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March 12, 2021

**VIA ELECTRONIC FILING**

Adam Teitzman, Commission Clerk  
Division of the Commission Clerk and Administrative Services  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: Docket No. 20210015-EI  
Petition by FPL for Base Rate Increase and Rate Unification

Dear Mr. Teitzman:

Attached for filing on behalf of Florida Power & Light Company ("FPL") in the above-referenced docket are the Direct Testimony and Exhibits of FPL witness Michael Spoor.

Please let me know if you should have any questions regarding this submission.

(Document 7 of 69)

Sincerely,

A handwritten signature in black ink, appearing to read 'Wade Litchfield', written in a cursive style.

R. Wade Litchfield  
Vice President & General Counsel  
Florida Power & Light Company

RWL:ec

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF MICHAEL SPOOR**

4 **DOCKET NO. 20210015-EI**

5 **MARCH 12, 2021**

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**TABLE OF CONTENTS**

1

2

3 **I. INTRODUCTION..... 3**

4 **II. OVERVIEW OF THE COMBINED COMPANY GRID ..... 10**

5 **III. CONSOLIDATION OF POWER DELIVERY FOR FPL AND GULF ..... 11**

6 **IV. SAFETY ..... 14**

7 **V. STORM HARDENING THE INFRASTRUCTURE ..... 15**

8 **VI. T&D RELIABILITY PROGRAM..... 16**

9 **VII. EMERGENCY PREPAREDNESS RESPONSE..... 22**

10 **VIII. GROWTH AND EXPANSION ..... 25**

11 **IX. REGULATORY COMPLIANCE..... 28**

12 **X. CUSTOMER SATISFACTION / TECHNOLOGY / RECOGNITION..... 29**

13 **XI. FPL T&D COSTS..... 36**

14

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1 I. INTRODUCTION

2

3 Q. Please state your name and business address.

4 A. My name is Michael Spoor, and my business address is One Energy Place, Pensacola,  
5 Florida, 32520.

6 Q. By whom are you employed and what is your position?

7 A. I am currently employed by Gulf Power Company (“Gulf” or “Gulf Power”) as the  
8 Vice President, which includes Power Delivery. Previously I was employed by Florida  
9 Power & Light Company (“FPL” or the “Company”) where I served in a variety of  
10 leadership positions for over 30 years, and I remain an officer of FPL.

11 Q. Please describe your duties and responsibilities in that position.

12 A. As Vice President of Gulf Power, my responsibilities with respect to Power Delivery  
13 include the planning, engineering, construction, operation, maintenance and restoration  
14 of Gulf Power’s transmission and distribution (“T&D”) grid. This includes the  
15 systems, processes, analyses, and standards utilized to ensure Gulf’s T&D facilities are  
16 safe, reliable, secure, effectively managed and in compliance with regulatory  
17 requirements.

18 Q. Please describe your educational background and professional experience.

19 A. I graduated from Auburn University with a Bachelor of Science degree in Industrial  
20 Engineering and from Nova Southeastern University with a Master of Business  
21 Administration. I am also a graduate of executive education programs at both  
22 Columbia University and Kellogg School of Management at Northwestern University.  
23 I am a registered professional engineer in the State of Florida. I joined FPL in 1985

1 and have served in a variety of leadership positions including area operations manager,  
2 manager of reliability, director of distribution system performance, director of business  
3 services and director of distribution operations. I assumed my responsibilities related  
4 to Gulf - Power Delivery in January 2019, having previously served as Vice President  
5 of Transmission and Substation with FPL. Based on my years of experience with FPL  
6 and my current Gulf position, I will be representing Power Delivery for FPL and Gulf.

7 **Q. Are you sponsoring or co-sponsoring any exhibits in this case?**

8 A. Yes. I am sponsoring the following exhibits:

- 9 • MS-1 Consolidated MFRs Co-Sponsored by Michael Spoor
- 10 • MS-2 Supplemental FPL and Gulf Standalone Information in MFR Format  
11 Co-Sponsored by Michael Spoor
- 12 • MS-3 FPL and Gulf's FPSC T&D SAIDI
- 13 • MS-4 FPL and Gulf's FPSC Distribution MAIFie
- 14 • MS-5 National & Regional Distribution SAIDI Benchmarking
- 15 • MS-6 FPL's AFS Avoided/Actual Customer Interruptions

16 **B. Are you sponsoring or co-sponsoring any consolidated Minimum Filing**  
17 **Requirements ("MFRs") in this case?**

18 A. Yes. Exhibit MS-1 lists the consolidated MFRs that I am co-sponsoring.

19 **Q. Are you sponsoring or co-sponsoring any schedules in "Supplement 1 – FPL**  
20 **Standalone Information in MFR Format" and "Supplement 2 – Gulf Standalone**  
21 **Information in MFR Format"?**

22 A. Yes. Exhibit MS-2 lists the supplemental FPL and Gulf standalone information in  
23 MFR format that I am co-sponsoring.

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to describe how the consolidation of Power Delivery  
3 for FPL and Gulf results in superior teamwork and operations benefiting more than 5.6  
4 million customer accounts in Florida. I describe how Power Delivery initiatives have  
5 been and continue to be utilized to strengthen and modernize the combined T&D  
6 infrastructure, as well as support customer growth in Florida, and how our new  
7 combined team of highly dedicated and motivated employees continue to share best  
8 practices and align processes, procedures, material, applications and systems. My  
9 testimony also lays out and explains the ongoing plan for capital investments that are  
10 making our T&D infrastructure smarter, more reliable, secure and resilient. Finally,  
11 my testimony demonstrates that the combined Capital Costs and T&D Operations &  
12 Maintenance (“O&M”) expenses for Power Delivery are reasonable.

13 **Q. How will you refer to FPL and Gulf when discussing them in testimony?**

14 A. In discussing operations or time periods prior to January 1, 2019 (when Gulf was  
15 acquired by FPL’s parent company, NextEra Energy, Inc.), “FPL” and “Gulf” will refer  
16 to their pre-acquisition status, when they were legally and operationally separate  
17 companies. For operations or time periods between January 1, 2019 and January 1, 2022,  
18 “FPL” and “Gulf” will refer to their status as separate ratemaking entities, recognizing  
19 that they were merged legally on January 1, 2021 and consolidation proceeded  
20 throughout this period. Finally, in discussing operations or time periods after January  
21 1, 2022, most references will be only to “FPL” because Gulf will be consolidated into

1 FPL, and FPL is proposing unified rates for the consolidated company. Therefore,  
2 unless otherwise noted, my testimony addresses requests for the consolidated company.

3 **Q. Please summarize your testimony.**

4 A. The integration and operation of FPL and Gulf as a single electric system will result in  
5 more efficient service delivery, improved storm response capabilities, better reliability  
6 and a superior team serving more than half of our state’s population. Together, the two  
7 companies have extensive experience operating within Florida’s unique geographic  
8 area and dealing with the state’s weather-related challenges, which are unlike any other  
9 region in the country. Separately, FPL and Gulf have been able to provide their  
10 customers with safe, reliable and excellent electric service and customer service. The  
11 partnership of the two companies’ T&D operations has already brought significant  
12 improvements to Gulf and the customers in Northwest Florida and going forward will  
13 support continued improvement for our customers across the state.

