ten-Year Site Plans for Florida"s Electric Utilities Doug Wright 09 30 19.pdf

If you have any questions regarding these comments, please contact Scott Rogers, Planning analyst, at (850) 717-8510, or by email at scott.rogers@deo.myflorida.com.

Thank you

Pam

Pam Strange
Assistant to James Stansbury, Chief
Bureau of Community Planning and Growth
Department of Economic Opportunity
107 East Madison Street
Caldwell Building, MSC 160
Tallahassee, FL 32399

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Ron DeSantis GOVERNOR



Ken Lawson

EXECUTIVE DIRECTOR

September 30, 2019

Mr. Doug Wright
Engineering Specialist
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

RE: Review of the 2019 Ten-Year Site Plans for Florida's Electric Utilities

Dear Mr. Wright:

At your request, we have reviewed the 2019 Ten-Year Site Plans of the electric utilities. The Department of Economic Opportunity's review focused on potential and preferred sites for future power generation, and the compatibility of those sites with the applicable local comprehensive plan, including the adopted future land use map. Please see our enclosed comments.

Should you have any questions regarding these comments, please contact Scott Rogers, Planning Analyst, at (850) 717-8510, or by email at scott.rogers@deo.myflorida.com.

Sincefely,

James D. Stansbury, Chief

Bureau of Community Planning and Growth

JDS/sr

Enclosure: DEO Review Comments

Florida Department of Economic Opportunity | Caldwell Building | 107 E. Madison Street | Tallahassee, FL 32399 850.245.7105 | www.FloridaJobs.org www.twitter.com/FLDEO | www.facebook.com/FLDEO

Florida Department of Economic Opportunity 2019 Ten-Year Site Plan Review Comments

The Department's review focused on potential and preferred sites for future power generation, and the compatibility of those sites with the applicable local comprehensive plan, including the adopted future land use map. In addition, the Department's comments provide information regarding the local zoning designation when the applicable future land use map designation for a site does not expressly address whether electric power generation facilities are allowed or prohibited. Nine utilities (Duke Energy Florida, Florida Municipal Power Agency, Florida Power and Light Company, Gainesville Regional Utilities, Gulf Power Company, Lakeland Electric, Seminole Electric Cooperative, City of Tallahassee, and Tampa Electric Company) have identified a total of 56 potential or preferred sites for future power generation in their Ten-Year Site Plan (TYSP). Potential sites are defined in Rule 25-22.070, Florida Administrative Code (F.A.C.), as "sites within the state that an electric utility is considering for possible location of a power plant, a power plant alteration, or an addition resulting in an increase in generating capacity." Preferred sites are defined in Rule 25-22.070, F.A.C., as "sites within the state on which an electric utility intends to construct a power plant, a power plant alteration, or an addition resulting in an increase in generating capacity."

1. Duke Energy Florida

The Duke Energy Florida TYSP identifies five preferred sites to increase power generating capacity.

A. <u>Columbia Solar Power Plant Site:</u> The Columbia Solar Power Plant site is located on 580 acres in Columbia County. The site is designated as "Agriculture-3" on the Columbia County Comprehensive Plan Future Land Use Map and "Agriculture-3" on the Columbia County Zoning Atlas. A solar power generation plant is allowed as a special exception use in the Agriculture-3 zoning district. Columbia County has approved a special exception use permit for the solar power plant site.

B. <u>Debary Energy Center Site</u>: The DeBary Energy Center site is located on 1,395 acres in the City of DeBary. The site contains existing power generating facilities, and the solar facility will occupy approximately 450 acres within the DeBary Energy Center site. The City of DeBary Comprehensive Plan Future Land Use Map designates the site as "Industrial/Utilities", which allows electric power generation facilities.

C. <u>Lake Placid Solar Power Plant Site</u>: The Lake Placid Solar Power Plant site is located on 380 acres in Highlands County. The Highlands County Comprehensive Plan designates the site as 'Mixed Use" and the Highlands County Zoning Map designates the site as "Agricultural." Solar energy facilities (farms) are allowed in the Agricultural zoning district as a Special Exception use. The Comprehensive Plan does not specifically address solar energy facilities. Highlands County has approved the solar farm Special Exception use for the site.

- D. <u>St. Petersburg Pier Solar Energy Center Site:</u> The St. Petersburg Pier Solar Energy Center site is located on two acres of the existing pier in the City of St. Petersburg. The pier is being renovated, and the solar panels will be installed on canopies that cover parking spaces (solar carport). The City of St. Petersburg Comprehensive Plan Future Land Use Map designates the site as "Institutional" and the City has approved the solar carport as part of the renovation.
- E. <u>Trenton Solar Power Plant Site:</u> The Trenton Solar Power Plant site is located on 580 acres in Gilchrist County. The site is designated Agriculture-2 on the adopted Future Land Use Map of the Gilchrist County Comprehensive Plan. Solar farms are an allowable land use within the Agriculture-2 future land use category by special use permit, and Gilchrist County approved a special use permit for a solar facility on the site in January 2019.

2. Florida Municipal Power Agency

The Florida Municipal Power Agency TYSP identifies three potential sites for the increase in power generating capacity: (1) Cane Island Power Park; (2) Treasure Coast Energy Center; and (3) Stock Island.

- A. <u>Cane Island Power Park Site</u>: The Cane Island Power Park (CIPP) site is located on 1,027 acres in rural northwest Osceola County, approximately one mile northwest of Intercession City. The site contains existing power generation facilities. The Osceola County Comprehensive Plan Future Land Use Map designates the site as "Rural/Agriculture", which allows electric utility facilities.
- B. <u>Treasure Coast Energy Center Site</u>: The Treasure Coast Energy Center (TCEC) site is located on 69 acres in the Midway Industrial Park in the City of Fort Pierce. The site contains existing power generation facilities. The City of Fort Pierce Comprehensive Plan Future Land Use Map designates the site as "Institutional", which allows an electric generating plant.
- C. <u>Stock Island Power Plant Site:</u> The Stock Island Power Plant site is located on Stock Island near Key West, and the site contains existing power generation facilities. The Monroe County Comprehensive Plan Future Land Use Map designates the Stock Island Power Plant site as "Public Facilities", which allows electric generation plants.

3. Florida Power and Light Company

The Florida Power and Light Company (FPL) TYSP identifies twenty-seven preferred sites for the increase in power generating capacity and four unspecified potential sites for the increase of power generating capacity.

- A. The TYSP identifies the following as preferred sites:
- 1. <u>Babcock Preserve Solar Energy Center Site</u>: The Babcock Preserve Solar Energy Center site is located on 430 acres in Charlotte County. The site is designated as "Babcock Mixed Use" on the Charlotte County Comprehensive Plan Future Land Use Map and "Babcock Overlay Zoning District" on the Charlotte County Zoning Atlas. Renewable energy systems and facilities, such as a solar photovoltaic electrical generation facility, are allowed as a permitted principal use in the Babcock Overlay Zoning District.
- 2. <u>Blue Heron Solar Energy Center Site</u>: The Blue Heron Solar Energy Center site is located on 628 acres in Hendry County. The Hendry County Comprehensive Plan Future Land Use Map designates the site as "Electrical Generating Facility", which allows electric power generation facilities.
- 3. <u>Cattle Ranch Solar Energy Center Site:</u> The Cattle Ranch Solar Energy Center site is located on 1,050 acres in DeSoto County. The DeSoto County Comprehensive Plan Future Land Use Map designates the site as "Electrical Generating Facility", which allows a solar photovoltaic electrical generating facility.
- 4. <u>Northern Preserve Solar Energy Center Site:</u> The Northern Preserve Solar Energy Center site is located on 558 acres in Baker County. The site is designated as "Agriculture B" on the Baker County Comprehensive Plan Future Land Use Map and "Agriculture 7.5" on the Baker County Zoning Map. Electric generating plants may be permitted as a special exception use in the Agriculture 7.5 zoning district through the Baker County Land Development Regulations.
- 5. <u>Sweetbay Solar Energy Center Site:</u> The Sweetbay Solar Energy Center site is located on 566 acres in Martin County. The site is designated as "Agriculture" on the Martin County Comprehensive Plan Future Land Use Map and "General Agricultural District AG-20A" on the Martin County Zoning Atlas. Solar Energy Facilities (solar farms) are allowed as a permitted use in the General Agricultural District AG-20A.
- 6. <u>Twin Lakes Solar Energy Center Site</u>: The Twin Lakes Solar Energy Center site is located on 873 acres in Putnam County. The Putnam County Comprehensive Plan Future Land Use Map designates the site as "Agriculture II", which allows passive energy generation projects (solar or wind).
- 7. <u>Echo River Solar Energy Center Site</u>: The Echo River Solar Energy Center site is located on 802 acres in Suwannee County. The Suwannee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture-1." Electric generating facilities may be allowed as a special exception use in the Agriculture-1 future land use category.
- 8. <u>Hibiscus Solar Energy Center Site:</u> The Hibiscus Solar Energy Center site is located on 402 acres in the City of Westlake in Palm Beach County. The City of Westlake Comprehensive Plan

designates the site as "Residential 1" and "Solar Energy Overlay", which allows solar power generation of electricity for off-site use.

