APPENDIX A

REVIEW OF THE

2020 TEN-YEAR SITE PLANS

OF FLORIDA'S ELECTRIC UTILITIES

FLORIDA PUBLIC SERVICE COMMISSION

OCTOBER 2020

Ten-Year Site Plan Comments

State Agencies

State Legislature

Regional Planning Councils

Water Management Districts

Local Governments

Other Organizations

Citizens of Florida

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State Agency

Florida Department of Economic Opportunity

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From: Strange, Pam [Pam.Strange@deo.myflorida.com]
Sent: Thursday, July 23, 2020 10:36 AM
To: Doug Wright
Cc: Rogers, Scott; Eubanks, Ray; Harris, Donna
Subject: Review of the 2020 Ten-Year Site Plans for Florida's Electric Utilities

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.

Thank you

Pam

Pam Strange
Administrative Assistant II
Florida Department of Economic Opportunity
Division Community Development/Office Community Planning and Growth
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Ron DeSantis
GOVERNOR

FLORIDA DEPARTMENT of ECONOMIC OPPORTUNITY

Ken Lawson
EXECUTIVE DIRECTOR

July 23, 2020

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

RE: Review of the 2020 Ten-Year Site Plans for Florida's Electric Utilities

Dear Mr. Wright:

At your request, we have reviewed the 2020 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.

Sincerely,

James D. Stansbury

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 2020 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. Ten utilities (Duke Energy Florida, Florida Municipal Power Agency, Florida Power and Light Company, Gainesville Regional Utilities, Gulf Power Company, Lakeland Electric, Orlando Utilities Commission, Seminole Electric Cooperative, City of Tallahassee, and Tampa Electric Company) have identified a total of 57 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 two preferred sites to increase power generating capacity.

A. Twin Rivers Solar Power Plant Site: The Twin Rivers Solar Power Plant site is located on 515 acres in Hamilton County. The Hamilton County Comprehensive Plan Future Land Use Map designates the site as "Agricultural-4", which allows solar electrical generating facilities and associated and related facilities as a special exception use.

B. Santa Fe Solar Power Plant Site: The Santa Fe Solar Power Plant site is located on 607 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.

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. Cane Island Power Park Site: 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. Treasure Coast Energy Center Site: The Treasure Coast Energy Center 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. Stock Island Power Plant Site: 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 and Gulf Power Company

The Florida Power and Light Company (FPL) and Gulf Power Company submitted a combined TYSP because both companies are now owned by NextEra Energy, Inc., and NextEra Energy's plan is to integrate FPL and Gulf Power into a single electric operating system effective in January 2022. The TYSP identifies twenty-six preferred sites and thirteen potential sites (six specified and seven unspecified) for the increase of power generating capacity.

A. The TYSP identifies the following as preferred sites:

1. Blue Springs Solar Energy Center Site: The Blue Springs Solar Energy Center site is located on 444 acres in Jackson County. The Jackson County Comprehensive Plan Future Land Use Map designates the site as "Agriculture-2", and electric power generating facilities are allowed as a conditional use.

2. Chautauqua Solar Energy Center Site: The Chautauqua Solar Energy Center site is located on 868 acres in Walton County. The Walton County Comprehensive Plan Future Land Use Map designates the site as "Rural Residential" and "General Agriculture." Renewable energy operations and solar farms are allowable uses within the General Agriculture future land use category.

3. Crist Unit 8 Site: The Crist Unit 8 site is located on 58 acres in Escambia County (approximately ten miles north of the City of Pensacola) within the existing Plant Crist site, which contains existing power generation facilities. The Escambia County Comprehensive Plan Future Land Use Map designates the Crist Unit 8 site as "Industrial", which allows electric power generation facilities.

4. Dania Beach Clean Energy Center Unit 7 Site: 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.

5. Discovery Solar Energy Center Site: 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.

6. Echo River Energy Storage Center Site: The Echo River Energy Storage Center site is located on 5 acres within the Echo River Solar Energy Center Site (802 acres) in Suwanee County. The Suwannee County Comprehensive Plan Future Land Use Map designates the 5-acre site as "Agriculture-1." Electric generating facilities may be allowed as a special exception use in the Agriculture-1 future land use category.

7. Echo River Solar Energy Center Site: 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. 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.

9. Fort Drum Solar Energy Center Site: The Fort Drum Solar Energy Center site is located on 930 acres in northeast Okeechobee County. The Okeechobee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture", which allows power generation.

10. Hibiscus Solar Energy Center Site: 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.

11. Lakeside Solar Energy Center Site: The Lakeside Solar Energy Center site is located on 693 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.

12. Magnolia Solar Energy Center Site: 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.

13. Manatee Energy Storage Center Site: The Manatee Energy Storage Center site is located on 40 acres in Manatee County, and the site is part of a larger site that contains existing power generation facilities. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Public/Semi-Public-1", which allows utility use, including alternative energy generation facilities (may include equipment that is directly involved in the storage and transmission of electricity).

14. Nassau Solar Energy Center Site: 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.

15. Okeechobee Solar Energy Center Site: 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.

16. Orange Blossom Solar Energy Center Site: 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.

17. Palm Bay Solar Energy Center Site: 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.

18. Pelican Solar Energy Center Site: 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.

19. Rodeo Solar Energy Center Site: 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.

20. Sabal Palm Solar Energy Center Site: 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.

21. Southfork Solar Energy Center Site: 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.

22. Sunshine Gateway Energy Storage Center Site: The Sunshine Gateway Energy Storage Center site is located on 30 acres in Columbia County. The Columbia County Comprehensive Plan Future Land Use Map designates the site as "Agriculture-3" 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.

23. Trailside Solar Energy Center Site: 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. Turkey Point Plant Site: 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."

25. Union Springs Solar Energy Center Site: 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.

26 Willow Solar Energy Center Site: The Willow Solar Energy Center site is located on 812 acres in Manatee County. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture/Rural", which allows utility use, including alternative energy generation facilities (a facility that utilizes photovoltaic solar power to generate electricity).

B. TYSP Potential Sites:

The TYSP states that seven potential sites are currently being evaluated for new power generating capacity in six counties (Calhoun, Escambia, Gadsden, Jackson, Okaloosa, and Santa

Rosa Counties) and that no specific locations for the potential sites have been selected yet within these counties. Two sites are anticipated in Calhoun County, and all seven sites would utilize solar power technology. The next TYSP should address any specific potential sites identified (selected) within these counties. In addition, the TYSP identifies the following six potential sites for new power generating capacity (solar power).

1. Elder Branch Solar Energy Center Site: The Elder Branch Solar Energy Center site is located on approximately 1,800 acres in Manatee County. The Manatee County Comprehensive Plan Future Land Use Map designates the site as "Agriculture/Rural", which allows utility use, including alternative energy generation facilities (a facility that utilizes Photovoltaic Solar Power to generate electricity).

2. Everglades Solar Energy Center Site: The Everglades Solar Energy Center site is located on approximately 600 acres in Miami-Dade County. The Miami-Dade County Comprehensive Plan Future Land Use Map designates the site as "Agriculture", which allows utility uses that are compatible with agriculture and rural residential character. The Miami-Dade County Zoning Map designates the site as "General Use", which allows an electric power plant to be approved upon public hearing.

3. Ghost Orchid Solar Energy Center Site: The Ghost Orchid Solar Energy Center site is located on approximately 4,561 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 (including solar power generation).

4. Sawgrass Solar Energy Center Site: The Sawgrass Solar Energy Center site is located on approximately 3,008 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 (including solar power generation).

5. Sundew Solar Energy Center Site: The Sundew Solar Energy Center site is located on 947 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.

6. White Tail Solar Energy Center Site: The White Tail Solar Energy Center site is located on 600 acres in Martin County. The site is designated as "Agriculture" on the Martin County Comprehensive Plan Future Land Use Map and "Agricultural-2 District" on the Martin County Zoning Atlas. Solar energy facilities (solar farms) are allowed as a permitted use in the Agriculture future land use category and Agricultural-2 District.

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. Deerhaven Generating Station Site: 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. Lakeland Electric

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

A. McIntosh Power Plant Site: 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.

6. Orlando Utilities Commission

The Orlando Utilities Commission (OUC) TYSP states that OUC's existing Stanton Energy Center and Indian River Plant sites may accommodate future generating unit additions. It may be helpful to readers if the OUC TYSP (Section 10 Environmental and Land Use Information) included a map showing the location of these sites in relation to the surrounding roadway network.

A. Stanton Energy Center Site: The Stanton Energy Center site is located on 3,280 acres in unincorporated Orange County, approximately 12 miles southeast of the City of Orlando, and contains existing power generation facilities. The Orange County Comprehensive Plan Future Land Use Map designates the site as Institutional, which allows utilities and public facilities.

B. Indian River Plant Site: The Indian River Plant site is located on 160 acres in unincorporated Brevard County, south of the City of Titusville, and contains existing power generation facilities. The Brevard County Comprehensive Plan Future Land Use Map designates the site as Public Facility, which allows government managed utilities.

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. Gilchrist Site: 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. Seminole Generating Station Site: 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. Hopkins Plant Site: 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 six preferred sites for the increase in power generating capacity.

1. Bayside Power Station Site: The Bayside (H.L. Culbreath) 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.

2. Big Bend Power Station Site: 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.

3. Durrance Solar Site: The Durrance Solar site is located on 473 acres near Bradley Junction in unincorporated Polk County. The site is designated as "Agriculture/Residential Rural" on the Polk County Comprehensive Plan Future Land Use Map. Solar electric generating facilities are allowed as a conditional use in the Agriculture/Residential Rural future land use category.

4. Little Manatee River Solar Site: 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.

5. Mountain View Solar Site: The Mountain View 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.

6. Wimauma Solar Site: 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.

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State Agency

Department of Environmental Protection

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RE: DN 20200000-OT - Review of the 2020 Ten-Year Site Plans - Comment Request letter dated April 7, 2020 (pt2)

Seiler, Ann [Ann.Seiler@FloridaDEP.gov]
Sent: Tuesday, June 16, 2020 3:10 PM
To: Doug Wright
Cc: Damian Kistner; Donald Phillips; Phillip Ellis; Laura King; Patti Zellner; SCO [SCO@dep.state.fl.us]

Good afternoon Doug.

The Department of Environmental Protection's Siting Coordination Office has reviewed the 2020 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: Tuesday, April 7, 2020 3:53 PM
To: SCO <SCO@dep.state.fl.us>
Cc: Doug Wright <dwright@psc.state.fl.us>; Damian Kistner <DKistner@psc.state.fl.us>; Donald Phillips <DPhillip@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: DN 20200000-OT - Review of the 2020 Ten-Year Site Plans - Comment Request letter dated April 7, 2020 (pt2)

Dear Ms. Mulkey,
Please find attached your copy of the 2020 Ten-Year Site Plans – Comment Request letter dated April 7, 2020, filed with the Florida Public Service Commission Clerk today.

Thank you,
Patti Zellner
Administrative Assistant
Division of Engineering
Phone: (850) 413-6208
Email: **pzellner@psc.state.fl.us**

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State Agency

Florida Fish and Wildlife Conservation Commission

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From: Amoah, Kat [Kat.Amoah@MyFWC.com]
Sent: Wednesday, July 01, 2020 8:39 AM
To: Doug Wright
Cc: Hight, Jason; Goff, Jennifer; Raininger, Christine; Cucinella, Josh; Conservation Planning Services
Subject: FWC's Comments on 2020 Ten-Year Site Plans

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:

ConservationPlanningServices@myFWC.com

Kat Amoah, AA III
Office of Conservation Planning Services
850-410-5272

Florida Fish and Wildlife Conservation Commission

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
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MyFWC.com

July 1, 2020

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 2020 Ten-Year Site Plans for Florida's Electric Utilities

Dear Mr. Wright:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the 2020 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. There are no comments or recommendations related to listed species or other fish and wildlife resources to offer on the following plans:

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

FWC staff appreciates the opportunity to review the Ten-Year Site Plans submitted by the PSC. Please submit any future requests for assistance with fish and wildlife resources to our office at ConservationPlanningServices@MyFWC.com. For specific technical questions about this year's reviews, please call Josh Cucinella at (352) 620-7330

Sincerely,

Jason Hight
Land Use Planning Program Administrator
Office of Conservation Planning Services

jh/jc
2020 Ten-Year Site Plans_41545_07012020

State Legislature

Florida House of Representatives

Representative Anna V. Eskamani

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From: Eskamani, Anna <Anna.Eskamani@myfloridahouse.gov>
Sent: Tuesday, August 18, 2020 8:52 AM
To: Office of Commissioner Polmann <Commissioner.Polmann@psc.state.fl.us>; Office of Commissioner Graham <Commissioner.Graham@PSC.STATE.FL.US>; Office of Chairman Clark <Commissioner.Clark@psc.state.fl.us>; Office of Commissioner Brown <Commissioner.Brown@psc.state.fl.us>; Office of Commissioner Fay <Commissioner.Fay@psc.state.fl.us>
Cc: Records Clerk <CLERK@PSC.STATE.FL.US>
Subject: TYSP & Florida's Risky and Harmful Overreliance on Fossil Fuels

Dear Commissioners,

As you review The Ten-Year Site Plans today provided by utility companies I wanted to once more elevate Florida's risky and harmful overreliance on fossil fuels and the importance of setting energy efficiency goals and renewable energy goals. Please see my attached letter.

With gratitude,

Rep. Eskamani

Representative Anna V. Eskamani
Florida State House District 47
Anna.Eskamani@MyFloridaHouse.gov | 407-376-3609 (cell)
Pronouns: She/Her/Hers

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Florida House of Representatives

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Email: Anna.Eskamani@myfloridahouse.gov

August 18, 2020

RE: Florida's Risky and Harmful Overreliance on Fossil Fuels

Dear Commissioners:

As you review The Ten-Year Site Plans today provided by utility companies, I wanted to once more elevate Florida's risky and harmful overreliance on fossil fuels, and the importance of setting energy efficiency goals and renewable energy goals.

Energy efficiency is a low-cost resource that can help utilities meet electricity demand. It helps utilities reduce their fuel costs and can help them defer or eliminate more expensive and polluting power plants. It also helps customers cut their energy waste and lower their power bills. Yet, Florida ranks near the bottom of state rankings for capturing energy savings from customers from its efficiency programs. **We can and must do better.**

As I have mentioned to you before, the state uses practices in setting its goals that are decades old. These practices were the justification for gutting energy efficiency goals in 2014 and most recently led many of the power companies to propose energy efficiency goals of zero or near zero. These practices penalize efficiency for being effective at helping customers cut energy use. For instance:

- Florida is the only state to continue to rely on a cost-effectiveness test – the Rate Impact Measure (RIM test) – that counts the utility's lost sales from efficiency programs (which is customers reducing their energy use) as a "cost" to the utility. Therefore, if an efficiency measure provides significant energy savings to a family or a business – it is eliminated from the utility's efficiency goals. **Isn't the goal of an efficiency program to help customers reduce energy use?**

- Another way the utilities drive down savings potential is by arbitrarily eliminating low cost, high impact measures that have a simple payback to customers of 2 years or less. Access to these measures is critically important to families struggling with a high-energy burden, especially during this pandemic.

The economic fallout from the COVID-19 crisis has laid bare the prevalence of high- energy burden in our communities. More than 600,000 customers are behind on power bill payments just in the investor-owned utilities' territories alone. No customer should have to make the choice between paying a power bill and essentials like food and medicine. Electricity is unequivocally a public health matter, and energy efficiency is a win-win for both the customer and the environment.

In order to get meaningful efficiency programs to Florida's families we must modernize the state's practices. You have an opportunity to do just that in the rulemaking docket you've opened to revise your goals setting rule. As part of that rulemaking process you should have scoping workshops so you can collect broad input from the public, stakeholders, and experts that provide best practices from other states -- before revising the rule.

At this critical moment, we ask the Commission to provide leadership and direction for our state to pursue a healthier and more equitable clean energy future.

Sincerely,

Anna

Representative Anna V. Eskamani
Florida House of Representatives, District 47

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Regional Planning Council

Central Florida Regional Planning Council

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From: Marisa Barmby [mbarmby@cfrpc.org]
Sent: Friday, July 24, 2020 5:19 PM
To: Doug Wright; Phillip Ellis
Cc: Jennifer Codo-Salisbury
Subject: 2020 Electric Utility Review by CFRPC

Good afternoon,

Attached, please find the Central Florida Regional Planning Council's electric utility review.

Please let us know if you need anything else.

Marisa Barmby

Marisa M. Barmby, AICP
Program Manager – Research
Central Florida Regional Planning Council
555 East Church Street, Bartow, FL 33830
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July 24, 2020

VIA EMAIL

Phillip Ellis
State of Florida Public Service Commission
Capital Circle Office Center
2540 Shumard Oak Blvd
Tallahassee, FL 32399

Dear Mr. Ellis,

RE: Review of 2020 Ten-Year Site Plans for Florida's Electric Utilities

The CFRPC reviewed ten-year site plans from Duke Energy Florida, Florida Power and Light Company (FPL/Gulf Power Company (GPC), Lakeland Electric, and Tampa Electric Company as requested in the letter dated April 7, 2020, and included on the Public Service Commission's website. As requested, comments on the plans and a brief summary related to the suitability of the above mentioned plans as planning documents is below.

Duke Energy Florida:

According to the plan, Duke Energy anticipates a 230 kV 50-mile new transmission line right-of-way from Kathleen – Osprey – Haines City East in June 2024.

This document is suitable for a planning document at a regional level because it provides information as to the proposed locations of planned new facilities. It is somewhat less suitable as a planning document at providing insight on the development through current demand and forecast demand because it cannot be extrapolated to a regional or county level because Duke Energy's boundaries cover so much of the State of Florida. It is helpful to know what energy conservation and management programs are being utilized as well as the environmental and land impacts are predicted to occur for the overall planning of the region's growth and development and protection.

Florida Power and Light Company (FPL/Gulf Power Company (GPC)

The plan discusses transmission facilities for the Okeechobee Solar Energy Center in Okeechobee County in 2020, the Fort Drum Solar Energy Center in Okeechobee County in 2021, the Lakeside Solar Energy Center, and other projects.

This document is suitable for a planning document at a regional level because it provides information as to the proposed locations of planned new facilities. It is somewhat less suitable as a planning document at providing insight on the development through current demand and forecast demand because it cannot be extrapolated to a regional or county level because FPL/Gulf Power's boundaries cover so much of the State of Florida. It is helpful to know what energy conservation and management programs are being utilized as well as the environmental and land impacts are predicted to occur for the overall planning of the region's growth and development and protection.

Lakeland Electric:

The plan states that Lakeland plans on retiring McIntosh Unit #2 after the planned 135 MW new gas turbine, McIntosh Unit GT2, becomes operational in April 2020. As of December 31, 2019, there are no long-term firm power sales or purchase contracts in place.

This document is suitable for a planning document at a regional level because it provides insight on the development of areas within a portion of the region through current demand and forecast demand. It also is helpful to know what energy conservation and management programs are being utilized as well as the environmental and land impacts are predicted to occur for the overall planning of the region's growth and development and protection.

This document is also written in a manner that makes it easy for non-utility planners to understand. However, due to the scanning or production process, several of the figures included in the document are blurry and very hard to read.

Tampa Electric Company:

According to the plan, there is a planned solar facility within the Central Florida Regional Planning Council Region for the 10-year planning reporting period.

This document is suitable for a planning document at a regional level because it provides information as to the proposed locations of planned new expansions and because it provides insight on the development of areas within a portion of the region through current demand and forecast demand. It also is helpful to know what energy conservation and management programs are being utilized as well as the environmental and land impacts are predicted to occur for the overall planning of the region's growth and development and protection. A recommendation would be to include boundaries of the counties to make it clear as to the location of facilities.

The proposed expansions/potential sitings as identified in the ten-year power plant site plans as submitted are consistent with the Central Florida Regional Planning Council Strategic Regional Policy Plan (SRPP). Thank you for the opportunity to review these electric utility ten-year site plans.

Sincerely,

Marisa M. Barmby, AICP
Program Manager – Research

Regional Planning Council

Treasure Coast Regional Planning Council

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From: Liz Gulick [lgulick@tcrpc.org]
Sent: Wednesday, July 01, 2020 11:13 AM
To: Doug Wright
Cc: Kate Cotner; Thomas Lanahan
Subject: Florida Power & Light Company/Gulf Power Company Ten Year Power Plant Site Plan 2020-2029

Dear Mr. Wright:

The Treasure Coast Regional Planning Council reviewed the ten year power plant site plan prepared by Florida Power & Light Company/Gulf Power Company. Council approved the attached report at their board meeting on June 19, 2020.

If you have any questions please call.

Sincerely,

Liz Gulick
Treasure Coast Regional Planning Council
421 SW Camden Avenue
Stuart, FL 34994
772 221-4060

TREASURE COAST REGIONAL PLANNING COUNCIL
INDIAN RIVER – ST. LUCIE – MARTIN – PALM BEACH

June 30, 2020

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

Subject: Florida Power & Light Company/Gulf Power Company Ten Year Power Plant Site Plan 2020-2029

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 and Gulf Power Company. Council approved the comments in the attached report at their board meeting on June 19, 2020. 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 urges FPL/Gulf 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

"Bringing Communities Together" • Est.1976

421 SW Camden Avenue - Stuart, Florida 34994
Phone (772) 221-4060 - Fax (772) 221-4067 - www.tcrpc.org

TREASURE COAST REGIONAL PLANNING COUNCIL

Report on the

Florida Power & Light Company/Gulf Power Company
Ten Year Power Plant Site Plan 2020-2029

June 19, 2020

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) and Gulf Power Company (Gulf) and provide comments to the FPSC on or before July 24, 2020.

COVID-19

Additionally, though the FPL/Gulf plan was submitted to the FPSC in April of this year, COVID-19 impacts were not factored into their planning and projections. Historically, recent annual changes to the FPL plan have been relatively minor. However, Council anticipates that will not be the case for the 2021-2030 plan based on the merger of FPL and Gulf plus the economic fallout from COVID-19.

Summary of the Plan

The plan indicates combined total summer peak demand projected growth of 11.5% over the 10-year period; from 27,088 megawatts (MW) in 2020 to 30,195 MW in 2029. During the same timeframe, FPL is expecting to reduce electrical use through demand-side management (DSM) programs that include conservation, energy efficiency, and load management initiatives. FPL/Gulf's combined DSM savings are expected to grow by 23.6% over the reporting period; from 1,790 MW in 2020 to 2,212 MW in 2029 (see Exhibit 1, Schedule 7.1).

After all DSM savings are factored in, FPL/Gulf will still require additional capacity from conventional and renewable power sources to meet future electrical demand. They are proposing to add about 4,390 MW of summer capacity to the total system from 2020 to 2029 (Exhibit 2, Table ES-1). They plan to gain additional electricity through 1) upgrades to existing facilities; 2) modernization of existing facilities; and 3) construction of new generating units while they continue to take older and coal-fired capacity out of service and account for the degradation of existing solar plants. As part of integrating FPL and Gulf Power, there are new photovoltaic (PV) solar facilities, enhancements to an existing natural gas plan, and conversion of two generating units from coal-fueled to natural gas within Gulf's service area, and retirement of Gulf's ownership portion of two other coal-fueled generating units planned. These changes will make the fuel mix and emissions profile of the Gulf Power area look more like the FPL area.

Major changes in generating capacity are as follows:

- 2020 through 2029 - new solar (PV) additions of approximately 8,860 MW
- 2020 through 2026 - capacity upgrades of existing combined cycle units
- In 2020, conversion of Crist Units 6 and 7 from coal to natural gas
- By the beginning of 2022, four new combustion turbines at the Crist plant
- By January 2022 - retirement of FPL's ownership portion of the Scherer 4 coal unit (approximately 630 MW)
- Beginning in 2022 - a 409 MW battery storage facility at the Manatee plant site
- Beginning in 2022 - two 30 MW battery storage facilities, sites TBD
- By the beginning of 2022, a bidirectional transfer line with 850 MW capacity between FPL and Gulf Power
- Mid-2022 - modernization of the existing Lauderdale plant
- May 2023 - expiration of 885 MW of purchased power from Shell
- By the beginning of 2024, retirement of Gulf Power's ownership of coal-fueled Daniels Units 1 and 2
- In 2028 and 2029, a total of approximately 700 MW of battery storage

Preferred and Potential Power Plant Sites

One of the primary reasons to prepare an annual ten year power plant site plan is to get information on a utility's plans on preferred and potential siting of new facilities.

Based on projected future resource needs, FPL/Gulf has identified 26 "preferred sites" for future power generating facilities. The following are located in the Treasure Coast Region (Exhibit 3):

1. Hibiscus Solar Energy Center, Palm Beach County: The proposed 402-acre site plant is located west of Seminole Pratt Whitney Road north of State Road 80 in the City of Westlake.
2. Pelican Solar Energy Center, St. Lucie County: The proposed 564-acre site is located on the former Minute Maid Grove between Florida's Turnpike and the Indian River County line.
3. Orange Blossom Solar Energy Center, Indian River County: The proposed 607-acre site is located at the northeast corner of Oslo Road and 122nd Avenue Southwest, about 4 miles west of Interstate 95 on former citrus groves.
4. Sabal Palm Solar Energy Center, Palm Beach County: The proposed 646-acre site is located north of 60th Street between Carol Street and 190th Trail.

Each of the above sites are planned for 74.5 MW PV solar plants. By their nature, these facilities have minimal offsite impacts.

FPL/Gulf has also identified 13 "potential sites" for future generation and storage facilities, though potential sites do not represent a commitment by the utility to construct these new facilities. Two of these sites are currently planned to be located in the Treasure Coast Region:

1. Sundew, St. Lucie County
2. White Tail, Martin County

Other Factors

The FPL/Gulf 2020-2029 plan describes six factors that have influenced or may influence this resource plan. They are summarized below:

1. The need to maintain balance between load and generating capacity in Southeastern Florida (Miami-Dade and Broward counties). This balance has both reliability and economic implications.

2. The desire to maintain/enhance fuel diversity in the FPL system including the types of fuel FPL uses and fuel transmission.

3. The need to maintain an appropriate balance of DSM and supply resources from the perspectives of both system reliability and operations including a 20 percent total reserve margin criterion for summer and winter.

4. The impact of meeting Federal and state energy-efficiency codes that will reduce forecasted summer and winter peak loads but also reduce potential DSM initiatives.

5. Steadily falling utility system key component costs that lower customer electric rates. These include trends of decreasing fuel costs, decreasing new facility construction costs, and increasing fuel efficiency of new generating units.

6. The forecast of potential CO2 compliance costs that remain lower than projections from a decade ago due to lower forecasted electricity usage growth rate, lower forecasted natural gas cost, retirements of existing coal units, and increasing implementation of renewable energy sources including solar.

Evaluation

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); accounting for 72.7% (1.1% from coal and 71.6% from natural gas) of FPL's electric generation in 2020. The plan predicts fossil fuels will account for 61.7% (0.2% from coal and 61.5% from natural gas) of combined FPL/Gulf electric generation in 2029. During the same period, nuclear sources are predicted to drop from 22.9% in 2020 to 20.2% in 2029, primarily due to significant FPL solar investment. Solar sources are predicted to dramatically increase from 3.5% in 2020 to 16.2% in 2029. For Gulf Power, their fuel sources in 2020 will also primarily be fossil fuels at 125.5% (23.8% from coal and 101.7% from natural gas), with 39.1% of their production interchanged to the Southern Company. The 2029 sources are shown above integrated with FPL.

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 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.

Solar:

Universal Solar: As indicated in this 2020 Site Plan, the resource plan shows a significant amount of utility-scale solar being added throughout the 10-year period. A total of approximately 10,000 MW (9,925 MW of PV and 75 MW of solar thermal) is projected by the end of the year 2029.

Customer-Focused Voluntary PV Pilot Programs: FPL began implementation of two customer-focused PV pilot programs in 2015.

a. FPL SolarNow provides customers the opportunity to bring solar projects into local communities by funding solar facility construction in public areas such as parks, zoos, and schools. Customers voluntarily contribute $9/month. As of the end of 2019, there were 48,897 participants enrolled in the program with 68 projects located in 64 different locations. These projects represent approximately 2,420 kW-DC of PV generation. The program was approved for a third one-year extension and is now scheduled to end at the close of 2020.

b. FPL SolarTogether is a new program that offers FPL customers the option to purchase capacity/energy from cost-effective, large-scale solar generation facilities with no long-term contracts, administrative fees, or termination penalties. Under this program, participants' monthly electric bills show a subscription charge and a direct credit on their electric bills associated with the amount of solar-generated capacity purchased. The first phase of the program is projected to add approximately 1,490 MW of new solar facilities.

C&I Solar Partnership Pilot Program: This program is a partnership with interested commercial and industrial (C&I) customers over an approximately 5-year period that is scheduled to conclude in 2020. The objective is to examine the effect of high localized PV penetration on FPLs distribution system and determine how best to address any problems that may be identified.

Battery Storage:

The resource plan presented in this 2020 Site Plan shows an increased amount of battery storage compared to what was presented in the 2019 Site Plan. A 409 MW battery storage facility will be added in late 2021 at the existing Manatee plant site and two 30 MW battery storage units will be added in 2021; one at the existing Sunshine Gateway Solar Energy Center and another at the

Echo River Solar Energy Center, which is currently in construction. An additional total of approximately 700 MW of battery storage is also included in the resource plan in the years 2028 and 2029 in Gulf's area.

Electric Vehicle Efforts:

Florida continues to rank in the top four in the nation for electric vehicle (EV) adoption, and more Floridians are buying electric vehicles every year. FPL began implementation of the new FPL EVolution pilot program in 2019 to support the growth of EVs with the goal to install more than 1,000 charging ports, thus increasing the availability of public charging stations for EVs in Florida by 50%. This pilot program will be conducted in partnership with interested host customers over an approximate 3-year period. Limited investments will be made in EV charging infrastructure. Installations will encompass different EV charging technologies and market segments, including workplace, destination, public fast charging, and residential. These places will include rest stops, public parks, shopping malls, and large businesses that employ thousands of Florida residents. As of December 31, 2019, FPL has installed 50 ports at 7 locations.

Conclusions and Recommendations

Council is encouraged that FPL continues to aggressively expand utilization of solar cost effectively and projects to increase the percentage of total electric generation system capacity from approximately 3.5 percent to over 16 percent by the end of 2029. Council urges FPL to continue their commitment to install more than 30 million solar panels on the system by the year 2030.

Council recommends FPL/Gulf 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/Gulf 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.