14  
15 Following the experience of the 2004 and 2005 hurricane seasons, when FPL customers  
16 were impacted by seven hurricanes and Gulf customers were impacted by three  
17 hurricanes, the Florida Legislature, the Florida Public Service Commission (“FPSC” or  
18 “Commission”) and Florida investor-owned utilities (including FPL and Gulf)  
19 recognized significant changes were required to construct, strengthen, and maintain an  
20 electrical grid that would be more storm resilient. More recently, in 2019, the Florida  
21 legislature reaffirmed and expanded the scope of grid strengthening by creating Section  
22 366.96, Florida Statutes, requiring public utilities to file and secure Commission  
23 approval of Storm Protection Plans (“SPP”). These initiatives have been recognized

1 by our customers, public officials and others throughout the electric industry as best  
2 practices and in the best interest of our customers. These Commission-approved  
3 programs will continue in a consolidated format when FPL files a petition that, subject  
4 to the Commission's decision of unified base rates in this proceeding, would request  
5 approval to administratively consolidate the two existing plans to strengthen and build  
6 a more resilient and secure electric grid to meet the increasing expectations of our  
7 customers.

8

9 While the primary focus of the SPP is strengthening the T&D infrastructure to reduce  
10 restoration costs and outage times following extreme weather events, the primary focus  
11 of the T&D reliability initiatives is to reduce day-to-day outages and restoration times.  
12 Both FPL and Gulf T&D reliability programs have produced superior results for our  
13 customers and include multiple initiatives that prevent outages and reduce outage  
14 durations. As further explained in my testimony, in 2020, FPL was awarded the annual  
15 ReliabilityOne® top national award for the fifth time in six years, and Gulf was also a  
16 recipient of a ReliabilityOne® Award for Outstanding Reliability Performance in the  
17 Southeast (suburban/rural service) region – these recognitions are a testament to the  
18 excellent reliability being provided to FPL's and Gulf's customers.

19

20 Both FPL and Gulf have been recognized by the industry for their emergency  
21 preparedness and storm restoration efforts. Most recently, both companies received the  
22 EEI Emergency Response Assistance award for their outstanding support of other  
23 utilities during a very challenging 2020 hurricane season, and Gulf also received the

1 EEI Emergency Recovery award for their outstanding restoration effort following  
2 Hurricane Sally. Together, the team will be even stronger to meet the needs of our  
3 customers following any type of major event that causes an interruption of service to  
4 our customers.

5  
6 Today, FPL customers, as well as Florida's economy and supporting critical  
7 infrastructure rely on, require, and increasingly expect, improved reliability, a secure  
8 electric grid, and enhanced storm response, all to meet the demands of a growing  
9 customer base. As FPL witness Barrett has stated in testimony, over 220,000 people  
10 moved to Florida in the twelve months ending July 2019, representing an average of  
11 almost 610 people per day. This trend is expected to continue as the population in  
12 Florida, the second fastest growing state, is predicted to grow at a higher rate than the  
13 overall U.S. Power Delivery will require significant ongoing capital investments in  
14 infrastructure to meet this growing demand, changes in load patterns, and challenges  
15 in customer requirements and expectations. Meeting the demands of customer growth  
16 throughout the service area will be a major portion of Power Delivery's costs, along  
17 with the associated engineering and construction effort that will be required to meet  
18 these demands.

19  
20 As FPL strives for continuous improvement in every aspect of the business, we  
21 endeavor to expand and develop new opportunities to increase overall customer  
22 satisfaction, ensure compliance with all federal, regional, state, and local regulatory  
23 commissions and agency policies, and make advances that improve the electric grid.

1 Through the use of technology, FPL has implemented numerous programs, outlined  
2 later in my testimony, that have improved the customer experience, enabled employees  
3 to be more efficient and make timely decisions, ensure compliance, and improve the  
4 performance of the grid in a way that has allowed FPL to provide the best reliability to  
5 customers for the 15th year in a row amongst the Florida IOUs. As an example of the  
6 implementation of technology and innovation, FPL's Smart Grid was responsible for  
7 avoiding over 1.6 million FPL customer interruptions in 2020. These improvements  
8 and technology innovations have been recognized by the industry and by our customers  
9 with fewer and shorter outages. To ensure these improvements and exceptional  
10 customer service continue, Power Delivery will remain diligent to meet these extremely  
11 critical objectives to continuously improve and protect both the physical security and  
12 cybersecurity of the grid.

13  
14 Going forward, as a single, integrated utility system, FPL remains committed to  
15 continuing the effective management of forward-looking investments and expenses  
16 necessary to construct, operate, maintain, and improve the T&D electrical grid. These  
17 investments and expenses result from: (1) executing FPSC storm-hardening/SPP  
18 hardening initiatives; (2) customer growth and system expansion; (3) executing our  
19 comprehensive T&D reliability/grid modernization initiatives; (4) servicing the  
20 electrical grid/other support activities; and (5) complying with regulatory requirements.  
21 Effective management of these programs has resulted in superior service such as best-  
22 ever FPSC Systems Average Interruption Duration Index ("SAIDI") in 2019 and

1 improved upon that performance again in 2020 for both FPL and Gulf while also  
2 delivering outstanding value for our customers.

3  
4 Together, FPL and Gulf are positioned to meet these challenges through the continued  
5 and successful implementation of the outlined programs to strengthen, modernize and  
6 improve the reliability of the electric grid. These efforts are producing superior results  
7 and providing a foundation for continuing the capital investments targeted to improve  
8 the reliability, resilience and security of the grid.

## 9 10 **II. OVERVIEW OF THE COMBINED COMPANY GRID**

11  
12 **Q. Please provide an overview of FPL's T&D Grid.**

13 A. As a combined utility system, FPL currently serves more than 5.6 million customer  
14 accounts representing more than 11 million people in 43 counties in peninsular and  
15 Northwest Florida, with approximately 77,000 miles of distribution lines and 9,000  
16 miles of high-voltage transmission lines.

17 **Q. Do operating and maintaining electrical systems in Florida present unique  
18 challenges?**

19 A. Yes. As an electric service provider in the state of Florida, FPL is well-acquainted with  
20 Florida's unique geographic and weather-related challenges, which in terms of  
21 frequency and severity, are unlike those faced by any other electric system in the  
22 country. The following points highlight the challenges: (1) Florida is more susceptible  
23 to tropical storms, hurricanes, and major hurricanes (Category 3 or higher) than any

1 other state; (2) FPL's service area is the most storm-susceptible within Florida, as it  
2 has approximately 610 miles of coastline (one of the longest of any utility in the  
3 U.S.) directly exposed to storms from the Atlantic Ocean and the Gulf of Mexico;  
4 (3) Because the vast majority of our customers live within 20 miles of the coast, a  
5 significant portion of our electric infrastructure is constantly exposed to the corrosive  
6 effects of salt spray and to the highest wind speeds when a storm hits; (4) Florida also  
7 experiences more thunderstorms and lightning strikes than any other U.S. region; and  
8 (5) Florida's subtropical climate promotes one of the fastest vegetation growth rates in  
9 the nation.