- 9. <u>Okeechobee Solar Energy Center Site:</u> The Okeechobee Solar Energy Center site is located on 471 acres in northeast Okeechobee County. The Okeechobee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture", which allows power generation.
- 10. <u>Southfork Solar Energy Center Site</u>: The Southfork Solar Energy Center site is located on 548 acres in Manatee County. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Agricultural", which allows utility use, including alternative energy generation facilities.
- 11. Egret Solar Energy Center Site: The Egret Solar Energy Center site is located on 676 acres in Baker County. The site is designated as "Agriculture Zone A" on the Baker County Comprehensive Plan Future Land Use Map and "Agriculture 10" on the Baker County Zoning Map. Electric generating plants may be permitted as a special exception use in the Agriculture 10 zoning district through the Baker County Land Development Regulations.
- 12. <u>Lakeside Solar Energy Center Site</u>: The Lakeside Solar Energy Center site is located on 692 acres in Okeechobee County. The Okeechobee County Comprehensive Plan Future Land Use Map designates the site as "Rural Estate" and "Industrial Overlay", which allows solar power generation.
- 13. <u>Magnolia Solar Energy Center Site:</u> The Magnolia Solar Energy Center site is located on 850 acres in Clay County. The Clay County Comprehensive Plan Future Land Use Map designates the site as "Agriculture" (700 acres) and "Conservation" (150 acres). Solar power generation may be permitted as a conditional use on the site through the Clay County Land Development Code.
- 14. <u>Pelican Solar Energy Center Site:</u> The Pelican Solar Energy Center site is located on 955 acres in St. Lucie County. The site is designated as "Agricultural-5" on The St. Lucie County Comprehensive Plan Future Land Use Map and "Agricultural-5" on the St. Lucie County Zoning Atlas. A solar generation station/plant may be allowed as a conditional use in the Agricultural-5 zoning district.
- 15. <u>Rodeo Solar Energy Center Site:</u> The Rodeo Solar Energy Center site is located on 1,040 acres in DeSoto County. The DeSoto County Comprehensive Plan Future Land Use Map designates the site as "Electrical Generating Facility", which allows electrical power generation facilities.
- 16. <u>Discovery Solar Energy Center Site</u>: The Discovery Solar Energy Center site is located on 491 acres within the John F. Kennedy Space Center in Brevard County. The site is owned by the United States Government and is not subject to the Brevard County Comprehensive Plan.

- 17. <u>Manatee County Site:</u> The Manatee County site is located on 1,454 acres in Manatee County. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture", which allows utility use, including alternative energy generation facilities.
- 18. <u>Nassau Solar Energy Center Site:</u> The Nassau Solar Energy Center site is located on 1,310 acres in Nassau County. The site is designated as "Industrial" on the Nassau County Comprehensive Plan Future Land Use Map and "Industrial Park" on the Nassau County Zoning Map. The Industrial future land use category allows heavy industry and light industry, and the Industrial Park zoning district allows electric generation as a permitted use.
- 19. <u>Orange Blossom Solar Energy Center Site:</u> The Orange Blossom Solar Energy Center site is located on 607 acres in Indian River County. The Indian River County Comprehensive Plan Future Land Use Map designates the site as "Agricultural-2", which allows public and private utilities.
- 20. <u>Palm Bay Solar Energy Center Site:</u> The Palm Bay Solar Energy Center site is located on 486 acres in the City of Palm Bay in Brevard County. The City of Palm Bay Comprehensive Plan Future Land Use Map designates the site as "Utility", which allows public and private utilities.
- 21. <u>Putnam County Site</u>: The Putnam County site is located on 395 acres in Putnam County. The Putnam County Comprehensive Plan Future Land Use Map designates the site as "Agricultural-1", which allows passive energy generation projects (solar or wind).
- 22. <u>Sabal Palm Solar Energy Center Site</u>: The Sabal Palm Solar Energy Center site is located on 1,288 acres in Palm Beach County. The Palm Beach County Comprehensive Plan Future Land Use Map designates the site as "Rural Residential", which allows electrical power generation facilities utilizing solar energy.
- 23. <u>Trailside Solar Energy Center Site</u>: The Trailside Solar Energy Center site is located on 846 acres in St. Johns County. The St. Johns County Comprehensive Plan Future Land Use Map designates the site as "Agricultural -Intensive", which allows solar farms.
- 24. <u>Union Springs Solar Energy Center Site</u>: The Union Springs Solar Energy Center site is located on 1,233 acres in Union County. The site is designated as "Agricultural" on the Union County Comprehensive Plan Future Land Use Map and "Agricultural" on the Union County Zoning Map. A solar generation facility may be allowed as a special use exception in the Agricultural zoning district, and Union County approved a special use exception for the solar energy center on the site in July 2018.
- 25. <u>Battery Storage Site</u>: The Battery Storage site is located on 40 acres in Manatee County. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Public/Semi-Public", which allows utility use, including alternative energy generation facilities.

- 26. <u>Dania Beach Clean Energy Center Unit 7 Site:</u> The Dania Beach Clean Energy Center Unit 7 site is located on the existing Lauderdale Plant property (392 acres) in Broward County within the City of Dania Beach and the City of Hollywood. The site contains existing power generating facilities. The Broward County Comprehensive Plan is applicable to both the unincorporated area of the County and the land within the incorporated municipalities of the County. The Broward County Comprehensive Plan Future Land Use Map designates the site as "Electrical Generating Facility", which allows electrical power plants. The City of Hollywood Comprehensive Plan Future Land Use Map designates the portion of the site within the City as "Utilities" and "Industrial", and the "Utilities" category allows electrical power plants and the "Industrial" category allows utility uses. The City of Dania Beach Comprehensive Plan Future Land Use Map designates the portion of the site within the City as "Electrical Generation Facilities", which allows electrical power plants.
- 27. <u>Turkey Point Plant Site:</u> The Turkey Point Plant site is located on approximately 3,300 acres in the southern portion of Miami-Dade County. The site contains existing power generating facilities. The Miami-Dade County Comprehensive Plan Future Land Use Map designates the site as "Institutions, Utilities, and Communications" which allows power generation and "Environmental Protection Area."

B. TYSP Potential Sites:

The TYSP states that FPL is currently evaluating potential sites for new power generating capacity (photovoltaic facilities and gas-fired facilities) in four counties (Hendry, Martin, Miami-Dade, and Okeechobee Counties) and that FPL has not yet selected any specific locations for potential sites within these counties. The next TYSP should address any specific potential sites identified (selected) by FPL within these counties.

4. Gainesville Regional Utilities

The Gainesville Regional Utilities TYSP identifies one preferred site (Deerhaven Generating Station site) for the increase in power generating capacity.

A. <u>Deerhaven Generating Station Site:</u> The Deerhaven Generating Station site is located on 3,474 acres within the City of Gainesville, and the site contains an existing power generation facility. The City of Gainesville Comprehensive Plan Future Land Use Map designates the site as "Public and Institutional Facilities", which allows utilities.

5. Gulf Power Company

The Gulf Power Company TYSP identifies one preferred site (North Escambia site) for the increase in power generating capacity.

A. <u>North Escambia Site</u>: The North Escambia site is located on 2,728 acres in the northern part of Escambia County, approximately five miles southwest of Century, Florida. The existing use of the site is predominantly timber harvesting and agriculture. The Escambia County Comprehensive Plan Future Land Use Map designates the site as Agriculture, and electric power generating facilities may be allowed as a conditional use in Agriculture through the Land Development Code.

6. Lakeland Electric

The Lakeland Electric TYSP identifies one preferred site (McIntosh Power Plant) for the increase in power generating capacity.

A. <u>McIntosh Power Plant Site:</u> The McIntosh Power Plant site is located on 530 acres in the City of Lakeland, and the site contains an existing power generation facility. The City of Lakeland Comprehensive Plan Future Land Use Map designates the site as "Industrial", and electric power generating facilities may be allowed as a conditional use through the Land Development Code.

7. Seminole Electric Cooperative

The Seminole Electric Cooperative TYSP identifies one potential site (Gilchrist site) and one preferred site (Seminole Generating Station site) for the increase in power generating capacity.

A. <u>Gilchrist Site</u>: The Gilchrist site is located on 520 acres in the central portion of Gilchrist County, approximately two miles northeast of the City of Bell. The site does not contain existing power generation facilities. Much of the site has been used for silviculture (pine plantation) and consists of large tracts of planted longleaf and slash pine community, and the site contains a limited amount of wetlands (10.1 acres). The site is designated Agriculture-2 on the adopted Future Land Use Map of the Gilchrist County Comprehensive Plan. Electric generating facilities are not identified as an allowable land use within the Agriculture-2 future land use category; however, solar farms are an allowable land use within the Agriculture-2 future land use category by special use permit. Seminole Electric Cooperative should contact the Gilchrist County Community Development Department at (352) 463-3173 for information regarding consistency with the Gilchrist County Comprehensive Plan.

B. <u>Seminole Generating Station Site</u>: The Seminole Generating Station site is located on 1,996 acres in unincorporated Putnam County, approximately five miles north of the City of Palatka. The site contains existing power generation facilities. The site is designated as Public Facilities on the adopted Future Land Use Map of the Putnam County Comprehensive Plan. Power generation facilities are an allowable use within the Public Facilities future land use category.

8. City of Tallahassee Utilities

The City of Tallahassee Utilities TYSP identifies one preferred site (Hopkins Plant) for the increase in power generating capacity.

A. <u>Hopkins Plant Site</u>: The Hopkins Plant site is located in Leon County and contains existing power generation facilities. The Tallahassee-Leon County Comprehensive Plan Future Land Use Map designates the site as "Government Operational", which allows electric generating facilities.

9. Tampa Electric Company

The Tampa Electric Company TYSP identifies nine preferred sites and three potential sites for the increase in power generating capacity.

A. TYSP Preferred Sites:

- 1. <u>Bonnie Mine Solar Site:</u> The Bonnie Mine Solar site is located on 352 acres in western Polk County. The site is designated as "Phosphate Mining" on the adopted Future Land Use Map of the Polk County Comprehensive Plan, and electric power generation facilities are an allowable use within the Phosphate Mining future land use category.
- 2. <u>Grange Hall Solar Site:</u> The Grange Hall Solar site is located on 447 acres in southeastern Hillsborough County. The site is designated as "Agricultural/Mining" on the Hillsborough County Comprehensive Plan Future Land Use Map and "Agricultural Mining" on the Hillsborough County Zoning Atlas. A solar energy production facility is allowed as a conditional use in the Agricultural Mining zoning district.
- 3. <u>Lake Hancock Solar Site</u>: The Lake Hancock Solar site is located on 356 acres within the Silver Planned Development in the City of Bartow. The City of Bartow Comprehensive Plan Future Land Use Map designates the site with the following future land use categories: (1) Low Density Residential; (2) Medium Density Residential; (3) High Density Residential; and (4) Commercial. A "Utility-owned Renewable Generation System" (photovoltaic system as its fuel source) is allowed in the Low Density Residential and Medium Density Residential future land use categories within the Silver Planned Development.
- 4. <u>Lithia Solar Site:</u> The Lithia Solar site is located on 580 acres in southeastern Hillsborough County. The site is designated as "Agricultural" and "Agricultural/Rural" on the Hillsborough County Comprehensive Plan Future Land Use Map and "Agricultural" on the Hillsborough County Zoning Atlas. A solar energy production facility is allowed as a conditional use in the Agricultural zoning district.
- 5. <u>Little Manatee River Solar Site</u>: The Little Manatee River Solar site is located on 572 acres in Hillsborough County. The site is designated as "Agricultural/Rural" on the Hillsborough County

Comprehensive Plan Future Land Use Map and "Agricultural Rural" on the Hillsborough County Zoning Atlas. A solar energy production facility is allowed as a conditional use in the Agricultural Rural zoning district.