The utility filing can be accessed at the following link:

http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2020/Florida%20Power%20and%20Light%20and%20Gulf%20Power%20Company.pdf

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)
August of Year	Firm Installed Capacity MW	Firm Capacity Import MW	Firm Capacity Export MW	Firm QF MW	Total Firm Capacity Available MW	Total Peak Demand MW	DSM MW	Firm Summer Peak Demand MW	Total Reserve Margin Before Maintenance MW	Total Reserve Margin Before Maintenance % of Peak	Scheduled Maintenance MW	Total Reserve Margin After Maintenance MW	Total Reserve Margin After Maintenance % of Peak	Generation Only Reserve Margin After Maintenance MW	Generation Only Reserve Margin After Maintenance % of Peak
FPL															
2020	27,145	110	0	434	27,689	24,624	1,786	22,838	4,851	21.2	0	4,851	21.2	3,065	12.4
2021	27,722	110	0	4	27,836	24,720	1,833	22,887	4,948	21.6	0	4,948	21.6	3,116	12.6
Gulf															
2020	2,389	1,039	0	0	3,429	2,464	6	2,458	970	39.5	0	970	39.5	965	39.1
2021	2,389	1,039	0	0	3,428	2,496	14	2,482	947	38.1	0	947	38.1	932	37.3
Integrated FPL and Gulf															
2022	30,763	1,149	0	4	31,915	27,220	1,903	25,317	6,599	26.1	0	6,599	26.1	4,695	17.2
2023	31,164	264	0	4	31,431	27,564	1,962	25,602	5,829	22.8	0	5,829	22.8	3,867	14.0
2024	31,061	264	0	4	31,328	27,953	2,026	25,927	5,401	20.8	0	5,401	20.8	3,375	12.1
2025	31,386	263	0	4	31,653	28,349	2,071	26,278	5,375	20.5	0	5,375	20.5	3,304	11.7
2026	31,892	263	0	4	32,159	28,775	2,107	26,668	5,490	20.6	0	5,490	20.6	3,384	11.8
2027	32,230	263	0	0	32,493	29,143	2,142	27,001	5,492	20.3	0	5,492	20.3	3,350	11.5
2028	32,639	263	0	0	32,902	29,592	2,177	27,415	5,486	20.0	0	5,486	20.0	3,310	11.2
2029	33,322	262	0	0	33,585	30,195	2,212	27,983	5,602	20.0	0	5,602	20.0	3,390	11.2

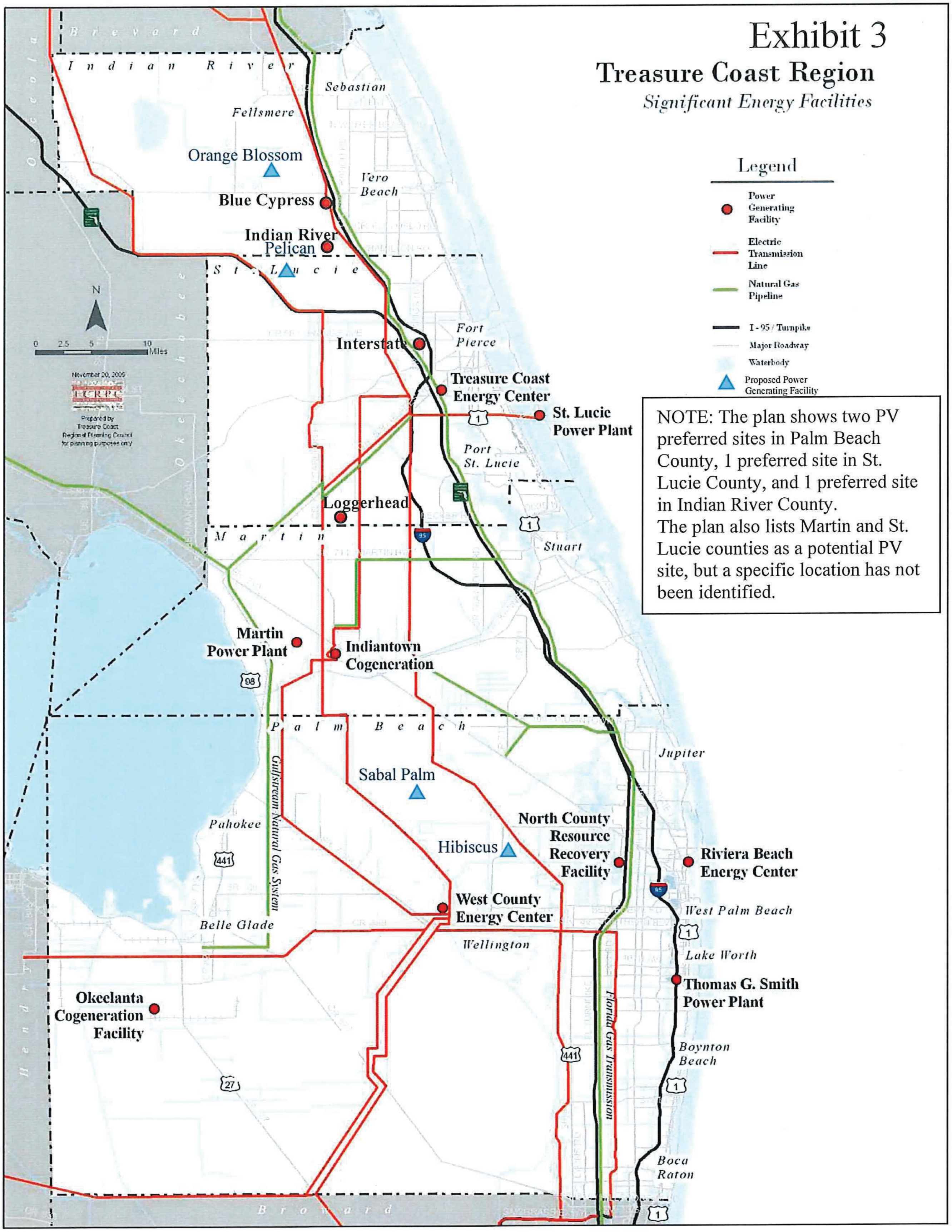
Col. (2) represents peak capacity additions and changes projected to be in-service by June 1st of each year. These MW are generally considered to be available to meet Summer peak loads which are forecasted to occur during August of the year indicated.
Col. (6) = Col.(2) + Col.(3) - Col.(4) + Col.(5).
Col.(7) reflects the 2019 peak load forecasts without incremental energy efficiency after 9/2019 or cumulative load management.
Col.(8) represents cumulative load management capability, plus incremental energy efficiency and load management, from 9/2019-on, intended for use with the 2019 load forecasts.
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:

Year [1/]	Projected Capacity & Firm Purchase Power Changes	FPL Summer MW (Approx.)	Gulf Summer MW (Approx.)	Date	Summer Reserve Margin [2/]
	FPL				
2020	Solar PV [3/] (All solar facilities in-service January of 2020)	248		First Quarter 2020	
	SoBRA PV [3/]	165		Second Quarter 2020	
	Sanford 4	147		Second Quarter 2020	
	Total of MW changes to Summer firm capacity:	**560**			**21.2%**
2021	West County 3	21		Third Quarter 2020	
	Turkey Point 4	20		Fourth Quarter 2020	
	Solar PV [3/]	539		First Quarter 2021	
	Solar Degradation [4/]	(3)			
	Total of MW changes to Summer firm capacity:	**577**			**21.6%**
	Gulf				
2020	Solar PV [3/] (Solar facility in-service April 1st of 2020)		41	Fourth Quarter 2020	
	Total of MW changes to Summer firm capacity:		**41**		**39.5%**
2021					
	Total of MW changes to Summer firm capacity:		**0**		**38.1%**
	Integrated FPL and Gulf				
2022	Manatee 1 and 2 Retirement	(1,618)		Fourth Quarter 2021	
	Scherer 4 Retirement	(634)		Fourth Quarter 2021	
	Manatee Energy Storage	409		Fourth Quarter 2021	
	Sunshine Gateway Energy Storage	30		Fourth Quarter 2021	
	Echo River Energy Storage	30		Fourth Quarter 2021	
	4X0 Crist CTs		938	Fourth Quarter 2021	
	Blue Springs PV [3/]		37	Fourth Quarter 2021	
	Chautauqua PV [3/]		37	Fourth Quarter 2021	
	Solar PV [3/]		224	First Quarter 2022	
	Fort Myers 2 Upgrade	40		Second Quarter 2022	
	Dania Beach Clean Energy Center Unit 7	1,163		Second Quarter 2022	
	Solar Degradation [4/]	(5)			
	Total of MW changes to Summer firm capacity:	**(585)**	**1,237**		**26.1%**
2023	Martin 8 Upgrade	40		Second Quarter 2022	
	Manatee 3 Upgrade	79		Fourth Quarter 2022	
	Solar PV [3/]		209	First Quarter 2023	
	Fort Myers 2 Upgrade	79		Second Quarter 2023	
	Solar Degradation [4/]	(6)			
	Total of MW changes to Summer firm capacity:	**192**	**209**		**22.8%**
2024	Lansing Smith 3 Upgrade		59	Fourth Quarter 2023	
	Daniel 1 and 2 Retirement		(502)	First Quarter 2024	
	Turkey Point 5 Upgrade	79		First Quarter 2024	
	Okeechobee Energy Center	58		First Quarter 2024	
	Solar PV [3/]		209	First Quarter 2024	
	Solar Degradation [4/]	(6)			
	Total of MW changes to Summer firm capacity:	**131**	**(234)**		**20.8%**
2025	Pea Ridge 1, 2 and 3 Retirement		(12)	Second Quarter 2024	
	Crist 4 Retirement		(75)	Fourth Quarter 2024	
	Solar PV [3/]	264		First Quarter 2025	
	Sanford 4 Upgrade	78		Second Quarter 2025	
	Sanford 5 Upgrade	78		Second Quarter 2025	
	Solar Degradation [4/]	(7)			
	Total of MW changes to Summer firm capacity:	**413**	**(87)**		**20.5%**
2026	Martin 8 Upgrade	40		Second Quarter 2025	
	Sanford 4 Upgrade	26		Second Quarter 2025	
	Sanford 5 Upgrade	26		Second Quarter 2025	
	Solar PV [3/]	422		First Quarter 2026	
	Solar Degradation [4/]	(8)			
	Total of MW changes to Summer firm capacity:	**506**			**20.6%**
2027	Crist 5 Retirement		(75)	Fourth Quarter 2026	
	Solar PV [3/]	422		First Quarter 2027	
	Solar Degradation [4/]	(9)			
	Total of MW changes to Summer firm capacity:	**413**	**(75)**		**20.3%**
2028	Lansing Smith A Retirement		(32)	Fourth Quarter 2027	
	Energy Storage		200	First Quarter 2028	
	Solar PV [3/]	252		First Quarter 2028	
	Solar Degradation [4/]	(11)			
	Total of MW changes to Summer firm capacity:	**241**	**168**		**20.0%**
2029	Energy Storage		500	First Quarter 2029	
	Solar PV [3/]	194		First Quarter 2029	
	Solar Degradation [4/]	(11)			
	Total of MW changes to Summer firm capacity:	**183**	**500**		**20.0%**

1/ Year shown reflects when the MW change begins to be accounted for in Summer reserve margin calculations.
2/ 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 summer firm capacity assumptions for the PV facilities.
4/ An annual 0.3% degradation for PV output is assumed for both FPL and Gulf Solar. Total degradation is shown solely in the FPL column.



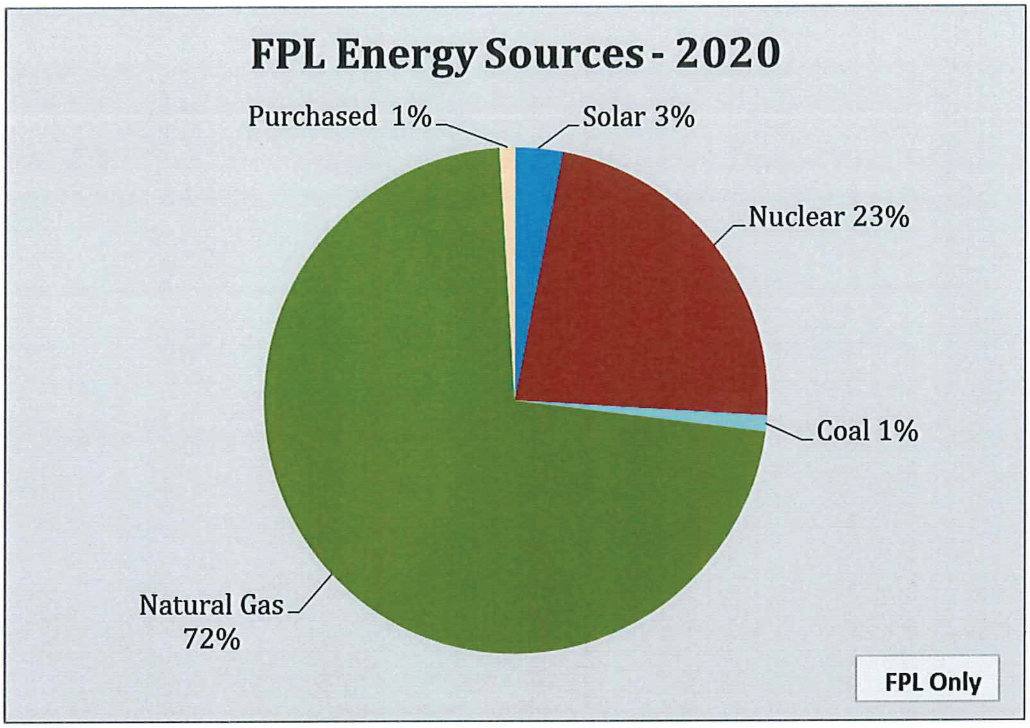
NOTE: The plan shows two PV preferred sites in Palm Beach County, 1 preferred site in St. Lucie County, and 1 preferred site in Indian River County.
The plan also lists Martin and St. Lucie counties as a potential PV site, but a specific location has not been identified.

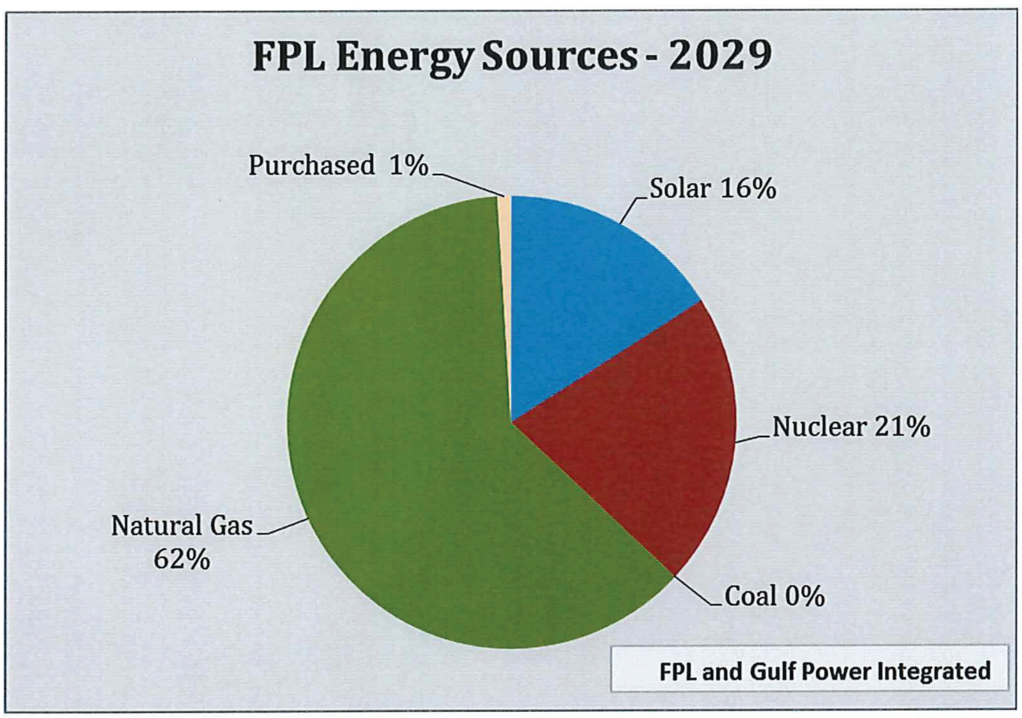
Exhibit 4

Schedule 6.2 Forecasted
Energy Sources % by Fuel Type

	Energy Source	Units	FPL 2020	FPL 2021	Gulf [1] 2020	Gulf [1] 2021	Integrated FPL and Gulf (Forecasted) 2022	2023	2024	2025	2026	2027	2028	2029
(1)	Annual Energy Interchange [2]	%	0.0	0.0	(39.1)	(39.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(2)	Nuclear	%	22.9	23.1	0.0	0.0	21.5	20.9	20.9	21.1	20.6	20.4	20.7	20.2
(3)	Coal	%	1.1	1.3	23.8	16.4	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2
(4)	Residual (FO6) -Total	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(5)	Steam	%	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)	Distillate (FO2) -Total	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(7)	Steam	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(8)	CC	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(9)	CT	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(10)	Natural Gas -Total	%	71.6	69.3	101.7	108.8	70.2	70.1	69.5	67.8	66.4	64.7	62.7	61.5
(11)	Steam	%	0.2	0.1	12.0	20.0	0.3	0.5	0.4	0.4	0.4	0.3	0.2	0.1
(12)	CC	%	71.1	68.9	40.9	40.7	67.7	68.7	68.9	67.1	65.9	64.2	62.3	61.3
(13)	CC PPAs - Gas	%	0.0	0.0	48.3	47.5	2.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
(14)	CT	%	0.3	0.3	0.6	0.6	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1
(15)	Solar [3]	%	3.5	5.4	3.6	3.5	6.4	7.0	7.6	8.8	10.7	12.6	14.4	16.2
(16)	PV	%	2.6	2.8	1.6	1.6	3.6	4.2	4.9	6.1	8.0	9.9	11.8	13.6
(17)	Solar Together [4]	%	0.8	2.5	0.0	0.0	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4
(18)	Solar Thermal	%	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
(19)	Solar PPAs	%	0.0	0.0	1.9	1.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
(20)	Wind PPAs	%	0.0	0.0	8.8	8.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
(21)	Other [5]	%	0.8	0.9	1.5	1.5	1.1	1.1	1.1	1.4	1.4	1.3	1.3	1.3
			100	100	100	100	100	100	100	100	100	100	100	100

1/ Sources: Actuals for FPL and Gulf: A Schedules and Actual Data for Next Generation Solar Centers Report. Forecast for Gulf 2020 and 2021: Projections from Southern Company
2/ Represents interchange between FPL/Gulf and other utilities. For Gulf, this number represents the net energy exchange with Southern Co.
3/ Represents output from FPL's PV and solar thermal facilities.
4/ The values shown represent energy produced from FPL-owned solar facilities that are part of FPL's SolarTogether (ST) program.
At the request of any ST participant, environmental attributes in the form of renewable energy certificates for that participant's allocation of the total energy produced will be retired on the participant's behalf.
5/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, etc., net of Economy and other Power Sales.


FPL Energy Sources - 2020
Purchased 1%
Solar 3%
Nuclear 23%
Coal 1%
Natural Gas 72%
FPL Only


FPL Energy Sources - 2029
Purchased 1%
Solar 16%
Nuclear 21%
Coal 0%
Natural Gas 62%
FPL and Gulf Power Integrated

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St. Johns River Water Management District

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From: Steve Fitzgibbons [SFitzgibbons@sjrwmd.com]
Sent: Monday, May 11, 2020 9:01 AM
To: Doug Wright; Phillip Ellis
Cc: Richard Burklew; Ann Shortelle; Tom Frick
Subject: FW: DN 20200000-OT - Review of the Ten-Year Site Plans - Comment Request letter dated April 7, 2020 (pt21)

Mr. Wright:

As requested in your letter dated April 7, 2020, St. Johns River Water Management District (District) staff have reviewed the Ten-Year Site Plans for Florida Power & Light Company/Gulf Power, Duke Energy Florida, Gainesville Regional Utilities, JEA, and Seminole Electric Cooperative. 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
Division of Strategic Planning and Initiatives
St. Johns River Water Management District
7775 Baymeadows Way, Suite 102
Jacksonville, FL 32256
Office (386) 312-2369
E-mail: sfitzgibbons@sjrwmd.com
Website: www.sjrwmd.com
Connect with us: Newsletter, Facebook, Twitter, Instagram, YouTube, Pinterest

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From: Patti Zellner <PZELLNER@PSC.STATE.FL.US>
Sent: Tuesday, April 7, 2020 3:56:18 PM
To: Ann Shortelle <ashortelle@sjrwmd.com>
Cc: Doug Wright <dwright@psc.state.fl.us>; Damian Kistner <DKistner@psc.state.fl.us>; Donald Phillips <DPhillip@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: DN 20200000-OT - Review of the Ten-Year Site Plans - Comment Request letter dated April 7, 2020 (pt21)

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Southwest Florida Water Management District

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From: James Golden [James.Golden@swfwmd.state.fl.us]
Sent: Monday, June 08, 2020 1:23 PM
To: Doug Wright
Cc: Phillip Ellis; April D. Breton; Cara S. Martin
Subject: 2020 Electric Utility Ten-Year Site Plans

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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Bartow Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Office
7601 U.S. 301 North (Fort King Highway)
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

June 8, 2020

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: 2020 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 2020 Ten-Year Site Plans for Duke Energy Florida (DEF), Florida Power & Light Company/Gulf Power Company (FPL/GPC), Lakeland Electric (LAK) 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." Considering solar generating facilities only require small quantities of water for occasional cleaning of solar panels, they have been excluded from our review.

Regarding the construction of future non-solar generating facilities (i.e., those 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 and 2027 at undesignated sites that may or may not be within the District
- FPL/GPC is not planning to construct any new generating facilities within the District
- LAK is not proposing to construct any new generating facilities within the District
- TECO is planning to construct three new reciprocating engines in 2020, 2024 and 2026 at undesignated sites within the District

The District offers the following technical assistance comments for consideration.

- 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.

- 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,

James J. Golden, AICP
Senior Planner

JG
c: April Breton, SWFWMD

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Suwannee River Water Management District

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From: Zwanka, Warren [Warren.Zwanka@srwmd.org]
Sent: Monday, June 01, 2020 3:15 PM
To: Doug Wright
Cc: Minnis, Steve; Carr, Christina; Phillip Ellis; Marshall, Leroy; Thomas, Hugh; Glass, Ben **Subject:** SRWMD Comments on DN 20200000-OT - Ten-Year Site Plans

Mr. Wright,

Thank you for the opportunity to provide comments on the 10-year site plans identified in the attached correspondence. Suwannee River Water Management District (District) has no comments on the FPL and GRU plans. Duke Energy has proposed several solar sites in our District that may be on properties with active District-issued water use permits. We have recently coordinated with Duke Energy to modify or rescind the water use permits associated with the Santa Fe and Columbia sites, but have been unable to ascertain the exact locations of the remaining sites. Therefore, the District would like to provide comment recommending that Duke Energy contact us within 30 days of the acquisition of the remaining sites in our jurisdiction to update the status of any water use permit(s) associated with the properties, pursuant to section 40B-2.351(2), F.A.C.

Warren Zwanka, P.G.
Resource Management Division Director Suwannee River Water Management District 9225 CR 49, Live Oak, FL 32060 386.362.1001
800.226.1066 (FL Toll Free) www.mysuwanneeriver.com

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Local Government

City of Sarasota

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From:	Jeffrey Vredenburg
To:	Phillip Ellis
Cc:	Meg Jamison; Kathryn King
Subject:	Public Comment, City of Sarasota, for Commission review of the 2020 electric utility Ten Year Site Plans
Date:	Wednesday, August 19, 2020 12:41:42 PM
Attachments:	Florida PSC on the Utility Ten Year Site Plans (TYSPs).pdf

Good Afternoon:

Attached please find comments from the City of Sarasota regarding the Commission's review of the 2020 electric utility Ten Year Site Plans.

Thank you,
Jeff Vredenburg
City of Sarasota Sustainability Program Educator

Jeff Vredenburg, LEED AP O+M
Sustainability | City Manager's Office
City of Sarasota | 1565 First Street | Sarasota, FL 34236
O: 941.263.6296 | M: 941.363.1140
www.SarasotaFL.gov

jeffrey.vredenburg@sarasotafl.gov

CITY OF SARASOTA SUSTAINABILITY

August 18, 2020

Chairman Gary F. Clark
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399

Re: Commission Review of the 2020 Electric Utility Ten Year Site Plans

Dear Chairman and Members of the Florida Public Service Commission,

Thank you for the opportunity to provide these comments on the Commission's review of the 2020 electric utility Ten Year Site Plans (TYSPs).

The City of Sarasota has a strong interest in the TYSP development and review process as a means to understand the investment decisions and evaluation criteria that our electric utility service providers are weighing and prioritizing as they work to build an energy system that is more equitable and affordable and that supports a transition to carbon-free electricity. As a coastal city threatened by sea level rise, we understand firsthand how the long-term energy decisions of our utilities impact our community's affordability, resilience, sustainability, and economic competitiveness.

It is with this context that I write to highlight some of the initiatives and efforts we are prioritizing and implementing that directly interplay with the energy decision-making and planning efforts of our electric utility service provider: Florida Power and Light.

As a City Commission priority, Sarasota is working to plan for and adapt to the impacts of climate change including sea level rise, increased storm surge, and more extreme rain and heat events. As part of this work, the Sarasota City Commission approved a Climate Vulnerability Assessment and Adaptation Plan in January 2018 that came out of an internal climate working group. This plan reviewed over 200 City-owned assets; identified more than 50 that are vulnerable to future climate conditions; and recommended high-level strategies to protect and preserve these facilities. The plan's creation and adoption was the culmination of many years of hard work that required significant collaboration between multiple City departments, consultants, and the public. We are now working actively to implement the strategies that the plan recommends.

Sarasota has been active in the local discussion about local vulnerabilities and adaptation potential in local policy. Most recently, the City joined the Tampa Bay Regional Resiliency Coalition.

In addition to our robust climate adaptation efforts, we have also adopted a number of commitments to minimize our climate impact and become a more resilient, sustainable community. For example:

- In 2019 the City Commission approved joining FPL's SolarTogether program and agreed to offset 71% of the City's municipal electricity to renewably sourced solar energy.

- In 2017 the City Commission adopted a resolution to power city operations with 50% renewable energy by 2024 and 100% renewable energy by 2030; and a community-wide target of 100% renewable energy by 2045.

P.O. Box 1058 Sarasota, FL 34230-1058

- We have established a goal to reduce all greenhouse gas (GHG) emissions across our community and within city operations by 35% by 2030 using a 2003 baseline; and,

- We have established a target to transition 90% of all new City fleet vehicle purchases to electric vehicles by 2024.

In addition, we continuously work to improve the energy efficiency of our public buildings — efforts that continue to pay dividends. For instance, electrical and water system upgrades we implemented from 2010-2012 have saved the City over $4 million in direct costs and operational savings.

To track progress toward these efforts, we regularly measure the GHG emissions of the entire community and the City's operations. Inventorying these emissions is an essential task to understand whether the City and its constituents are on track to meet our goals.

Collaboration is also paramount to success. To that end, we work closely with other local governments; nonprofit and academic organizations; and neighborhood, business, and faith-based groups to inform projects, policies, and education initiatives.

Partnerships with our electric utility service provider is also critical. After all, improvements to the overall emissions performance of the electricity grid are necessary for the City and its community members to reduce their carbon footprints and deliver upon the GHG emissions reductions targets that we have established. For this reason, we have a strong interest in the TYSP review and development process to gain insights into the energy system plans and actions that our utility service providers intend to implement, which in turn, inform the strategies and actions that we prioritize and ultimately implement. As such we recommend that the Commission keep our city staff and our peers at other jurisdictions informed of the TYSP process developments and outcomes so that we can stay informed and include this information in our planning processes. We would also be interested in discussing possible improvements to the TYSP process so that it can be even more helpful to local planning efforts.

Thank you for your consideration of my comments. I welcome the opportunity to share more information about our work or answer any questions that you may have. You can reach me at 941-263-6680.

Sincerely,

Thomas W. Barwin
City Manager

cc: City Commission

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Local Government

Volusia County

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From: Carol McFarlane [cmcfarlane@volusia.org]
Sent: Friday, July 24, 2020 3:00 PM
To: Doug Wright; Phillip Ellis; Clay Ervin; Palmer Panton
Subject: 2020 Ten-Year Site Plans for Electric Utilities

Mr. Wright:

Volusia County staff has received the 10-year plan for Florida's Public Utilities and has no objections. Please see the attached letter dated July 24, 2020.

Thank you,

Carol McFarlane, AICP
Land Development Manager
County of Volusia
Growth and Resource Management Division
123 W. Indiana Avenue, Room 202
DeLand, FL 32720
Office: 386-736-5942

Volusia County
FLORIDA

Growth & Resource Management
Land Development

July 24, 2020

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

Re: Review of the 2020 Ten-Year Site Plans for Florida's Electric Utilities
Volusia County Letter of No-Objection

Dear Mr. Wright:

Volusia County staff have reviewed the above-referenced Ten-Year Site Plans, hereinafter referred to as "the Plan", and finds no objection. The County offers the following comments for informational purposes only:

1. The population projections in the report used BEBR estimates. This is consistent with Volusia County's planning efforts as we also use BEBR projections.
2. The demand projections were based on the economy pre-Covid, so there is some concern with the projected outcomes.
3. The electrical consumption per household increases over the forecast period. This is expected and may actually increase if we observe greater work from home. The unknown is whether or not there will be an off-setting decrease by the commercial sector.

Thank you including the County in this process. We greatly appreciate the coordination efforts and are happy to provide feedback.

Sincerely,

Carol McFarlane

Carol McFarlane, AICP
Land Development Manager
cmcfarlane@volusia.org

c: Clay Ervin, Growth and Resource Management Director (via email)
Palmer Panton, Planning and Development Services Director (via email)

123 West Indiana Avenue, Room 202 • DeLand, FL 32720
Phone: (386) 736-5942
www.volusia.org

Other Organization

Southeast Sustainability Directors Network

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From: Meg Jamison <meg@southeastsdn.org>
Sent: Sunday, August 16, 2020 8:15 AM
To: Records Clerk <CLERK@PSC.STATE.FL.US>
Subject: Comments: Commission Review of 2020 Electric Utility Ten Year Site Plans

Greetings Mr. Chairman,

Please find comments attached to this message regarding the Commission's review of 2020 Utility Ten Year Site Plans.

Thanks!
Meg

Meg Williams Jamison
Network Director | Southeast Sustainability Directors Network (SSDN)
www.southeastsdn.org | Follow us! @theSSDN
2020 Roddenberry Fellow

SSDN SOUTHEAST SUSTAINABILITY DIRECTORS NETWORK

August 17, 2020

Chairman Gary F. Clark
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399

Re: Commission Review of 2020 Electric Utility Ten Year Site Plans

Dear Chairman and Members of the Florida Public Service Commission:

Thank you for the opportunity to provide these comments on the Commission's review of the 2020 electric utility Ten Year Site Plans (TYSPs).