### 11 III. CONSOLIDATION OF POWER DELIVERY FOR FPL AND GULF

13 **Q. How have the Power Delivery organizations and systems of the two companies**  
14 **been consolidated?**

15 A. Since the acquisition of Gulf by NextEra Energy Inc., the parent company of FPL, the  
16 two utilities have engaged in best practice sharing and the process of operational  
17 consolidation. As an integrated team bringing together best practices from each system,  
18 we undertook to execute the same long-term strategy that has been our core focus at  
19 FPL for many years:

- 20 • Unyielding commitment to customer satisfaction
- 21 • Focus on efficiency and best-in-class cost performance
- 22 • Investing capital in ways that benefit customers

1 As part of the operational consolidation, a new transmission line, the North Florida  
2 Resiliency Connection (“NFRC”), is being constructed to enhance the existing  
3 electrical connection between these two systems and provide additional operational  
4 benefits. The NFRC is expected to be completed in mid-2022.

5 **Q. Please describe a few of the benefits of consolidating the two Power Delivery**  
6 **organizations.**

7 A. FPL has been able to provide its customers with safe, reliable and excellent service.  
8 The consolidation of the Gulf and FPL Power Delivery organizations has combined the  
9 extensive experience, knowledge, and excellent customer service of two outstanding  
10 companies. The successful partnership of the two organizations to function as one  
11 company has already resulted in significant service improvements in Northwest Florida  
12 and will provide further opportunities for us to deliver electric service to all of our  
13 customers more reliably, safely and efficiently.

14  
15 FPL has a culture of continuous improvement and the Company and its employees have  
16 been recognized in several key areas of performance including reliability, emergency  
17 preparedness, customer satisfaction, safety and technology adoption. Gulf has a long  
18 and proud tradition of excellent service to its customers and communities in Northwest  
19 Florida. The combination of the two companies creates a superior team, providing  
20 excellent service for customers. This will be accomplished through joint efforts to  
21 deploy Storm Protection Plans, and ultimately one consolidated Storm Protection Plan,  
22 to reduce restoration costs and outage times during extreme weather events and to

1 invest in our transmission and distribution infrastructure and in our people in ways that  
2 will help achieve best-in-class day-to-day reliability and customer service.

3 **Q. Please provide additional details regarding the NFRC and some of the benefits it**  
4 **will provide.**

5 A. The NFRC is a 176-mile, 161 kV transmission line connecting Gulf's current service  
6 area and system in Northwest Florida with FPL's system in northern Florida.  
7 Specifically, the NFRC will connect FPL's system across the state from Sinai Cemetery  
8 substation in Northwest Florida to Raven substation in the North Florida region. The  
9 NFRC is part of an ongoing investment to enhance electric service reliability and  
10 resiliency in North and Northwest Florida. On October 10, 2018, Hurricane Michael  
11 severely damaged the transmission system in the region, highlighting the importance  
12 of a resilient transmission infrastructure. The NFRC will provide an additional  
13 hardened transmission circuit from a different part of the state into the region, providing  
14 additional redundancy to the transmission grid. As discussed by FPL witness Forrest,  
15 the NFRC also will be beneficial to the integration of the FPL electric grid by allowing  
16 bi-directional energy transfer capabilities within the state and economic dispatch of the  
17 combined fleet of generation assets. The NFRC will enable the transfer of up to 850  
18 MW across FPL's combined service area. This connection will provide for cleaner,  
19 more reliable and lower cost energy for all customers. FPL witness Sim presents the  
20 analysis that demonstrates the NFRC's economic benefits.

1 IV. SAFETY

2

3 **Q. Please describe FPL’s commitment to safety.**

4 A. The Company considers safety to be integral to effective operations and indicative of  
5 overall performance. The superior reliability and customer service provided by FPL  
6 and Gulf have been delivered while maintaining a continual focus on employee safety.  
7 As a result of concerted and sustained efforts, FPL has achieved a 75% improvement  
8 over the last decade and Gulf has achieved a 93% improvement since acquisition in the  
9 Occupational Safety & Health Administration’s (“OSHA”) industry-standard metric of  
10 reportable injuries per 200,000 man-hours. FPL’s measure of days away and/or  
11 restricted time (“DART”) due to workplace injuries improved by 78% over the same  
12 time period, while Gulf had zero working time lost due to workplace injuries in 2020.  
13 A key reason for this improvement is our continued commitment to safety by  
14 leveraging technology and engineering out injuries with enhanced tools, processes, and  
15 equipment. Safety programs involve establishing a partnership with employees to  
16 institute an environment where actions are guided by our safety principles. These are  
17 in addition to the corporate-sponsored safety program “Zero Today,” which serves to  
18 constantly reinforce the need for everyone’s continued commitment to safety  
19 principles. “Zero Today” is our commitment to maintaining a safe work environment  
20 and creating an inclusive safety culture where safety is everyone’s job – a philosophy  
21 that all injuries are preventable.



1 was again evident during the 2020 hurricane season, where there were a record 30  
2 named storms, surpassing the record of 28 named storms in 2005. For instance, during  
3 Tropical Storm Eta's "double" Florida landfall in 2020, FPL's smart grid technology  
4 investments helped avoid more than 140,000 outages, which allowed our team to  
5 restore customers with outages faster, with the average customer restored in  
6 approximately two and a half hours.

## 7 8 **VI. T&D RELIABILITY PROGRAM**

9  
10 **Q. Please provide an overview of FPL's T&D reliability program.**

11 A. Today's society's ever-increasing reliance on digital technology and customer's  
12 increasing demands for reliable service demand a focus on continuous reliability  
13 improvement. The focus of the T&D reliability initiatives is to reduce day-to-day  
14 outages and restoration times. FPL's and Gulf's combined T&D reliability program,  
15 which has produced superior results for our customers, includes multiple initiatives that  
16 prevent outages and reduce outage durations. For distribution, in addition to smart grid  
17 technology, and predictive and proactive reliability measures, reliability initiatives are  
18 also developed by identifying and analyzing causes of past interruptions. FPL then  
19 targets those interruptions' causes that, if remedied/repared, will result in the largest  
20 benefits for customers. For the transmission system, reliability initiatives focus on  
21 facility/system assessments, targeted maintenance, prevention through prediction,  
22 utilizing smart grid technology, and prevention of recurrence. As previously discussed

1 in my testimony, the NFRC will be beneficial to the operation of the FPL transmission  
2 grid, providing additional redundancy.

3 **Q. Please provide an overview of FPL’s T&D reliability initiatives’ results.**

4 A. The T&D reliability initiatives employed by FPL continue to produce improved and  
5 superior reliability results. In 2019, FPL and Gulf had their best-ever performance  
6 results for FPSC T&D System Average Interruption Duration Index (“SAIDI”). In  
7 2020, FPL and Gulf both once again had best-ever performance results for FPSC SAIDI  
8 and both had their best-ever FPSC Distribution Momentary Average Interruption  
9 Frequency Event Index (“MAIFIE”) as can be seen on Exhibits MS-3 and MS-4. For  
10 FPL, these best-ever 2020 FPSC T&D SAIDI and FPSC Distribution MAIFIE results  
11 are 39% and 77%, respectively, better than the results achieved in 2006. For Gulf, these  
12 best-ever 2020 FPSC T&D SAIDI and FPSC Distribution MAIFIE are 50% and 30%,  
13 respectively, better than the results achieved since 2018. Additionally, for the 15th  
14 consecutive year, FPL’s 2020 FPSC T&D SAIDI was the best among the Florida IOUs.  
15 Lastly, I’m proud to say that in 2020, FPL was the first investor-owned utility in Florida  
16 to achieve FPSC T&D SAIDI of less than 50 minutes.