- 6. <u>Mountain Solar Site</u>: The Mountain Solar site is located on 345 acres in northeastern Pasco County. The Pasco County Comprehensive Plan Future Land Use Map designates the site with the following future land use categories: (1) Residential-1; (2) Residential-3; and (3) Agricultural/Rural. Private electric public utilities (includes power plants) may be permitted in these future land use categories.
- 7. <u>Payne Creek Solar Site:</u> The Payne Creek Solar site is located on 503 acres in southwestern Polk County. The site is designated as "Phosphate Mining" on the adopted Future Land Use Map of the Polk County Comprehensive Plan, and electric power generation facilities are an allowable use within the Phosphate Mining future land use category.
- 8. <u>Peace Creek Solar Site:</u> The Peace Creek Solar site is located on 422 acres within the Wilson Ranch Planned Development in the City of Bartow. The site is designated as "Mixed Use/Neighborhood Development" on the adopted Future Land Use Map of the City of Bartow Comprehensive Plan. A "Utility-owned Renewable Generation System" (photovoltaic system as its fuel source) is allowed in the Mixed Use/Neighborhood Development future land use category within the Wilson Ranch Planned Development.
- 9. <u>Wimauma Solar Site:</u> The Wimauma Solar site is located on 500 acres in southeastern Hillsborough County. The site is designated as "Wimauma Village Residential-2" on the Hillsborough County Comprehensive Plan Future Land Use Map and "Agricultural Rural" on the Hillsborough County Zoning Atlas. A solar energy production facility is allowed as a conditional use in the Agricultural Rural zoning district.

B. TYSP Potential Sites:

- 1. <u>Polk Power Station Site</u>: The Polk Power Station site is located in southwest Polk County and contains existing power generation facilities. The site is designated as "Phosphate Mining" on the adopted Future Land Use Map of the Polk County Comprehensive Plan, and electric power generation facilities are an allowable use within the Phosphate Mining future land use category.
- 2. <u>H.L. Culbreath Bayside Power Station Site:</u> The H.L. Culbreath Bayside Power Station site is located in unincorporated Hillsborough County and contains existing power generation facilities. The site is designated mostly as "Heavy Industrial" with a smaller area as "Light Industrial" on the adopted Future Land Use Map of the Hillsborough County Comprehensive Plan. Electric generation plants are an allowed use in the Heavy Industrial future land use category.
- 3. <u>Big Bend Power Station Site</u>: The Big Bend Power Station site is located in unincorporated Hillsborough County and contains existing power generation facilities. The site is designated as "Heavy Industrial," "Light Industrial," and "Environmentally Sensitive Areas" on the adopted

Future Land Use Map of the Hillsborough County Comprehensive Plan. Electric generation plants are an allowed use only in the Heavy Industrial future land use category. The "Environmentally Sensitive Areas" protect wetlands and significant wildlife habitat along the southern portion of the site.

State Agency

Department of Environmental Protection

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 From:
 Seiler, Ann

 To:
 Doug Wright

 Cc:
 Mulkey, Cindy

Subject: RE: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Ms. Mulkey)

Date: Monday, September 16, 2019 10:22:50 AM

Attachments: <u>image002.png</u>

image003.png

My apologies Doug.

The Department of Environmental Protection's Siting Coordination Office has reviewed the 2019 Ten-Year Site Plans for Florida's Electric Utilities and found the documents to be adequate for planning purposes.

Thank you for the opportunity to review and comment on the plans.

Best Regards,



Ann Seiler

Florida Department of Environmental Protection Siting Coordination Office 2600 Blair Stone Rd. MS 5500 Tallahassee, Florida 32399 Ann.Seiler@Floridadep.gov

Office: 850.717.9113 Cell: 850.228.6237

From: Patti Zellner <PZELLNER@PSC.STATE.FL.US>

Sent: Wednesday, April 10, 2019 2:41 PM

To: SCO <SCO@dep.state.fl.us>

Cc: Doug Wright <dwright@psc.state.fl.us>; Jeff Doehling <JDOEHLIN@psc.state.fl.us>; Phillip Ellis <PEllis@PSC.STATE.FL.US>; Laura King <LKing@PSC.STATE.FL.US>; Patti Zellner

<PZELLNER@PSC.STATE.FL.US>

Subject: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Ms. Mulkey)

Dear Ms. Mulkey,

Please find attached your copy of the 2019 Ten-Year Site Plans – Comment Request letter dated April 10, 2019, filed with the Florida Public Service Commission Clerk today.

Sincerely,

Patti Zellner

Administrative Assistant

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State Agency

Fish and Wildlife Conservation Commission

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From: Wallace, Traci
To: Doug Wright

Cc: Wettstein, Fritz: Hight, Jason; Goff, Jennifer; DiGruttolo, Laura; Keltner, James; Walsh, Kristal; Sempsrott,

Michelle; Penniman, Daniel; Phillips, Bryan; Greene, Sean; Hoehn, Ted; Wagman, Jason; Raininger, Christine

Subject: FWC"s Comments on Review of the 2019 Ten-Year Site Plans for Florida"s Electric Utilities

 Date:
 Tuesday, August 06, 2019 2:23:44 PM

 Attachments:
 2019 Ten Year Site Plan 080619.pdf

Please find attached FWC's comments on the above-referenced project. You will **not** receive a hard-copy version of this letter unless requested.

If you wish to reply to our comments, please send your reply to:

FWCConservationPlanningServices@myFWC.com

Traci Wallace, AA III Office of Conservation Planning Services 850-410-5272



Florida Fish and Wildlife Conservation Commission

Commissioners

Robert A. Spottswood Chairman Key West

Michael W. Sole Vice Chairman Tequesta

Rodney Barreto Coral Gables

Steven Hudson *Fort Lauderdale*

Gary Lester

Gary Nicklaus Jupiter

Sonya Rood St. Augustine

Office of the Executive Director Eric Sutton

Executive Director

Thomas H. Eason, Ph.D. Assistant Executive Director

Jennifer Fitzwater Chief of Staff

850-487-3796 850-921-5786 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street Tallahassee, Florida 32399-1600 Voice: 850-488-4676

Hearing/speech-impaired: 800-955-8771 (T) 800 955-8770 (V)

MyFWC.com

August 6, 2019

Doug Wright
Engineering Specialist
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850
dwright@psc.state.fl.us

Re: Review of the 2019 Ten-Year Site Plans for Florida's Electric Utilities

Dear Mr. Wright:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the 2019 Ten-Year Site plans for the electric utilities operating in Florida submitted to the Florida Public Service Commission (PSC) pursuant to Section 186.801, Florida Statutes. We have no comments or recommendations related to listed species or other fish and wildlife resources to offer on the following plans:

- City of Tallahassee
- Duke Energy Florida
- Florida Municipal Power Agency
- Florida Power & Light
- Gainesville Regional Utilities
- Gulf Power Company
- Jacksonville Electric Authority
- Lakeland Electric
- Orlando Utilities Commission
- Seminole Electric Cooperative
- Tampa Electric Company

FWC staff appreciates the opportunity to review the Ten-Year Site Plans submitted by the PSC. Please submit future requests for assistance with fish and wildlife resources to our office at FWCConservationPlanningServices@MyFWC.com. For specific technical questions about this year's reviews, please call Jason Hight at (850) 413-6966 or email Jason.Hight@MyFWC.com.

Sincerely,

Fritz Wettstein

Fritz Wettstein Land Use Planning Program Administrator Office of Conservation Planning Services

fw/jh ENV 2-11 Gainesville Regional Utilities 2019 Ten Year Site Plan_39945_080619 Florida Municipal Power Agency 2019 Ten Year Site Plan_39946_080619 Lakeland Electric 2019 Ten Year Site Plan_39942_080619 Orlando Utilities Commission 2019 Ten Year Site Plan_39941_080619 Seminole Electric 2019 Ten Year Site Plan_39940_080619 Tampa Electric Company 2019 Ten Year Site Plan_39939_080619 City of Tallahassee 2019 Ten Year Site Plan_39938_080619 Duke Energy Florida 2019 Ten Year Site Plan_39937_080619 Florida Power and Light Company 2019 Ten Year Site Plan_39934_080619 Jacksonville Electric Authority 2019 Ten Year Site Plan_40037_080619 Gulf Power Company 2019 Ten Year Site Plan_39943_080619

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Regional Planning Council

Treasure Coast Regional Planning Council

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From: <u>Liz Gulick</u>
To: <u>Doug Wright</u>

Cc: <u>kate.cotner@fpl.com</u>; <u>Thomas Lanahan</u>

Subject: 2019 Ten Year Power Plant Site Plan - Florida Power and Light Company

Date: Thursday, June 27, 2019 11:22:03 AM

Attachments: Letter to Doug Wright - Florida Public Service Commission (6-27-19).pdf

Dear Mr. Wright:

The Treasure Coast Regional Planning Council reviewed the ten year power plant site plan prepared by Florida Power and Light Company. Council approved the attached report at their board meeting on June 21, 2019.

If you have any questions please call.

Sincerely,

Liz

Liz Gulick Special Projects Coordinator Treasure Coast Regional Planning Council 421 SW Camden Avenue Stuart, FL 34994 772 221-4060 June 27, 2019

Doug Wright, Engineering Specialist Division of Engineering Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

Subject: 2019 Ten Year Power Plant Site Plans

Dear Mr. Wright:

The Treasure Coast Regional Planning Council has reviewed the ten year power plant site plan prepared by Florida Power and Light Company. Council approved the comments in the attached report at their board meeting on June 21, 2019. The report concludes that while the region and all of South Florida remain vulnerable to fuel price increases and supply interruptions because of the continued heavy reliance on only two primary fuel types, natural gas and nuclear fuel, the use of solar power is projected to increase dramatically.