The Southeast Sustainability Directors Network (SSDN) is a network of local governments in the southeastern United States that works together to advance sustainability initiatives in the region. As part of this work, SSDN supports the efforts of more than 40 local Florida governments to:

- Mitigate the environmental, economic, and public health impacts of climate change;
- Build a healthy, sustainable future with more opportunities for economic growth;
- Reduce pollution and improve Florida's air and water quality;
- Protect public health and safety, especially of Florida's most vulnerable citizens; and
- Meet ambitious climate goals.

As you conduct your review this year of the 2020 electric utility TYSPs, I write to share information with you about the energy decision-making trends of Florida's local governments. I hope this information provides you with helpful insights about the interests and needs of some of the state's largest energy consumers and their constituents.

Increasingly, local governments in the southeast and in Florida are establishing long-term sustainability goals and advancing sustainability initiatives in order to reduce emissions, scale investment in clean energy, create economic opportunities and jobs, and deliver immediate public health benefits to their residents and businesses. The development and adoption of these goals and initiatives is typically informed by public hearings and workshops, direct engagement with local stakeholders, and inventories and assessments that identify the opportunities, strategies, and pathways to achieve more sustainable outcomes.

Goals commonly adopted by local governments include:

1. Greenhouse gas (GHG) emissions reduction targets for a city or county's operations;
2. GHG emissions reduction targets for a city or county's entire community;[1] and
3. Renewable energy goals.

For instance, many local jurisdictions are adopting goals to achieve:

- Carbon neutrality or a specified level of GHG emissions reduction for their community or city operations by a target date (e.g. 30% GHG emissions reduction by 2030); and
- 100% renewable energy for their community or city operations by a target date (e.g. to power 100% of city operations with renewable energy by 2050).

Additionally, many municipalities are establishing GHG inventories to measure and report the emissions of their entire communities and/or their local government operations; are increasingly adopting social equity goals, or establishing offices of equity and inclusion, as part of their sustainability platforms in order to address the needs of frontline community members; and are increasingly leveraging their sustainability initiatives to build community resilience to disasters (e.g. via climate vulnerability assessments and resilience plans).

Notably, SSDN conducts an annual survey of its members to track the adoption rate of these goals and initiatives.[2] The results of our 2019 survey reveal that an overwhelming majority of our local government members have adopted GHG mitigation targets and are measuring and reporting their GHG emissions. Indeed:

- 62% of SSDN members have adopted a GHG mitigation target for their city or county operations;
- 40% of SSDN members have adopted a GHG mitigation target for their community;
- 73% of SSDN members are measuring and reporting GHG emissions for their city or county operations; and
- 45% of SSDN members are measuring and reporting GHG emissions for their community.

In order to deliver upon these goals, local governments are prioritizing numerous strategies, including the following efforts:

- They promote energy efficiency within their communities including in residences, multifamily buildings, and commercial spaces;

[1] A "community" goal is for the community as a whole and could include a jurisdiction's residential, transportation, and commercial sectors, etc. as defined by the local government.
[2] In any one year, Florida cities and counties represent between 40%-50% of SSDN's membership

- They install solar arrays where land and roof space allows and strive to implement energy efficiency first in their own operations in order to reduce the upfront cost of renewable energy implementation;
- They support programs that expand access to renewable energy, including community solar offerings; and
- They work to support the adoption of electrified transport in their communities and in their own fleets.

Despite these robust efforts, local governments are often constrained in how much they can do to drive down their total GHG emissions footprint since they have little to no direct ability as customers to choose the sources of energy that power Florida's electricity grid. As such, cities and counties have a keen interest in finding ways to systematically improve the overall emissions performance of the grid's generation portfolio.

SSDN members are aware of the fact that this issue is typically examined in other states through a robust integrated resource planning process. In general a robust integrated resource planning process is a useful tool for local governments and other stakeholders to engage with their utility regulators and service providers to gain insights into the long-term plans for the electricity system; understand the key environmental, social, reliability, cost, and risk factors that shape decision-making; identify opportunities to achieve lower overall system costs; leverage relevant partnership opportunities; and foster dialogue. While such a process does not currently exist in Florida, SSDN and its members are interested in the TYSPs as a means to work towards better generation planning decisions that reflect the energy preferences of Florida's local communities.

Thank you for your consideration of my comments. I welcome the opportunity to share more information with you including the results of our 2020 local government survey when it becomes available later this fall, which will include data on additional local governments who have set aggressive carbon reduction goals in the past 12 months.

Please do not hesitate to contact me at 423-416-0839 with any questions.

Respectfully,

Meg Jamison
Director
Southeast Sustainability Directors Network
meg@southeastsdn.org

Other Organization

Southern Alliance for Clean Energy

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From: George Cavros [george@cavros-law.com]
Sent: Friday, July 24, 2020 4:53 PM
To: Doug Wright; Phillip Ellis
Cc: Maggie Shober
Subject: Southern Alliance for Clean Energy's TYSP written comments

Hi Doug and Phillip,

I have attached Southern Alliance for Clean Energy's written comments on the 2020 Ten Year Site Plans. Thank you for your assistance, and please feel free to contact me with any questions.

Sincerely,

George Cavros

George Cavros, Esq.
120 E. Oakland Park Blvd., Suite 105
Fort Lauderdale, Florida 33334
954/295-5714

Southern Alliance for Clean Energy Comments on 2020 Ten Year Site Plans

Contents

Southern Alliance for Clean Energy (SACE) is a regional non-profit clean energy organization that advocates for moving the Southeast, including Florida to a lower cost, lower risk clean energy future. SACE appreciates the opportunity to provide these comments to assist the Commission in its evaluation the 2020 Ten Year Site Plans (TYSP) filed by the state's largest utilities.[1] The resource decisions that flow from the proposed plans will have both environmental, health, and financial cost and risk implications for Florida customers. The SACE comments are intended to assist the Commission in evaluating the plans and additionally provide recommendations on policy changes that can promote lower cost, lower risk, and cleaner resource planning outcomes for the state's customers.

[1] R. 25-22.071, FAC. ("All electric utilities in the State of Florida with existing generating capacity of 250 megawatt (mW) or greater shall prepare a ten-year site plan…."). In 2020, the utlities included are Florida Power and Light and Gulf Power Company, Duke Energy Florida, Florida Munucipal

Florida's reliance on gas raises serious economic and climate concerns. These TYSPs propose to either continue or expand utilities' reliance on gas, and thus continue to send billions of Floridan dollars outside the state every year. Florida utilities could lower customer bills and invest those dollars in the local economy through investments in clean energy resources like energy efficiency, solar, and storage. These investments would also move Florida toward the emission reductions needed to address the climate crisis, reduce environmental risks associated with gas infrastructure, and reduce the risk that utilities will need to increase rates in the future when gas assets become stranded assets and when utilities have to comply with a future climate policy regime.

SACE provides information below to assist the Commission in analyzing the TYSPs, and on policies that can be adopted through Commission practice, rule adoption, or statutory change that include: 1) climate, cost, and risk dangers of continued reliance on gas; 2) embracing the vast potential for energy savings through utility-sponsored energy efficiency programs; 3) current and opportunities for expanded solar development in Florida; 4) improvements to the utility planning process to make it more robust and transparent; 5) all-source procurement as a tool to lower electricity costs through competition; and 6) and the potential for reserve margin sharing across Florida to help improve reliability and save customer dollars. These recommendations are based on best practices and more than a decade of direct experience as formal participant in more than a dozen IRP proceedings across the Southeast.

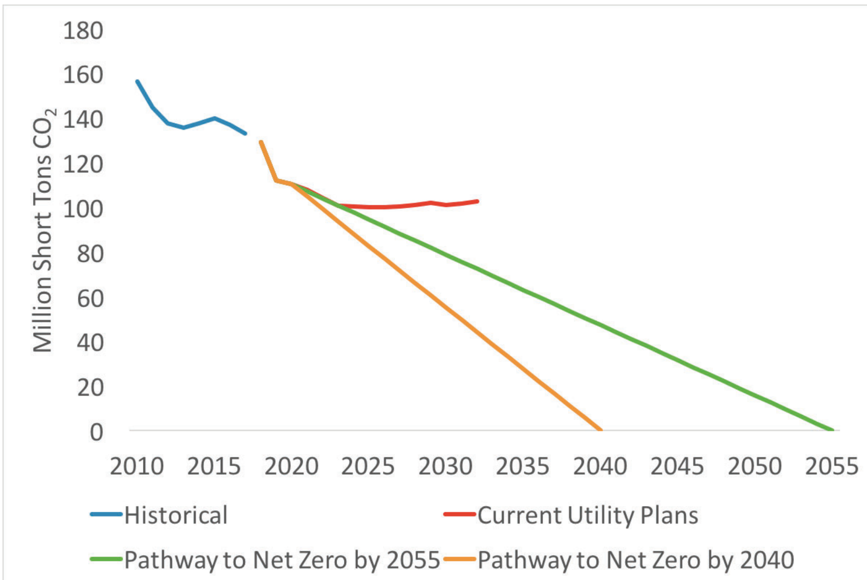
I. Reliance on Gas: Costly, Risky, and Unfriendly to Climate

Florida utilities have decreased emissions in recent years by moving away from coal. However, with an expansion of Florida's already heavy reliance on gas the state's CO_2 emissions will remain flat for the next decade. Florida utilities have presented plans to continue or expand reliance on gas in these TYSPs without showing that these new and existing gas plants are a prudent way for utilities to spend ratepayer dollars when the utilities haven't invested energy efficiency to lower customer bills and the costs of solar and storage continue to decline. In addition to our concern that continuing reliance on gas will increase costs to customers, it also opens up risks that may or may not have been fully considered when utilities developed these TYSP, including risks stemming from a future climate policy regime.

A. Florida Electric Emissions Flatline under Current TYSP

SACE found that, based on historical emissions and current utility plans, Florida is not on a pathway to reach net zero carbon emissions during the 2040-2050 timeframe. This goal is based on IPCC findings that indicate the electric power sector can help avoid the worst impacts of the climate crisis by reaching net zero global greenhouse gas emissions during that time. This goal exists among not only the scientific community, but also among investor groups. In 2019, a group of investors and pension funds sent a letter to the top 20 largest publicly-traded electric generators in the United States asking for detailed plans to achieve carbon-free electricity by 2050 at the latest. Several peer utility systems in the Southeast, such as Duke Energy and Southern Company, have adopted this goal.

Figure 1. Florida Utilities not on track to Net Zero by 2040-2055



Source: Southern Alliance for Clean Energy analysis of Ten Year Site Plans (TYSP) from 2019 and 2020

Currently, Florida utilities have an average CO_2 emissions rate of about 1,000 lbs / MWh. This is higher than the average for vertically-integrated utilities in the Southeast, though there is considerable variation among Florida utilities. Three Florida utilities were among those with the highest CO_2 emission rates in the Southeast in 2018: Tampa Electric, Gulf Power, and Duke Energy Florida. FPL, in contrast, had one of the lowest emission rates in the Southeast. Florida's emissions were relatively high during the last decade but are expected to converge with the regional average during the 2020s. Recent emissions reductions have come from fuel switching from coal to gas, but the state is unlikely to see significant reductions in the future with an increasing reliance on gas. Beyond 2024, the carbon emission rate of the Florida power sector is essentially flat.

Gas generation makes up an outsized portion of the resource mix in Florida, making it difficult to reach an average emissions rate lower than that of an average gas plant. In Florida, the average gas plant emits approximately 861 lbs per MWh. Even with additional solar capacity coming online in the future, the state emission rate is expected to be approximately 750 lbs / MWh in 2035. Thus, the state of Florida has likely already reached the point of diminishing returns on CO_2 reductions from switching to gas.

Also notable is that a significant portion of historical emissions reductions have been facilitated by out of state activity. For example, our analysis takes into account that contracts with Plant Daniel have recently transferred ownership to Mississippi. That may not be modeled in typical results that then would not reflect the drop in emission from reduced out-of-state coal usage.

Further reductions in CO_2 emissions cannot occur without two things happening: the retirement of existing fossil (gas and coal) plants and replacing those plants with zero emission resources like energy efficiency and solar. These TYSP currently reflect the retirement of approximately 1,600 MW of coal and 1,800 MW of gas. However, these plans indicate that there will still be coal used by 2030 and the amount of gas capacity on the system will actually increase.

Gas capacity increases in two ways: building new power plants and upgrading existing power plants. More than half of the new gas capacity are combined cycle (CC) units planned to come online or be upgraded between 2020 and 2025. These types of plants run at capacity factors from 60-80%, and thus will be responsible for a large amount of emissions. The new CC units are Putnam that Seminole is bringing online in 2022, Broward County that is bringing online in its territory in 2022, and a unit at the Big Bend site that TECO is bringing online in 2023. These three new CC plants are expected to emit over 6 million tons of CO_2 per year that they operate.[2] Since the new CC plants have book lives of 30 years or more, that means that all three will emit over 223 million tons of CO_2 if they are each run for their entire book life. If these are built, and if the ultimate policy regime that emerges to address the climate crisis follows the current science that tells us we need to get to zero annual emissions by 2040-2055, these plants will become stranded assets that ratepayers will continue to pay for without reaping any benefits.

Upgrades to CC plants contribute to CO_2 emissions from the sector as well. For example the upgrades to CC plants planned by NextEra in both the FPL and Gulf territories are responsible for approximately a 2% overall increase in the CO_2

[2] CO_2 emissions calculated assuming the capacity factors, heat rates, and book lives listed in each TYSP's schedule 9.

emissions from NextEra utilities over the 2020-2030 timeframe. Additionally, when a utility invests to upgrade a plant it commits to continuing to operate that plant for an extended period of time to recoup that investment. Since upgrade projects do not have to be included in the schedule 9 sections of TYSP we do not know the potential financial impact of these upgrades.

New Combustion Turbine (CT) and Internal Combustion (IC) plants have an impact on CO_2 emissions despite their lower capacity factors. For example, if NextEra deployed energy efficiency, solar, and storage instead of the planned four CT units in its TYSP for Gulf it could reduce NextEra's overall emissions by approximately 1%.

B. Continued Gas is Costly and Risky

Energy efficiency is the lowest cost way to lower customer electric bills. As described in the section on energy efficiency below, Florida utilities are leaving customer savings on the table by failing to invest in this cost-effective resource.

Even with cost-effective energy efficiency employed, generation resources are still needed to meet load growth and replace retiring generation. Despite solar investments throughout most of these TYSPs, as indicated in the section on solar below, there is still room for Florida utilities to replace proposed and existing gas generation with solar and storage. NextEra stated in its own recent investor presentation that "solar is expected to be the cheapest source of electric generation other than wind after investment tax credit steps down."[3] And since the state does not have much in the way of on-shore wind resources, it is clear that Florida utilities can and should incorporate more of this low-cost, clean energy source into future plans.

Since Florida does not have its own gas resource, all of the gas to generate most of the state's electricity must be imported. In recent years about 1/4 to 1/5 of all revenue collected by utilities from electric customers has been spent on gas. Under these TYSPs that trend is expected to continue, to the tune of utilities sending $4-6 billion of Floridan's money out-of-state.

Continued investment in gas infrastructure not only has the potential to cost more than investments in equivalent clean energy resources, it opens Floridians up to future risks that could increase their electricity costs. There is likely to be some sort of climate policy between today and 2030. An electric generation portfolio that is

[3] NextEra Energy June 2020 Investor Presentation, http://www.investor.nexteraenergy.com/~/media/Files/N/NEE-IR/news-and-events/events-and-presentations/2020/6-2-2020/June%202020%20Investor%20Presentation%20vF.pdf.

heavily dependent on gas will not be able to perform under a climate policy regime in the same way it is performing now in the absence of climate policy. Florida utilities are proposing new gas power plants with the assumption that these plants will be able to run for at least 30 years. In all likelihood, Florida utilities will not be able to use these plants as much (lower capacity factors) or as long (less than book life), and Florida electric customers will have paid for infrastructure that is no longer providing value. This is the issue of stranded asset risk associated with these investments in new gas plants. It is unclear from the TYSPs whether Florida utilities have considered this risk when developing these portfolios. Since so many propose an expansion of reliance on gas in the future, it is likely that the utilities have not fully considered the risk of gas plants becoming stranded assets in the future when developing these plans.

These are not the only risks associated with an expanded reliance on gas for generation. There are financial risks associated with the volatility of gas prices, which would be driven up by any number of factors including the regulation of gas fracking. There are environmental risks associated with the plants themselves but also the pipelines that snake through Florida's communities. These pipelines could have dangerous leaks in the future or become the targets of terrorist activity, putting Floridan lives at risk.

Combining the fasts that Florida's reliance on gas has negative impacts on climate and customer costs, and presents a riskier future, it is clear that Florida utilities should focus on replacing gas with clean energy resources and abandon plans for new gas infrastructure in the future. These risks and costs should be carefully and transparently considered when Florida utilities develop TYSPs.

II. Vast Energy Efficiency Potential in Florida

Florida has vast potential for energy efficiency above and beyond the historical goals that have been set, including those set in the most recent Florida Energy Efficiency and Conservation Act (FEECA)[4] goal setting process. The goals set ultimately serve as demand side management inputs to the utilities' integrated resource plan (IRP) process that forms the basis of the individual utility TYSP. In fact, data show the state of Florida falls well below the regional average in energy savings and trails far behind the nation as a whole.[5]

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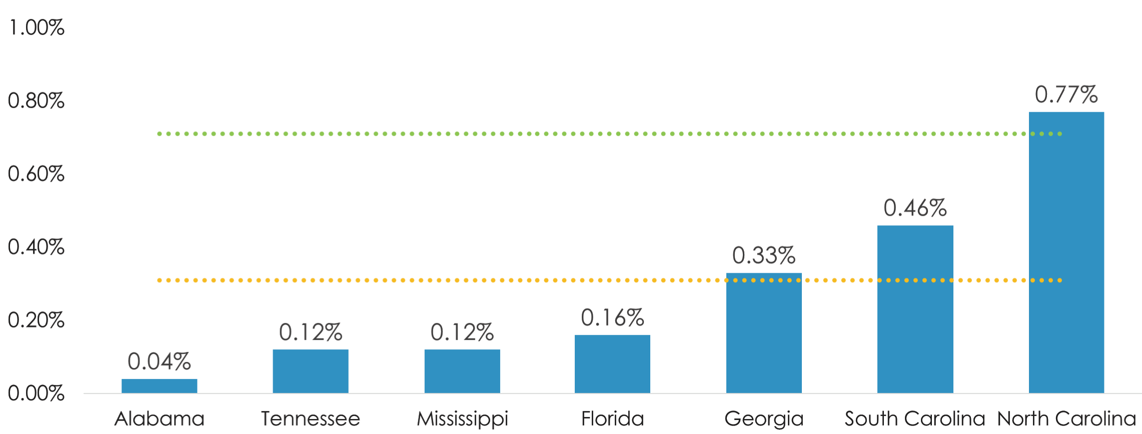
[4] Sections 366.8-83, 403.591, Fla. Stat.

[5] Florida's 2018 energy savings as a percent of prior year retail sales was 0.16%, the Southeast average was 0.31%, and the national average was 0.71%. Southern Alliance for Clean Energy, *Energy Efficiency in the Southeast*: 2019.

Energy efficiency is well known as the least-cost energy resource. But, Florida's use of certain measure screening practices has led to anemic energy saving performance by the state's utilities relative to peer utilities. Florida is actually the only state to use these measure screening methods, which diverge substantially from industry standard practice and (predictably) eliminate nearly all of the most common and cost-effective efficiency measures.

These outdated and restrictive screening practices not only undermine energy efficiency as a tool to help customers cut energy waste and save money on bills, it places these resource at a competitive disadvantage relative to other resource choices in the utility's IRP process. As a result, instead of investing in more robust low-cost energy efficiency programs, Florida customers are being substantially overcharged for use of more expensive power supplied by fossil fuel generation.

Figure 2. 2018 Energy Savings as a % of Prior Year Retail Sales



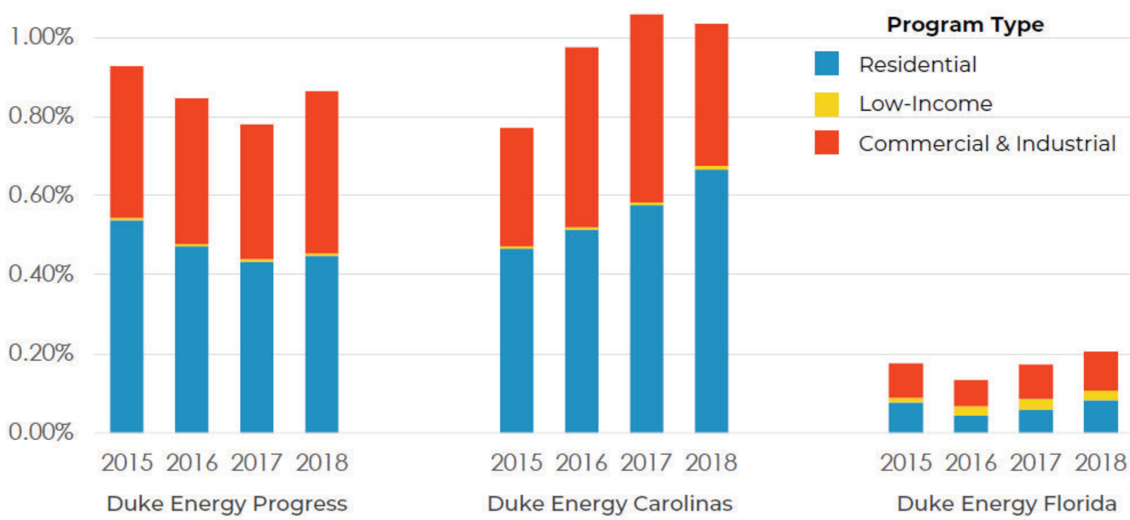
Source: Southern Alliance for Clean Energy, Energy Efficiency in the Southeast: 2019 Annual Report.

For decades, Florida's utilities have sought to minimize energy efficiency through regulatory processes for decades by using the Rate Impact Measure (RIM) test. The RIM test is not a measure of utility system benefit, but rather a test focused on lost revenue, therefore it creates a significant blind spot for decision making. The test penalizes efficiency by treating energy savings as a cost to the utility rather than counting it as a benefit to customers. RIM was never intended for use in comparing efficiency measures against supply resources and cannot be effectively used for that purpose. By contrast, other test, such as the Total Resource Cost Test and Utility Cost Test were designed for such purposes and are better suited for resource planning analysis.

Beyond cost effectiveness, energy efficiency resource optimization must utilize a reasonable projection of market demand for efficiency products. Unfortunately, Florida is also the only state in the country to use an arbitrary 2-year payback screen as a proxy for free ridership, rather than the empirically based evaluation, measurement, and verification (EM&V) methods that are standard industry practice.

By using the RIM test and 2-year screen, numerous utilities proposed goals of zero or near zero in the 2019 FEECA conservation goal setting process. While the Commission ultimately rejected these proposals, the currently authorized goals are still the product of RIM test and 2-year screening results from the previous FEECA goal-setting cycle. As a direct result, ***nearly all of the most cost effective and impactful efficiency measures have been eliminated*** from consideration prior to development of the TYSPs. Now is the time, before the next FEECA goal setting proceeding, for the Commission to reform decades old practices that restrict the Commission's ability to capture meaningful energy savings.

Figure 3. Energy Savings as a % of Prior Year Retail Sales for Duke Energy Utilities



Source: Southern Alliance for Clean Energy, Energy Efficiency in the Southeast: 2019 Annual Report.

While far from the lowest performing Florida utility, a comparison between Duke Energy Florida and its sister companies in the Carolinas illustrate the effect of Florida's use of the RIM test and 2-year screen, as seen in Figure 3. In accordance with local policy, Duke in the Carolinas uses the Total Resource Cost Test and the Utility Cost Test along with well documented EM&V (rather than Florida's 2-year screen) to validate its savings performance and account for free ridership. In the

Carolinas there are also policies whereby Duke is compensated with performance incentives for delivering meaningful levels of energy savings to its customers. The Florida Commission has the statutory authority to implement a similar utility performance incentive policy, but thus far has not exercised its authority to do so.

Florida Power & Light saw even lower energy savings in 2018 than DEF. At 0.08% of energy saved, FP&L's annual efficiency savings level is a mere quarter of the Southeast regional average (despite the fact that it's the largest single utility in the region) and less than one eight of the 0.71% national average.

Figure 4. Florida Power & Light Savings Metrics Compared to Regional Peers

UTILITY	% SAVINGS	2018 MWh SAVED (Home Equivalent)	CUSTOMER BASE
ENTERGY ARKANSAS	1.22%	18,399	693,203
DUKE ENERGY CAROLINAS	1.03%	60,062	2,215,198
DUKE ENERGY PROGRESS	0.89%	26,734	1,399,860
GEORGIA POWER	0.48%	30,680	2,204,911
REGIONAL AVERAGE	**0.31%**	--	--
FLORIDA POWER & LIGHT	0.08%	6,057	4,391,832

Source: Southern Alliance for Clean Energy, Energy Efficiency in the Southeast: 2019 Annual Report.

Best practice in utility resource planning allows energy efficiency and the full range of demand side management resources to compete head-to-head with supply resources on a consistent and integrated basis. For both energy (kWh) and capacity (MW), this means selecting energy efficiency, demand response, and distributed energy resources (DER) that are less expensive than existing power plants or utility proposed supply resources. To optimize energy efficiency as a resource within an overall utility resource portfolio, it must be treated as a selectable resource unimpeded by arbitrary restrictions during resource optimization modeling, rather than simply subtracted from load projections.

Energy efficiency should also be a key part of utility resource planning in Florida. Regardless of FEECA goals, utilities should be able to utilize the cost-effectiveness of this resource to meet its resource needs and thus offset the need to build generation resources. There are numerous examples of utilities across the country modeling energy efficiency as a resource in the IRP process. Doing the same in Florida has the potential for vast energy and financial savings, reducing emissions, creating local jobs, and improving health.

III. Expanded Solar Development is Available

According to these TYSP Florida utilities are planning future solar additions at a level that mean Florida will soon have the most total solar capacity installed compared to other Southeast states. However, according to utility plans across the region, other states will remain ahead of Florida in terms of solar watts per customer. SACE uses the watts per customer metric to be able to compare the amount of solar across utilities and states of different sizes.

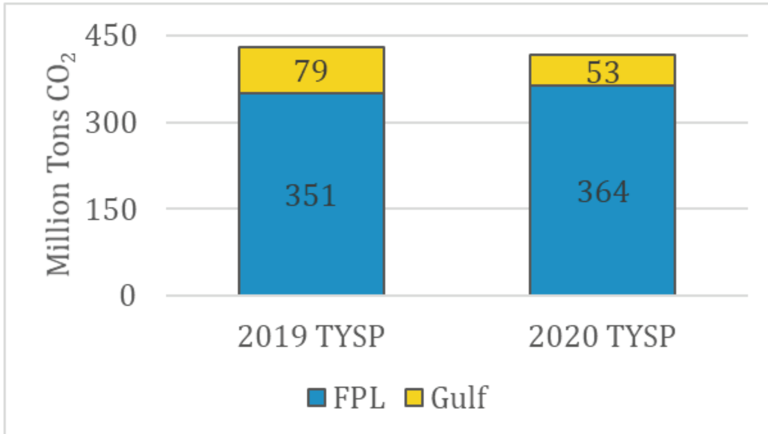
Florida utilities' TYSPs represent a primary input to the proprietary database SACE maintains. Our Solar in the Southeast annual report emphasizes a near-term, four-year rolling time horizon.

NextEra plans to fully integrate Gulf Power with FPL after 2022. The two utilities filed a joint TYSP this year. After receiving approval from the Florida PSC in March, FPL has begun developing SolarTogether, the largest shared-solar program in the country (1,490 MW over the next two years). The SolarTogether shared-solar program is projected to eliminate one fossil gas combustion turbine that had been planned for 2022-2023 and also results in the deferral of a combined-cycle fossil gas unit from 2028 to 2029.[6] After that, however, the joint TYSP reflects shifting the solar focus from FPL territory to Gulf. The TYSP reflects no additional solar build-out for FPL 2022-2024 while Gulf Power expands 1,341 MW during that timeframe.

This significantly decreases the cumulative CO_2 emissions expected from Gulf Power over the 2020-2030 timeframe, but it also results in an increase in cumulative emissions from FPL so that the overall impact on cumulative emissions of the two NextEra utilities is small (3% reduction compared to the 2019 Ten Year Site Plans).

[6] FPL, Rebuttal Testimony of Juan Enjamio, Docket No 20190061, September 23, 2019, p. 7.

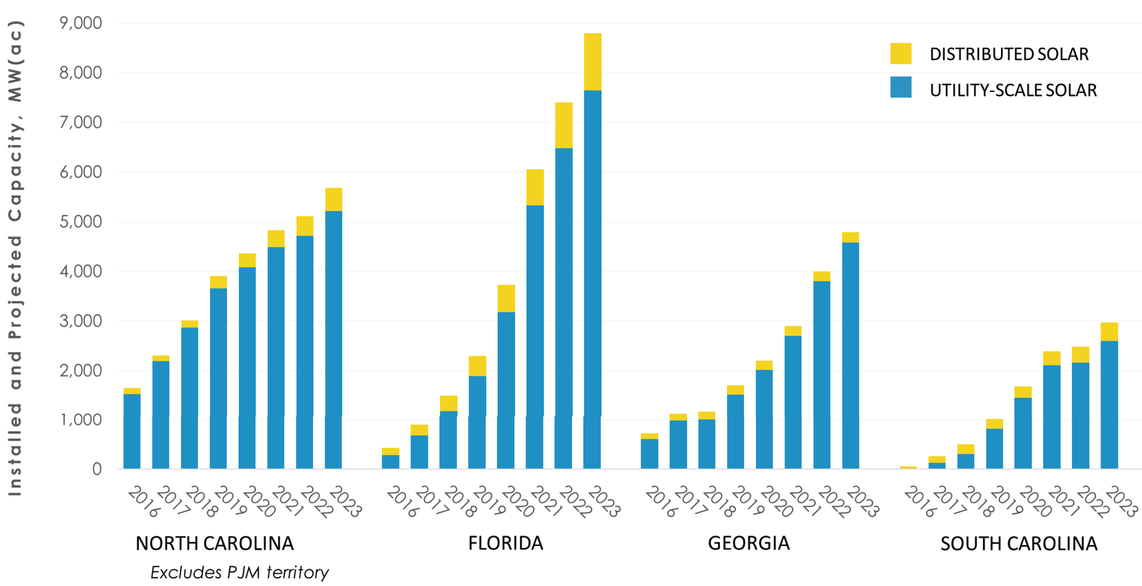
Figure 5. Cumulative CO_2 2020-2030 by NextEra Utility and Ten Year Site Plan



Source: Southern Alliance for Clean Energy analysis of Ten Year Site Plans (TYSP) from 2019 and 2020

SACE's compilation of utility plans, including the 2020 TYSPs, illustrate the state of Florida as a whole will surpass all other Southeast states by 2021 in total MW of solar installed. The results below represent forecast growth in both utility-scale solar as well as distributed solar (which includes net metered solar installations).