17  
18 Exhibit MS-5 also shows FPL’s Distribution SAIDI performance (calculated using the  
19 Institute of Electrical and Electronics Engineers (“IEEE”) 2.5 beta methodology) for  
20 2019 (51.46 minutes) which ranked 58% better than the national average. This exhibit  
21 also shows Gulf’s Distribution SAIDI Performance for 2019 (72.47 minutes) which  
22 ranked 41% better than the national average. This ranking was determined utilizing  
23 the most recent data reflected in PA Consulting’s annual 2019 ReliabilityOne®

1 benchmarking summary and the U.S. Energy Information Administration’s (“EIA”)  
2 2019 Annual Industry Report. This benchmarking study included 2019 Distribution  
3 SAIDI results (the vast majority calculated using IEEE’s 2.5 beta methodology) from  
4 114 IOUs throughout the nation. Achieving these excellent reliability performance  
5 results in 2019 demonstrate that our grid modernization and reliability initiatives are  
6 effective and beneficial. With FPL and Gulf’s continued commitment and the  
7 necessary investments to employ these initiatives, we expect our superior reliability  
8 performance will continue to improve.

9 **Q. Please provide specific examples of FPL’s key distribution system reliability**  
10 **initiatives.**

11 A. Key distribution reliability initiatives include:

12 Grid Modernization/Smart Grid – This program includes several initiatives that have  
13 been a significant focus of FPL, as part of an effort to develop a modern, automated and  
14 self-healing grid. Included in these initiatives are smart devices, e.g., automated feeder  
15 switches (“AFS”), automated lateral switches (“ALS”), automated transformer switches  
16 (“ATS”) and fault current indicators (“FCI”) that automatically identify and/or isolate  
17 problematic line sections and/or clear temporary faults– avoiding and/or mitigating  
18 interruptions and reducing restoration times and costs. These devices are providing  
19 significant reliability improvement results. For example, as shown in Exhibit MS-6,  
20 AFS devices were responsible for avoiding over 1.6 million FPL customer interruptions  
21 in 2020. This illustrates that smart grid technology improves reliability for our  
22 customers.

23

1 Targeted Performance Improvement – This includes multiple initiatives that target  
2 infrastructure/devices experiencing a higher number of outages and/or momentary  
3 interruptions. Examples of these reliability initiatives include prioritization feeders,  
4 submarine cable, momentary outliers and device outliers.

5  
6 Underground Cable - This initiative addresses “direct-buried” feeder and lateral cable  
7 failure modes through rehabilitation (by injecting cable with silicone, which extends its  
8 useful life) or, when rehabilitation is not an option, replacement of the cable. These  
9 solutions prevent interruptions and improve service.

10  
11 Vegetation Management – While providing storm benefits, vegetation management  
12 continues to also be a key, long-standing reliability initiative providing day-to-day  
13 reliability benefits for customers. Vegetation-related outages continue to be one of the  
14 top causes of interruptions, primarily the result of Florida’s year-round growth cycle.  
15 With annual trimming cycle of feeders and laterals and mid-cycle feeder trimming, FPL  
16 will average approximately 17,000 miles annually, which is the equivalent of trimming  
17 a line from Tallahassee to Antarctica and back. FPL also continues to promote our  
18 “Right Tree, Right Place” public education program with local governments and  
19 customers to educate them on our trimming program, practices, safety issues and proper  
20 tree placement. This program is part of FPL’s SPP moving forward (2022).

21 **Q. Please provide FPL specific examples of key reliability initiatives in transmission.**

22 A. Key transmission system reliability initiatives include:

1        Facility/System Assessments – Under this initiative, transmission line and substation  
2 assessments are conducted utilizing equipment diagnostics and both on-site and remote  
3 system surveillance in order to evaluate and determine the health of facilities and  
4 equipment. Holistic station and equipment assessments, including oil sampling/testing,  
5 equipment/protective systems testing, thermal imaging and climbing inspections are  
6 performed, which provide information used to prevent or predict equipment/facility  
7 failures. Also, certain system surveillance is accomplished through equipment  
8 performance monitoring and diagnostics, using remote monitoring tools and analysis  
9 programs.

10  
11        Grid Modernization/Smart Grid – FPL continues to incorporate intelligent  
12 technology within substation systems to better anticipate and respond to system  
13 disturbances. For example, the substation transformer relay scheme upgrades, use of  
14 microprocessor-based systems to gather data, assess equipment operating conditions,  
15 and the use of auto-restoration and self-healing systems result in improved reliability,  
16 increased situational awareness of grid operations and optimized asset utilization.

17  
18        Prevention through Prediction – By combining remaining useful life determination and  
19 risk assessment, a plan is developed to replace major transmission equipment and  
20 facilities in a more predictive manner. When such replacements are made,  
21 technological advances and design improvements are incorporated to reduce future  
22 interruptions and maximize asset utilization.

23

1            Prevention of Recurrence – Through the use of the Event Response Process (where  
2 each outage event is recorded, classified and analyzed), countermeasures are developed  
3 to prevent the recurrence of similar events. For example, if it is determined that a  
4 relay operated improperly, the root cause is determined, and countermeasures are  
5 implemented to similar devices throughout the system to prevent recurrence.

6

7            Targeted Maintenance - Information obtained during condition assessments is evaluated  
8 using predictive models. A plan is then developed to replace or conduct targeted  
9 maintenance on major equipment and facilities. Targeted maintenance extends the  
10 useful life of equipment and minimizes costs by deferring the need for substantial  
11 investment in new equipment and facilities.

12

13            Vegetation Management – Transmission facilities also must be protected from Florida’s  
14 abundant and fast-growing vegetation. To ensure system stability and compliance  
15 with North American Electric Reliability Corporation (“NERC”) reliability standards,  
16 100% of the transmission rights-of-way are inspected twice a year, with necessary  
17 trimming identified and completed. This program is part of FPL’s SPP moving forward  
18 (2022).

19    **Q.    Please describe how reliability/grid modernization programs such as the 500kV**  
20    **rebuild program benefit customers?**

21    A.    The combination of facilities/system assessments and age of the critical infrastructure  
22    has led to a plan to rebuild the 500kV system, the electricity delivery backbone. The  
23    majority of the 500kV transmission structures were originally built during the same



1 **Q. Does FPL conduct training and exercises to ensure the organization is ready to**  
2 **respond to potential threats or incidents?**

3 A. Yes. FPL’s comprehensive and multifaceted emergency response training occurs  
4 throughout the year to ensure that employees are ready and prepared to respond to an  
5 emergency event. Additionally, for certain potential significant threats or events,  
6 simulated events/response exercises are conducted annually to enhance training and  
7 preparedness (e.g., company-wide storm dry run, capacity shortfall, and cybersecurity  
8 simulations/exercises).

9 **Q. Please describe FPL emergency preparedness and training.**

10 A. Both companies engage year-round in emergency preparations and drills. The 2020  
11 dry-run exercise was conducted jointly by FPL and Gulf, simulating a hurricane  
12 impacting both utilities during a pandemic event. Interactions between FPL, Gulf  
13 and other agencies typically take place as a result of emergency preparation drills, and  
14 other external entities (e.g., the FPSC, Florida Office of Public Counsel, U.S. DOE,  
15 the Edison Electric Institute (“EEI”), and other utilities) routinely attend annual storm  
16 dry run events to observe and learn about our restoration processes.