Council is encouraged that FPL is continuing their expansion of solar capacity by proposing to build even more large scale solar projects in the next ten years, leading to solar comprising 14.5% of the fuel mix by 2028 compared to 2.1% in 2019. Council urges FPL and the State of Florida to continue developing new programs to: 1) reduce the reliance on fossil fuels as future energy sources; 2) increase conservation activities to offset the need to construct new power plants; and 3) increase the use of renewable energy sources to produce electricity.

Please contact me if you have any questions.

Sincerely yours,

Thomas J. Lanahan Executive Director

Attachment

cc: Kate Cotner, FPL

TREASURE COAST REGIONAL PLANNING COUNCIL

Report on the

Florida Power & Light Company Ten Year Power Plant Site Plan 2019-2028

June 21, 2019

Introduction

Each year every electric utility in the State of Florida produces a ten year site plan that includes an estimate of future electric power generating needs, a projection of how those needs will be met, and disclosure of information pertaining to the utility's preferred and potential power plant sites. The Florida Public Service Commission (FPSC) has requested that Council review the most recent ten year site plan prepared by Florida Power & Light Company (FPL). The purpose of this report is to summarize FPL's plans for future power generation and provide comments for transmittal to the FPSC.

Summary of the Plan

The plan indicates that total summer peak demand is expected to grow by 12.6 percent from 24,305 megawatts (MW) in 2019 to 27,363 MW in 2028. During the same period, FPL is expecting to reduce electrical use through demand side management programs, which include a number of conservation, energy efficiency, and load management initiatives. FPL's demand side management programs are expected to grow by 19.0 percent from 1,815 MW in 2019 to 2,159 MW in 2028 (see Exhibit 1 Schedule 7.1). After FPL's demand side management efforts are factored in, FPL will still require additional capacity from conventional and renewable power plants to meet future electrical demand. FPL is proposing to add a total of about 7,497 MW of summer capacity to its system from 2019 to 2028 (see Exhibit 2 Table ES-1). FPL plans to obtain additional electricity through: 1) upgrades to existing facilities; 2) modernization of existing FPL facilities; and 3) construction of new generating units. They also plan to take a considerable amount of older and coal-fired capacity out of service. Major changes in generating capacity are as follows:

- 2019 Okeechobee Clean Energy Center in Okeechobee County will become operational with 1,778 MW of combined cycle capacity;
- 2021-2022 FPL plans to retire (2) 809 MW units: Manatee units 1 and 2 in Manatee County;
- 2022 replacement of 884 MW of combined cycle capacity at the Lauderdale site in Broward County with a new, modern 1,163 MW 2 x 1 combined cycle. The unit will be named FPL Dania Beach Clean Energy Center Unit 7;
- 2026 FPL plans for a new 1,886 MW combined cycle generating plant to become operational at an as-yet undetermined location; and
- 2028 FPL's 2019 resource plan projects a cumulative total of approximately 8,128 MW of photovoltaic solar generation (PV) across the system by the end of 2028. This total value consists of approximately 8,053 MW of PV and 75 MW of solar thermal.

Based on the projection of future resource needs, FPL has identified the following 27 **preferred** sites (*5 in the Treasure Coast region*) for future power generating facilities:

- 1. Babcock Preserve Solar Energy Center, Charlotte County
- 2. Blue Heron Solar Energy Center, Hendry County
- 3. Cattle Ranch Solar Energy Center, DeSoto County
- 4. Northern Preserve Solar Energy Center, Baker County
- 5. Sweetbay Solar Energy Center, Martin County
- 6. Twin Lakes Solar Energy Center, Putnam County
- 7. Echo River Solar Energy Center, Suwannee County
- 8. Hibiscus Solar Energy Center, Palm Beach County
- 9. Okeechobee Solar Energy Center, Okeechobee County
- 10. Southfork Solar Energy Center, Manatee County
- 11. Egret Solar Energy Center, Baker County
- 12. Lakeside Solar Energy Center, Okeechobee County
- 13. Magnolia Springs Solar Energy Center, Clay County
- 14. Pelican Solar Energy Center, St. Lucie County
- 15. Rodeo Solar Energy Center, DeSoto County
- 16. Discovery Solar Energy Center, Brevard County
- 17. Manatee County Site, Manatee County
- 18. Nassau Solar Energy Center, Nassau County
- 19. Orange Blossom Solar Energy Center, Indian River County
- 20. Palm Bay Solar Energy Center, Brevard County
- 21. Putnam County Site, Putnam County
- 22. Sabal Palm Solar Energy Center, Palm Beach County
- 23. Trailside Solar Energy Center, St. Johns County
- 24. Union Springs Solar Energy Center, Union County
- 25. Battery Storage the battery storage addition/s is projected to be approximately 469 MW. Approximately 409 MW of this storage capacity will be located in Manatee County
- 26. Lauderdale Modernization (Dania Beach Clean Energy Center Unit 7), Broward County
- 27. Turkey Point Plant, Miami-Dade County

Also, FPL has identified 4 **potential** sites for future generation and storage facilities. The identification of potential sites does not represent a commitment by FPL to construct new power generating facilities at these sites. The potential sites include:

- 1. Hendry County
- 2. Martin County
- 3. Miami-Dade County
- 4. Okeechobee County

The ten year site plan describes six factors that have impacted or could impact FPL's resource plan. These factors include:

1. Maintaining a balance between load and generating capacity in southeastern Florida, particularly in Miami-Dade and Broward counties.

- 2. Maintaining/enhancing fuel diversity in the FPL system while considering system economics.
- 3. Maintaining an appropriate balance of demand side management (DSM) and supply resources to achieve system reliability and operations.
- 4. The impact of federal and state energy efficiency codes and standards.
- 5. Increased competitiveness of battery storage.
- 6. Projected changes in carbon dioxide regulations and related compliance costs.

Evaluation

One of the main purposes of preparing the ten year site plan is to disclose the general location of proposed power plant sites. The FPL ten year site plant identifies five preferred sites and one potential site for future power generating facilities in the Treasure Coast Region (see Exhibit 3). All six sites in the Region are being planned or evaluated for utility-scale PV facilities.

Each of the five preferred sites are planned for 74.5 MW PV solar plants. By their nature, these facilities have minimal offsite impacts but do occupy large areas of land (ranging upward from 402 acres to 1,288 acres).

The ten year site plan indicates that fossil fuels will be the primary source of energy used by FPL to generate electricity during the next 10 years (see Exhibit 4 Schedule 6.2). The plan indicates fossil fuels will account for 72.9 percent (2.2 percent from coal and 70.7 percent from natural gas) of FPL's electric generation in 2019. The plan predicts fossil fuels will account for 61.0 percent (1.4 percent from coal and 59.6 percent from natural gas) of FPL's electric generation in 2028. During the same period, nuclear sources are predicted to change from 23.5 percent in 2019 to 23.2 percent in 2028. Solar sources are predicted to dramatically increase from 2.1 percent in 2019 to 14.5 percent in 2028.

Renewable Energy

The ten year site plan indicates FPL is continuing its efforts to implement cost-effective renewable energy. FPL has facilitated a number of renewable energy projects (facilities which burn bagasse, waste wood, municipal waste, etc.) through power purchase agreements. For example, FPL has a contract to receive firm capacity from the Solid Waste Authority of Palm Beach County (SWA) through April 2032. FPL's efforts to increase use of cost-effective renewable energy also include the use of utility-scale solar and customer-focused solar. FPL also has interest in battery storage. These efforts are described below.

Universal Solar. At the time this Site Plan was filed, FPL has 18 universal solar generating facilities in commercial operation. 17 of these facilities are PV facilities and they represent 1,153 MW of generation and the other facility is a 75 MW solar thermal facility. Each of these facilities was constructed in the following counties:

- 1. Alachua/Putnam (Horizon 74.5 MW)
- 2. Brevard (Barefoot Bay 74.5 MW)
- 3. Brevard (Space Coast 10 MW)

- 4. Charlotte (Babcock 74.5 MW)
- 5. Columbia (Sunshine Gateway 74.5 MW)
- 6. DeSoto (Citrus 74.5 MW)
- 7. DeSoto (DeSoto 25 MW)
- 8. DeSoto (Wildflower 74.5 MW)
- 9. Hammock (Hammock 74.5 MW)
- 10. Indian River (Blue Cypress 74.5 MW)
- 11. Indian River (Indian River 74.5 MW)
- 12. Manatee (Manatee 74.5 MW)
- 13. Martin (Martin 75 MW)
- 14. Miami-Dade (Miami-Dade 74.5 MW)
- 15. Putnam (Coral Farms 74.5 MW)
- 16. St. Lucie (Interstate 74.5MW)
- 17. St. Lucie (Loggerhead 74.5 MW)
- 18. Volusia (Pioneer Trail 74.5 MW)

Distributed Generation PV Pilot Programs. FPL has three types of distributed generation (DG) PV programs (two existing and one planned). First is the existing *Community-Based Solar Partnership Pilot Program*, which is a voluntary solar pilot program to provide customers with an additional and flexible opportunity to support development of solar power in Florida. This pilot program provides all customers the opportunity to support the use of solar energy at a community scale and is designed for customers who do not wish, or are not able, to place solar equipment on their roof. Customers can participate in the program through voluntary contributions of \$9/month. At the end of 2018, there were 42,654 participants enrolled. This program has installed 39 projects in 39 communities. The tariff for the program was approved by the FPSC in January 2015, extended in 2018, and the pilot program is scheduled to conclude at the end of 2019.

The second type of DG PV program is the new planned *Community Shared Solar Program*. This voluntary program will offer FPL customers the option to purchase capacity/energy from cost-effective, large scale solar generation facilities. FPL expects the program's final design will not require participants to be bound to a long-term contract or subject to administrative fees or termination penalties. Participants' monthly electric bills will show both a subscription charge and a direct credit associated with the amount of solar generated capacity purchased. This solar program will leverage the economies of scale of universal solar to deliver long-term participant savings.