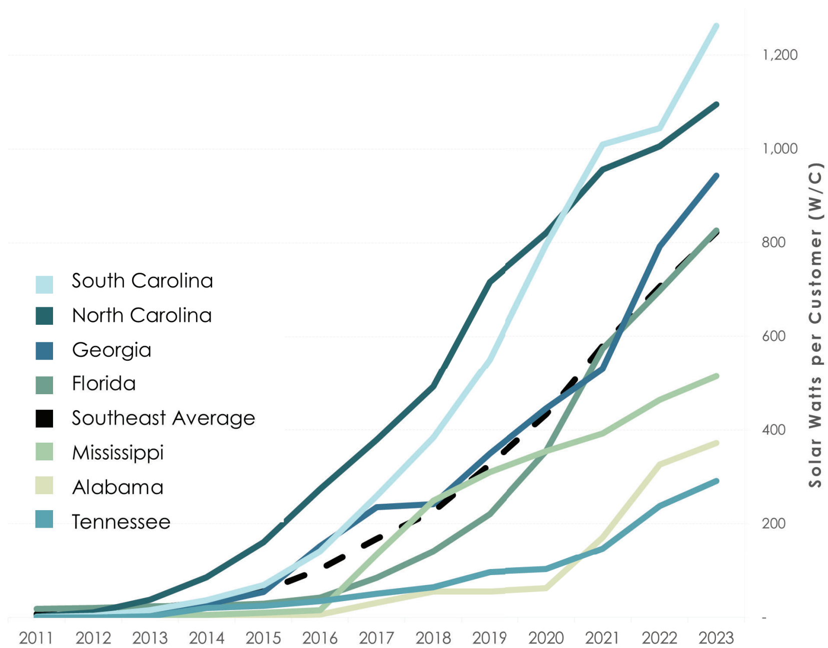
Figure 6. Historical and Planned Solar for Select Southeast States



Source: Southern Alliance for Clean Energy, Solar in the Southeast Annual Report, June 23, 2020.

However, since the state is more populous, it is expected to be at the regional average in terms of solar watts per customer in 2023. This indicates both the opportunity for additional solar ambition by Florida utilities and a need to embrace that ambition if Florida intends to become one of the Southeast region leaders in solar penetration.

Figure 7. Historical and Future Solar Watts per Customer from Utility Plans



Source: Southern Alliance for Clean Energy, Solar in the Southeast Annual Report, June 23, 2020.

While the state as a whole is expected to see growth in solar, some individual utilities are doing more while others are lagging behind. Gulf Power, Tampa Electric, and Orlando are all planning significant increases in solar, to the point where they are expected to have over 1 kW per customer in 2023.

Utilities that will still be lagging behind others in the state and region in 2023 include Lakeland and Seminole. These three have also announced solar expansions for the next four years. Lakeland expects to add at least 50 MW of solar (along with battery storage) as it retires the C.D. McIntosh coal plant. (This was announced after the 2020 TYSP submission.) Seminole Electric replaced a smaller 2022 solar contract (40 MW) with a larger one (298 MW) for 2023. Relative to the number of customers each of these utilities serve, the three remain well below the state and regional average for solar ambition through 2023.

Gulf Power, Orlando, and even Seminole are expected to have eight times the solar watts per customer in 2023 that they had in 2019. Duke Energy Florida reflects a lower than average solar ambition for 2023 based on current plans but has recently petitioned the Florida PSC for approval of a 750 MW Clean Energy Connections shared-solar program that will accelerate its deployment of solar and increase the four-year forecast solar ratio.

Figure 8. Historical and Planned Solar Watts per Customer for Select Florida Utilities

UTILITY	2019	**2023**
GULF POWER	297	**2,748**
TAMPA ELECTRIC	428	**1,827**
ORLANDO (OUC)	141	**1,345**
GAINESVILLE (GRU)	292	**883**
STATE AVERAGE	220	**826**
SOUTHEAST AVERAGE	*325*	***819***
JACKSONVILLE (JEA)	112	**738**
DUKE ENERGY FLORIDA	155	**722**
FLORIDA POWER & LIGHT	265	**672**
TALLAHASSEE	363	**579**
LAKELAND	139	**565**
SEMINOLE	34	**301**
POWERSOUTH	31	**85**

Source: Southern Alliance for Clean Energy, Solar in the Southeast Annual Report, June 23, 2020.

IV. Utility Future Planning should be Robust and Transparent

The Commission is charged with analyzing the plans and classifying them as “suitable'” or “unsuitable'” and may suggest alternatives to the plans.[7] In its analysis,

[7] § 186.801(2), Fla. Stat.

the Commission must consider a number of criteria, including the impact of the TYSP projections on fuel diversity, the environmental impacts of proposed power plants, and possible alternatives to the proposed plans.[8]

Yet, notably absent from the TYSPs are the alternatives to the proposed plans. The evaluation of possible supply-side and demand-side alternatives is a critical part of a utility's internal integrated resource plan IRP process. While the IRP process is generally described in the plans, much of the data, assumptions and scenarios used by the utility in its IRP are not visible to stakeholders and the public. It is not clear what alternatives plans, if any, the utilities have considered in developing the TYSPs.

The lack of alternative plans information creates are regulatory "blind spot" for the Commission in evaluating a utility's TYSP, and in taking a comprehensive look at future resource decisions. Stakeholders are likewise limited in their access to long term planning scenarios and alternatives analysis. Parties can obtain information on the utilities internal IRP process through intervention and discovery in resource planning dockets, such as the conservation goal-setting docket or a need determination docket. Yet, this delayed access to the utility's resource planning process is less than optimal. A party's challenge to a resource decision often places the burden on the party to recreate the utilities internal analysis in order to challenge it – after the resource decision has largely been made by the utility, and awaiting approval by the Commission.

Moreover, the current Florida resource planning process has gaps that allow utility resource decisions to effectively evade review. For instance, the utilities TYSPs project over 1,000 MW of refueled fossil fuel steam generation and over 5,000 MW of new fossil generation over the next ten years with no review for need. While the prudency of these fossil fuel generation decisions may ultimately comprise part of a larger base rate increase case, the issue can get lost given the myriad of issues considered in a rate case proceeding. There can be a dearth of evidence produced regarding the prudency of those investments – especially when the cases are resolved through settlement which considers whether the stipulation as a whole is in the public interest.[9] Clearly, there are opportunities to make the current planning process more efficient, transparent and comprehensive.

A successful IRP process must be more transparent and include meaningful stakeholder participation in the approval of the IRP. A more robust IRP process with stakeholder and public participation can result in new ideas on how to address

[8] *Id*.

[9] *See eg*., Florida Public Service Commission, Order No. PSC-16-0560-AS-EI (December 15, 2016).

future demand either through generation or demand side management; provide a sense of what customers value, such as cleaner energy; and rankings of priorities, such as environment, equity, cost and reliability. The Commission should adopt rules to incorporate elements of IRP best practices.[10] Where it cannot do so by rule adoption, the Commission can advocate for statutory changes that provide for these best practices.

V. All Source Procurement

All-source procurement means that whenever a utility believes it is time to acquire new generation resources, it conducts a unified resource acquisition process. In that process, the requirements for capacity or generation resources are neutral with respect to the full range of potential resources or combination of resources available in the market. [11]

There is currently no required request for proposal (RFP) process for procuring generation resources below 75 MW of steam generation or solar capacity,[12] the threshold for review under the Power Plant Siting Act,[13] - which includes a determination of need for the additional resource.[14] For a new electrical power plant of 75 MW or greater, the utility initiates regulatory oversight when the unit is identified as the utility's next planned generating unit in a TYSP. Identification of the next planned generating unit is important for a number of reasons, including the practice of basing the avoided capacity rate in standard offer contracts on the next unit.

The only requirement for a Florida utility to consider alternatives to the next planned generating unit is the PSC's rule requiring a RFP process for projects 75 MW or greater. According to that rule, "[t]he use of a Request for Proposals (RFP) process is an appropriate means to ensure that a public utility's selection of a proposed generation addition is the most cost-effective alternative available."[15] However, by benchmarking alternatives against the "price and non-price attributes

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[10] Rachel Wilson, Bruce Biewald, *Best Practices in Electric Utility Integrated Resource Planning*. Regulatory Assistance Project, June 2013.

[11] John D. Wilson, et. al, Making the Most of the Power Plant Market: Best Practices for All Source Electric Generation Procurement, Energy Innovation and Southern Alliance for Clean Energy, April 2020.

[12] There is the standard offer contract for renewable energy of 80 MW or less pursuant to the utility's PURPA obligation, but the structure of the contracts is not optimal for meaningful development. See SACE solar comments [citation to SACE FL PSC solar comments 2015]

[13] *See also* Section 403.503(14), Fla. Stat.

[14] Section 403.519, Fla. Stat.

[15] R. 25-22.082, F.A.C

of its next planned generating unit,"[16] the RFP rule effectively excludes any requirement for the utility to consider alternative configurations of technology(ies) that might be more cost-effective in the long-term.

Florida's history of utilities selecting themselves as the winner of every RFP suggests that meaningful competition can be discouraged by an ineffective procurement process. All-source procurement helps eliminate potential biases towards over-procurement, self-generation, and specific fuel-type generation. . As indicated in *Making the Most of the Power Plant Market: Best Practices for All Source Electric Generation Procurement*[17] "there is a widespread perception that the Florida RFP evaluation process does not generally offer an opportunity for meaningful competition." It is a responsibility of regulators to proactively address structural bias and prevent improper self-dealing by utilities.

In establishing these *Best Practices*, the authors carefully considered the case studies evaluated in the paper, and in particular the approach employed by Xcel Colorado, to derive the following five recommendations.

Regulators should:

1. Use the resource planning process to determine the technology-neutral procurement need.
2. Require utilities to conduct a competitive, all-source procurement process, with robust bid evaluation.
3. Conduct advance review and approval of procurement assumptions and terms.
4. Renew procedures to ensure that utility ownership of generation is not at odds with competitive bidding.
5. Revisit rules for fairness, objectivity, and efficiency.

Xcel Colorado's ERP (Electric Resource Plan) process shows when allowed to compete, renewable energy resources displaced natural gas in head-to-head matchups. The end result is cleaner utility portfolios and savings for customers.

VI. Reserve Margin Sharing

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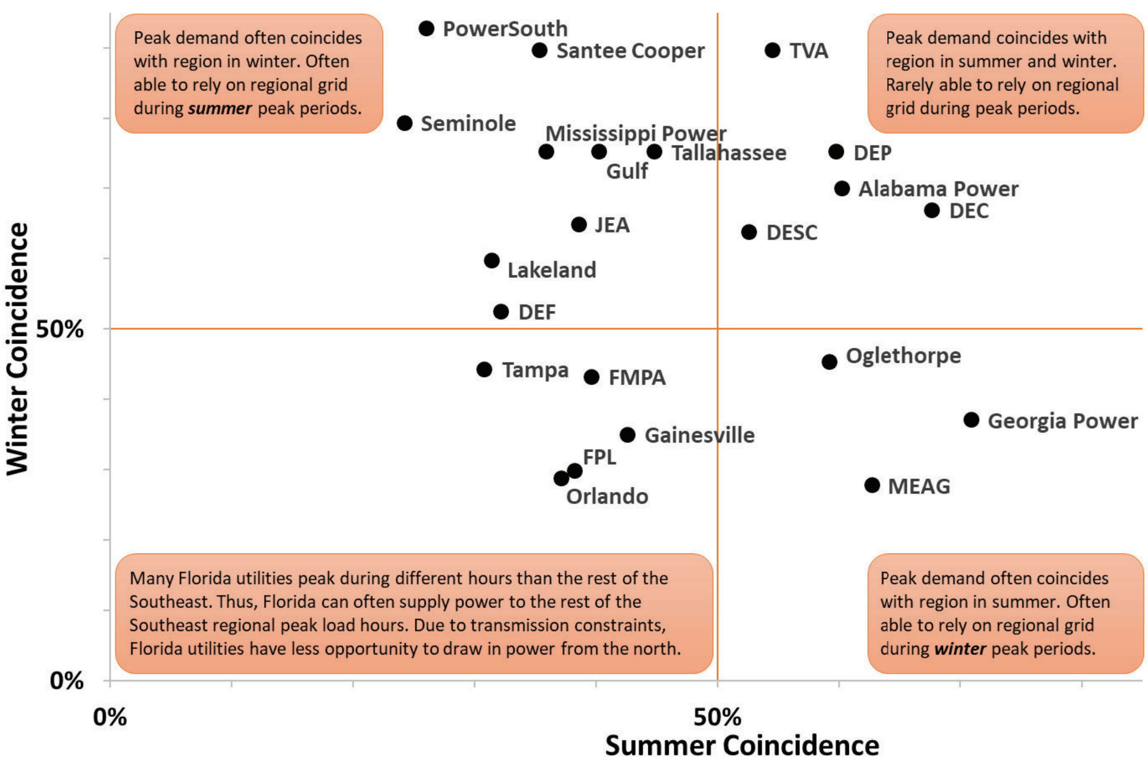
[16] Id.

[17] John D. Wilson, et. al, Making the Most of the Power Plant Market: Best Practices for All Source Electric Generation Procurement, Energy Innovation and Southern Alliance for Clean Energy, April 2020.

SACE analysis of twenty years of utility load data across the Southeast shows that while utilities across the region often peak on the same day as similar neighboring utilities, there are several time periods where utility peaks are not coincident, opening up the possibility for utilities to share resources to meet peak loads.[18] If utilities can rely on neighbors to help meet reserve margin targets, it reduces the need for utilities to build redundant resources and thus reduces costs that are ultimately borne by customers.

SACE's analysis of coincident peaks included utilities from across the Southeast, but resulted in particularly interesting findings for Florida utilities. Five Florida utilities often peak at different times than the rest of the region in both winter and summer seasons: FPL, Orlando, Gainesville, FMPA, and Tampa Electric.

Figure 9. Hourly Coincidence Rate of Southeastern Utilities with the Regional Peak, 1998-2016



[18] See full analysis in SACE's Seasonal Electric Demand in the Southeastern United States report here: https://cleanenergy.org/wp-content/uploads/Seasonal-Electric-Demand-in-SE-SACE-Final.pdf.

Source: Southern Alliance for Clean Energy, Seasonal Electric Demand in the Southeastern United States, June 2020.

Southeast-wide summer peak events are often characterized by high peak demand in Alabama, Tennessee, Georgia, and the Carolinas but milder demand in peninsular Florida. During these peak times, Florida utilities are in a strong position to market surplus power to peaking utilities in the region. While it is true that transmission constraints limit the amount of power peninsular utilities can import during peak events, when the rest of the Southeast is peaking this transmission infrastructure is likely under-utilized and Florida utilities could supply excess power. Since these events are most likely to occur in summer, they could be another driver for Florida utilities to further invest in solar. However, the current Ten Year Site Plans do not indicate that Florida utilities are considering this option.

VII. Conclusion

Florida's reliance on natural gas is not only a concern from a climate perspective, but an economic perspective as well. Florida imports its gas from outside the state, sending billions of dollars outside the state every year. Expansion of gas infrastructure, including upgrading existing power plants, exposes Florida utilities to serious risk of future stranded assets. With investments in energy efficiency and solar, Florida utilities could simultaneously lower customer bills and boost a local energy economy that would drive jobs and economic development all across the state.

It is reasonable to expect some sort of climate policy regime to emerge over the next decade. It is important that the Commission, stakeholders, and ratepayers understand how Florida utilities' plans for the future would perform under a potential future climate policy. Would such a policy result in higher electric bills for customers or are utility plans robust enough to meet that challenge without raising rates? Considering how off-track current plans are from where the science tells us we need to be to address the climate crisis, these plans are not in the best interest of Floridians.

The state and its customers can benefit from a more robust, transparent and participatory IRP process. Florida utilities could save customers money, improve health in the state, and reduce emissions if resources requirements for capacity or generation resources are neutral with respect to the full range of potential resources or combination of resources available in the market. The state should continue to encourage ramping up of solar development that is eliminating or deferring future fossil plants, and reform outdated FEECA practices that restrict energy savings so that the Commission can tap into the enormous potential for energy efficiency – while also helping the state reduce its emission profile. Sharing of reserve margins can bring added cost savings to Florida families and businesses. We encourage the Commission to pursue these policies because they would result in more clean energy resources, fewer new fossil infrastructure investments, and improvements to customer rates, bills, and health.

Other Organization

Vote Solar

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From: Katie Chiles Ottenweller [katie@votesolar.org]
Sent: Friday, July 24, 2020 6:01 PM
To: Doug Wright
Cc: Phillip Ellis; Mark Futrell; Records Clerk
Subject: Vote Solar comments on electric utilities' 2020 10-year site plans

Dear Mr. Wright:

Please see attached Vote Solar's comments on Florida electric utilities' 2020 10-year site plans.

One of our attachments is a summary document which I am planning to supplement with the full report early next week, if that's alright.

I hope you have a wonderful and safe weekend.

Best,
Katie

Katie Chiles Ottenweller | Southeast Director

katie@votesolar.org | 706.224.8017

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VOTE SOLAR

July 24, 2020

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Dear Chairman Clark and Commissioners:

Vote Solar respectfully offers these comments concerning Florida utilities' 2020 10-year site plans, in order to support the Commission's oversight role and encourage an electric system that is affordable, reliable, secure and clean.

Since 1974, certain electric utilities under Florida law have been required to submit to the Commission a 10-year site plan estimating their power-generating needs and the location of any proposed power plants. *See* Section 186.801, F.S.[1] The Commission is charged with conducting a preliminary review of each plan, classifying each as suitable or unsuitable, and may suggest alternatives to the plan. *Id*.

Florida law states that the Commission "shall review" the following elements of each plan: the need for electrical power; the effect on fuel diversity within the state; the environmental impact of each power plant site; possible alternatives to the proposed plan; the views of other relevant agencies; the extent to which the plan is consistent with the state comprehensive plan; state data on energy availability and consumption; the amount of renewable energy resources the utility produces or purchases; the amount of renewable energy resources the utility plans to

[1] Utilities are only required to submit TYSPs if (1) their generating capacity is greater than 250 MW or they are planning to construct a 75 MW or greater new generating facility at least 3 years prior. In 2019, 11 out of Florida's 58 utilities submitted TYSPs, which constituted about 98% of total retail sales in the state.

produce or purchase over the 10-year planning horizon and the means by which the production or purchases will be achieved; and how the production and purchase of renewable energy resources impact the utility's present and future capacity and energy needs. Fla. Stat. Ann. § 186.801. Under Florida law, 10-year site plans are "tentative information for planning purposes only and may be amended at any time" by utilities. *Id*. As permitted by statute, the Commission has implemented regulations concerning the 10-year site plans. *See* Fla. Stat. Ann. § 186.801; Rule 25-22.070, F.A.C.

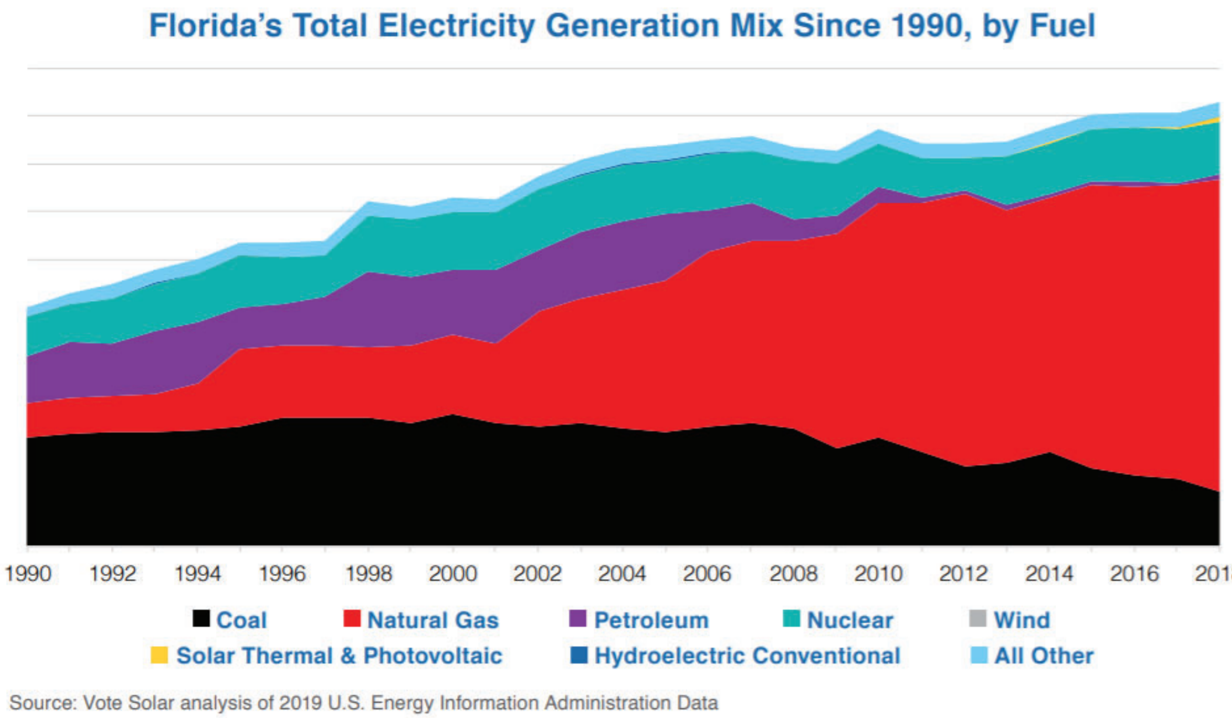
As Vote Solar reviewed utilities' 2020 plans, we saw significant diversity among the plans with respect to their transparency, incorporation of sound planning principles, clean energy commitments and preparedness to adapt to climate risk. For that reason, we have developed report cards for each utility, which are attached for your review. During this analysis, several important cross-cutting themes also emerged among many of the utilities' plans. Below, we present these themes as **"Six Questions the Commission Should Ask"** as it reviews the 2020 plans. We hope that this framework assists the Commission and its staff in its important oversight role.

"Six Questions the Commission Should Ask as it Reviews TYSPs"

1. **How do utilities plan to address gas over-dependence?**

Florida's share of natural gas generation places it among the top four states in the country, and its **70% reliance on gas is double the national average**. The end result is that each year, some $5 billion dollars leave Florida's economy to pay for fuel (accounting for about $1 out of every $4 spent by Floridians on electric bills). Florida's utilities plan to expand their reliance on gas generating plants even more over the next decade, potentially putting Florida consumers on the hook for fuel price shock as well as stranded asset risk as lower-risk alternatives like solar power threaten to make today's gas investments obsolete. Vote Solar recently released a report on these issues entitled *The Costs and Risks of Florida's Dependence on Natural Gas*, which we have attached for your convenience.

The Legislature, in requiring 10-year site plans to be filed, stated that the Commission "shall review" each plan's effect on fuel diversity within the state. *See* Fla. Stat. Ann. § 186.801. Under this authority, we encourage the Commission to question utilities' over-reliance on gas.



Since 1990, the vast majority of all installed capacity - over 33 GW - has been in gas plants; and Florida utilities plan to add several gigawatts of gas generation in this decade. Below are just a few troubling elements of utilities' 2020 filings:

- FPL: Planning 600 MW of combined cycle gas plant upgrades
- Gulf Power: Planning 938 MW of new combustion turbines
- Duke Energy: total energy from gas to increase from 64.9% to 77.3% by 2029; also planning to build 492 MW of new combustion turbines
- Tampa Electric: total energy from gas to increase to 84.6% by 2029
- FMPA: total energy from gas to increase from 75.6% to 81.2% by 2029

Over this decade, FPL projects the cost of natural gas will almost double, increasing by 75% from $2.42/MMBtu in 2020 to $4.25 in 2029.[2] If gas prices do double, Floridians could see their electric bills increase by $360/year. In contrast, Jim Robo, CEO of NextEra Energy, has described solar as being "very, very competitive" compared to gas-fired generation, and notes "a significant opportunity in almost every part of the country where batteries are now more economic than gas-fired peakers, even at today's natural-gas prices." **We strongly believe that utilities should not have more than 50% of their energy mix coming from gas, consistent with national averages, and should not be continuing to invest in new gas capacity once**

[2] *See* FPL responses to 2020 TYSP discovery requests, FPSC Docket 2020-0000.

they hit that limit. Florida's regulators should carefully weigh both fuel price and stranded asset risks in assessing the prudence of continued investments of ratepayer funds in gas.

2. When and how will proposed new investments be reviewed?

Adding to the riskiness of utilities' planned gas investments is the question of *when* these investments of ratepayer dollars will actually be reviewed by the Commission. Vote Solar found that the majority of Florida utilities' proposed new capacity over the next decade will be constructed prior to any cost-effectiveness review by the Commission.

The unfortunate result is that many investments may fall into a "too early / too late" vortex. At the 10-year site plan stage, utilities can claim that new capacity is tentative and that more robust review of potential alternatives will happen later. However, the reality is that many of these gas plant costs are not subject to the Power Plant Siting Act, and therefore would be allowed to move forward with construction prior to any other review. These unreviewed costs include: coal to gas unit conversions; combined cycle upgrades; and any new combustion turbines. Only at the time of a future rate case would utilities be required to demonstrate the prudency of those investments, at which point ratepayer funds would already have been spent.

FPL: Almost 800 MW of combined cycle upgrades

- ➔ Estimated capital cost: $781 million.[3]

Gulf Power: 938 MW of new combustion turbines

- ➔ Estimated capital cost: $450 million[4]

Duke Energy: 492 MW of new combustion turbines

- ➔ Estimated capital cost: $400 million[5]

In this situation, extra scrutiny is clearly warranted at the 10-year site planning stage for *any* proposed investments that aren't subject to pre-construction review. Utilities should be required to articulate why these investments were selected; how they compare to other alternatives like solar paired with battery storage; what the cost to ratepayers will be; and the capacity and fuel cost assumptions being used.

[3] Based on cost estimates from NREL Annual Technology Baseline 2020.
[4] Based on Gulf reported capital costs.
[5] Based on cost estimates from NREL Annual Technology Baseline 2020.

3. How can Florida modernize its resource planning review?

There are actions that the Commission can take this year within its existing statutory authority to modernize its review process concerning Florida utilities' plans. The Commission can begin by formalizing the 10-year site plan review process and shoring up opportunities for public and stakeholder engagement. *See* Section 186.801(2), F.S. (the commission may adopt rules governing the method of submitting, processing, and studying the 10-year plans). We recommend that the Commission strengthen the 10-year site plan process by making 10-year site plans part of a docketed proceeding, similar to FEECA dockets; providing a clear opportunity and timeline for public comments; requiring utilities to file sworn testimony associated with their plans; allowing for intervention, discovery and the filing of non-utility expert testimony; and subjecting utilities' plans to cross-examination.

We also urge the Commission to require utilities to file both preferred plans and alternatives for the Commission to review, beginning in 2021, with clear price per GWh comparisons for each plan. *See* Section 186.801(2)(d), F.S. (the Commission "shall review... [p]ossible alternatives to the proposed plan"). These improvements will better ensure that the Commission has the information it needs to meaningfully regulate the utilities' resource decisions to meet the public interest.

In terms of the Commission's substantive review, we encourage the Commission to exercise the following legislatively granted authority:

- Making comments and recommendations to utilities concerning their plans (*see* Section 186.801(2), F.S. (states PSC may "suggest alternatives"); Fla. Admin. Code Ann. r. 25-22.071(4) (the Commission "will report its findings, along with any comments or recommendations"). These recommendations can be directed to utilities' current or future plan filings.
- Rejecting unsuitable plans and sending plans back for additional data to be provided (Section 186.801(2), F.S. ("the commission shall make a preliminary study of such plan and classify it as "suitable" or "unsuitable."); Fla. Admin. Code Ann. r. 25-22.071(5) (unsuitable plans can later be deemed suitable with additional data).

Florida should also consider beginning a holistic review of its electric planning process, which does not appear to have undergone substantive review since the 1970s. Some best practices for resource planning may require legislative reforms in order to implement. Such improvements include, but are not limited to: increasing the 10-year time period to 15 or 20 years, in keeping with many other states; making plans binding and subject to both review and amendment by regulators; and requiring utilities to conduct full integrated resource planning with transparency around least cost, least risk plans and alternatives. Without a binding, long term planning process with thorough vetting, the Commission's ability to regulate the utilities in the public interest will be hamstrung.

Such a holistic review would provide an opportunity to rethink system needs in a future likely dominated by renewable energy, new technology, and engaged consumers.[6] Battery storage, EV charging demand, demand response, rooftop and utility scale solar threaten to rapidly overtake traditional supply, but traditional planning approaches are ill-equipped to evaluate this new reality. Planning needs to be responsive to new reliability and flexibility needs; policy goals; new technology; customer preferences and sustainability goals; electrification; and the proliferation of distributed energy resources. *Id*. For example, electrification may DOUBLE total demand by 2050; planning processes must consider the impact of this new load on electric utilities and their customers. Similarly, instead of assuming that gas is the best option to replace retiring coal plants, modern planning should allow for portfolios of clean energy resources (solar, bulk storage and controllable demand) that, when combined, can offer the same energy, flexibility and capacity needs at less cost than gas. *Id*. The best way to ensure fair access for all resources to compete is to require all-source, competitive procurements for all new capacity investments, thus inviting innovation into utility plans to maximize savings for consumers.

Going forward, we encourage a conversation about how Florida can ensure it is well situated for next generation energy resource planning. We have provided a list of resources in an appendix that we hope will prove helpful to this end.

4. How does Florida stack up on clean energy investments?

According to the U.S. Energy Information Administration, solar is now the cheapest generating resource available to Florida utilities, but many utilities continue to treat it as a niche energy source. While solar energy is increasing across Florida over the next decade, the state has a lot of catching up to do, and a whole lot of runway to do it.