17  
18 As part of FPL’s continued leadership in emergency preparedness and response, FPL  
19 serves as a founding member of the National Response Executive Committee  
20 (“NREC”). The NREC is an industry group, as part of EEI, that is responsible for  
21 overseeing nationwide mutual assistance and resource sharing during events that  
22 are larger than can be accommodated through the industry regional mutual assistance  
23 processes. FPL serves as a founding member, closely coordinating with the Southeastern

1 Electric Exchange (“SEE”) and other industry regional groups as needed to provide and  
2 receive mutual assistance.

3

4 In the area of cybersecurity, FPL performs annual internal drills with the participation  
5 of federal agencies (e.g., DHS, USSS, FBI) to ensure readiness of the organization,  
6 participates with other electric utilities across the country in NERC’s biennial GridEx  
7 exercise and participates in industry forums (e.g., Electricity Subsector Coordinating  
8 Council and NERC activities) to ensure lessons learned are applied.

9 **Q. Please provide other examples of Power Delivery’s efforts to ensure emergency  
10 preparedness.**

11 A. For storms, in addition to providing significant employee training, other planning and  
12 preparations include securing necessary foreign crew resources, storm staging sites,  
13 logistics (e.g., lodging), necessary equipment, inventory and having communication  
14 capabilities and processes ready. Having these plans and processes in place prior to  
15 each hurricane season allows FPL to execute its effective restoration plans as soon as  
16 it is safely possible.

17 **Q. Please comment on how customers will benefit through the combination of the two  
18 Emergency Preparedness organizations?**

19 A. FPL and Gulf have proven that they are industry leaders when it comes to the  
20 preparations and executions following major events. Responses to storms such as  
21 Hurricane Matthew and Hurricane Irma that impacted FPL’s system in 2016 and 2017  
22 and Hurricane Michael that impacted Gulf’s system in 2018 are examples where these  
23 two companies excelled. While the companies have supported each other with

1 resources in the past, the benefits of combining these two teams and integrating best  
2 practices became evident in 2020 after the direct impact to Gulf's system by Hurricane  
3 Sally, a powerful Category 2 storm, in which 285,000 customers were restored in just  
4 5 days, improving the original Estimated Restoration Time (ERT). The continued  
5 consolidation of these teams, processes, and systems across the Florida footprint will  
6 positively impact our customers in a substantial way both prior to and following major  
7 events that impact electric service.

## 8

### 9 VIII. GROWTH AND EXPANSION

10

11 **Q. How do new service accounts, major new construction projects and increased  
12 electrical demand in an area affect FPL's T&D planning operations?**

13 A. All of these factors can significantly impact resources, costs, and reliability. From 2019-  
14 2023, FPL expects to cumulatively add approximately 425,000 new service accounts as  
15 described by FPL witness Park. This trend is expected to continue as Florida is the  
16 second fastest growing state in the nation and predicted to outpace the growth rate of  
17 the overall United States. Accommodating new customers, whether a typical residential  
18 customer or a major project (e.g., the American Dream Miami, expected to break  
19 ground mid-2021 and include 6.2 million square feet of retail and entertainment space),  
20 requires the installation of new infrastructure. Depending on the new customer's  
21 load, additional infrastructure required could be as simple as installing a single service  
22 to a home or business or could require constructing new feeders and/or transmission  
23 lines and substations. Similarly, the cumulative effect of increases in load due to new

1 customers and/or increased customer usage/demand in certain areas also can require  
2 upgrades to existing infrastructure and/or the installation of new facilities. FPL's fast-  
3 growing service area will require significant ongoing capital investment to meet  
4 customer growth, additional load requirements, and new construction development.  
5 Importantly, our customers are depending on us now more than ever and Power Delivery  
6 is committed to meet those expectations and provide a safe, reliable, and secure electric  
7 grid to meet their needs.

8

9 Major new projects throughout FPL's combined service area also can have a significant  
10 impact on resources and costs (e.g., new feeders, new transmission lines and even new  
11 T&D substations). In addition to the American Dream Miami Project mentioned  
12 earlier, an example of two other major projects that are currently under construction or  
13 expected to be under construction during 2020-2022:

- 14 • Florida Space Coast has several ongoing projects, including development of Blue  
15 Origin's Launch Complex 36, which will be used to launch the reusable New Glenn  
16 rocket.
- 17 • Baptist Hospital, a new \$600 million campus in Pensacola, will require construction  
18 of a new feeder and upgrades to an additional feeder for redundant sources.

19

20 While these are considered major construction projects for the electric grid, they are  
21 also examples of community economic growth projects that impact growth in the  
22 residential and commercial markets as well.

1 **Q. As part of the required expansion of the system to meet the growing customer**  
2 **demand, please describe some of the considerations that the Company must take**  
3 **into account in acquiring and holding T&D Property Held for Future Use**  
4 **(“PHFU”).**

5 A. Customer growth, increased electrical demands, and major new construction projects,  
6 require T&D to acquire and hold PHFU for this new infrastructure. As provided in  
7 MFR B-15, these T&D PHFU investments have been identified as being  
8 geographically and strategically located and necessary to meet future customer load  
9 growth, improve customer reliability, comply with NERC standards regulating the  
10 reliability of the grid and/or integrate future generation into the grid. With suitable  
11 properties on hand for future needs, FPL avoids being in a time pressure situation or  
12 being limited on suitable options, both scenarios in which property sellers may take  
13 advantage, resulting in higher costs.

14  
15 T&D substations and transmission lines can take years to plan, design, permit and  
16 construct. This includes securing necessary sites and properties. Additionally, the  
17 annual planning process is very dynamic and, by virtue of its close linkage to load  
18 growth forecasts, can and often does result in yearly modifications of system expansion  
19 plans. PHFU ensures we are able to move an adequate and reliable supply of power  
20 across the system to meet an ever-evolving set of electrical grid conditions and needs.

21  
22  
23

1 **IX. REGULATORY COMPLIANCE**

2

3 **Q. Are the operation and maintenance of FPL’s T&D systems significantly impacted**  
4 **by mandated compliance and regulations?**

5 A. Yes. As a regulated electric utility, FPL’s and Gulf’s combined T&D systems  
6 operation and facilities must comply with a variety of policies, standards, orders and  
7 requirements of federal, regional, state and local regulatory commissions and agencies.  
8 In addition to FPSC rules and requirements, these include the requirements of Federal  
9 Energy Regulatory Commission (“FERC”), NERC, the U.S. Environmental  
10 Protection Agency (“EPA”), U.S. Department of Homeland Security, Occupational  
11 Safety and Health Administration, Florida Department of Environmental Protection  
12 (“FDEP”), and numerous cities and counties. Of course, compliance with newly  
13 mandated requirements can incrementally increase costs for new and existing assets  
14 and require implementation of new and/or enhanced processes and related training.

15 **Q. Please provide examples of rules, regulations and requirements that can have a**  
16 **significant impact on FPL’s T&D operations, processes and costs.**

17 A. Under the direction of FERC, NERC currently enforces approximately 100 reliability  
18 standards for physical security and cybersecurity, containing in excess of 1,600  
19 requirements and sub-requirements that govern the operation and maintenance of FPL’s  
20 bulk electric system as well as, prevent malicious cyber-attacks on the grid. New  
21 standards and requirements continue to be added to NERC’s list for mandatory  
22 compliance. For example, in January 2020, new cybersecurity requirements became  
23 enforceable for approximately one-third of FPL’s and Gulf’s electric substations and

1 generating sites, and in October 2020, NERC began enforcing a new standard that  
2 addresses the supply chain risk management associated with all new electronic devices  
3 newly installed/replaced in FPL's grid control centers and most important substation  
4 and generating sites.