The third type of DG PV program is the existing Commercial and Industrial Partnership Pilot Program. This pilot program will be conducted in partnership with interested commercial and industrial customers over about a five year period. Limited investments will be made in PV facilities located at customer sites in selected geographic areas of FPL's service territory. The primary objective is to examine the effect of highly localized DG PV penetration on FPL's distribution system and to determine how best to address any problems that may be identified. FPL has installed approximately 3 MW of PV facilities on circuits that experience specific loading conditions to better study feeder loading impacts. Up to an additional 2 MW may be built in 2019 to further expand the understanding of integrating large PV facilities into the FPL

system, and this last phase may include integrated storage. In addition, FPL is evaluating the integration of solar in urban areas to test the impact on the distribution system of feeders that are heavily loaded as well as investigate the capabilities of a micro grid.

Battery Storage Efforts. Battery storage technology continues to advance and the costs of storage are projected to continue to decline. Battery storage has become an economically competitive firm capacity option for FPL's system, particularly in combination with utility-scale solar facilities. For the first time, in late 2021 or early 2022, battery storage is being added as firm capacity with approximately 469 MW. Approximately 409 MW of storage capability is projected to be sited in Manatee County.

FPL is very interested in storage technology and has initiated two different pilot projects designed to evaluate different potential applications of batteries on FPL's system. The objectives are to identify the most promising applications for batteries and begin to gain experience with battery installation and operation. This information will position FPL to quickly take advantage of battery storage for the benefit of customers as the economics of battery technology improve.

The first pilot, called *Small Scale*, began in 2016 and 2017 when FPL implemented approximately 4 MW of battery storage systems, spread across six sites, with the general objective of demonstrating the operational capabilities of batteries and learning how to integrate them into FPL's system. These small storage projects were designed to address peak shaving, frequency response, and backup power. In addition, these initial projects were designed to provide FPL with an opportunity to determine how to best integrate storage into FPL's operational software and how best to dispatch and/or control the storage systems. Locations with installations include Miami-Dade County, Monroe County, and Key Biscayne, as well as several smaller systems at various other locations. These projects have been in service for more than 2 years and are providing valuable information.

The second pilot, called *Large Scale*, will be deployed through the 2020 time frame. The 50 MW of batteries that will be deployed in this larger project will expand the number of storage applications and configurations that FPL can test, as well as making the scale of deployment more meaningful, given the large size of FPL's system. The first two storage projects under this pilot involve pairing battery storage with existing Universal PV facilities and these projects went into service in the 1st quarter of 2018. One of the projects is a 4 MW battery sited at FPL's Citrus Solar Energy Center, which will capture clipped (curtailed) solar energy from the panels during high solar insolation hours, then release this energy in other hours. The second project is a 10 MW battery at FPL's Babcock Ranch Solar Energy Center, which is designed to shift PV output from non-peak times to peak times and also to provide "smoothing" of solar output and regulation services. FPL expects to have all of the large-scale storage pilot projects in operation by the end of 2020. These projects will utilize approximately 28 MW of the 50 MW allowed under the Settlement Agreement. The remaining 22 MW of allowed storage capacity is subject to further evaluation of what types of battery storage configurations and applications are projected to be the most meaningful for the utility to examine at this time.

In addition to the small scale and large scale pilots, FPL plans to test battery storage in a residential setting, which will involve the Palm Beach County area. The test will address benefits

of having a 5-to-8 kW storage system for home backup power and the ability of FPL to remotely control the storage systems which provide services to the electric grid. The test is projected to start in 2019.

Conclusion

Council is encouraged that FPL continues to aggressively expand utilization of solar cost effectively and projects to double the solar additions since the 2018 site plan. In this 2019 plan, FPL projects a total of 8,128 MW of solar will be in operation by the end of 2028. The objective is to install more than 30 million solar panels on the system by the year 2030. At the same time, FPL is constructing and operating highly efficient natural gas plants that have decreased dependence on foreign oil and saved energy costs.

Council recommends that FPL continue to make progress toward adopting a more balanced portfolio of fuels that includes a significant component of renewable energy sources. This is important to reduce vulnerability to fuel price increases and supply interruptions. Council continues to encourage the Florida Legislature to adopt a Renewable Portfolio Standard in order to provide a mechanism to expand the use of renewable energy in Florida.

Council supports FPL's existing and proposed solar projects and encourages FPL to develop additional projects based on renewable resources. FPL should consider developing other programs to install, own, and operate PV units on the rooftops of private and public buildings. The shift to rooftop PV systems distributed throughout the area of demand could reduce reliance on large transmission lines and reduce costs associated with owning property; purchasing fuel; and permitting, constructing, and maintaining a power plant. Another advantage of this strategy is that PV systems do not require water for cooling. The incentive for owners of buildings to participate in this strategy is they could be offered a reduced rate for purchasing electricity. Also, FPL should consider expanding solar rebate programs for customers who install PV and solar water heating systems on their homes and businesses. These rebates should be coordinated with other programs, such as the Solar and Energy Loan Fund (SELF) and Property-Assessed Clean Energy (PACE) programs, to provide participants in these programs the option of receiving a rebate. SELF is a low interest rate loan program that provides financing for clean energy solutions. PACE programs allow property owners to finance energy retrofits by placing an additional tax assessment on the property in which the investment is made.

Council urges FPL and the State of Florida to continue developing new programs to: 1) reduce the reliance on fossil fuels as future energy sources; 2) increase conservation activities to offset the need to construct new power plants; and 3) increase the use of renewable energy sources to produce electricity. The complete costs of burning fossil fuels, such as the costs to prevent environmental pollution and costs to the health of the citizens, need to be considered in evaluating these systems. State legislators should amend the regulatory framework to provide financial incentives for power providers and customers to increase conservation measures and to rely to a greater extent on renewable energy sources. The phasing in of PV and other locally available energy sources will help Florida achieve a sustainable future as called for in Council's Strategic Regional Policy Plan.

Attachments

Exhibit 1

Schedule 7.1 Forecast of Capacity, Demand, and Scheduled Maintenance At Time Of Summer Peak

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
								Firm	Total			Total		Generation Only	
	Firm	Firm	Firm		Firm	Total		Summer	Reserve		Reserve		eserve	Reserve	
	Installed	Capacity	Capacity	Firm	Capacity	Peak		Peak	Margin Before		Scheduled	Margin After		Margin After	
August of	Capacity	Import	Export	QF	Available	Demand	DSM	Demand	Maintenance		Maintenance	Maintenance		Maintenance	
Year	MW	MW	MW	MW	MW	MW	MW	MW	MW	% of Peal	k MW	MW	% of Peak	MW	% of Peak
											100		200		
2019	26,570	110	0	434	27,113	24,305	1,815	22,489	4,624	20.6	0	4,624	20.6	2,809	11.6
2020	27,170	110	0	104	27,384	24,507	1,877	22,630	4,754	21.0	0	4,754	21.0	2,876	11.7
2021	27,456	110	0	4	27,570	24,668	1,912	22,756	4,814	21.2	0	4,814	21.2	2,901	11.8
2022	27,915	110	0	4	28,029	24,837	1,948	22,890	5,139	22.5	0	5,139	22.5	3,192	129
2023	28,258	110	0	4	28,371	25,173	1,983	23,191	5,180	22.3	0	5,180	22.3	3, 198	12.7
2024	28,541	110	0	4	28,654	25,583	2,018	23,565	5,089	21.6	0	5,089	21.6	3,071	12.0
2025	28,939	110	0	4	29,052	25,939	2,053	23,886	5,166	21.6	0	5,166	21.6	3,113	12.0
2026	30,816	110	0	4	30,930	26,380	2,088	24,292	6,638	27.3	0	6,638	27.3	4,550	17.2
2027	31,155	110	0	0	31,265	26,867	2,124	24,743	6,522	26.4	0	6,522	26.4	4,399	16.4
2028	31,467	110	0	0	31,577	27,363	2,159	25,204	6,374	25.3	0	6,374	25.3	4,215	15.4

Col. (2) represents capacity additions and changes projected to be in-service by June 1st. These MW are generally considered to be available to meet Summer peak loads which are forecasted to occur during August of the year indicated.

Col. (6) = Col.(2) + Col.(3) - Col(4) + Col(5).
Col. (7) reflects the December 2018 load forecast without incremental energy efficiency or cumulative load management.

Col. (8) represents cumulative load management capability, plus incremental energy efficiency and load management, from 9/2018-on intended for use with the

December 2018 load forecast. Col.(10) = Col.(6) - Col.(9) Col.(11) = Col.(10) / Col.(9)

Col. (12) indicates the capacity of units projected to be out-of-service for planned maintenance during the Summer peak period. Col. (13) = Col. (10) - Col. (12)

Col.(14) = Col.(13) / Col.(9) Col.(15) = Col.(6) - Col.(7) - Col.(12) Col.(16) = Col.(15) / Col.(7)

Exhibit 2

Table ES-1: Projected Capacity & Firm Purchase Power Additions and Changes:

		Summer MW		Summer Reserve
Year 1/	Projected Capacity & Firm Purchase Power Changes	(Approx.)	Date	Margin 2
2019	SoBRA PV 3/	165	January-19	
	Okeechobee Clean Energy Center	1,778	April-19	
	Sanford 5	159	April-19	
	West County 2	64	April and May 2019	
	Turkey Point 5	46	May and June 2019	
	Fort Myers 2	239	May and August 2019	
	Sanford 4	148	June-19	
	Total of MW changes to Summer firm capacity:	2,600		20.6%
2020	Cape Canaveral Energy Center 3	33	November-19	
	Manatee 3	116	November-19	
	Turkey Point 5	40	December-19	
	Solar PV 3/, 4/	248	January-20	
	SoBRA PV 3/	165	April-20	
	Solar Degradation 3/	(2)		
	Total of MW changes to Summer firm capacity:	600		21.0%
2021	Turkey Point 4	20	October-20	
100000	Solar PV 3/, 4/	248	Fourth Quarter 2020	
	West County 3	22	May-21	
	Solar Degradation 3/	(3)	Section 1	
	Total of MW changes to Summer firm capacity:	286		21.2%
2022	Manatee 1 Retirement	(809)	Fourth Quarter 2021	
	Manatee 2 Retirement	(809)	Fourth Quarter 2021	
	Battery Storage	469	Fourth Quarter 2021	
	Solar PV 3/, 4/	449	First Quarter 2022	
	Lauderdale Modernization (Dania Beach Clean Energy Center Unit 7)	1,163	June-2022	
	Solar Degradation 3/	(4)		
	Total of MW changes to Summer firm capacity:	459		22.5%
2023	Solar PV 3/	347	First Quarter 2023	
2020	Solar Degradation 3/	(5)	, not goalto zoza	
1000	Total of MW changes to Summer firm capacity:	342		22.3%
0004	Solar PV 3/	289	First Quarter 2024	22.070
2024	The state of the s		FIISt Qualter 2024	
	Solar Degradation 3/	(6)		21.6%
4	Total of MW changes to Summer firm capacity:	283	E: 10 -1 -000E	21.070
2025	Solar PV 3/	405	First Quarter 2025	
	Solar Degradation 3/	(7)		
	Total of MW changes to Summer firm capacity:	398		21.6%
2026	Unsited Combined Cycle	1,886	June-2026	
	Solar Degradation 3/	(8)		
	Total of MW changes to Summer firm capacity:	1,878		27.3%
2027	Solar PV 3/	347	First Quarter 2027	
	Solar Degradation 3/	(8)		-
	Total of MW changes to Summer firm capacity:	339	STAVE COLOR	26.4%
2028	Solar PV 3/	321	First Quarter 2028	
Control of the Contro	Solar Degradation 3/	(9)	A series and a series of the s	
-	Total of MW changes to Summer firm capacity:	312	CONTRACT TO SECOND	25.3%

 $^{^{1/}}$ Year shown reflects when the MW change begins to be accounted for in Summer reserve margin calculations.

Winter Reserve Margins are typically higher than Summer Reserve Margins. Winter Reserve Margins are shown on Schedule 7.2 in Chapter III.

³/ MW values shown for the PV facilities represent the firm capacity assumptions for the PV facilities and FPL currently assumes 0.3% degradation annually for PV output.

^{4&#}x27; Solar PVMW values, and timing of those MW, presented in this table are subject to change based on the outcome of FPL's petition for FPSC approval of FPL's SolarTogether Program. Please see Chapter III for more information.

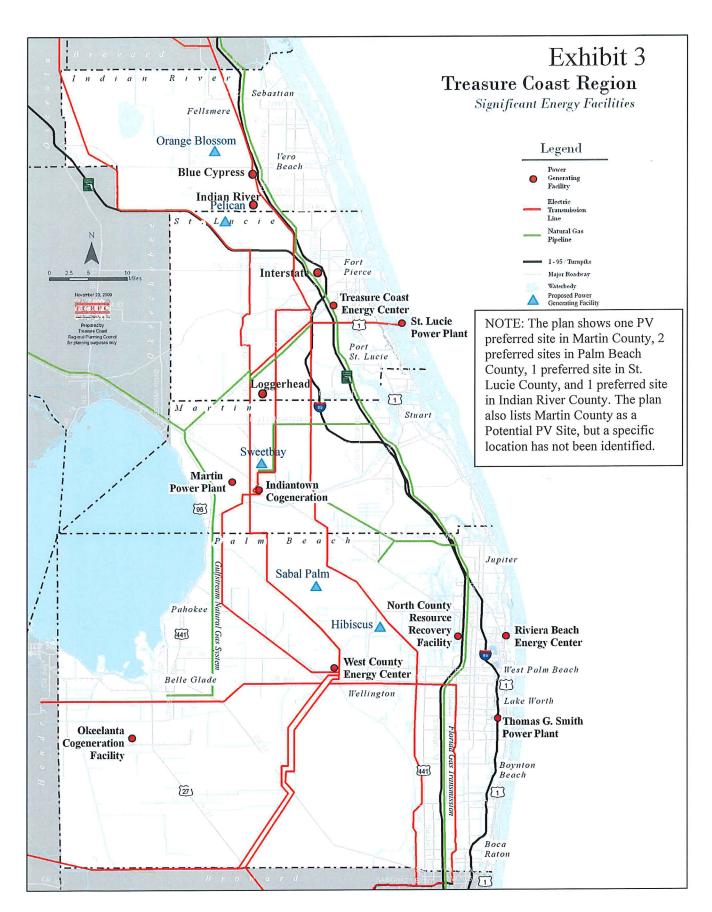
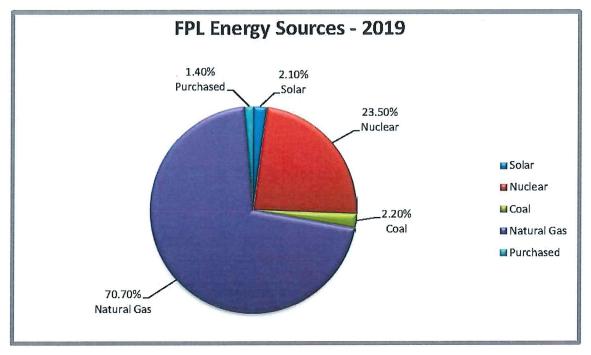


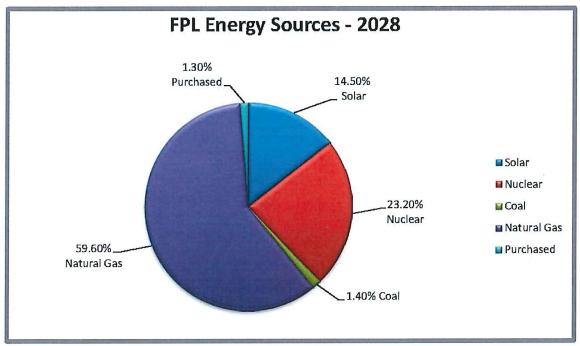
Exhibit 4

Schedule 6.2 Energy Sources % by Fuel Type

		Actua	1V	Forecasted										
	Energy Source	<u>Units</u>	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	ual Energy rchange	%	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2) Nucl	lear	%	23.2	23.0	23.5	23.3	23.2	23.7	23.3	23.0	23.3	22.8	22.4	23.2
(3) Coal	I	%	3.4	2.1	2.2	1.2	1.4	1.2	1.4	1.2	1.4	1.3	1.4	1.4
(4) Resi (5) Stea	idual (FO6) -Total nm	% %	0.2 0.2	02 02	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0
(6) Disti (7) Stea (8) CC (9) CT	illate (FO2) -Total im	% % %	0.2 0.0 0.1 0.1	0.1 0.0 0.1 0.0	0.0 0.0 0.0 0.0									
(10) Natu (11) Stea (12) CC (13) CT	ural Gas -Total im	% % % %	71.8 2.9 68.4 0.5	74.5 2.6 71.6 0.4	70.7 1.1 69.1 0.5	70.6 0.3 70.3 0.1	69.5 0.4 69.0 0.1	67.5 0.0 67.4 0.1	66.1 0.0 66.0 0.1	65.2 0.0 65.2 0.0	62.9 0.0 62.9 0.0	63.6 0.0 63.6 0.0	62.3 0.0 62.3 0.0	59.6 0.0 59.6 0.0
(14) Sola (15) PV (16) Sola	r ² r Thermal	% % %	0.5 0.5 0.0	1.5 1.5 0.0	2.1 2.1 0.1	3.4 3.4 0.1	4.5 4.5 0.1	6.2 6.2 0.1	7.8 7.8 0.1	9.2 9.2 0.1	11.0 11.0 0.1	10.9 10.9 0.1	12.4 12.4 0.1	14.5 14.5 0.1
(17) Othe	er ^a	% _	(0.5) 100	(1.5) 100	1.4 100	1.4 100	1.4 100	1.3 100	1.3	1.3 100	1.3	1.3	1.3	1.3

^{1/} Source: A Schedules and Actual Data for Next Generation Solar Centers Report
2/ Represents output from FPL's PV and solar thermal facilities.
3/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, etc., Independent Power Producers, net of Economy and other Power Sales. No economy or other power sales are accounted for in the forecasted values 2019-2028.





Water Management District

St. Johns River Water Management District

From: <u>Steve Fitzgibbons</u>

To: <u>Doug Wright</u>; <u>pellis@psc.statte.fl.us</u>

Cc: Richard Burklew

Subject: FW: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Ms. Shortelle)

Date: Monday, June 03, 2019 11:11:53 AM

Attachments: @

Mr. Wright:

As requested in your letter dated April 10, 2019, St. Johns River Water Management District (District) staff have reviewed the Ten-Year Site Plans (TYSPs) for Florida Power & Light Company (FPL), Duke Energy Florida (DEF), Gainesville Regional Utilities (GRU), JEA, and Seminole Electric Cooperative (SEC). Based on review of the submitted materials, District staff had no comments on the TYSPs and found them to be suitable as planning documents.

If you have any questions or need additional information, please contact me

Sincerely,

Steve Fitzgibbons

Steven Fitzgibbons, AICP
Intergovernmental Planner
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Connect with us: Newsletter, Facebook, Twitter, Instagram, YouTube, Pinterest

<< image003.gif@01D51793.CA477650 >>

From: Patti Zellner < PZELLNER@PSC.STATE.FL.US>

Sent: Wednesday, April 10, 2019 3:13 PM **To:** Ann Shortelle ashortelle@sirwmd.com

< PEllis@PSC.STATE.FL.US >; Laura King < LKing@PSC.STATE.FL.US >; Patti Zellner

<PZELLNER@PSC.STATE.FL.US>

Subject: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Ms. Shortelle)

Dear Ms. Shortelle,

Please find attached your copy of the 2019 Ten-Year Site Plans – Comment Request letter dated April 10, 2019, filed with the Florida Public Service

Water Management District

Southwest Florida Water Management District

From: <u>James Golden</u>
To: <u>Doug Wright</u>

Cc: April D. Breton; Cara S. Martin

Subject:2019 Electric Utility Ten-Year Site PlansDate:Friday, June 21, 2019 9:09:46 AMAttachments:PSC 10YRSP LTR 062119.pdf

The District's review letter is attached.