Today, Florida utilities have less solar (in terms of watts per customer) than peer Southeast utilities Duke Energy Progress, Dominion Energy SC, Duke Energy Carolinas and Georgia Power. FPL and Duke Energy Florida still fall below the Southeast average in terms of solar per customer.[7] For comparison, Duke Energy Progress in the Carolinas has 1,755 solar watts per customer; FPL has 265 and Duke Energy Florida only has 155. As an upside, it means that **utilities like Duke Power have demonstrated an ability to integrate and harness over**

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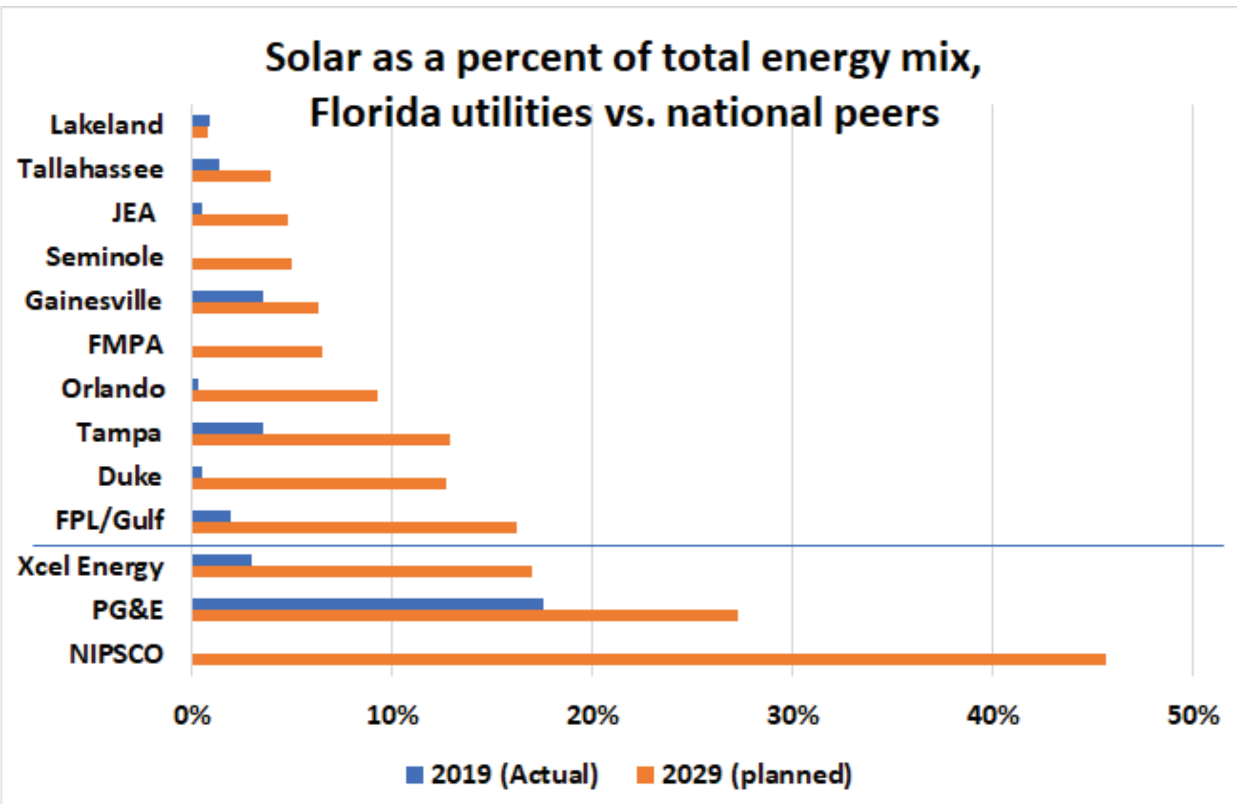
[6] The Brattle Group, *The Next Generation of Energy Resource Planning: Rethinking System Needs in a Future Dominated by Renewables, New Tech, and Engaged Customers* (2019), *available at* https://brattlefiles.blob.core.windows.net/files/16833_the_next_generation_of_energy_resource_planning.pdf.
[7] Southern Alliance for Clean Energy, *Solar in the Southeast Annual Report (2020), available at* https://cleanenergy.org/wp-content/uploads/Solar-in-the-Southeast-Report-2020.pdf.

ten times as much solar energy in the Carolinas as they have in Florida -- creating valuable lessons learned that will allow for smooth integration of renewables in our state.

As a benchmark, we believe that each utility should be aggressively moving towards **at least 30% renewable energy by 2030**. FPL, which plans for the highest percentage of renewable energy among Florida utilities in 2029 (16%), is only at about half of that goal. Peer utilities across the country, from Xcel and NIPSCO in the Midwest to PG&E in California, are voluntarily planning for renewable energy as a reliable and economic energy resource. States such as California, Hawaii, North Carolina and Arizona have navigated the integration of clean energy to date at significantly higher solar penetrations than Florida, and have demonstrated the predictable value that these resources add to the grid. These path-breaking states should give Florida regulators peace of mind that our state can confidently invest in significant amounts of renewable energy over the next decade -- much more than utilities are currently planning for.



Vote Solar also believes that <u>how</u> renewable energy is procured for customers matters, and the Florida legislature agrees. As part of their 10-year site plan filings, the Legislature requires utilities to provide information about <u>how</u> renewable energy is going to be procured (a requirement that it did not specify for traditional generating resources). *See* Section

186.801(2)(i), F.S. (the Commission "shall review…[t]he amount of renewable energy resources the utility plans to produce or purchase over the 10-year planning horizon and ***the means by which*** the production or purchases will be achieved.") (emphasis added).

Markets work -- and Florida utilities should be aggressively relying on market options to procure more affordable power, instead of solely relying on self-built capacity. Third-party developed and owned projects have shown themselves to be the most cost effective option for customers time again in competitive solicitations across the Southeast, including in nearby Georgia.[8] We encourage the Commission to question utilities' plans when they exclude consideration of market alternatives. Utilities' financial incentives should be aligned with customer value to maximize system benefits when renewables are being added to the grid.

5. Are Florida utilities preparing for a carbon-constrained world?

There is broad consensus among market analysts and large, sophisticated utilities that carbon regulation is a matter of when, not if. Building a future carbon price into planning protects customers from this eventuality, helping ensure that utilities are projecting reasonable future costs on carbon-heavy generation. Some Florida utilities (including FPL and Duke) incorporate a future carbon cost into their planning, but most of the municipal utilities do not, which likely biases their planning in favor of carbon-heavy resources. Florida regulators should scrutinize the impact of these flawed assumptions on municipal utilities' plans.

A good utility helps empower its customers so they can meet their clean energy goals and keep energy bills stable. Many Fortune 500 companies have established carbon reduction goals based on market trends and evolving investor expectations, and these corporations are looking to grow in states where clean energy options are readily available. Nearly 200 global corporations have committed to 100% renewable energy, including household names like Google, Ikea, Apple, Bank of America, Coca Cola, ebay, Facebook, GM, Microsoft, Target, and Walmart.[9]

Florida's forward-looking utilities are seriously exploring battery storage and clean energy options for customers, but Florida's smaller utilities are generally overlooking these "next gen" technology opportunities. We specifically commend utilities like FPL, OUC and Duke Energy Florida that are offering both robust rooftop net metering programs, while simultaneously creating solar subscription programs that expand access to solar power for those customers who are unable to go solar on their homes or businesses. These options make Florida a more attractive place to live and do business.

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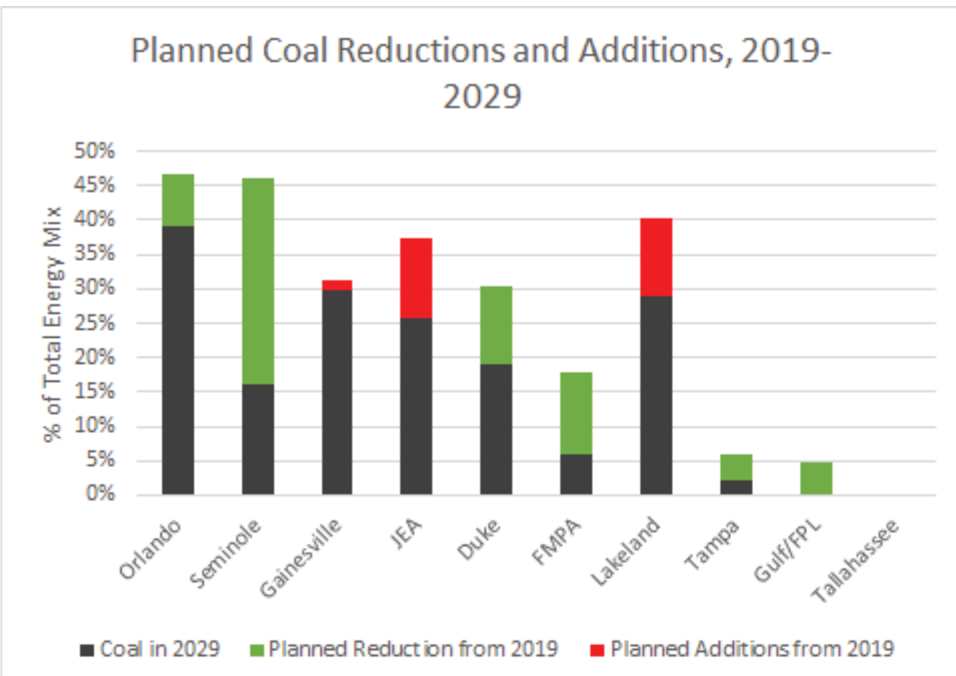
[8] *See, e.g.*, https://dailyenergyinsider.com/news/11265-georgia-power-awards-power-purchase-agreements-three-solar-projects/.
[9] https://www.there100.org/companies.

To date, the cost evaluation of energy storage has generally lacked sophistication (e.g., by not fully considering all sub-hourly capacity and ancillary services benefits) and failed to keep up with rapidly falling energy storage costs.[10] In March of 2019, FPL announced its plan to build the world's largest solar-powered battery in Manatee County, replacing two natural gas units and saving customers more than $100 million dollars.[11] Now that battery storage has been demonstrated to be cost effective in Florida, the Commission should question gas investments that are made by utilities whose planning lacks sophistication when it comes to analyzing storage -- their plans likely ignore cheaper, carbon-neutral capacity options that are now up for the taking.

Shifting in the wrong direction, some Florida utilities are actually *increasing* coal energy over the next decade -- a trend that is sharply at odds with the rest of the country.[12] JEA, GRU and Lakeland all anticipate significant increases in coal energy usage in the 2020s, a decision that they do not justify based on cost in their plans.



Vote Solar believes that utilities should be phasing out coal to less than 5% by 2030, in line with FPL and Tampa Electric's plans. Any <u>increase</u> in coal is extremely concerning given the market dynamics, not to mention the carbon and public health impacts of coal. We believe that a utility's decision to increase coal energy warrants rejection of these utilities' plans, and at

[10] https://energystorage.pnnl.gov/pdf/PNNL-28627.pdf
[11] http://newsroom.fpl.com/2019-03-28-FPL-announces-plan-to-build-the-worlds-largest-solar-powered-battery-and-drive-accelerated-retirement-of-fossil-fuel-generation
[12] https://www.eia.gov/outlooks/steo/report/coal.php.

the very least, we encourage the Florida Commission to question these utilities concerning how these plans can possibly be least cost compared to alternatives.

6. Are utilities protecting Florida's most vulnerable ratepayers?

The cheapest kilowatt-hour is the one that never gets used. Quite simply, that makes energy efficiency the cheapest energy source available to Florida's electric utilities. But according to the American Council for an Energy Efficient Economy (ACEEE), many Florida utilities rank far below their peers in terms of energy efficiency investments. The 2020 ACEEE Utility Energy Efficiency Scorecard reviews the efficiency investments of 52 utilities across the country. Of that list, TECO, Duke Energy Florida and FPL all rank in the bottom 8 utilities, with TECO at #46, DEF at #48 and FPL at #51 (ahead of only one utility - Alabama Power).[13] This lack of investment is also tied to Floridians having higher than average electricity bills than the national average.[14]

Energy efficiency investments matter now more than ever, as many Floridians are struggling to pay their electric bills due to the economic fallout from COVID. Consumer protection needs to be top priority right now during the coronavirus pandemic. Energy efficiency should be utilities' first investment before adding additional generation capacity, and utilities should be targeting **a minimum of 1% of annual energy savings**. Vote Solar also believes that utilities should be mobilizing energy saving programs to provide extra bill support and stability to customers who are in arrears on bills, in addition to halting all shut-offs through the end of hurricane season. We strongly support emergency bill relief programs for customers who are in arrears during this time, which should rely on a combination of arrearage management, bill forgiveness incentives for consistent repayment, and targeted efficiency programs.

We appreciate the Commission's attention to these important issues, and hope that these comments aid the Commission in its review of Florida utilities' long-term plans.

Sincerely,

Katie Chiles Ottenweller
Southeast Director
Vote Solar

Odette Mucha

[13] https://www.aceee.org/sites/default/files/pdfs/u2004%20rev_0.pdf
[14] https://www.eia.gov/todayinenergy/detail.php?id=34932

Regulatory Director, Southeast
Vote Solar

Tyler Fitch
Regulatory Manager, Southeast
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Attachments:

A: Utility Best Practice Planning Resource List

B: Vote Solar Report: *The Costs and Risks of Florida's Dependence on Natural Gas*

C: Summary of Vote Solar's 2020 Florida Utility Report Cards *(longer report forthcoming)*

Electric Utility Best Practice Planning Resource List

Brattle Group (2019), The Next Generation of Energy Resource Planning

RAP & Synapse (2013), Best Practices in Integrated Resource Planning

LBNL (2016), The Future of Electricity Resource Planning

NARUC electricity planning task force library of resources here

How Do Florida's Utilities Stack Up?

Report Cards for 10 of Florida's Largest Utility Providers Based on Each Utilities' 2020 10-Year Site Plans

VOTE SOLAR

Each year, Florida's biggest electric utilities file a report to the Florida Public Service Commission (PSC) outlining their plans for the next ten years. The plans, called the "10-Year Site Plans," outline how each utility plans to meet its forecasted energy demand over the next decade.

In most states, similar regulatory filings include a cost analysis of each decision, requiring utilities to justify their investments and follow a "least cost" path. Alternatives to expensive new power generation assets are considered, including energy efficiency and demand side management. And robust stakeholder input is considered. In Florida, utilities do not provide any cost or benefit analysis for new power plants. While the plans provide the public some visibility into their utility forecasts, the process does not consider stakeholder input, nor make it easy for Floridians to understand why utilities are making their decisions or how alternatives would fare. Vote Solar combed through hundreds of pages of 10-Year Site Plans to highlight key takeaways.

What Does the Future Hold?

At 70%, Florida's reliance on gas is among the very highest in the country today and twice the national average. Unfortunately, the plans filed by the state's largest utility providers show that we are poised to continue that reliance into the next decade. This pattern creates risks for the state and a missed opportunity for local economic development. Because Florida does not produce its own natural gas, it is required to purchase it from out-of-state sources. As a result, $1 out of every $4 spent by Floridians for electricity is shipped out of state to pay for gas imports.

Trends in Florida

Key trends across the Florida utilities include an over-reliance on natural gas and investment in solar over only the next few years. They generally show a lack of leadership on energy storage, electric vehicles, and energy efficiency, with some of the worst efficiency performance in the nation. While many of the utilities have wisely turned away from coal, others have not, with some planning to invest in even more coal, despite climate concerns and all market signs pointing to cheaper and less risky alternatives. Utilities that had investments in non-solar renewables, including hydropower, wind, biomass, etc. are turning away from these resources. It's a mixed bag on market competition, with some utilities taking advantage of competitive bidding to find the lowest cost generation options, while others reject competition out right.

Vote Solar combed through hundreds of pages of 10-Year Site Plans to highlight key takeaways. We've given each utility an overall letter grade of A - F, evaluating their plans in the following eight categories:

1. **Commitment to renewable energy and carbon pollution reduction -** Stated carbon reduction goals tar get at least a 30% reduction by 2030 (consistent with the goals of Duke, Southern Company and FPL parent companies), and move aggressively towards at least 30% renewable energy by 2030.

2. **Independence from fossil gas -** No more than 50% of energy mix from gas, for fuel diversity and mitigated fuel cost and supply risks. Over 50% gas, cease capital investments in new gas capacity and instead opt for cleaner, less risky sources.

3. **Freedom from uneconomic coal -** Phase out coal to less than 5% by 2030. Any increase in coal is extremely concerning given the market dynamics and climate and public health impacts.

4. **Consumer protection and affordability -** Energy efficiency is the cheapest resource and should be the first investment before adding new generation capacity, with a minimum of 1%-2% energy savings. Give top priority to consumer protection during the coronavirus pandemic. Halt all shut-offs for non-payment through the end of hurricane season, waive fees, and forgive arrearages.

5. **Cost reduction through market competition -** Markets work. Use market options to procure the most affordable power, instead of relying on self-built capacity.

6. **Customer choice and demand side options -** Empower customers so they can meet their clean energy goals and keep energy bills stable.

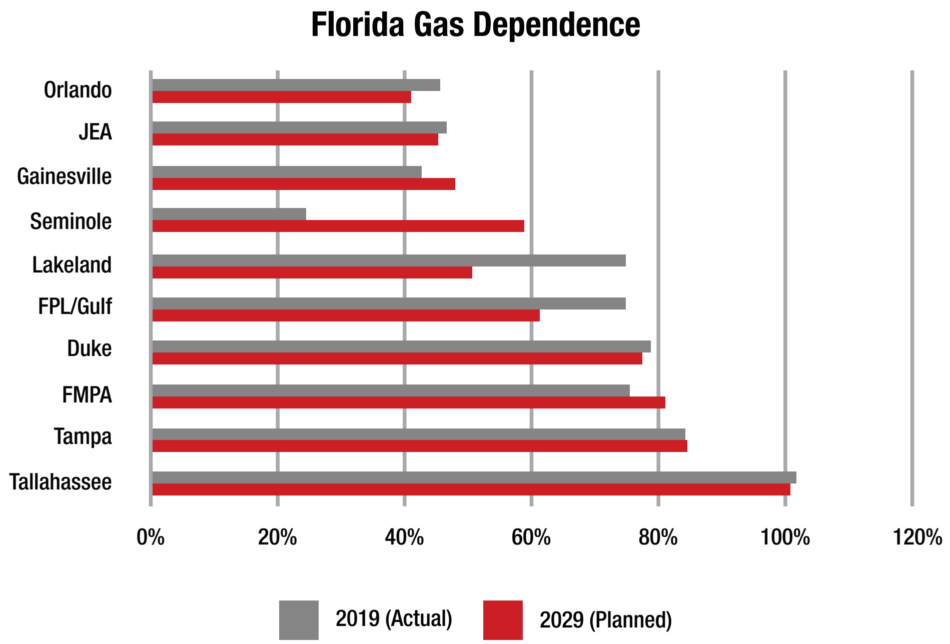
7. **Investment in resilient energy storage -** Resilient energy storage is vital to achieving high penetrations of solar on the grid. Gain knowledge around the value energy storage brings to customers and the grid.

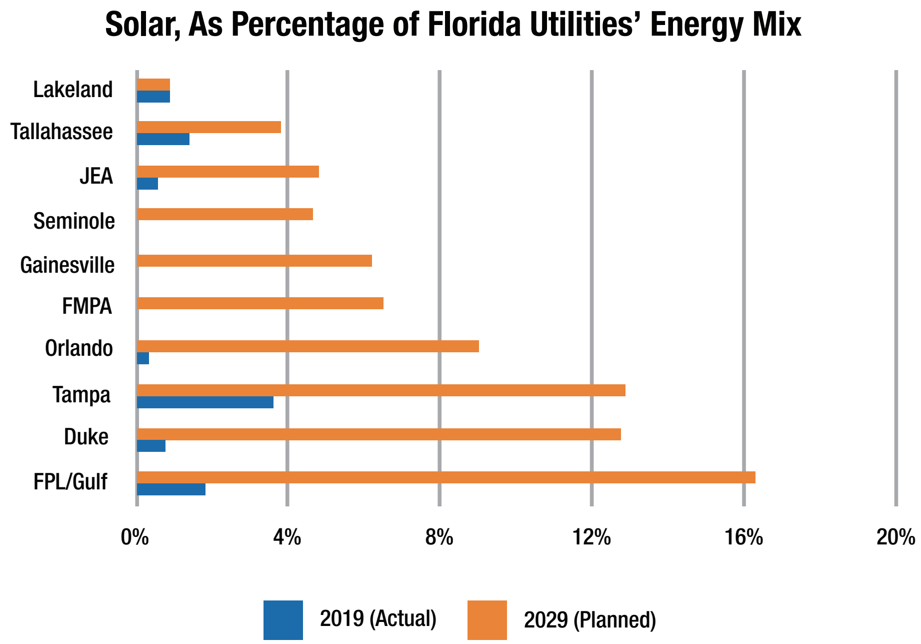
8. **Electric vehicle promotion -** Electric vehicles not only support the decarbonization of the economy but also are a natural area for increased electricity use. Prepare for the proliferation of EVs and support an efficient and competitive build out of charging infrastructure.

The grades are listed below with additional information on each utility in the following pages.

Utility Provider	Grade	Key Takeaway
Tampa Electric Company (TECO)	B+	Less coal, but not enough fuel diversity
Florida Power & Light (FPL)	B	Leading on solar, but still heavy on gas
Orlando Utilities Commission (OUC)	B-	Well done, but time for aging coal plants to retire
Duke Energy	B-	Making progress, but still too much gas
City of Tallahassee Utilities	C	Capital city could improve. The most reliant on gas
Gainesville Regional Utilities (GRU)	C-	Going the wrong direction: Come on Gators!
Seminole Electric Cooperative	D+	Should do better for Florida's co-ops
Florida Municipal Power Authority (FMPA)	D+	Not living up to potential to lead municipal utilities
JEA	D	Customers beware
Lakeland Electric	F	Doubling coal – 19th century style

The following charts show where each of Florida's 10 largest utility providers are in terms of gas, solar, and coal for electricity generation today and where they plan to be in 2029.





The clear result from these plans is that Florida is not nearly diversified enough when it comes to electricity generation. We invest far too much in volatile natural gas and not nearly enough in cost-effective solar. Moreover, while most utilities are moving drastically away from coal, a few increase their reliance on it.

THE COSTS & RISKS OF FLORIDA'S DEPENDENCE ON NATURAL GAS

Produced by Vote Solar

VOTE SOLAR

www.VoteSolar.org

July 2020

Solar farm in Tallahassee

SUMMARY

When it comes to energy independence, Florida continues to move backwards, heading in the opposite direction from most of the country. For the past three decades, the so-called Sunshine State has embraced not solar but natural gas as the resource of choice for generating electric power. Instead of fully embracing lowest cost solar investments, Florida currently plans to expand that gas generation capacity even more over the next decade. The end result is that Florida is increasingly reliant on a volatile fuel source that must be imported, increasing risks and raising costs for every Florida ratepayer.

For every **FOUR DOLLARS** that Floridians pay their electric companies,

at least **ONE** of those dollars **IMMEDIATELY LEAVES FLORIDA** to pay for out-of-state gas. Every year, those fuel payments add up to **$5 billion leaving the state's economy.**

Florida's reliance on gas is among the very highest in the country today, and new information and filings show that its utilities are poised to continue that reliance into the next decade. This pattern creates risks for the state and a missed opportunity for local economic development. Because Florida does not produce its own natural gas, it is required to purchase it from out-of-state sources. As a result, $1 out of every $4 spent by Floridians for electricity is shipped out of state to pay for gas imports.

- Florida's share of gas generation is among the top four in the country, and **its 70% reliance on gas is double the national average.**
- Since 1990, the vast majority of all installed capacity in Florida has been in gas plants.
- Each year, some $5 billion leave the Florida economy to pay for fuel.
- If natural gas prices increase in the future, Floridians will disproportionately bear the financial burden because of the state's heavy reliance on that fuel source.
- Florida captured only one-twentieth of its energy efficiency potential in 2017.[1]

$1 out of every $4
Floridians spend on electricity goes out of state to pay for gas imports.

Florida long resisted the most obvious energy source associated with the state — solar power. Clean and more affordable alternatives to gas, such as solar, are in the marketplace today. These low-risk alternatives are threatening to make today's natural gas investments obsolete, saddling consumers with burdensome and unnecessary costs. Now is the time for leadership to secure a more affordable energy future for Florida.

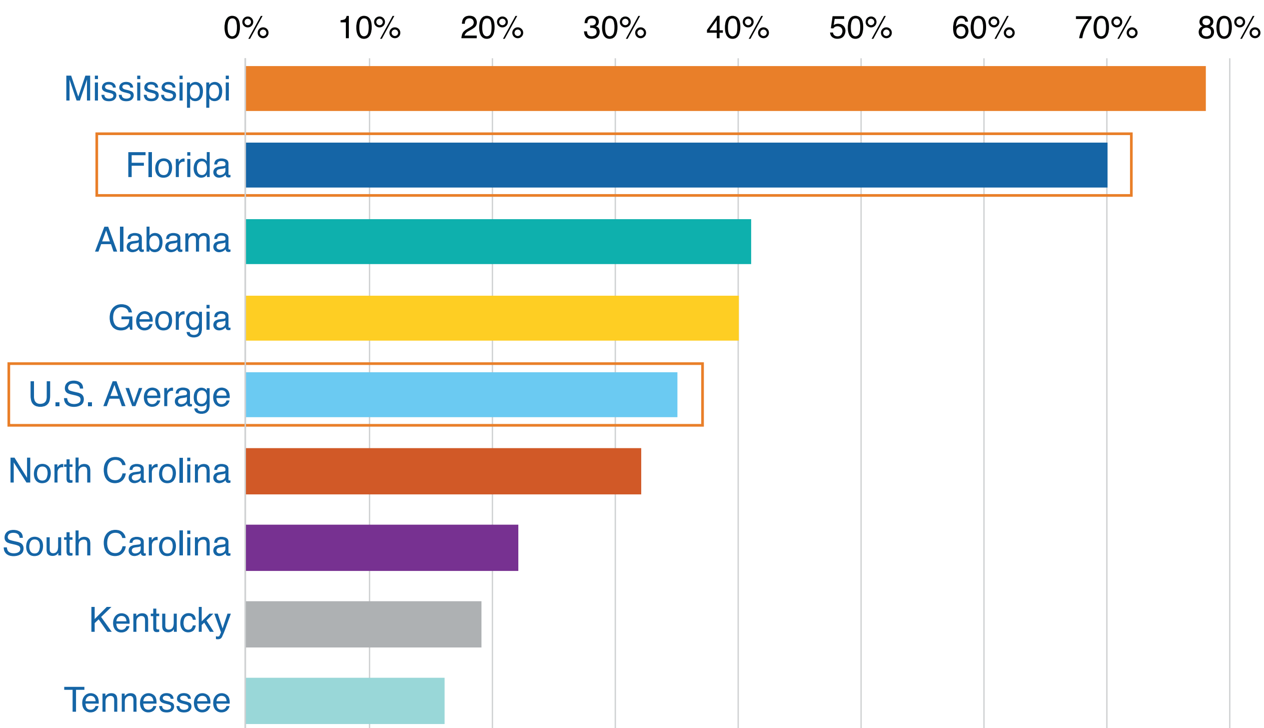
HOW DOES FLORIDA'S DEPENDENCE ON GAS COMPARE TO THE REST OF THE COUNTRY?

New natural gas pipelines being installed in Gilchrist County.

Florida's gas share is much larger than its peers in the Southeast. Fully 70% of Florida's electricity comes from burning gas, all of which must be piped in from out of state. Florida also stands out across the United States, which on average generates about 35% of its electricity from gas and has no single source of energy providing a majority of electricity.

Florida's share of gas generation is among the top four in the country, just behind Rhode Island, Delaware, and Mississippi. Yet as participants in larger energy markets, Rhode Island and Delaware have access to a broader energy mix than what they generate solely in-state, and as a result their overall supply of electricity comes from a mix that is less reliant on gas.

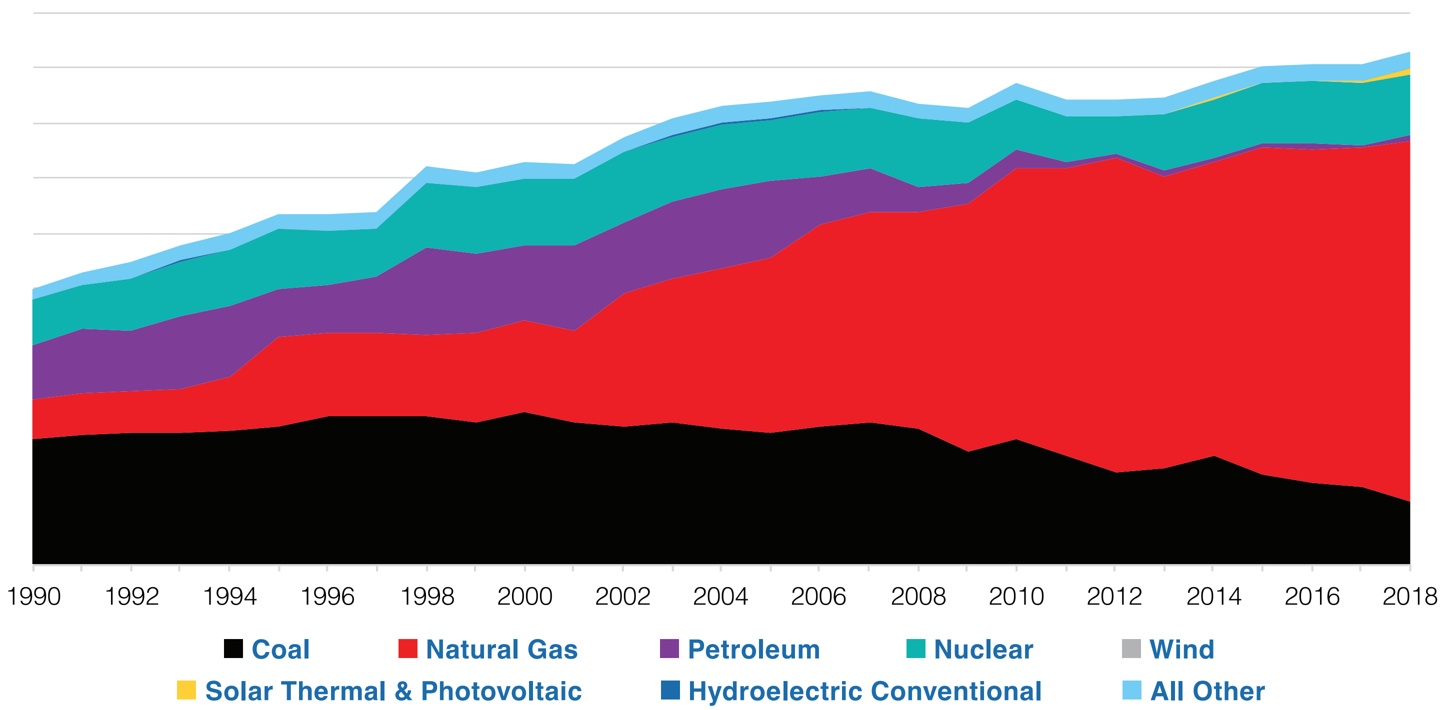
Southeast States – Gas as a Share of Electricity Generation, 2018



Source: Vote Solar analysis of 2019 U.S. Energy Information Administration Data

While Florida's reliance on coal and petroleum as fuel sources for electricity generation has significantly declined over the past several decades, those increasingly obsolete fuel sources have been replaced with volatile natural gas resources that now risk being priced out by emerging clean energy. Florida's reliance on natural gas is a relatively new phenomenon; just over a decade ago, the state derived less than half of its electricity from gas.