5  
6 FPL is also subject to a wide range of environmental laws and regulations (e.g.,  
7 U.S. EPA, FDEP, the Florida Fish and Wildlife Conservation Commission) to protect  
8 our natural resources. These laws and regulations require FPL to incorporate  
9 environmental protection/stewardship into the design, construction, operation and  
10 maintenance of its T&D facilities.

11  
12 Lastly, Regulatory Compliance includes obligations associated with the construction  
13 and relocation of facilities as required by state agencies, such as the Florida Department  
14 of Transportation, and local municipalities to meet the needs of the state and  
15 communities we serve.

## 16 17 **X. CUSTOMER SATISFACTION / TECHNOLOGY / RECOGNITION**

18  
19 **Q. What measures have been implemented to improve customer communications?**

20 A. FPL and Gulf continually strive to improve the service we provide our customers.  
21 In addition to improving the reliability of electric service, this means increasing  
22 overall customer satisfaction with initiatives such as how we communicate with our  
23 customers and provide them better and more timely information. By providing easier

1 access to better information, customers can make more informed decisions. An  
2 example of a recent initiative deployed to improve customers' overall service and  
3 satisfaction is the "FPL Project Portal" on FPL's website ([www.FPL.com](http://www.FPL.com)). The FPL  
4 Project Portal is part of our Major Projects and Construction Services organization. The  
5 FPL Project Portal makes it easier to work with FPL on construction projects, resulting  
6 in improved partnerships with large builders/developers. The Project Portal allows  
7 customers to initiate work, check status of jobs and find information about their projects.  
8 The Project Portal was recognized with the SEE's 2019 Chairman's Award, which  
9 "honors the one project that is deemed most outstanding for all category winners – the  
10 'Best of the Best'."

11  
12 More recently, FPL has expanded this concept with the Inspection Portal. The  
13 Inspection Portal streamlines the process of reporting completed inspections by  
14 municipalities. At the end of February 2021, the Inspection Portal was selected as a  
15 winner in the Customer Service & Billing Category of the SEE 2021 Industry  
16 Excellence Awards.

17 **Q. Please elaborate on how the FPL Project Portal, as well as the more recent**  
18 **Inspection Portal, improved service for customers.**

19 A. FPL has continued to push the boundaries of service excellence by providing customers  
20 with new self-service options that improve the user experience and enable customers  
21 to better track and manage their projects. The Project Portal has allowed FPL to provide  
22 construction customers an enhanced level of customer support through the introduction  
23 of new features, including a Centralized Appointment Calendar, Self-Scheduling

1 Disconnect & Reconnect service (“D&R”) and Construction Services Interactive Voice  
2 Response (“IVR”).

3

4 Prior to the Project Portal, when a customer needed to schedule an appointment with  
5 FPL, each FPL service area had its own method of tracking customer appointments,  
6 and there was no visibility between areas. The Project Portal enhanced the appointment  
7 process by moving to a centralized appointment calendar and provided the database to  
8 implement a customer self-service feature for making appointments. Using the Project  
9 Portal, customers can select the appointment type and see available time slots to  
10 schedule an available date and time convenient for them. Artificial intelligence  
11 functionality takes the customer’s information and creates the appropriate work request  
12 in order to schedule it to the workforce. Amazon Web Services (“AWS”) was  
13 implemented to call the customer the day before the scheduled appointment. The  
14 customer was presented with the options to confirm, reschedule, or cancel an  
15 appointment.

16

17 The local engineering areas received more than 100,000 calls in 2018. Many of these  
18 calls were for issues best handled by other departments or where customers could have  
19 benefited from self-service. FPL implemented an IVR system to give customers an  
20 option to have their billing and account adjustment questions routed to the correct  
21 departments. It leverages Project Portal self-service options for verifying construction  
22 schedules, customer requirements and status of municipal inspections. The IVR system  
23 provides clarity and transparency along with ease of routing customer inquiries to the

1 proper segment channels, resulting in improved efficiency in the engineering  
2 department and an improved customer experience.

3  
4 The Inspection Portal is FPL's new premier municipal interface that allows real-time  
5 reporting of approved inspections to FPL. The robust tool was created to streamline  
6 communications through automation and eliminate outdated processes that led to  
7 customer and municipal dissatisfaction. These new enhancements are paving the way  
8 for a new era of self-service in the electric industry.

9  
10 The results speak for themselves. Project Portal usage has doubled over the past year,  
11 and FPL expects increasing interest in Inspection Portal. Customers are excited about  
12 how this industry-changing and innovative technology makes their lives easier.

13 **Q. How has FPL used technology to improve system reliability?**

14 A. FPL has focused its efforts to significantly increase the utilization of information  
15 technology and automation to modernize its grid to make it smarter, self-healing and  
16 more reliable. This focus was initiated by FPL in 2006 with the installation of AMI  
17 that provides two-way communication to the customer's meter and has continued with  
18 other smart grid devices such as AFS, ALS, ATS and FCI. In addition to improving  
19 reliability, a more modernized grid also reduces costs, as restoration costs are reduced  
20 with fewer outages. As previously discussed, FPL's smart grid helped avoid more than  
21 140,000 outages during Tropical Storm Eta alone. In addition, FPL has implemented  
22 other technology initiatives, which are described below:

1        System Control Center – FPL’s System Control Center (“SCC”) is a state-of-the-art  
2        facility that enables more efficient operation and coordination of FPL’s transmission  
3        and substation network. This includes ensuring full compliance with all applicable  
4        standards, e.g., NERC and Critical Infrastructure Protection (“CIP”) cybersecurity  
5        standards/requirements. The quality and availability of energy management system  
6        tools and status information on FPL’s transmission and substation system allow for  
7        improved and continuous monitoring and control by system operators.

8  
9        Distribution Control Center (“DCC”) – FPL’s DCC is a state-of-the-art facility that  
10        enables more efficient operation and coordination of FPL’s distribution network.

11  
12        Power Delivery Diagnostic Center (“PDDC”) – The PDDC acts as a “nerve center”  
13        for FPL’s smart grid. The PDDC monitors, in real-time, critical operating parameters  
14        of T&D equipment/devices; gathers and analyzes data from advanced sensors, monitors,  
15        switches, smart meters, etc.; and utilizes FPL-developed analyses, applications,  
16        algorithms and other tools to predict likely equipment failures so that remediation can  
17        be efficiently planned and completed before a failure/outage occurs. The PDDC also  
18        provides analyses of system events and coordination and support to the SCC, DCC, and  
19        T&D operations. For instance, when an outage event occurs, the PDDC immediately  
20        begins to collect and analyze pertinent data, while the restoration crew is still traveling  
21        to the event site. Equipped with this information upon arrival, the restoration crew can  
22        perform the restoration more quickly and effectively.

1        Restoration Spatial View (“RSV”) – RSV, an FPL-developed application that runs on  
2        tablets, smart phones, and laptops, provides real-time situational awareness (from  
3        multiple systems) and acts as a “one-stop shop” for restoration crews. It provides real-  
4        time outage information, weather radar/alerts, electrical network information, customer  
5        energy consumption, voltage, crew location and more - all layered on a map view.