Jim Golden, AICP

Senior Planner Southwest Florida Water Management District 2379 Broad Street Brooksville, FL 34604 (352) 796-7211 x4790

james.golden@watermatters.org

Southwest Florida Water Management District



Southwest Florida Water Management District 2379 Broad Street, Brooksville, Florida 34604-6899 (352) 796-7211 or 1-800-423-1476 (FL only) WaterMatters.org

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Kelly S. Rice Citrus, Lake, Levy, Sumter

Joel Schleicher Charlotte, Sarasota

Rebecca Smith Hillsborough, Pinellas

> Mark Taylor Hernando, Marion

Brian J. Armstrong, P.G. Executive Director June 21, 2019

Mr. Doug Wright, Engineering Specialist Florida Public Service Commission Division of Engineering Capital Circle Office Center 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

Subject: 2019 Electric Utility Ten-Year Site Plans

Dear Mr. Wright:

In response to your request, the Southwest Florida Water Management District (District) has completed its review of the 2019 Ten-Year Site Plans for Duke Energy Florida (DEF), Florida Power & Light Company (FPL), Lakeland Electric (LAK), Seminole Electric Cooperative (SEC), and Tampa Electric Company (TECO). The District conducted its review pursuant to Section 186.801(2)(e), Florida Statutes, which requires the Public Service Commission to consider "the views of the appropriate water management district as to the availability of water and its recommendation as to the use by the proposed plant of salt water or fresh water for cooling purposes."

Regarding the construction of future non-solar generating facilities that are not already approved, undergoing approval or under construction, our findings are as follows.

- DEF is planning to construct two new combustion turbine units in 2025 at undesignated sites that may or may not be within the District
- FPL is planning to construct a new combined cycle generating facility in 2024 at one
 of several potential sites that are located outside of the District
- LAK is not proposing to construct any new generating facilities within the District
- SEC is not proposing to construct any new generating facilities within the District
- TECO is planning to construct two new combustion turbine units in 2020 and 2023 at undesignated sites within the District

The District offers the following technical assistance comments for consideration. Since the proposed solar facilities only require small quantities of water for occasional cleaning of solar panels, we have no comments on those facilities.

The most water conserving practices must be used in all processes and components
of the power plant's water use that are environmentally, technically and economically
feasible for the activity, including reducing water losses, recycling, and reuse. If a
lower quality water is available and is environmentally, technically and economically
feasible for all or a portion of the proposed use, this lower quality water must be
used.

Mr. Doug Wright, Engineering Specialist June 21, 2019 Page 2

• For new generating facilities proposed in the southern and much of the central portions of the District, there are additional water use constraints. These areas have been designated as Water Use Caution Areas. This designation has occurred in response to water resource impacts, such as saltwater intrusion, lowered water levels in lakes and wetlands, and reduced stream flows, which have been caused by excessive ground water withdrawals. Regional recovery strategies are being implemented to address these adverse water resource impacts. Consequently, the District has heightened concerns regarding potential impacts due to additional water withdrawals in these areas.

Early coordination with the District's Water Use Permit (WUP) staff is encouraged prior to submittal of any Site Certification or WUP applications. For assistance or additional information concerning the District's WUP program, or to schedule a preapplication conference, please contact April Breton, WUP manager, at (813) 985-7481, extension 2049, or april.breton@watermatters.org.

We appreciate this opportunity to participate in the review process. If you have any questions or require further assistance, please do not hesitate to contact me at (352) 796-7211, extension 4790, or james.golden@watermatters.org.

Sincerely,

for for hella

James J. Golden, AICP

Senior Planner

JG

c: April Breton, SWFWMD

Water Management District

Suwannee River Water Management District

From: Weeks, Stefani
To: Patti Zellner

Cc: <u>Doug Wright; Jeff Doehling; Phillip Ellis; Laura King; Thomas, Hugh</u>

Subject: 2019 Ten-Year Site Plan

Date: Monday, May 13, 2019 3:57:49 PM

Attachments: @

Ms. Zellner,

Based on our review of this document, the proposed solar farm to be located in Trenton may be on land that has an active water use permit. Permit numbers 2-041-220153 and 2-041-221547 may be located within the proposed solar farm layout. A more thorough review can be done if a list of parcels is provided. The water use permits would need to be modified if the land is converted to the solar farm. Other than the updates to the water use permits, the Suwannee River Water Management District has no other comments.

Stefani Weeks, E.I.
Resource Management Division
Suwannee River Water Management District
9225 CR 49, Live Oak, FL 32060
386.362.1001
800.226.1066 (FL Toll Free)
www.mysuwanneeriver.com
Let us know how we're doing: Contact Us

<< image001.png@01D509A3.44705770 >>

All E-mail sent to and from this address may be public records. The Suwannee River Water Management District does not allow use of the District E-mail system and other equipment for non-business related purposes.

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image001.png (5.0KB)
Duke Energy Florida.pdf (1.7MB)

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Local Government

Brevard County

 From:
 Mcgee, Darcie A

 To:
 Doug Wright; Phillip Ellis

 Cc:
 Toro, Deanna; Gerundo, Carol

Subject: 2019 Ten-Year Site Plans for Florida's Electric Utilities - Brevard County Comment Memorandum

Date: Friday, July 12, 2019 4:05:02 PM

Attachments: 2019-07 PSC - Brevard Co Comment Memo.pdf

2019 TYSP Comment Request.pdf

Dear Mr. Wright & Ms. Zellner,

Attached please find Brevard County's comment memorandum regarding the 2019 Ten-Year Site Plans for Florida's Electric Utilities. Please feel free to contact me should you have any questions.

Regards, Darcie

Darcie McGee

Environmental Resources Management
Natural Resources Management Department
2725 Judge Fran Jamieson Way, Bldg. A, Room 219
Viera, FL 32940
Phone (321) 633-2016
darcie.mcgee@brevardfl.gov
http://www.brevardfl.gov/NaturalResources/EnvironmentalResources



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Natural Resources Management Department

2725 Judge Fran Jamieson Way Building A, Room 219 Viera, Florida 32940

Inter-Office Memo

TO:

Frank Abbate, County Manager

THROUGH:

John Denninghoff, Assistant County Manager

Virginia Barker, Director, Natural Resources Management Department (NRM)

Darcie McGee – Assistant Director, Environmental Protection, NRM

Lee Ann McCullough-Wham, Program Manager, Environmental Resources

Management (ERM)

FROM:

Vanessa Arnal, Environmental Scientist I, ERM 7.a.

DATE:

July 10, 2019

SUBJECT:

Review of the 2019 Ten-Year Site Plans for Florida's Electric Utilities

Pursuant to Section 186.801, Florida Statutes, the Florida Public Service Commission (Commission) is responsible for reviewing and classifying each electric utility's Ten-Year Site Plan as "suitable" or "unsuitable." As part of the annual review, in accordance with Rule 25-22.071, Florida Administrative Code, the Commission requested that Brevard County review the relevant Ten-Year Site Plans (TYSP) and provide comments in regards to their suitability as planning documents.

NRM reviewed applicable TYSPs and, as described below, has no comments.

Florida Power & Light Company (FPL)

FPL identified two locations in Brevard County as Preferred Sites; both with solar generation facilities and corresponding transmission lines proposed:

- 1. Discovery Solar Energy Center
- 2. Palm Bay Solar Energy Center

The proposed Discovery Solar Energy Center, is located on NASA Parkway adjacent to the Merritt Island National Refuge. The design is for a 74.5 MW solar fixed panel photovoltaic facility, on-site transmission substation, and site stormwater system. Improvements to the transmission facilities consist of minor modifications to the "Rocket" substation and a new loop of transmission lines. FPL has applied for a state Environmental Resources Permit, and a U.S. Army Corps of Engineers Section 404 permit. The anticipated in-service date is in 2020 or 2021. The proposed Discovery Solar Energy Center is located on Federal lands and is therefore not in Brevard County's regulatory jurisdiction.

2019 Ten-Year Site Plan Review Florida's Electric Utilities

The Palm Bay Solar Energy Center is located in south Palm Bay, west of I-95. The design is for a 74.5 MW solar fixed panel photovoltaic facility, on-site transmission substation, and site stormwater system. Improvements to the transmission facilities consist of minor modifications to the "Hayward" substation and a new loop of transmission lines. FPL has applied for a state Environmental Resources Permit, a U.S. Army Corps of Engineers Section 404 permit, and City of Palm Bay Development approval. The anticipated in-service date is in 2021. The proposed Palm Bay Energy Center is located within the City of Palm Bay, and is therefore not in Brevard County's regulatory jurisdiction.

Orlando Utilities Commission (OUC)

OUC has a generating facility located four miles south of Titusville, at 7800 S Highway 1 (Unincorporated District 1). The facility contains three steam electric generating units, currently in Extended Cold Shutdown; and four gas combustion turbine units. No new capacity additions are proposed; however, the facility may accommodate future generating unit additions.

Florida Municipal Power Agency (FMPA)

FMPA is a project-oriented, joint-action agency. There are currently 31 municipal electric utility members of FMPA located throughout the State of Florida. As a joint-action agency, FMPA facilitates opportunities for members to achieve economies of scale in power generation and related services. FMPA developed the All-Requirements Power (ARP) Supply Project to secure an adequate, economical, and reliable supply of electric capacity and energy as directed by its 14 FMPA members.

FMPA on behalf of the ARP proposes to purchase the entire capacity of, and energy generated by NextEra's Oleander Unit 5, simple cycle gas turbine unit primarily fueled with natural gas. The facility is located at 555 Townsend Road, Cocoa. No facility improvements are proposed. The Oleander Power Plant is located within the City of Cocoa, and is therefore not in Brevard County's regulatory jurisdiction.

Local Government

Pasco County

From: Rana L. Hayes on behalf of Michael J. Carballa

To: <u>Doug Wright</u>

Cc: Nicole O"Neill; Michael J. Carballa; Dan Biles

Subject: RE: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Mr. Biles)

Date: Wednesday, July 03, 2019 4:32:39 PM

Attachments: PSC Comments 7-3-19.pdf

Please see the attached letter.