Florida's Total Electricity Generation Mix Since 1990, by Fuel

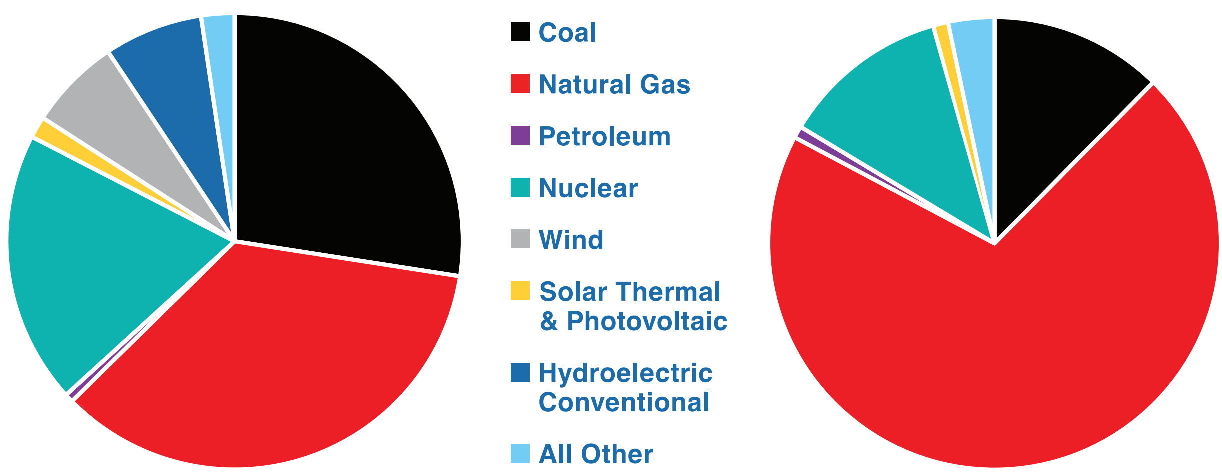


Source: Vote Solar analysis of 2019 U.S. Energy Information Administration Data

As shown in the pie charts below, while gas-fired generation plays a substantial role in electricity generation across the country, Florida's use is more drastic. The state now relies heavily on gas for electricity generation to serve its nearly 22 million residents.

Share of Generation, U.S. Total, 2018

Share of Generation, FL, 2018



Source: Vote Solar analysis of 2019 U.S. Energy Information Administration Data

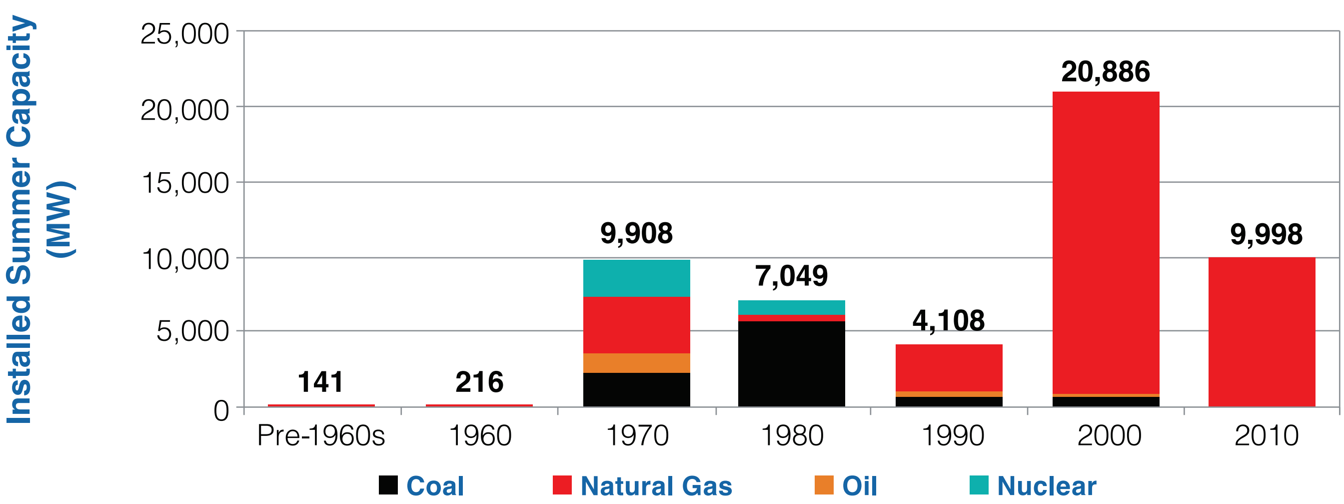
HOW DID WE GET HERE?

Big Bend Power Plant along the Manatee Viewing Center canal in Apollo Beach.

Each year, Florida's major utilities file proposals for meeting electricity needs over the next decade. These plans are evaluated by the Florida Public Service Commission (PSC), after which the PSC makes a determination as to whether each plan is suitable or unsuitable.[2] However, these plans may be amended at any time by utilities. Further, many natural gas investments — such as building a new gas combustion turbine — do not require advanced approval by the PSC prior to construction under Florida law. This dynamic gives utilities significant latitude over resource decisions.

Using this opaque process, Florida utilities have propelled Florida into this high-gas energy mix through a decade of overspending on gas generation. Since 1990, the vast majority of all installed capacity — over 33 GW of capacity — has been in gas plants.

State of Florida – Electric Utility Installed Capacity, by Decade



Source: FRCC 2019 Regional Load and Resource Plan

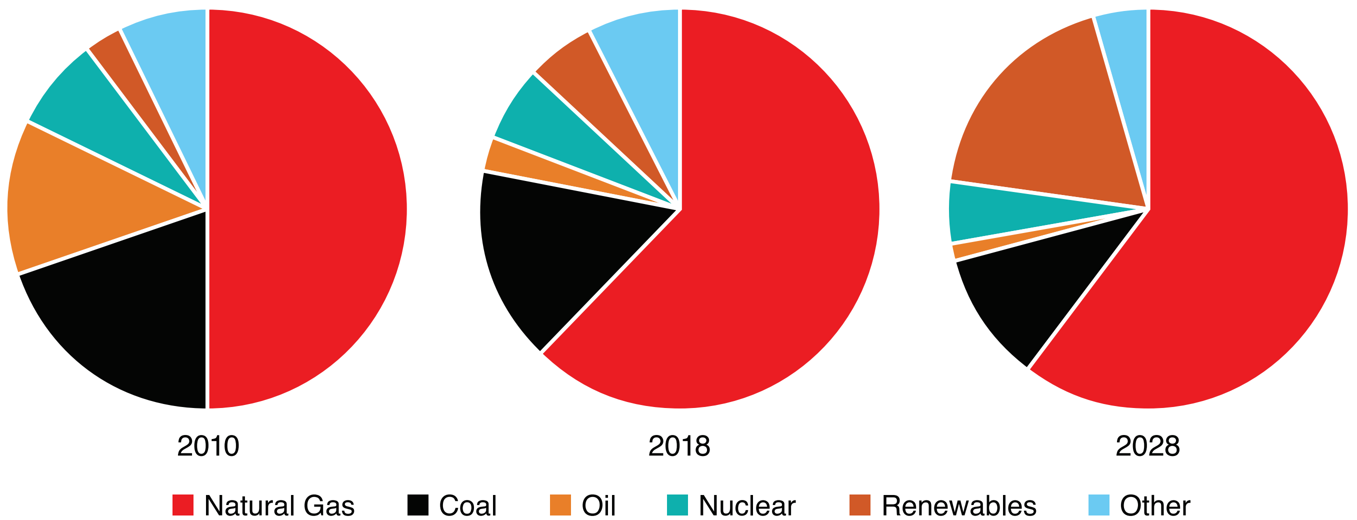
In its rapid turn toward gas generation, Florida has actually procured more resources than it needs to run the grid. A review by the National Energy Reliability Corporation found that Florida has 25% more generation capacity than it needs — almost double the recommended safety margin.[3] In fact, without adding any new capacity or counting energy imports, nuclear, or solar plus storage, Florida's fossil resources alone could serve peak summer loads through 2026. This oversupply of generation capacity means more equipment to maintain and higher costs for ratepayers.

WHAT'S ON TAP FOR THE NEXT 10 YEARS?

Florida Power & Light storage tanks sit along Manatee Lagoon in West Palm Beach at this natural gas plant. Photo taken May 2018.

Based on the most recently completed planning cycle, Florida plans to add several gigawatts of gas generation in this decade. Many of the projects being planned by major utilities are not subject to PSC pre-construction authorization.

Florida Historical, Current, and Projected Capacity, by Fuel Type



Source: U.S. Energy Information Administration Form 860, 2018.

The 2020 filings reveal more of the same from many Florida utilities, which will exacerbate consumers' exposure to gas risk over the next decade.[4] Upcoming projects include:

- FPL: Planning 600 MW of CC upgrades – *not subject to PSC pre-construction authorization*
- Gulf Power: Planning 938 MW of new combustion turbines – *not subject to PSC pre-construction authorization*
- Duke Energy: Total energy from gas to increase from 64.9% to 77.3% by 2029. They also plan to build 452 MW of new combustion turbines (*also not subject to PSC pre-construction authorization*)
- Tampa Electric Company (TECO): Total energy from gas to increase to 84.6% by 2029
- Florida Municipal Power Agency (FMPA): Total energy from gas to increase from 75.6% to 81.2% by 2029

FPL projects the cost of natural gas will almost double, increasing by 75% over the next decade from $2.42/MMBTU in 2020 to $4.25 in 2029.[5]

HOW DOES THIS IMPACT FLORIDA CONSUMERS?

NASA's first large-scale solar power generation facility at Kennedy Space Center. Image credit: NASA.

Florida utilities' over-reliance on gas is a gamble they are playing with Florida consumers' money. If gas prices increase, everyday Floridians will be on the hook for those payments. While natural gas prices are difficult to predict, at least one scenario from the U.S. Energy Information Administration would see gas double in price over the next ten years.[6] This would result in an extra $360 per year on every customer's electric bill.

Gas price shock is nothing new to Florida consumers. In 2006, in the wake of rising global prices compounded by supply disruptions caused by hurricanes in the Gulf of Mexico, the PSC approved a 19% bill increase for residential customers and a 30% to 41% bill increase for commercial and industrial customers of Florida Power & Light (FPL).[7] At that time, FPL's generation mix included only 37% natural gas — significantly less than it is today.

This Florida Power & Light power plant in Riviera Beach was demolished in 2011 and replaced with a natural gas plant.

If gas prices **double,** $ + $

Floridians could see their utility bills **increase by**

$360/year

In the past, electric utilities have turned to hedging their natural gas bet to mitigate this risk. But hedging brings its own hazards. Natural gas fuel contracts entered into by Florida's utilities lost consumers almost $7 billion between 2002 and 2016. Although the PSC imposed a moratorium on hedging in 2017, new hedging methods lost another $3.6 million in 2019 alone.

Adding to these risks, utilities now run a new risk of saddling consumers with stranded costs by building even more gas in an environment of cheaper, more reliable solar power and battery storage. Policymakers should carefully weigh these risks in assessing the prudence of continued investments of ratepayer funds in gas.

WHAT CAN FLORIDA DO ABOUT ITS DEPENDENCE ON GAS?

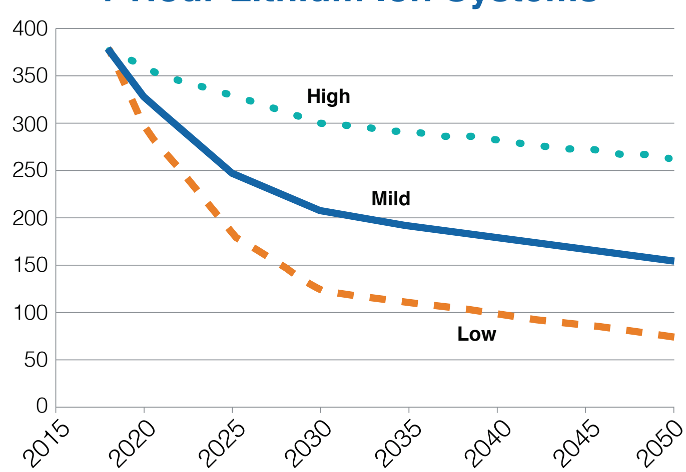
The cost of battery storage on large-scale solar projects continues to decrease.

Experts and advocates, from IHS Markit to the Edison Electric Institute, agree: The best way to mitigate risk is to minimize exposure through a diversity of fuels and technologies. Investing in a variety of resources will reduce Florida's overall exposure to any price fluctuation.

Fortunately, by combining clean energy resources, utilities can tap into cheaper, more flexible options for meeting future energy needs, while simultaneously diversifying Florida's energy mix. Battery storage promises to boost the efficiency and effectiveness of renewable energy sources, and is seeing significant price declines. This decline is projected to continue and makes solar plus storage opportunities even more attractive.[8]

- **According to the U.S. Energy Information Administration, solar power is now the cheapest generating resource available to Florida.[9] While Florida utilities' investments in solar power are growing, Florida drew just 2% of its electricity from solar in 2019.[10]**
- Solar is an even better investment in combination with other clean energy resources. An analysis by the Rocky Mountain Institute recently found that clean energy portfolios (a combination of solar, battery storage, and demand-side resources) can now provide the same services at lower cost than new gas-fired power plants.[11] **Clean energy portfolios can satisfy the same energy needs as four proposed natural gas plants in Florida — and save customers $1.1 billion along the way.**[12] As clean energy prices continue to decline, the potential for savings will only grow.
- The cost of battery storage has plummeted in recent years, and Florida is beginning to take notice. While Florida has only about 10 MW of storage installed, there is over 430 MW of such storage being planned for future implementation across the state.
- Unfortunately, Florida customers are missing out on savings from energy efficiency programs. Investor-owned utilities in Florida saved on average only about 0.22% of retail sales in 2015 through their efficiency programs.[13] And despite the fact that Florida's cost-effective energy efficiency potential is among the highest in the country,[14] the state captured only one-twentieth of its efficiency potential in 2017.[15]

Battery Cost Projections for 4-Hour Lithium Ion Systems



4-Hour Battery System Capital Cost (2018$/kWh)

Source: National Renewable Energy Laboratory, Cost Projections for Utility-Scale Battery Storage, June 2019.


Solar farm in Columbia County, FL.

CONCLUSION

Florida's reliance on gas is among the very highest in the country — and the state is poised to continue that reliance into the 2020s, creating significant risks for the state and a missed opportunity for local economic development. Cleaner and more affordable alternatives are available in the marketplace, offering a less risky path forward for Florida's electric utilities and ratepayers.

Florida needs strong leadership to promote investment in largely untapped clean energy resources like solar, battery storage, and energy efficiency that will keep Floridians' dollars in state, create local jobs, and power a clean, resilient future.

REFERENCES

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[4] Florida utilities' 2020 Ten-Year Site Plans

[5] 2020 FPL Ten-Year Site Plan - Discovery Response

[6] U.S. Energy Information Administration 2020 Annual Energy Outlook

[7] Florida PSC Approves FPL's Fuel Cost Adjustment for 2006 Bills, Reflecting Volatile Global Fuel Costs, Hurricane Impacts in the Gulf. https://www.tdworld.com/overhead-distribution/article/20962115/florida-psc-approves-fpls-fuel-cost-adjustment-for-2006-bills-reflecting-volatile-global-fuel-costs-hurricane-impacts-in-the-gulf

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[10] Solar Energy Industry Association: Florida Solar through Q1 2020. https://www.seia.org/state-solar-policy/florida-solar.

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[15] American Council for an Energy-Efficient Economy (2018). State Energy Efficiency Scorecard Spending & Savings Table. Retrieved at: https://database.aceee.org/sites/default/files/docs/spending-savings-tables.pdf.

Re: Vote Solar comments on electric utilities' 2020 10-year site plans

Katie Chiles Ottenweller [katie@votesolar.org] **Sent:** Friday, August 07, 2020 9:58 AM
To: Doug Wright
Cc: Damian Kistner

Attachments: How Do Florida's Utilities~1.pdf (2 MB)

Doug,

Here is the supplement to our TYSP comments filed last week - let me know if you have any questions.

Best, Katie

Katie Chiles Ottenweller | Southeast Director katie@votesolar.org | 706.224.8017

Vote Solar

Atlanta, Georgia

votesolar.org

How Do Florida's Utilities Stack Up?

Report Cards for 10 of Florida's Largest Utility Providers Based on Each Utilities' 2020 10-Year Site Plans

VOTE SOLAR

Each year, Florida's biggest electric utilities file a report to the Florida Public Service Commission (PSC) outlining their plans for the next ten years. The plans, called the "10-Year Site Plans," outline how each utility plans to meet its forecasted energy demand over the next decade.

In most states, similar regulatory filings include a cost analysis of each decision, requiring utilities to justify their investments and follow a "least cost" path. Alternatives to expensive new power generation assets are considered, including energy efficiency and demand side management. And robust stakeholder input is considered. In Florida, utilities do not provide any cost or benefit analysis for new power plants. While the plans provide the public some visibility into their utility forecasts, the process does not consider stakeholder input, nor make it easy for Floridians to understand why utilities are making their decisions or how alternatives would fare. Vote Solar combed through hundreds of pages of 10-Year Site Plans to highlight key takeaways.

What Does the Future Hold?

At 70%, Florida's reliance on gas is among the very highest in the country today and twice the national average. Unfortunately, the plans filed by the state's largest utility providers show that we are poised to continue that reliance into the next decade. This pattern creates risks for the state and a missed opportunity for local economic development. Because Florida does not produce its own natural gas, it is required to purchase it from out-of-state sources. As a result, $1 out of every $4 spent by Floridians for electricity is shipped out of state to pay for gas imports.

Trends in Florida

Key trends across the Florida utilities include an over-reliance on natural gas and investment in solar over only the next few years. They generally show a lack of leadership on energy storage, electric vehicles, and energy efficiency, with some of the worst efficiency performance in the nation. While many of the utilities have wisely turned away from coal, others have not, with some planning to invest in even more coal, despite climate concerns and all market signs pointing to cheaper and less risky alternatives. Utilities that had investments in non-solar renewables, including hydropower, wind, biomass, etc. are turning away from these resources. It's a mixed bag on market competition, with some utilities taking advantage of competitive bidding to find the lowest cost generation options, while others reject competition out right.

Overall, Florida utilities are (1) over-reliant on natural gas, (2) making good strides on solar, but only over the next few years, and (3) failing on energy efficiency.

Vote Solar combed through hundreds of pages of 10-Year Site Plans to highlight key takeaways. We've given each utility an overall letter grade of A - F, evaluating their plans in the following eight categories:

1. **Commitment to renewable energy and carbon pollution reduction -** Stated carbon reduction goals target at least a 30% reduction by 2030 (consistent with the goals of Duke, Southern Company and FPL parent companies), and move aggressively towards at least 30% renewable energy by 2030.

2. **Independence from fossil gas -** No more than 50% of energy mix from gas, for fuel diversity and mitigated fuel cost and supply risks. Over 50% gas, cease capital investments in new gas capacity and instead opt for cleaner, less risky sources.

3. **Freedom from uneconomic coal -** Phase out coal to less than 5% by 2030. Any increase in coal is extremely concerning given the market dynamics and climate and public health impacts.

4. **Consumer protection and affordability -** Energy efficiency is the cheapest resource and should be the first investment before adding new generation capacity, with a minimum of 1%-2% energy savings. Give top priority to consumer protection during the coronavirus pandemic. Halt all shut-offs for non-payment through the end of hurricane season, waive fees, and forgive arrearages.

5. **Cost reduction through market competition -** Markets work. Use market options to procure the most affordable power, instead of relying on self-built capacity.

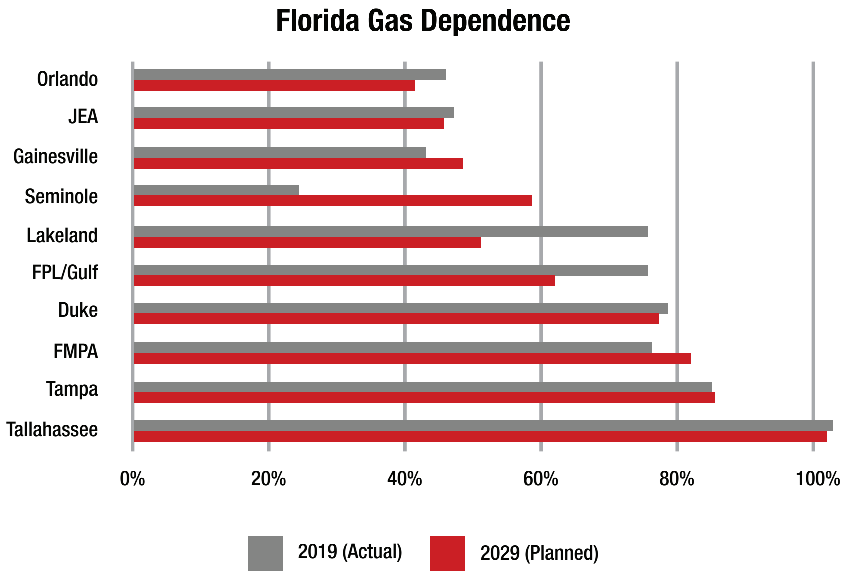
6. **Customer choice and demand side options -** Empower customers so they can meet their clean energy goals and keep energy bills stable.

7. **Investment in resilient energy storage -** Resilient energy storage is vital to achieving high penetrations of solar on the grid. Gain knowledge around the value energy storage brings to customers and the grid.

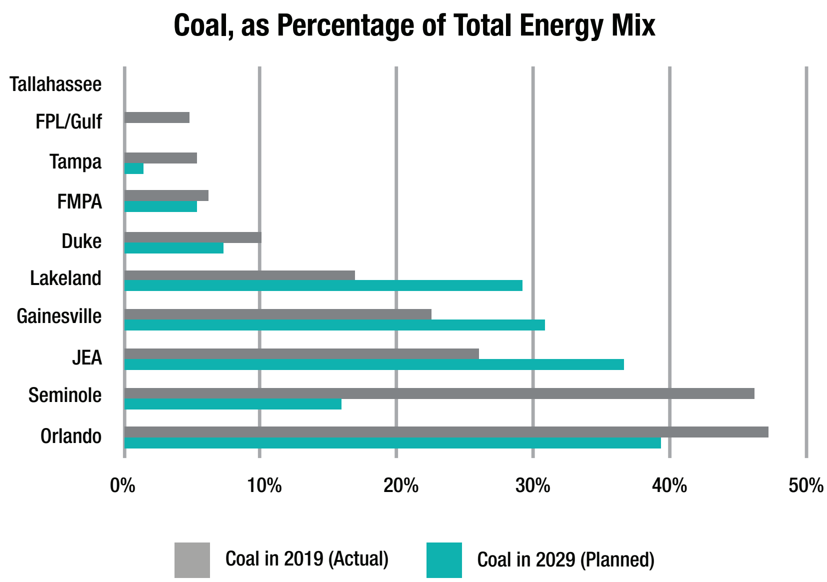
8. **Electric vehicle promotion -** Electric vehicles not only support the decarbonization of the economy but also are a natural area for increased electricity use. Prepare for the proliferation of EVs and support an efficient and competitive build out of charging infrastructure.

The grades are listed below with additional information on each utility in the following pages.

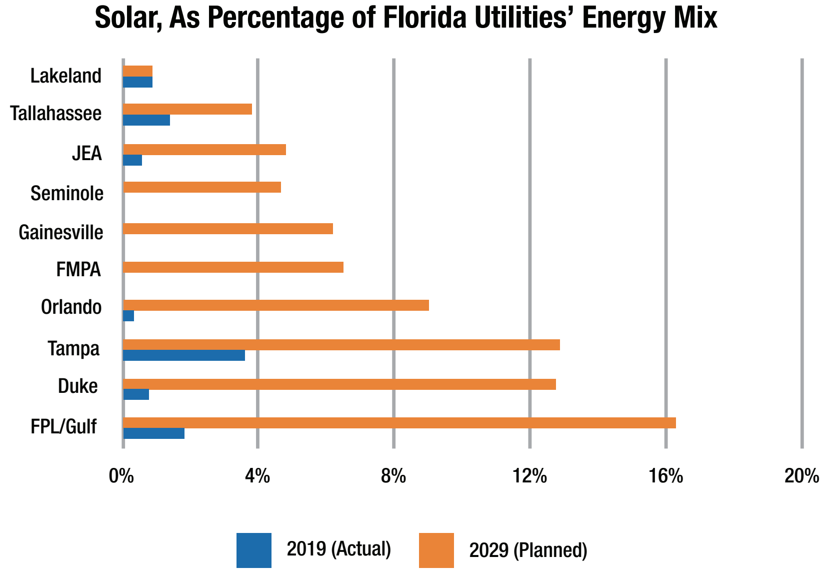
Utility Provider	Grade	Key Takeaway
Tampa Electric Company (TECO)	B+	Less coal, but not enough fuel diversity
Florida Power & Light (FPL)	B	Leading on solar, but still heavy on gas
Orlando Utilities Commission (OUC)	B-	Well done, but time for aging coal plants to retire
Duke Energy	B-	Making progress, but still too much gas
City of Tallahassee Utilities	C	Capital city could improve. The most reliant on gas
Gainesville Regional Utilities (GRU)	C-	Going the wrong direction: Come on Gators!
Seminole Electric Cooperative	D+	Should do better for Florida's co-ops
Florida Municipal Power Authority (FMPA)	D+	Not living up to potential to lead municipal utilities
JEA	D	Customers beware
Lakeland Electric	F	Doubling coal – 19th century style



The following charts show where each of Florida's 10 largest utility providers are in terms of gas, solar, and coal for electricity generation today and where they plan to be in 2029.



"Fuel diversity helps to protect electric companies and their customers from contingencies such as fuel unavailability, fuel price fluctuations, and changes in regulatory practices that can drive up the cost of a particular fuel. Fuel diversity also helps to ensure stability and reliability in electricity supply and strengthens national security."
-Edison Electric Institute



The clear result from these plans is that Florida is not nearly diversified enough when it comes to electricity generation. We invest far too much in volatile natural gas and not nearly enough in cost-effective solar. Moreover, while most utilities are moving drastically away from coal, a few increase their reliance on it.

FLORIDA POWER & LIGHT

GRADE: B

Florida Power & Light (FPL) is Florida's largest utility with over 5 million customers. FPL is merging with Gulf Power, making it into a behemoth, eclipsing the next biggest utility in the state (Duke) planning to produce nearly three times more energy in 2029. FPL receives an overall grade of B, bolstered by its plan to nearly eliminate coal-powered energy and install more solar than the rest of the utilities in this report. FPL loses points for stifling market competition for solar development and continuing to invest in new gas assets, despite its own predictions of increasing gas prices.

Renewable Energy and GHG Reductions: Parent company NextEra has set a goal to reduce its carbon emissions rate by 67% by 2025, from a 2005 baseline, but was recently graded F by the Carbon Disclosure Project. FPL includes a carbon compliance cost in planning, beginning in 2026. FPL plans to build 8,860 MW of new solar, and reach 16% renewable energy by 2030, which puts FPL at the head of the class in Florida. However, FPL remains below its peer utilities around the country, including PG&E with a 2030 target of 60% renewables and APS with a 2030 target of 45% renewables. This new solar is part of FPL's '30 x 30' announcement to add 30 million solar panels to its service territory by 2030. But this year's plan appears to backslide on that commitment by spreading some of the planned solar into Gulf's service territory post-merger.

Gas Over-dependence: FPL plans on investing heavily in gas infrastructure, despite its own prediction that gas prices will nearly double from $2.42 in 2020 to $4.25 in 2029. FPL plans to develop nearly 2 GW of new gas capacity at a possible cost of $1.7 billion dollars, including upgrading combined cycle (CC) units, converting coal plants to gas, and building 4 new combustion turbine (CT) gas plants. Unfortunately for Florida consumers, CC upgrades, conversions from coal units to gas, and new CTs do not require Commission approval or review prior to construction. All this despite FPL's parent company, NextEra stating that gas investments are increasingly uneconomic compared to solar and battery storage. Jim Robo, CEO of NextEra Energy, has described solar as being "very, very competitive" compared to gas-fired generation, and notes "a significant opportunity in almost every part of the country where batteries are now more economic than gas-fired peakers, even at today's natural-gas prices."

Uneconomic Coal: FPL significantly reduces its use of coal to near 0% by the end of the decade. It plans on the early retirement of 4 uneconomic coal units (about 1500 MW total by 2024).

Consumer Protection and Affordability: FPL's SolarTogether program has the largest carveout for low-income customers in the U.S., giving vulnerable households access to solar savings. However, FPL is far behind other Florida utilities in delivering energy-saving efficiency programs to its most vulnerable customers. In fact, ACEEE ranks FPL as second to worst of the nation's top 52 utilities on energy efficiency. In response to the COVID-19 pandemic, FPL has suspended disconnections through July and is waiving late fees and offering additional consumer payment plan options. But, it may be reverting back to normal disconnection operations at the end of July — despite a resurgence of cases and unemployment claims in mid-July.

Market Competition: All of FPL's solar sites are self-built, which shortchanges opportunities for solar market development or for lower-cost third party owned systems. Unlike many of its peers in Florida, FPL has no planned renewable energy power purchase agreements (PPAs) over the next decade.

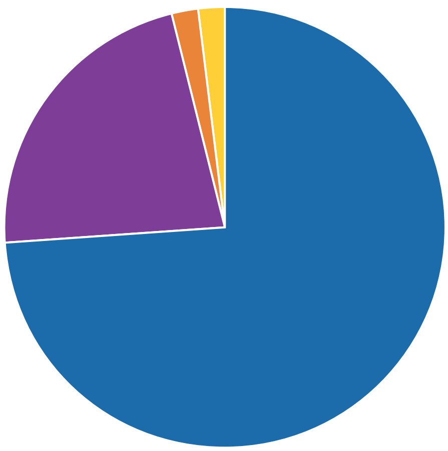
Customer Choice: FPL has nearly 17,000 rooftop solar net metering customers in its territory, and recently launched the largest utility-sponsored community solar program in the country; but customer demand for solar energy still outstrips supply.