6        A significant customer benefit includes the restoration confirmation feature, which  
7        allows restoration crews to confirm the power status of all smart meters affected by  
8        an outage before leaving the area. This has resulted in fewer repeat customer  
9        calls/restoration crew visits.

10  
11        Drones - FPL uses drones with high definition and thermal cameras in day-to-day  
12        operations and after severe weather events to assess overhead power equipment.  
13        Drones are ideally suited for this work because they can safely and quickly deliver  
14        high-quality photos and videos of power lines in a way that can minimize  
15        environmental impact. They also help FPL to not inconvenience customers to gain  
16        access to our equipment on their property.

17  
18        In day-to-day operations, FPL uses drones to perform maintenance inspections of  
19        equipment. These proactive assessments help FPL identify any areas of concern before  
20        an outage can occur. Following a severe weather event, drones help us assess damage  
21        in areas that are flooded or impassable due to collapsed vegetation.

22

1 Predictive Algorithms – In 2017, the Association of Edison Illuminating Companies  
2 (“AEIC”) awarded a team from FPL the prestigious AEIC Achievement Award for a  
3 technology breakthrough in anticipating intermittent power failures and, in turn,  
4 improving the company's ability to take preventative action. The team received the  
5 esteemed award for developing a complex algorithm to detect distinct patterns in  
6 residential smart meters, allowing it to predict individual customer outages days in  
7 advance and avoid power loss.

8  
9 FPL’s proactive ticket notification system uses smart grid data to predict when a  
10 customer is about to experience an outage, enabling crews to deploy to an affected area.  
11 In many cases, this allows crews to resolve the issue before a customer is even aware  
12 of a problem.

13 **Q. Have FPL and Gulf received recognition for efforts to provide safe and reliable**  
14 **service for customers?**

15 A. Yes. In 2020, FPL was honored with the ReliabilityOne® National Reliability  
16 Excellence Award, presented by PA Consulting, for the fifth time in six years, and Gulf  
17 was honored with the ReliabilityOne® Award for Outstanding Reliability Performance  
18 in the Southeast (suburban/rural service) region. The ReliabilityOne® National  
19 Reliability Award is given to the award recipient that has demonstrated sustained  
20 leadership, innovation and achievement in the area of electric reliability. Criteria for  
21 the award is based primarily on system reliability statistics that measure the frequency  
22 and duration of customer outages. After provisional recipients are selected, each  
23 company undergoes an on-site certification process, which provides an independent

1 review and confirmation of the policies, processes and systems used to collect, analyze  
2 and report a company's reliability results. In addition to the national award in 2020, FPL  
3 was awarded the ReliabilityOne® for Outstanding Reliability Performance in the  
4 Southeast (metropolitan) region for the seventh straight year. In 2016 and 2019, FPL  
5 also earned the ReliabilityOne® Award for Outstanding Technology and Innovation.

6

7 Finally, both FPL and Gulf earned awards from EEI for their efforts during the 2016,  
8 2017, 2018 and 2020 hurricane seasons, including the Emergency Assistance Award for  
9 Puerto Rico Power Restoration. Gulf received EEI's Emergency Recovery award for  
10 its outstanding power restoration efforts after Hurricane Michael in 2018 and Hurricane  
11 Sally in 2020. Both companies received the EEI Emergency Response Assistance award  
12 for their exceptional support of other utilities during the active 2020 hurricane season.

13 **Q. Have these initiatives been recognized by customers?**

14 A. Yes, the cumulative success of FPL's initiatives to improve our service and how we  
15 communicate with our customers has contributed to reducing FPSC reliability-related  
16 logged complaints per 10,000 customers by 32% for FPL since 2016.

17

## 18 **XI. FPL T&D COSTS**

19

20 **Q. Please provide an overview of FPL's actual/forecasted T&D costs.**

21 A. FPL's and Gulf's combined T&D capital costs and O&M expenses result from five  
22 major cost drivers: (1) FPSC storm hardening and SPP; (2) growth; (3) reliability/grid  
23 modernization; (4) grid servicing/support; and (5) complying with regulatory agency

1 requirements. For T&D capital costs, the major drivers have been FPSC storm  
 2 hardening, growth, and reliability/grid modernization. For T&D O&M expenses, the  
 3 major drivers have been grid servicing/support, regulatory compliance and  
 4 reliability/grid modernization. For 2021-2023, these same major cost categories are  
 5 expected to continue to drive T&D capital costs and O&M expenses.

6

7

**A. T&D CAPITAL COSTS**

8 **Q. What is FPL’s and Gulf’s Combined T&D actual/projected base (i.e., non-clause)**  
 9 **capital costs for 2019-2022 and 2023?**

10 A. FPL’s and Gulf’s combined T&D base (i.e., non-clause) capital costs for 2019-2022  
 11 and for 2023 are \$12.72 billion and \$2.98 billion, respectively. As discussed, the major  
 12 drivers for capital costs historically and for the projected period are the same.

13 **Q. Please provide 2019-2023 base (i.e., non-clause) capital costs by major drivers for**  
 14 **FPL and Gulf.**

15 A. Below are the 2019-2023 base (i.e., non-clause) capital costs for each major driver for  
 16 FPL and Gulf:

17

(\$Billions)

<u>Major Driver</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2019-2023</u>	
						(\$)	(%)
FPSC Storm Hardening/SPP	\$0.85	\$0.96	\$0.14	\$0.15	\$0.15	\$2.24	14%
Growth	\$0.87	\$0.99	\$1.40	\$1.26	\$1.35	\$5.86	37%
Reliability/Grid Modernization	\$0.94	\$1.15	\$1.36	\$1.12	\$1.06	\$5.64	36%
Grid Servicing/Support	\$0.31	\$0.29	\$0.34	\$0.31	\$0.35	\$1.61	10%
Regulatory Compliance	\$0.06	\$0.06	\$0.07	\$0.08	\$0.07	\$0.35	2%
Total	<u>\$3.03</u>	<u>\$3.45</u>	<u>\$3.31</u>	<u>\$2.92</u>	<u>\$2.98</u>	<u>\$15.69</u>	<u>100%</u>

Note: Totals may not add due to rounding.

18

1 Each of these drivers, their specific components and their importance in maintaining a  
2 resilient, reliable and compliant T&D system, were discussed earlier in my testimony.

3 **Q. Please provide additional details for capital costs driven by FPSC Storm**  
4 **Hardening and SPP.**

5 A. While 2020 is a transition year between the two FPSC rules, the capital costs for the  
6 FPSC Storm Hardening (under the now repealed Rule 25-6.0342, F.A.C.) category for  
7 2019 and 2020 is \$0.85 billion and \$0.96 billion, respectively, resulting from FPL's and  
8 Gulf's efforts to further harden the T&D grid (e.g., feeder hardening) through base rates.  
9 For 2021-2023, storm hardening capital expenditures in years 2021-2023 have been or  
10 will be requested for recovery through the SPPCRC (Docket No. 20200092-EI, Order  
11 No. PSC-2020-0409-AS-EI, SPP Docket No. 20200071-EI, Order No. PSC-2020-0293-  
12 AS-ES) with cost of removal related to existing assets of \$0.14 billion, \$0.15 billion,  
13 \$0.15 billion in years 2021-2023, respectively, forecasted to be recovered in base rates.  
14 The only capital expenditures not currently recoverable through SPPCRC relates to  
15 Gulf's Transmission Inspection Program, which is forecasted to be approximately \$2.6  
16 million annually for 2022 and 2023. FPL witness Fuentes is proposing a Company  
17 adjustment to move these capital expenditures to the SPPCRC beginning in 2022.