Michael J. Carballa, P.E., BCEE
Assistant County Administrator
Pasco County Public Infrastructure Branch
19420 Central Boulevard
Land O' Lakes, FL 34637

T: 813-235-6189

From: Patti Zellner < PZELLNER@PSC.STATE.FL.US>

Sent: Wednesday, April 10, 2019 4:33 PM **To:** Dan Biles < dbiles@pascocountyfl.net>

Cc: Doug Wright < dwright@psc.state.fl.us>; Jeff Doehling < JDOEHLIN@psc.state.fl.us>; Phillip Ellis

<PEllis@PSC.STATE.FL.US>; Laura King <LKing@PSC.STATE.FL.US>; Patti Zellner

<PZELLNER@PSC.STATE.FL.US>

Subject: 2019 Ten-Year Site Plans - Comment Request letter dated April 10, 2019 (Mr. Biles)

Dear Mr. Biles,

Please find attached your copy of the 2019 Ten-Year Site Plans – Comment Request letter dated April 10, 2019, filed with the Florida Public Service Commission Clerk today.

Sincerely,

Patti Zellner

Administrative Assistant

Division of Engineering

Phone: (850) 413-6208

Fax: (850) 413-6209

Email: pzellner@psc.state.fl.us



July 3, 2019

Doug Wright
Engineering Specialist
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850
dwright@psc.state.fl.us

Dear Mr. Wright:

Re:

Pasco County appreciates the opportunity to review and provide comments on the 2019 Ten-Year Site Plans for Florida's Electric Utilities. The County has solicited review from its departments and has provided comments on the subsequent page. As you may be aware, Pasco County owns a waste to energy facility and presently generates over 190,000 MWH of renewable electricity annually. Given our existing Power Purchase Agreement with Duke Energy Florida, LLC for renewable energy, we are providing comments on their plan as submitted.

Sincerely,

Dan Biles, P.E.

County Administrator

Attachment

ec:

Michael Carballa, Assistant County Administrator for Public Infrastructure

Review of the 2019 Yen-Year Site Plans for Florida's Electric Utilities

John Power, Pasco County Solid Waste Director

Attachment
Florida Public Service Commission
Review of the 2019 Yen-Year Site Plans for Florida's Electric Utilities

Pasco County, FL Comments on Duke Energy of Florida (DEF), LLC 10 Year Site Plan

General Comment:

DEF should include consideration of renewal or extension of the existing long-term firm purchase power agreement for renewable electrical capacity & generation with Pasco County, FL from the Pasco County Resource Recovery Facility for the period starting 1/1/2025. DEF should explore long term firm purchase power agreements with other Resource Recovery Facilities for renewable electricity generated from municipal solid waste.

Specific Comments:

Suggested revisions and additions are shown in red:

Comment 1: Page 2-25 Revise 3rd sentence to read as follows:

Although DEF's fuel mix continues to rely on an increasing amount of natural gas to meet its generation needs, DEF continues to maintain alternate fuel supplies including long term operation of some coal fired facilities, adequate supplies of oil for dual fuel backup, continued purchase of renewable generation capacity and energy deliveries from the municipal solid waste fueled electric generating facilities with QF status and increasing amounts of renewable generation particularly from solar generation.

Comment 2: Page 3-1 Revise the 2nd sentence of the Supply-Side Resources Section as follows:

Insert the words "renewable and cogeneration" between the words "purchased" and "power"

Comment 3: Page 3-4 Revise existing heading under Dependable Purchased Power to read as follows:

Firm Qualifying Facility Renewable and Cogeneration Contract's (451 MW)

Local Government

Pinellas County

From: Sacco, Paul S

To: Doug Wright; Phillip Ellis
Cc: Harji, Rahim; Sacco, Paul S

Subject: Review of the 2019 Ten-Year Stie Plans for Florida"s Electric Utilities (Pinellas County)

 Date:
 Monday, June 24, 2019 3:05:03 PM

 Attachments:
 SKMBT C652D19062114370.pdf

Good Day,

Please see attached letter summarizing Pinellas County Government's review of Duke Energy Florida's 10-year Site Plan. Please feel free to contact me with any questions. Thank you.

Paul Sacco, Director Pinellas County Solid Waste Department 727-464-7514



Dave Eggers
Pat Gerard
Charlie Justice
Janet C. Long
Kathleen Peters
Karen Williams Seel
Kenneth T. Welch



Barry A. Burton County Administrator

June 26, 2019

State of Florida Public Service Commission Attn: Doug Wright, Engineering Specialist Capital Circle Office Center 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

Re: Review of the 2019 Ten-Year Site Plans for Florida's Electric Utilities

Dear Mr. Wright:

Thank you for the invitation to review the Ten-Year Site Plans (TYSP) for Florida's Electric Utilities. To provide context for the broader demand and supply picture within the State, the County also reviewed the TYSP filed by the Florida PSC at the end of 2018. Pinellas County (County) is included in the Duke Energy Florida (DEF) electric utility service area. Hence, in addition to general comments on the TYSP, the primary focus of the County's review is specific to DEF's TYSP. The County has a keen interest in DEF's TYSP, as there is a current Qualified Facility (QF) Power Purchase Agreement (PPA) in place between both parties for avoided electrical power capacity and the sale of electrical power from a municipal solid waste to energy facility. The PPA expires on December 31, 2024.

To summarize the comments listed below, the County has questions, issues and concerns with:

- DEFs reliance on ambitious retail sales to offset wholesale sales to justify projected demand growth to install more capacity or purchase additional electrical power from others.
- DEFs assumption that retail/residential sales will increase as the number of customers increase, when the actual percent of change, since 2008, between number of customers and retail energy load sales clearly shows that growth of number of customers doesn't indicate growth in retail energy load sales.
- The significant growth of planned solar photovoltaic (PV) installations from 16 MW to 5,700 MW by 2028, with essentially all economics being broadly defined as 'TBD'. Yet, DEF has clearly

Pinellas County Administration 315 Court St. • Room 601 Clearwater, FL 33756 Main: (727) 464-3485 FAX: (727) 464-4384 V/TDD: (727) 464-4062 www.pinellascounty.org detailed cost data for natural gas fired combustion turbine installations for the same period.

- Listing the Pinellas Waste-to-Energy (WTE) facility as 'Renewable MSW', but using natural gas fired combustion turbines as the basis of cost for avoided capacity calculations for a QF Standard Offer Contract
- DEFs use of a 7.7% weighted cost of capital when this rate is much more than what is encountered in the current market.

Comments on DEF's TYSP:

DEF's forecasted demand is fairly low energy demand growth over the next ten years; approximately 20% for rural and residential and 16% for commercial. Relying on ambitious retail sales to offset wholesale sales, which continue to decline, DEF is using this projected demand growth as justification to install more capacity or purchase additional firm electrical power from others.

According to Duke, customer growth will occur due to two specific factors:

- 1. Decline in average household count (namely more singles) resulting in more households.
 - However, the decline in average household count evidence is spotty, at best, considering the actual 2018 results are similar to 2009 results, with a bump up in 2010 and remaining constant, before trending down, and
- 2. Population growth overall as it forecasts that the baby boom retirees will continue to fuel demand on both residential and commercial/industrial load.

When reviewing the actual metrics from 2008 - 2017 for the state of Florida and its utilities from the PSC 10-Year Plan published at the end of 2018; the actual percent of change since 2008 between number of customers and retail energy load sales clearly shows that growth of number of customers does not indicate growth in retail energy load sales. DEF assumes that retail/residential sales will increase as number of customers grow. The County does not agree with this assumption and sees this corollary relationship to be weak and unsubstantiated.

Like other utilities in the State, DEF is emphasizing its growth in PV to burnish its renewable energy credentials. The increase in solar generation is remarkable, with growth ramping up from 16 MW to date to over 5,700 MW by 2028. DEF's plan is a concerted effort to make solar the 'renewable energy of choice'.

Over the next four years, there is 700 MW of PV under development. Many of the PV installations are "TBD" with capital costs stated as < \$1,650/KW and fixed operational and maintenance (O&M) costs as <\$8/MWh. The plan states, "Given the small amount of PV solar currently present on the DEF system, DEF plans to evaluate this assignment over time and may revise this value in future Site Plans based on changes in project designs and the data received from actual operation of these facilities once they are installed." The County is struggling to comprehend the one-size fits all approach to the near term

pipeline PV installations and DEF's ability to reassess their plans on actual costs. The cost vagueness at this point of development implies DEF does not have strong sense of what PV installations and O&M costs will be.

- 1. Conversely, natural gas fired combustion turbine project capital costs are detailed as \$767.90/ KW with variable O&M at \$9.31/MWh. The plan includes two combustion turbine projects, with installed costs at \$675.5/KW and availabilities of 95.06%. It is surprisingly interesting to see DEF banking heavily on PV when the cost of natural gas fired units (and the associated capacity factors) are so favorable. Gas fired units (low NO_X) are so much better than coal. One conclusion would be that DEF would have balanced the "new generation build-out" a bit more in favor of natural gas.
- 2. The plan lists and describes Pinellas as "Renewable MSW". As listed as 'renewable', why not combine Renewable MSW into the same category as Renewable Solar and pay at the equivalent rates as avoided capacity for PV installations? The County strongly believes that all 'Renewables' should be treated on the same economic basis. This is especially true for Renewable MSW since it provides base load, highly reliable capacity, with a proven track record of over 30-years in the State of Florida.
- 3. The plan indicates that most interest in QF sales is from PV developers with 80 active projects and 6,100 MW of interconnection requests (this may include individuals with roof top solar systems). The plan documents do not elaborate on what constitutes an "active" project.
- 4. There is no growth in renewable energy from municipal solid waste (MSW), which is currently listed at 756 GWh.
- 5. DEF lists key financial assumptions for their most recent planning studies to be: a 47% debt and 53% equity capital structure, a projected cost of debt of 4.55%, and an equity return of 10.5%. "The assumptions resulted on a weighted cost of capital of 7.7% and an after tax discount rate of 7.15%." The County questions DEF's use of a weighted cost of capital of 7.7%; this rate is much more than what is encountered in the current market.

If you have any questions regarding the County's review, please contact Paul Sacco, Pinellas County Solid Waste Department Director at 727-464-7514 or at psacco@pinellascounty.org.

Sincerely,

Barry A. Burton
County Administrator

cc: Rahim Harji, P.E., Assistant County Administrator Paul S. Sacco, Director, Solid Waste