Investment in Resilient Storage: FPL has made a strong start on storage, with 469 MW under development now in FPL territory. The company also plans for 700 MW of new battery storage but not until 2028 and 2029, in Gulf territory. The company can improve upon incentivizing solar+storage and microgrid capabilities for customers who need it.

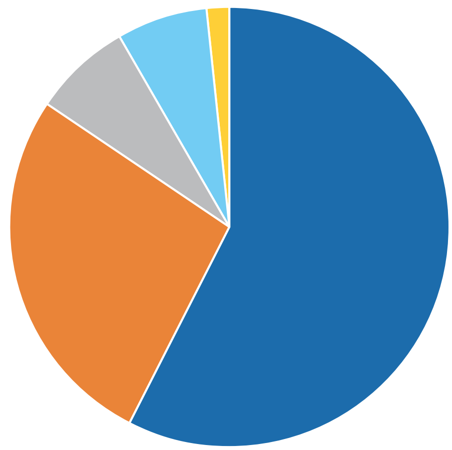
Electric Vehicle Promotion: FPL includes EV growth projections in its energy forecasts, and Gulf has two specially designed rates for residential customers with EVs. FPL is evaluating similar programs or tariffs for PEVs, and has the FPL Evolution pilot, which will install more than 1,000 EV chargers across the state.

Jim Robo, CEO of NextEra Energy, has described solar as being “very, very competitive” compared to gas-fired generation, and notes “a significant opportunity in almost every part of the country where batteries are now more economic than gas-fired peakers, even at today’s natural-gas prices.”

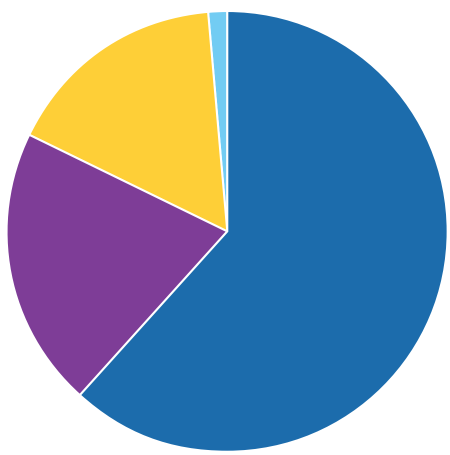
FPL Energy Mix, 2019 (Actual)



Gulf Energy Mix, 2019 (Actual)



FPL/Gulf Energy Mix, 2029 (Planned)



DUKE ENERGY

GRADE: **B-**

Duke Energy Florida (DEF) serves 1.8 million customers in North and Central Florida. DEF receives an overall grade of B- for reducing its dependence on coal, increasing solar to 13% by 2029, offering community solar options, and promoting electric vehicles and energy storage. DEF is still behind the curve on reducing gas reliance and has only lackluster energy efficiency offerings.

Renewable Energy and GHG Reductions: Duke makes good strides increasing solar from 0.5% of its total energy mix in 2019 to 12.7% in 2029. The company has set a nonbinding carbon reduction goal, and uses a carbon compliance cost in its planning starting in 2025.

Gas Over-dependence: Duke relies too heavily on gas, not doing enough to reduce its customers' vulnerability to fuel price risk and stranded assets. Duke's gas reliance hovers between 76-79% over the ten year reporting period. Duke is doubling down on big gas infrastructure, adding 452 MW of new gas (investments that are not subject to pre-construction approval by the PSC).

Uneconomic Coal: Duke shifts away from coal over the ten year planning period, going from 9.7% coal energy in 2019 to 7.7% in 2029 — but still remains higher than the other Florida IOUs and not quite reaching the 5% or less mark.

Consumer Protection and Affordability: Duke has set aside a robust low-to-moderate income carveout in its community solar proposal that matches the percentage of its low-to-moderate income customers (27%), which we see as a new best practice. It proposed deep efficiency savings for low income customers, but is still only reaching a small portion of its neediest customers. Duke's energy efficiency performance is very poor compared to peers nationwide achieving only 0.16% savings as percent of sales. In response to COVID-19, DEF instituted an open-ended disconnection grace period that will continue to protect customers through August, but there is little certainty about when protections will lapse.

Market Competition: There are nearly 6 GW of solar in Duke's interconnection queue, with over 80 active projects being developed. Duke estimates that it will buy 675 MW of independently owned solar over the next decade. That said, qualifying facility purchases fall from 4.1% in 2019 to 0% in 2029. As a sign of progress, Duke has committed to competitively solicit solar projects for its proposed Clean Energy Connect program, including some third party developed projects.

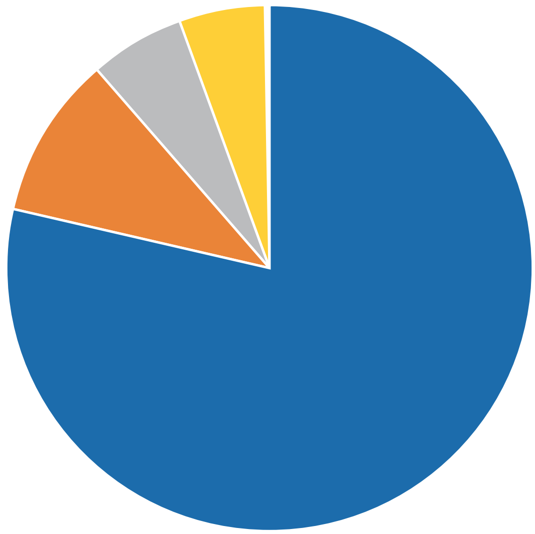
Customer Choice: Duke Energy Florida's service territory has an active rooftop solar market, and Duke anticipates total production to continue to grow. In fact, Duke has the highest percentage of NEM customers of all the utilities reviewed in this report, at 1.3 percent. It has also followed FPL's lead and has a large community solar program in the works with strong access provisions for low-income customers.

Investment in Resilient Storage: Duke is falling behind peer utility FPL in terms of grid-scale storage investments. But, it is leading on microgrids with its recent commitment to study solar and storage projects on critical emergency facilities for back-up power. Duke has a microgrid energy storage pilot underway with the University of South Florida, and is planning a 50 MW storage pilot for early 2021.

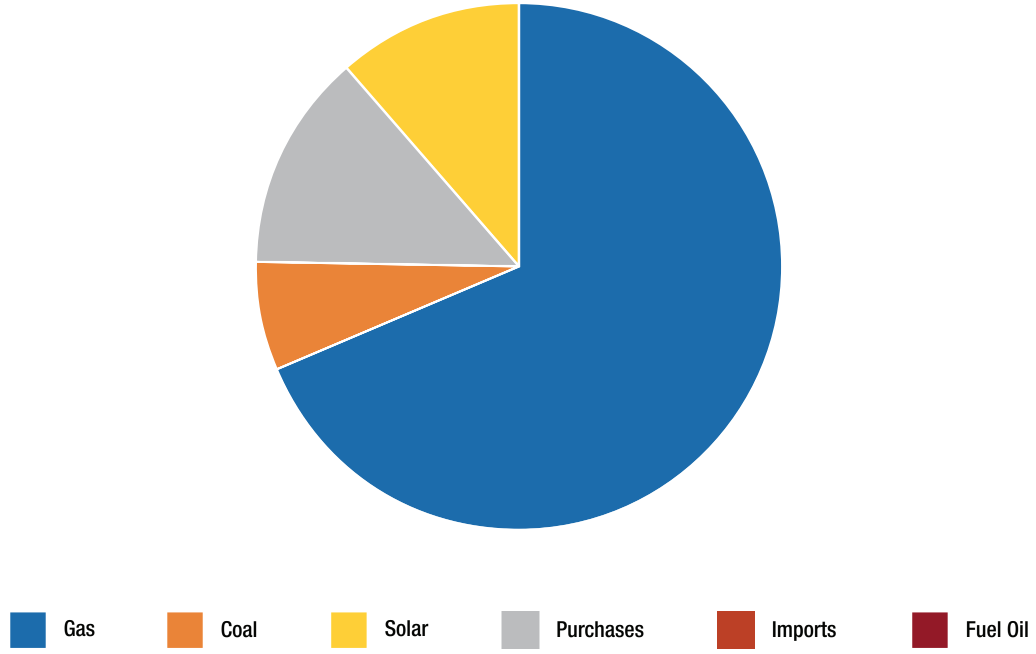
Electric Vehicle Promotion: Duke includes projections of EV adoption in its load forecasting. It is also conducting a three year $400,000 pilot on EV education and awareness, and data collection.

Duke's energy efficiency performance is very poor compared to peers nationwide, achieving only 0.16% savings as percent of sales.

Duke Energy Mix, 2019 (Actual)



Duke Energy Mix, 2029 (Planned)



TAMPA ELECTRIC COMPANY (TECO)

GRADE: B+

Tampa Electric (TECO) is an investor owned utility with over 770,000 customers in the Tampa region. TECO earns a B+ with the highest percentage of solar installed in 2019. It also increases its solar to 13% in 2029, scales back on coal, and offers community solar options and an energy storage pilot. It is very reliant on gas and faces risks of increased fuel costs over the next ten years.

Renewable Energy and GHG Reductions: TECO more than triples its solar energy production from 756 GWh in 2019 to a peak of 2,964 GWh (or 14% of its energy mix) in 2024. That said, it does not plan to continue investing in additional solar after 2024.

Gas Over-dependence: TECO is very heavily dependent on natural gas, a resource that it admits is subject to price volatility and supply risks. The company's gas dependence only gets worse over the next ten years, going from over 17,000 GWh of gas in 2019 to almost 19,000 GWh in 2029. TECO plans to spend ratepayer dollars on gas infrastructure, including making improvements to seven combustion turbine plants over the decade. The utility is retiring 891 MW of natural gas capacity at the Big Bend facility, a natural opportunity to diversify its energy mix. But, instead of investing in new renewable energy, it plans to build even more new gas capacity — 1542 MW.

Uneconomic Coal: TECO made good progress between 2018 and 2019 cutting its coal-based energy output in more than half from 2,982 GWh (or 14% of its total energy mix) to 1,214 GWh (or 6% of total energy mix). Coal continues to decline to around 2% of TECO's energy mix in the years 2023-2029.

Consumer Protection and Affordability: TECO's energy efficiency programs are better than most Florida utilities, and it plans to reach nearly a quarter of its low income customers with energy saving programs over the next decade. TECO has voluntarily suspended disconnections through the end of August, offers 12 month repayment plans, and has donated $1 million to the Salvation energy bill support program. Unfortunately, that is unlikely to address the growing problem of energy debt. TECO can do more to support its neediest customers during this time of crisis including arrearage forgiveness and expanded energy efficiency programs to lower customer bills.

Market Competition: TECO states it "will continue to assess competitive purchase power agreements and DSM programs that may replace or delay the scheduled [new natural gas] units. Such optimizations must achieve the overall objective of providing reliable power in a cost-effective manner." Yet TECO decreases its use of purchased energy from 6.3% in 2019 to less than 1% of its total energy mix by 2029.

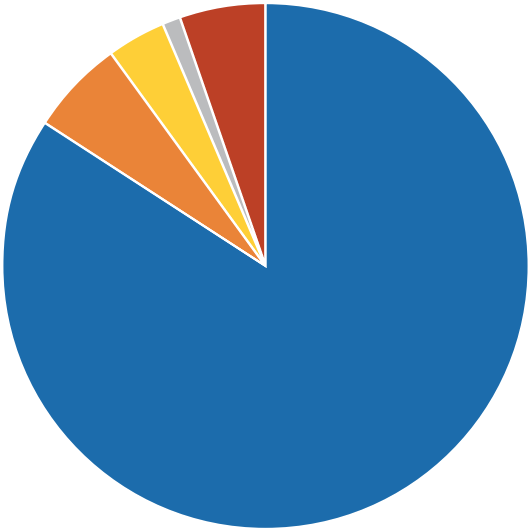
Customer Choice: TECO offers a robust solar net metering program to its rooftop solar customers, and also launched a 17.5 MW shared solar program called SunSelect in 2019, with plans to add additional solar capacity to meet the large demand from customers. It has also run a solar power purchase program called the Sun to Go program for 13 years.

Investment in Resilient Storage: TECO points to the value that storage can bring to the grid, and has proposed a pilot program to study the interactions of a fully integrated renewable energy system that contains solar, batteries, car charging and industrial truck charging, which will inform demand response programming and storage options for C&I customers. It is also gaining experience with solar + 13MW battery for energy arbitrage and peak shaving at the Big Bend facility. It plans to add 220MW of distributed battery storage capacity this decade.

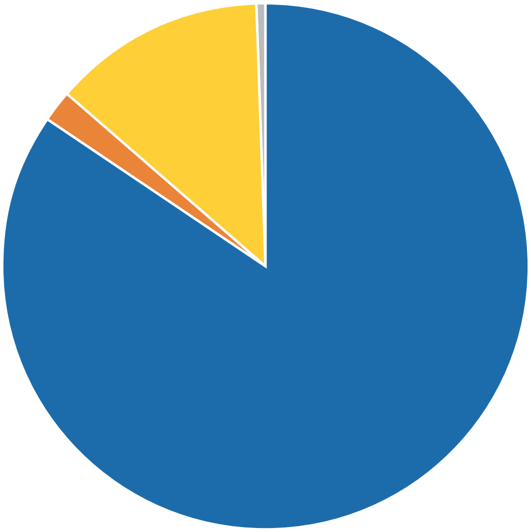
Electric Vehicle Promotion: TECO included EV loads into its forecasts, and is participating in an R&D project. But, it does not currently offer any incentives for EV deployment.

Placing energy storage closer to the load can improve customer resiliency, effectively shave the peak, and defer or avoid transmission and/or distribution system upgrades.

TECO Energy Mix, 2019 (Actual)



TECO Energy Mix, 2029 (Planned)



SEMINOLE ELECTRIC COOPERATIVE

GRADE: D+

Seminole Electric Cooperative is a not-for-profit generation and transmission utility that serves nine distribution cooperative utilities. Seminole is not a customer-facing company, but provides power to its member companies which represent approximately 800,000 customers in 42 of Florida's 67 counties. The information provided below is therefore a proxy for the combined generation mix of those 9 utilities, which do not file their own TYSPs. Seminole receives a grade of D+ because it increases its reliance on gas by investing in 3 new gas plants, and plans to maintain only a small amount of renewables (4%). On the positive side, it reduces its coal use and relies on a competitive process for its power purchases.

Renewable Energy and GHG Reductions: Seminole has no utility-owned renewable energy generation now or planned for the future. That said, it increases its purchased renewable energy slightly from 610 GWh in 2019 to 768 GWh in 2029. It expands solar purchases from 0% to a total of 4.5% of energy sources in 2029, but at the same time, plans to eliminate nearly 600 GWh (4.1% of its energy mix) from other renewable energy sources, including municipal solid waste, biomass, and landfill gas, making its clean energy commitment essentially flat.

Gas Over-dependence: Seminole is significantly ramping up its reliance on natural gas from 25% in 2019 to 60% in 2029 despite it stating that fuel diversity has "significant strategic value."

Uneconomic Coal: Seminole decreases its reliance on coal, going from nearly half of its energy sources powered by coal (46%), down to 16% in 2029. However, it is not reaching the 5% or less target by 2030 that would be prudent given the costs and risks associated with coal.

Consumer Protection and Affordability: Seminole's members are currently implementing a smart thermostat demand response pilot program to evaluate the cost effectiveness of a potential larger scale program. However, they appear to be backsliding as the residential peak load management decreased by a third from 99MW avoided during the summer peak demand in 2010 to 58MW avoided in 2020. As a wholesale utility, Seminole has not offered any public commitments of protection of its customers due to the coronavirus economic and public health crisis.

Market Competition: Seminole will continue to utilize competitive bidding as one of its tools for acquiring least cost conventional and renewable generating resources. All of Seminole's future bid solicitations for non-peaking power will include the solicitation of renewable energy proposals.

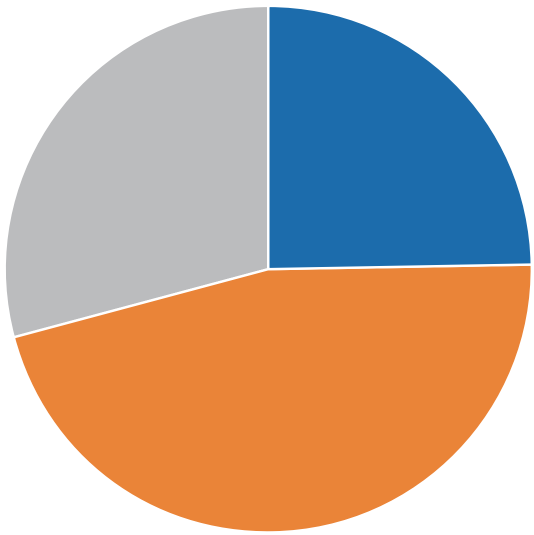
Customer Choice: Seminole includes net metering data in its load forecasts. As a wholesale utility, it doesn't have a direct interaction with customers, but could still do more to promote customer options through its retail partners.

Investment in Resilient Storage: Unlike other Florida utilities, Seminole has not pursued storage options to date, including pilots, and has none announced over the next decade.

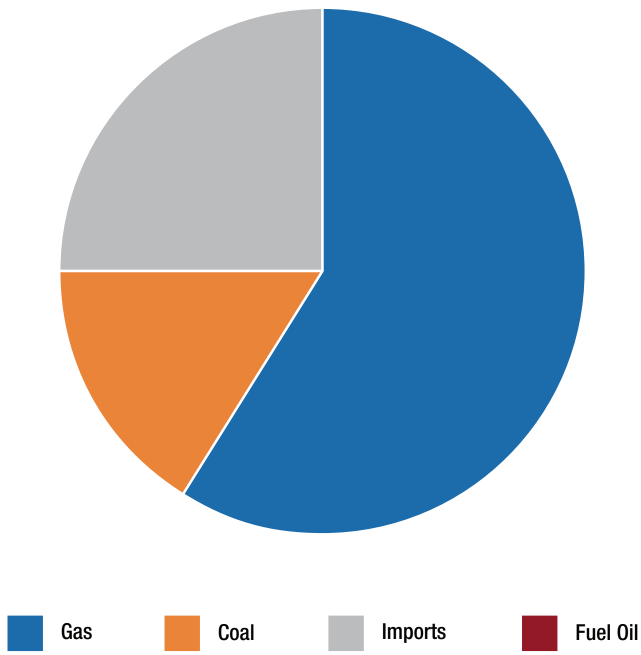
Electric Vehicle Promotion: As a wholesale utility, Seminole does not interact directly with EV customers. It could include electric vehicles in its load forecast, but has not.

Seminole operates Florida's least economic coal plant. According to the "Coal Cost Crossover" report from Vibrant Clean Energy, the Seminole Generating Station is 98% more expensive to operate than replacing it with local wind or solar.

Seminole Energy Mix, 2019 (Actual)



Seminole Energy Mix, 2029 (Planned)



JEA

GRADE: D

JEA is the state's largest local government-owned utility with nearly half a million customers in Northeast Florida. JEA receives a grade of D as it increases solar use to only 5% by 2029, and simultaneously increases its dependence on coal, an energy source that has proven unsustainable economically and environmentally. While strong on competition, JEA can improve on consumer protection and affordability.

Renewable Energy and GHG Reductions: Despite stating a goal of having 30% carbon-neutral energy sources by 2030, JEA plans to produce only 5% of its energy mix from carbon-neutral owned generation assets by 2029. JEA plans to invest in solar from 2019-2022, increasing its use tenfold compared to today (from 58 GWh in 2019 to a peak of 682 GWh in 2022). Despite this early progress, solar stalls at 5.2% of total owned energy sources in 2022, and falls far short of our 30% by 2030 recommendation. JEA also eliminates 130 GWh of renewable landfill gas and all use of wind credits. JEA sells RECs associated with the renewable energy it produces, raising concerns about its claims to the environmental attributes of those MWhs.

Gas Over-dependence: JEA's reliance on fossil gas increases from just under 50% in 2019 to a peak of 64.8% in 2020. Over time, it falls to 45.5% in 2029, which is still high, but better than most Florida utilities.

Uneconomic Coal: While most of the country is shifting away from coal due to clear market dynamics, JEA actually increases its coal use by 55% from over 3,000 GWh in 2019 (26% of its energy mix) to over 5,000 GWh in 2029 (37% of total energy mix).

Consumer Protection and Affordability: JEA was one of the first utilities in Florida to threaten shutting off its customers during the coronavirus pandemic and economic crisis. After an initial one-time discount to customers, JEA notified over 24,000 customers (or 5% of all their customers) that their power may be shut off due to nonpayment beginning on July 7, right in time for dangerous summer heat. JEA resumed disconnecting consumers in mid-July.

JEA offers a demand response option to large industrial customers. It began a residential Demand Rate pilot program, which unfortunately is not a good deal for its customers. JEA does not forecast an improvement in the impact of these offerings over the ten year reporting period, with the amount of energy saved stagnating at 2020 levels. That said, JEA has made progress over the years, as the 2020 level of 35GWh saved is a significant increase from the 2019 reported level of 26GWh saved and 14GWh saved in 2010. And JEA leadership has acknowledged, "The cheapest megawatt is the one we don't have to build."

Market Competition: JEA excels in competition compared to its Florida peers, and has led competitive bidding processes to procure renewable resources. It relies heavily on PPAs and purchased power, which enables it to select the least cost option.

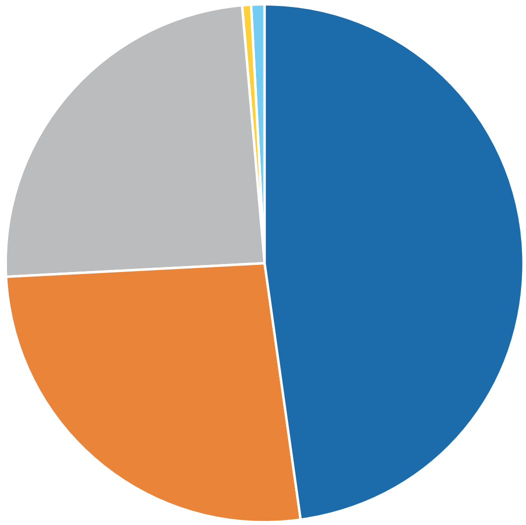
Customer Choice: JEA offers a solar option to large commercial and industrial customers through its SolarMax program. That said, JEA notoriously gutted its solar net metering program in 2017, drastically changing the economics of its customers' rooftop solar investments and stifling families' ability to use solar to control their energy bills.

Investment in Resilient Storage: JEA is investigating a storage pilot project to provide resiliency to wastewater systems, and acknowledges solar + storage systems can be valuable while the grid is operating and when the grid is down due to severe weather. It also began a 20 year PPA in 2019 from a 5MW solar system with 2MW of battery storage, and offers a battery incentive program for residential solar customers.

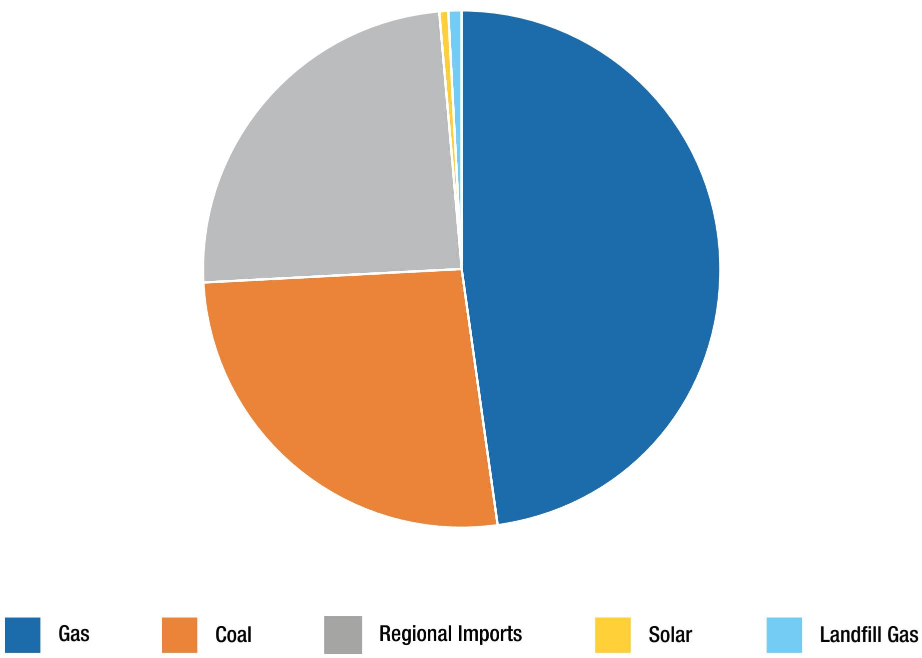
Electric Vehicle Promotion: JEA offers rebates for the purchase of plug-in electric vehicles — $500 for a battery sized at less than 15 kWh and $1,000 for 15 kWh and higher.

Vibrant Clean Energy's "Coal Cost Crossover" report finds JEA's Northside coal plant was 57% more expensive to operate than the cost to replace it with local solar or wind in 2018.

JEA Energy Mix, 2019 (Actual)



JEA Energy Mix, 2019 (Actual)



ORLANDO UTILITIES COMMISSION

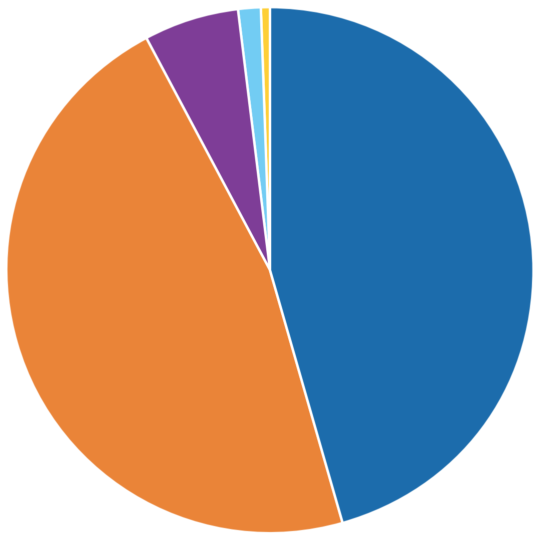
GRADE: **B+**

Orlando Utilities Commission (OUC) is a municipally owned utility with over 200,000 retail customers. It receives an overall grade of B+ excelling in electric vehicles, storage, and competition. However, it is the most reliant on coal of all the utilities in this report, and does not invest enough in renewables.

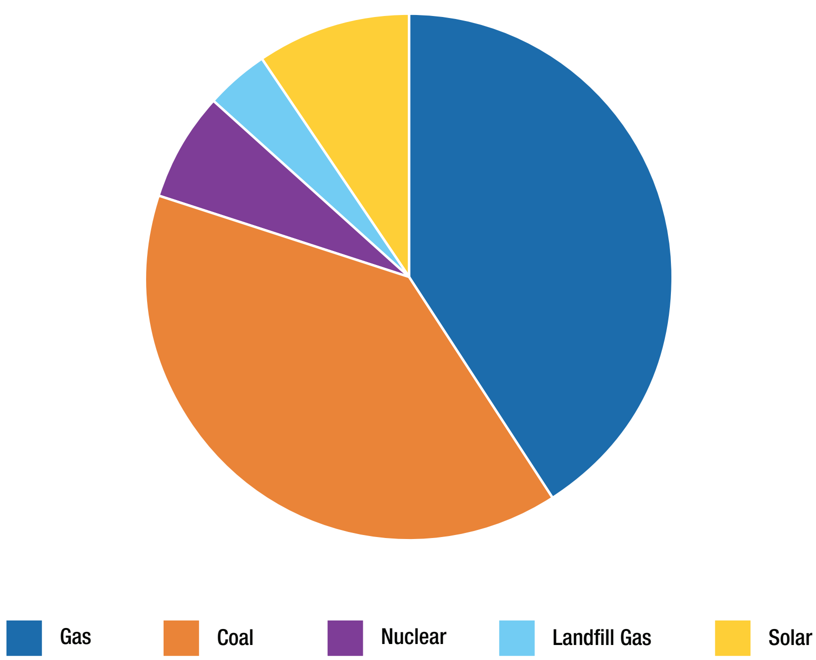
Renewable Energy and GHG Reductions:	In 2020, Orlando Utilities Commission established clean energy goals of a 50% reduction from a 2005 baseline, escalating to net-zero carbon emissions by 2050. In its ten-year site plan, OUC increases solar and landfill gas from 3% to 13% of its total energy mix. That said, it could do more to reduce its overall GHG by pivoting away from coal.
Gas Over-dependence:	OUC increases its share of gas generation from 39% to 41% over the ten-year planning period. While this is substantially less than other utilities, the benefit is offset by the prominent role of coal in OUC's generation portfolio.
Uneconomic Coal:	In 2019, OUC still received nearly half of its energy from coal-fired power plants, the most of any Florida utility. That reliance reduces slightly to just under 40% in 2029, maintaining OUC's position in last place among its peers. OUC owns coal-fired assets that are under threat of becoming uneconomic. It should follow the nationwide trend to retire coal capacity now.
Consumer Protection and Affordability:	OUC provides sliding-scale support for its home audit & retrofit efficiency program, and it has provided substantial monetary support to economically disrupted customers due to COVID-19. However, its shutoff ban expired July 13 and late fees will be reinstated Aug 3. OUC's plan did not consider supply side efficiency alternatives because it has excess supply. As a result it is missing an opportunity to take advantage of cost effective efficiency measures and early retirement of expensive and polluting assets.
Market Competition:	OUC makes use of independently developed power purchase agreements, including for 108.5 MW of the Florida Municipal Solar Project.
Customer Choice:	OUC offers a wide range of options for customers who want to go solar on their terms. OUC enables net metering, but it also offers a collective purchase program (called OUCollective), one of the first community solar programs in the country, and a residential solar plus storage rebate.
Investment in Resilient Storage:	OUC is one of the only utilities in Florida to offer up-front incentives for solar plus storage systems on residential homes. It's also gathering input from customers and citizens on the role of resiliency in its 2020 Energy Integrated Resource Program.
Electric Vehicle Promotion:	OUC has installed 150 level 2 and DC fast chargers, propelling Orlando to one of the top 5 cities for electric vehicles in the nation. It also forecasts for EV adoption using inputs from the National Renewable Energy Lab and Siemens.

In 2019, OUC still received nearly half of its energy from coal-fired power plants, the most of any Florida utility.

Orlando Energy Mix, 2019 (Actual)



Orlando Energy Mix, 2029 (Planned)



FLORIDA MUNICIPAL POWER AUTHORITY

GRADE: D+

Florida Municipal Power Authority (FMPA) is a wholesale power company owned by Florida's 30+ municipal electric utilities, 13 of which receive all of their power from FMPA. The information below is therefore a proxy of the combined generation mix of those utilities, which do not file their own TYSPs. FMPA receives an overall grade of D+ as it remains dangerously reliant on gas and does little to advance storage, demand side management or electric vehicles. However, it does expand its use of solar energy, reduce coal, and take advantage of competitive bidding to purchase solar from PPAs.

Renewable Energy and GHG Reductions: FMPA will be entering into solar PPAs for the first time — totaling 154 MW over the next ten years. But solar still only provides 6.5% of FMPA's power supply in 2029.

Gas Over-dependence: The company will increase its already-extreme overcommitment to gas from 75.6% in 2019 to 81.2% in 2029.

Uneconomic Coal: As a percentage of total energy generated, FMPA plans to reduce its reliance on coal from 17.8% to 5.9% in the next ten years. But it will also maintain its ownership stake in the Stanton power plant, which is uneconomic compared to renewables.

Consumer Protection and Affordability: While FMPA is a wholesale power company, and does not have control of customer-facing programs, it does discuss the energy conservation program created by its 13 core retail companies. Unfortunately, the program's impact is too negligible to be included in FMPA load forecasts.

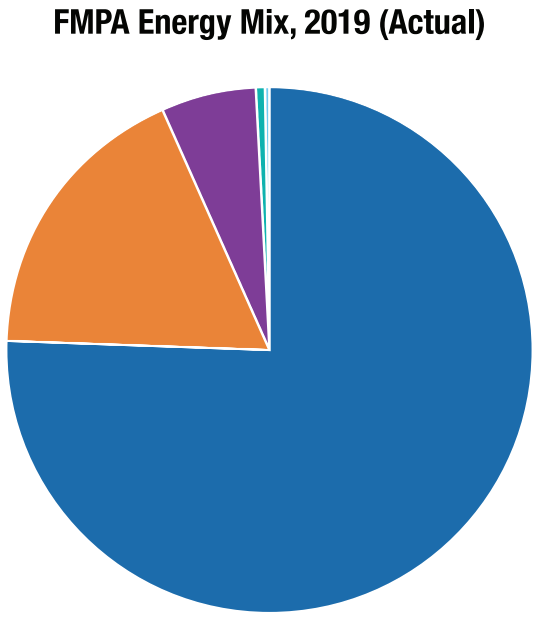
Market Competition: FMPA's solar procurement to-date has exclusively used power-purchase agreements, which enables FMPA to take advantage of the most competitive market prices for renewable resources.

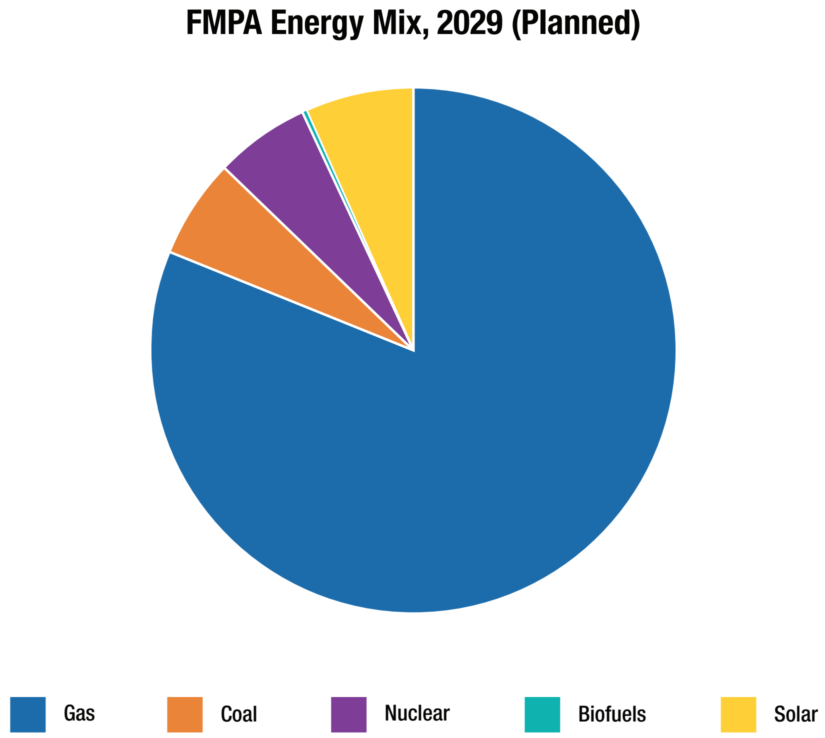
Customer Choice: Customers from FMPA's 13 dedicated retail companies currently enjoy net metering and the territory currently holds 12,000 kW of net metering capacity. However, unlike other wholesale providers, FMPA is not pursuing community solar programs. FMPA's CEO, Jacob Williams, has also encouraged member utilities to raise fixed fees on residential customers to $50 per month in September 2019 to make net metering customers "go away."

Investment in Resilient Storage: FMPA's TYSP does not mention storage as a viable technology, or even one the company is paying attention to.

Electric Vehicle Promotion: FMPA does not take electrification of any load or the proliferation of electric vehicles into account through its load forecasts.

FMPA's CEO, Jacob Williams, has encouraged member utilities to raise fixed fees on residential customers to $50 per month in September 2019 to make net metering customers "go away."





LAKELAND ELECTRIC

GRADE: F

Renewable Energy and GHG Reductions: Lakeland has no plans to install new solar (despite the city contracting for 24 MW in 2007), and more than doubles its reliance on carbon-heavy coal over the next decade. Lakeland sells its RECs on the voluntary market, raising concerns about double-counting with respect to its existing solar investments.

Gas Over-dependence: Despite the fact that Lakeland Electric already has enough generation capacity to meet projected demand, such that reliability issues based on one measure were "so small that [they] would be non-existent," Lakeland completed a new gas turbine in 2020. Gas makes up 74% of Lakeland's generation in 2019 and maintains the majority of generation through the next decade.

Uneconomic Coal: Lakeland Electric is one of only three utilities in Florida that expects to **substantially increase** its reliance on uneconomic coal in the next decade — even though it could exit its coal supply deal pain-free in 2023. Lakeland's ten-year site plan notes that it maintains a coal supply reserve "due to market uncertainty of supplier availability due to potential bankruptcies."

Consumer Protection and Affordability: Lakeland resumed disconnections on economically disrupted customers due to COVID-19 on June 15 — far earlier than other Florida utilities.

Market Competition: Over the next decade, Lakeland increases imports from the Florida municipal power pool, which dispatches generation pooled among OUC, FMPA, and Lakeland. Increased use of the power pool is likely to result in more economic generation. However, Lakeland has not entered into any power purchase agreements and its last requests for proposals for solar generation and water heating were in 2007.

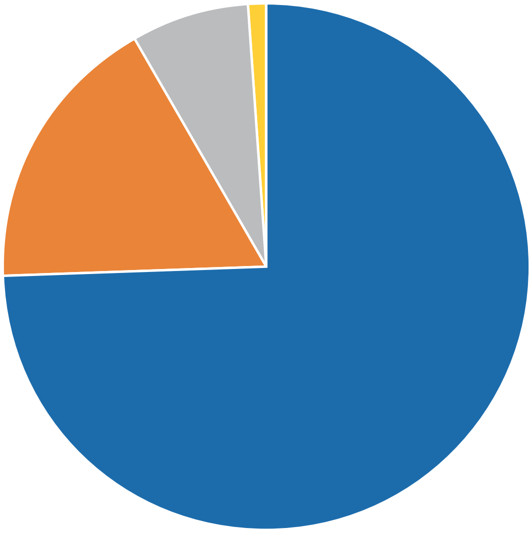
Customer Choice: Customers have access to rooftop solar net metering, but those who want to participate in the program are hit with a punitive demand charge during peak hours. Also, no community solar programs are currently being offered.

Investment in Resilient Storage: Lakeland doesn't consider customer resilience programs, local storage or storm preparedness in its Ten Year Site Plan. Its 90-to-120-day coal reserve relies on an outdated notion of "resilience." It also launched a miniscule storage pilot in 2017 of a single 0.006MW battery, about the size of a residential storage system.

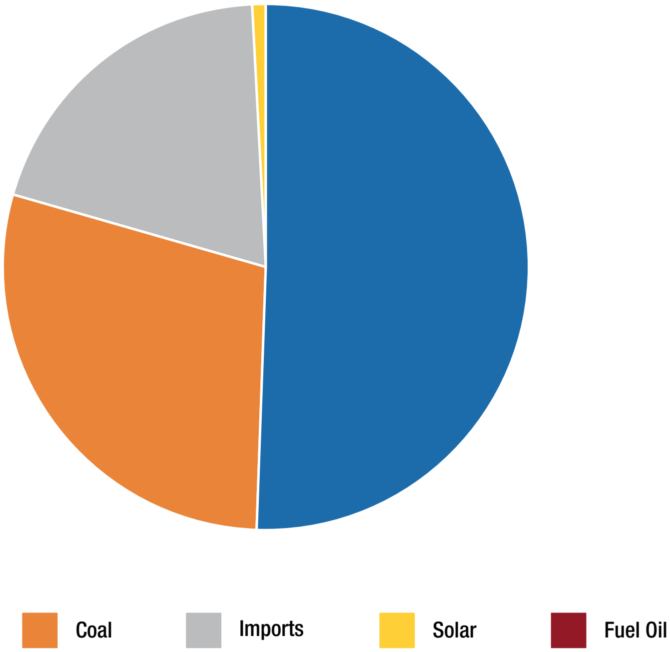
Electric Vehicle Promotion: Lakeland doesn't promote or plan for electric vehicles in its ten-year site plan. In fact, the terms 'electrification' and 'electric vehicles' do not appear in its 88-page plan.

Lakeland's ten-year site plan notes that it maintains a coal supply reserve "due to market uncertainty of supplier availability due to potential bankruptcies."

Lakeland Energy Mix, 2019 (Actual)



Lakeland Energy Mix, 2029 (Planned)



CITY OF TALLAHASSEE UTILITIES

GRADE: C

The city of Tallahassee owns, operates, and maintains an electric generation, transmission, and distribution system that supplies electric power to over 123,000 customers. The City scored a grade of C, winning points for competition, demand side management, and avoidance of coal; but it is the most reliant on gas of all the utilities included in this report.

Renewable Energy and GHG Reductions: The City of Tallahassee adopted a Clean Energy Plan in 2019 that commits city facilities to be 100% clean by 2035 and the Tallahassee community to be powered by 100% renewable energy by 2050. This plan does not come close to achieving that goal. While the City supports net metering for its citizens, this ten-year site plan includes no new utility-scale solar investments or PPAs beyond the one they executed in 2019; instead, it expands the City's reliance on gas. It also fails to include CO2 costs in its forecasts.

Gas Over-dependence: The City of Tallahassee generates more energy than it needs in total from natural gas alone every year, and more than two-thirds of its energy needs are satisfied by just two facilities. While the City has an Energy Risk Management policy in place, it is likely not enough to mitigate the City's substantial fuel and capital risk from gas.

Uneconomic Coal: The City does not get any power from coal directly because it is completely powered by gas.

Consumer Protection and Affordability: The City is proactive and expansive in its demand-side management offerings to customers, including specialized programs for low-income customers. The city is also providing six-month utility payment relief for its customers. But the City's disconnection moratorium ended on May 12, potentially subjecting COVID-impacted customers to extreme summer heat.

Market Competition: Tallahassee signed PPAs for 20 and 42 MW of solar in 2016 and 2017 and appears to be actively seeking other opportunities to do so.

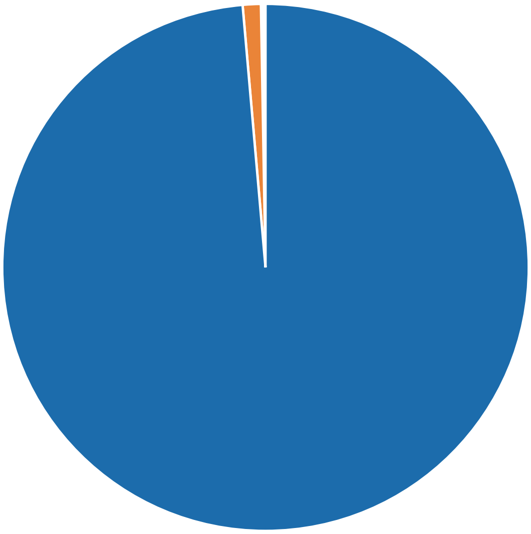
Customer Choice: Tallahassee is continually exploring demand-side resources that could be of assistance to its customers, including solar net metering and piloting a demand response program. Tallahassee includes no plans to explore community solar.

Investment in Resilient Storage: The City continues to investigate demand-side management and demand response tools that would allow customers to enjoy a more resilient power supply, but it has not yet embraced storage technologies as a cost-effective tool for affordable, renewable, and resilient energy.

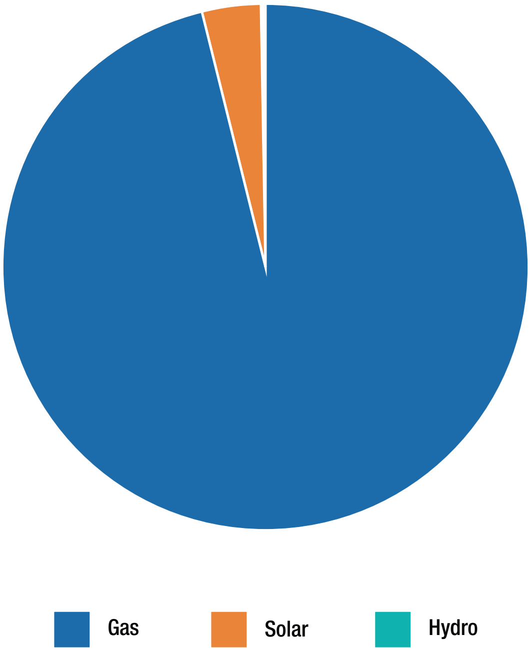
Electric Vehicle Promotion: Tallahassee's Clean Energy Plan commits the city to 100% electric light-duty vehicles by 2035, with medium- and heavy-duty vehicles following as feasible. That said, the utility does not incorporate electrification into its load forecast this year, and does not appear to offer rebates or EV-specific rates for customers.

Despite having a city-wide goal of 100% renewable energy by 2050, the City of Tallahassee Utilities' plan includes no new solar investments between 2020-2029.

Tallahassee Energy Mix, 2019 (Actual)



Tallahassee Energy Mix, 2029 (Planned)



GAINESVILLE REGIONAL UTILITIES

GRADE: C-

Gainesville Regional Utilities (GRU) is a municipal utility for the city of Gainesville and serves approximately 93,000 retail and wholesale customers. GRU received a grade of C-. Over the next ten years, despite a city-wide clean energy commitment, it plans to increase its reliance on gas, invest in more coal, eliminate renewables like landfill gas, and decrease its use of biomass. The company appears to have too much generation with very high reserve margins. On the positive side, GRU increases investments in solar, and is considering developing an electric vehicle off peak rate or incentive in the future.

Renewable Energy and GHG Reductions: Despite having a city-wide 100% clean energy goal by 2045, GRU has no solar farms on its system until 2023, and then only to meet 6.5 percent of its energy needs, with no additional solar investments through 2029. Overall, GRU's renewable energy will drop from 30.9% to 17% over the next decade (largely due to reductions in biomass from nearly 30% in 2019 to less than 8% in 2029, despite predictions that biomass fuel will lower in price). GRU assumes that there will be no costs associated with its carbon emissions over the next decade — which is out of sync with the large Florida utilities.

Gas Over-dependence: GRU's reliance on gas stays under 50% over the decade. But GRU notes that it is evaluating the possibility of adding gas generation to the Deerhaven site in 2021 by fuel switching from coal to gas. It's unclear whether GRU is considering more cost effective alternatives such as efficiency and solar paired with battery storage.

Uneconomic Coal: Despite conceding that coal carries significant price risks for consumers related to both fuel and transportation, GRU is increasing coal from 22.5% in 2019 to 31.2% in 2029.

Consumer Protection and Affordability: GRU stopped shut-offs and waived late fees from March 17-July 17th. GRU lowered its customers' bill by 17% over a six month period through September 2020. GRU will also auto-enroll customers in its "Coronavirus Payment Plan," which spreads any accumulated debts over six months.

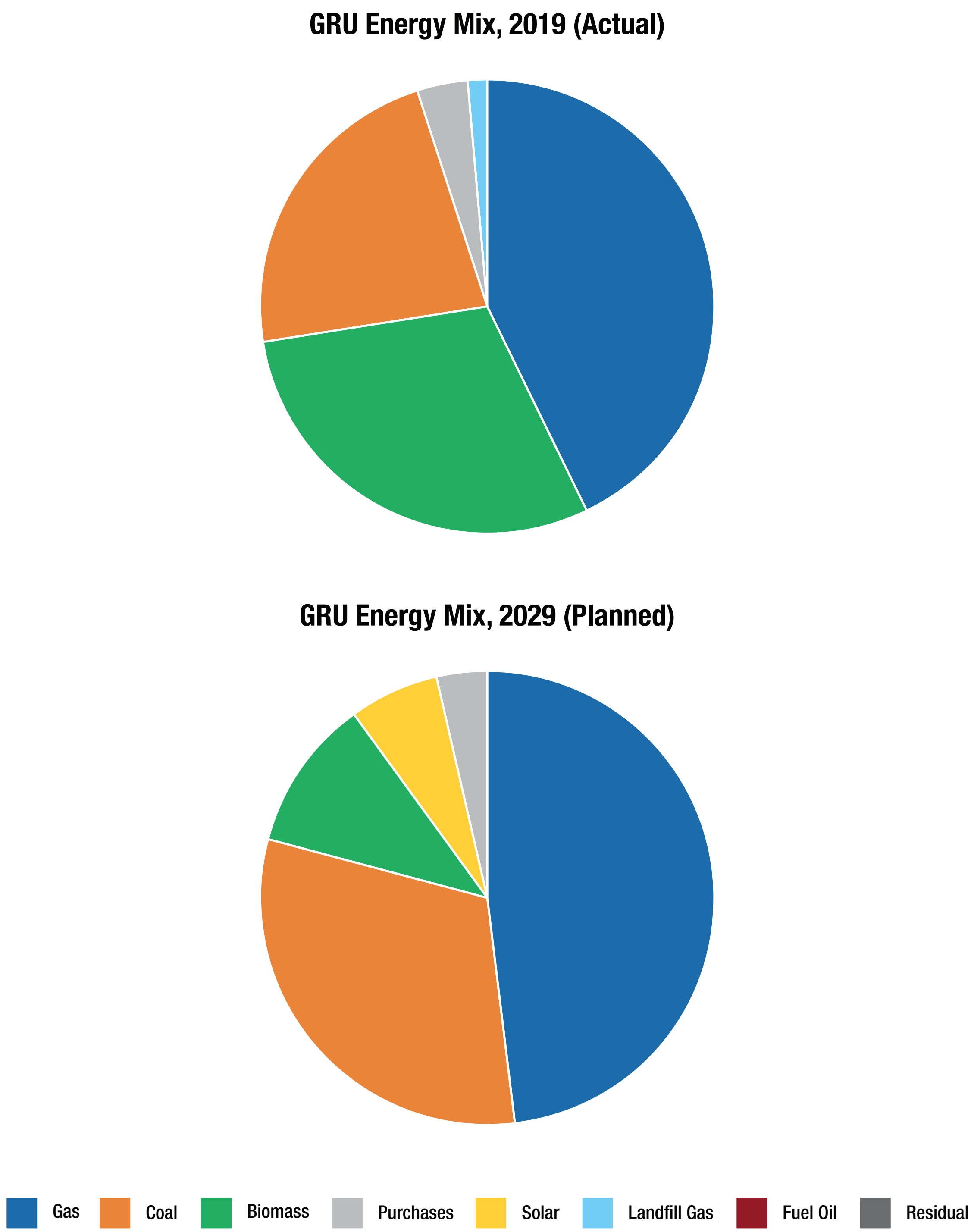
Market Competition: GRU has no PPAs for fossil energy sources. In 2017, it purchased the biomass plant from the company with which it held a 30 year PPA, and curiously plans to reduce its energy output from 594GWh in 2019 to 159 GWh in 2020, despite expectations of lower fuel costs. GRU also plans to purchase solar from a 50 MW solar system with 12MW battery via a 20 year PPA starting in 2023.

Customer Choice: GRU offers rooftop solar net metering with a cash credit at the end of the year for any excess generation. It also continues to purchase over 18 MW of customer-owned solar from a legacy 2009 feed in tariff. But GRU does not offer a community solar program for customers who can't use rooftop solar.

Investment in Resilient Storage: GRU's plan doesn't give much consideration to how storage fits into its system, and GRU has no storage on the grid currently. However, GRU is planning to enter into a PPA in 2023 from a 50 MW solar system with 12MW battery — using storage for ramp rate control.

Electric Vehicle Promotion: GRU includes forecasts of PEV adoption in its load forecasts, but does not offer any programs or tariffs for EVs. GRU is considering developing an EV off peak rate or incentive in the future.

Gainesville Regional Utilities plans to use less renewable energy in 2029 than it does today: dropping from 31% to 17%.



Florida Power & Light, Gulf Power

	2019 FPL (Actual)		2019 Gulf (Actual)		2029 Merged (Planned)	
Gas	74.6%	93,373 GWh	75.0%	8,808 GWh	61.5%	87,157 GWh
Nuclear	22.2%	27,791 GWh	0%	—	20.2%	28,590 GWh
Coal	2.0%	2,488 GWh	35.1%	4,125 GWh	0.2%	232 GWh
Solar	1.9%	2,396 GWh	2.0%	232 GWh**	16.2%	22,947 GWh
Residual	0.2%	224 GWh	0%	—	0%	—
Fuel Oil	0.2%	224 GWh	0%	—	0%	5 GWh
Purchases	-1.1%	-1,328 GWh	9.4%	1,101 GWh	1.3%	1,789 GWh
Wind PPAs	0%	—	8.8%	1,031 GWh	0.7%	1,031 GWh
Exports	0%	—	-30.3%	-3,556 GWh	0%	—
TOTAL		125,168 GWh		11,742 GWh		141,751 GWh

Duke Energy Florida

	2019 (Actual)		2029 (Planned)	
Gas	78.8%	35,092 GWh	77.3%	35,671 GWh
Coal	9.7%	4.322 GWh	7.7%	3,540 GWh
Imports/ Exchanges	5.3%	2,352 GWh	0.1%	34 GWh
Purchases	4.1%	1,803 GWh	0%	2 GWh
MSW	1.5%	670 GWh	2.1%	949 GWh
Fuel Oil	0.1%	30 GWh	0.1%	65 GWh
Solar	0.5%	222 GWh	12.7%	5,862 GWh
Biomass	0%	15 GWh	0%	0 GWh
TOTAL		44,505 GWh		51,985 GWh

Tampa Electric

	2019 (Actual)		2029 (Planned)	
Gas	84.2%	17,493 GWh	84.6%	18,981 GWh
Coal	5.8%	1,214 GWh	2.0%	444 GWh
Import/ Export	5.2%	1,085 GWh	0%	-7 GWh
Purchases	3.6%	756 GWh	12.9%	2,902 GWh
Solar	1.1%	220 GWh	0.5%	122 GWh
Fuel Oil	0%	1 GWh	0%	–
Other	0%	–	0.1%	-12 GWh
TOTAL		20,770 GWh		22,430 GWh

Seminole Electric Cooperative

	2019 (Actual)		2029 (Planned)	
Coal	46.1%	6,952 GWh	16.0%	2,677 GWh
Imports	25.1%	3,785 GWh	20.3%	3,383 GWh
Gas	24.8%	3,745 GWh	59.1%	9,868 GWh
MSW	3.3%	493 GWh	0%	–
Biomass	0.6%	88 GWh	0%	–
Fuel Oil	0.1%	18 GWh	0%	7 GWh
Landfill Gas	0.1%	10 GWh	0%	–
Solar	0%	4 GWh	4.6%	768 GWh
TOTAL		15,095 GWh		16,703 GWh

JEA

	2019 (Actual)		2029 (Planned)	
Gas	49.3%	6,312 GWh	45.5%	6,240 GWh
Coal	25.7%	3,287 GWh	37.4%	5,121 GWh
Imports	23.8%	3,050 GWh	12.3%	1,679 GWh
Landfill Gas	0.7%	88 GWh	0%	–
Solar	0.5%	58 GWh	4.8%	663 GWh
Fuel Oil	0%	2 GWh	0%	1 GWh
Residual	0%	1 GWh	0%	–
TOTAL		12,798 GWh		13,704 GWh

Orlando Utilities Commision

	2019 (Actual)		2029 (Planned)	
Coal	46.6%	3,614 GWh	39.2%	3,250 GWh
Gas	45.8%	3,554 GWh	41.1%	3,405 GWh
Nuclear	5.8%	449 GWh	6.7%	554 GWh
Landfill Gas	1.6%	123 GWh	3.9%	320 GWh
Solar	0.3%	22 GWh	9.2%	766 GWh
TOTAL		7,762 GWh		8,295 GWh

Florida Municipal Power Authority

	2019 (Actual)		2029 (Planned)	
Gas	75.6%	4,757 GWh	81.2%	5,507 GWh
Coal	17.8%	1,121 GWh	5.9%	403 GWh
Nuclear	5.9%	368 GWh	5.9%	399 GWh
Biofuels	0.4%	28 GWh	0.3%	23 GWh
Landfill Gas	0.2%	13 GWh	0.1%	6 GWh
Fuel Oil	0%	3 GWh	0%	–
Solar	0%	–	6.5%	443 GWh
TOTAL		20,770 GWh		22,430 GWh

Lakeland Electric

	2019 (Actual)		2029 (Planned)	
Gas	74.7%	2,382 GWh	50.8%	1,767 GWh
Coal	17.2%	548 GWh	28.8%	1,003 GWh
Imports	7.2%	231 GWh	19.6%	682 GWh
Solar	0.9%	28 GWh	0.8%	28 GWh
Fuel Oil	0%	0 GWh	0%	1 GWh
TOTAL		3,189 GWh		3,481 GWh

City of Tallahassee Utilities

	2019 (Actual)		2029 (Planned)	
Gas	101.7%	2,900 GWh	100.7%	2,998 GWh
Solar	1.4%	41 GWh	3.9%	117 GWh
Hydro	0.2%	7 GWh	0%	—
Exports	-1.7%	-95 GWh	-4.6%	-137 GWh
TOTAL		2,852 GWh		2,977 GWh

Gainesville Regional Utilities

	2019 (Actual)		2029 (Planned)	
Gas	42.7%	854 GWh	48.2%	952 GWh
Biomass	29.7%	594 GWh	10.7%	211 GWh
Coal	22.5%	449 GWh	31.2%	616 GWh
Purchases	3.6%	72 GWh	3.6%	71 GWh
Landfill Gas	1.2%	23 GWh	0%	—
Fuel Oil	0.4%	7 GWh	0%	—
Residual	0.1%	1 GWh	0%	—
Solar	0%	—	6.3%	124 GWh
TOTAL		2,000 GWh		13,704 GWh

Citizens of Florida

Claude Gerstle, MD

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From: Claude Gerstle
Sent: Tuesday, August 18, 2020 12:06 PM
To: Gabriella Passidomo
Subject: Re: August 18 comment. About FP & L 10 year plan

I've attached a copy of my comments for today's meeting
Claude Gerstle

Rolling Blackouts in California

As California ISO began taking its emergency actions on Saturday, electricity wholesale costs jumped on its energy market. Prices in locations near the Tahoe area spiked into the thousands of dollars per megawatt-hour, far above the typical costs of under $100.

FP & L uses a demand-side model that may not adequately protect us from this kind of situation. As reliance on PV grows the resiliency and reliability of the network falls due to a number of factors. Winter PV capacity is only 15% of summer capacity. Weather further reduces reliability so that reserve factors must be increased. Increasingly powerful storms further impact the reliability of PV as we have recently seen significant damage even in a category one hurricane. FP & L has recently announced that they are building 1 GW of battery backup but this is lithium-ion batteries usually suitable for 4 hour backup rather than 10 hour flow batteries. A recent study from MIT states that if good renewables have 16% in our backup they can avoid significant costs for transmission line upgrades and fossil fuel backup capability.MIT study capacity deferral. I would like to hear the commissions thoughts on how much battery backup should be required. Furthermore if FP & L participated in the southeast regional energy group there might be considerable savings through sharing of peaking resources and more opportunity to trade excess capacity.

The federal government is considering a bill that would add a $15 per time carbon tax increasing $10 per year and the state may well add a similar tax to help fund energy efficiency projects.

Assumptions made in the plan may not be realistic. While the state anticipates 2.7% per year population growth plan assumes .9%. The plan assumes continued increases in efficiency but most of the switch to LED lighting has already occurred. There are significant efficiencies that can be gained by improving building efficiency for air conditioning as Florida residents spend 27% of their power on air conditioning compared with 18% in neighboring warm states but FP & L has not been very successful finding and helping remediate homes with poor efficiency.

Systems appear to typically be oversized. A study of 75 sites in the Northwest (Lucas, 1993) found that two-thirds were sized greater than that recommended by the Manual J procedure (ACCA, 1986), including a 15% sensible load oversize factor, while a study in Florida of over 400 homes found more than 50% oversized the cooling equipment more than 120% of Manual J (James, et. al., 1997).ACN efficiency.

We currently have 83,000 EV's and are expected to have 450,000 by 2030. This must be factored into the plan. In order to reach 100% renewable energy by 2050 without taking into account any growth or seasonal factors just converting the transportation sector to EV will mean an increase of over 100,000 GW hours

To summarize my points:

1. The assumptions for increasing energy demand based on population growth, increasing temperatures and electrification transportation system are not adequately accounted for in the 10 year plan.

2. The seasonal as well as hourly changes in PV capacity are not sufficiently taking into account and require a systematic examination of requirements for battery capacity and excess PV capacity. These deficiencies in PV capacity will result in higher bills and overreliance on gas electrical generation

3. Excessive reliance on DSM model may leave us vulnerable to large increases in electrical power costs due to state and federal carbon taxes.. There should be careful consideration of participation in the southeast regional energy group.

4. FP & L must aggressively reach out to users of excessive power square foot basis and assist with energy audits and remediation plans working together with state funding for the poor especially for programmable thermostats.

5. The commission should assist FPL by urging the state to adopt a passive: standard in the statewide building code.

6. FP & L should carefully examine alternatives to building new natural gas generation units and if built should be planned for transition to 100% hydrogen.