18 **Q. Please provide additional details for capital costs driven by Growth.**

19 A. The capital costs associated with the cumulative installation of new service lines to  
20 serve approximately 425,000 new service accounts being added, averages  
21 approximately \$0.26 billion each year for 2019-2022 and \$0.28 billion for 2023.  
22 Capital costs for expansion and upgrades of both T&D facilities/infrastructure to  
23 ensure the safe and reliable operation of the grid for 2019-2022 are \$0.50 billion, and

1 \$0.26 billion for 2023. Remaining capital costs in this cost category associated with  
2 new large major construction projects and new streetlight systems for 2019-22,  
3 averages approximately \$0.74 billion each year and \$0.80 billion for 2023.

4 **Q. Please provide additional details for capital costs driven by Reliability/Grid**  
5 **Modernization.**

6 A. Capital costs associated with the distribution reliability/grid modernization initiatives for  
7 2019-2022 and 2023 are \$1.59 billion and \$0.38 billion, respectively. For transmission  
8 reliability, capital costs for 2019-2022 and 2023 are \$2.40 billion and \$0.68 billion,  
9 respectively. Lastly, capital expenditure associated with the NFRC for 2019-2022 are  
10 \$0.59 billion with anticipated completion in mid-2022.

11 **Q. Please provide additional details for capital costs driven by distribution-related**  
12 **Reliability/Grid Modernization.**

13 A. The installation of distribution smart grid devices account for \$0.80 billion for 2019-  
14 2022 and \$0.19 billion for 2023. The capital costs associated with the underground  
15 inspection, repair and rehabilitation of underground are \$0.07 billion for 2019-2022  
16 and \$0.01 billion for 2023. The remaining components for this category, accounting  
17 for \$0.72 billion for 2019-2022 and \$0.17 billion for 2023, are associated with other  
18 various distribution reliability initiatives such as hand-hole and pad-mount transformer  
19 and submarine cable replacements.

20 **Q. Please provide additional details for capital costs driven by transmission-related**  
21 **Reliability/Grid Modernization.**

22 A. Capital costs associated with transmission facility/system assessments, replacements  
23 and the prevention through prediction/reoccurrence initiatives account for \$0.70 billion

1 in 2019-2022 and \$0.24 billion for 2023. The remaining transmission reliability-related  
2 capital costs are associated with modernizing the transmission grid (e.g., 500kV  
3 Rebuild program, upgrading/digitizing substation transformer relays and installing  
4 substation fault information capabilities). Capital costs for these initiatives are \$1.70  
5 billion for 2019-2022 and \$0.44 billion for 2023.

6 **Q. Please provide details for capital costs driven by Grid Servicing/Support.**

7 A. Capital costs associated with the three major components of this key driver category  
8 include: (1) restoring customers' service, \$0.54 billion for 2019-2022, and \$0.13  
9 billion for 2023; (2) the company's vehicle fleet, \$0.20 billion for 2019-2022 and \$0.05  
10 billion for 2023; and (3) other various support activities (e.g., purchase of tools,  
11 computer systems/software, maintenance/ upgrades of office facilities, and responding  
12 to customer requests). For 2019-2022, these costs are \$0.52 billion, and \$0.17 billion  
13 for 2023.

14 **Q. Please provide details for capital costs driven by Regulatory Compliance.**

15 A. This remaining major driver category, accounting for approximately \$272.5 million  
16 in 2019-2022 and \$72.9 million for 2023, includes costs associated with complying  
17 with various regulatory mandates, rules and regulations previously discussed.

18  
19 **B. T&D O&M EXPENSES**

20 **Q. What are FPL's and Gulf's combined T&D O&M expenses for 2022 Test Year  
21 and 2023 Subsequent Year?**

22 A. FPL and Gulf have forecasted combined T&D O&M expenses of \$289.7 million and  
23 \$295.4 million for the 2022 Test Year and 2023 Subsequent Year, respectively. These

1 forecasts include a portion of T&D O&M expenses related to SPP programs for 2022  
2 and 2023 of approximately \$83 million each year. FPL witness Fuentes is requesting  
3 a Company adjustment to move the recovery of all SPP O&M expenses from base  
4 rates to the SPPCRC.

5 **Q. How do T&D O&M expenses compare to typical benchmarks utilized by the**  
6 **FPSC for evaluating the reasonableness of O&M expenses?**

7 A. Total T&D 2022 Test Year and 2023 Subsequent Year O&M expenses compare  
8 favorably to the benchmarks typically used by the Commission to evaluate the  
9 reasonableness of O&M expenses (e.g., MFR C-8 Consolidated, Details of Changes in  
10 Expenses and MFR C-41 Consolidated, O&M Benchmark Variance by Function). For  
11 example, 2022 Test Year and 2023 Subsequent Year T&D O&M expenses are  
12 significantly below the FPSC O&M benchmark as calculated by FPL witness Bores in  
13 MFR C-41, which are approximately \$153.6 million and \$158.4 million for 2022 and  
14 2023, respectively.

15 **Q. Is there other information available indicating that FPL's O&M expenses are**  
16 **reasonable?**

17 A. Yes. As contained in FPL witness Reed's testimony, benchmarking of T&D O&M  
18 expenses demonstrates that FPL has "shown excellence in controlling its Distribution  
19 O&M expenses" and "performed well in controlling Transmission O&M expenses."

20 **Q. Are FPL's T&D forecast for capital costs and O&M expenses reasonable?**

21 A. Yes. For the reasons outlined in detail in my testimony and exhibits, FPL's 2022 test  
22 year and 2023 subsequent year T&D forecast for capital costs and O&M expenses are  
23 reasonable and reflect our intentions for continued superior performance. As

1 previously discussed, Power Delivery has the leadership and performance track record  
2 for managing and sustaining excellent T&D system performance.

3 **Q. Does this conclude your direct testimony?**

4 A. Yes.

**Florida Power & Light Company**

**CONSOLIDATED MFRs SPONSORED OR CO-SPONSORED BY MICHAEL SPOOR**

<b>MFR</b>	<b>Period</b>	<b>Title</b>
<b>CO-SPONSOR:</b>		
B-15	Test Subsequent	PROPERTY HELD FOR FUTURE USE - 13 MONTH AVERAGE
B-24	Test Subsequent	LEASING ARRANGEMENTS
C-15	Historic Test Subsequent	INDUSTRY ASSOCIATION DUES
C-16	Historic	OUTSIDE PROFESSIONAL SERVICES
C-34	Historic Subsequent	STATISTICAL INFORMATION
E-07	Test Subsequent	DEVELOPMENT OF SERVICE CHARGES

**Florida Power & Light Company**

**SUPPLEMENT 1 - FPL STANDALONE INFORMATION IN MFR FORMAT SPONSORED OR  
CO-SPONSORED BY MICHAEL SPOOR**

Schedule	Period	Title
<b>CO-SPONSOR:</b>		
B-15	Test Subsequent	PROPERTY HELD FOR FUTURE USE - 13 MONTH AVERAGE
B-24	Test Subsequent	LEASING ARRANGEMENTS
C-15	Test Subsequent	INDUSTRY ASSOCIATION DUES
C-34	Subsequent	STATISTICAL INFORMATION
E-07	Test Subsequent	DEVELOPMENT OF SERVICE CHARGES

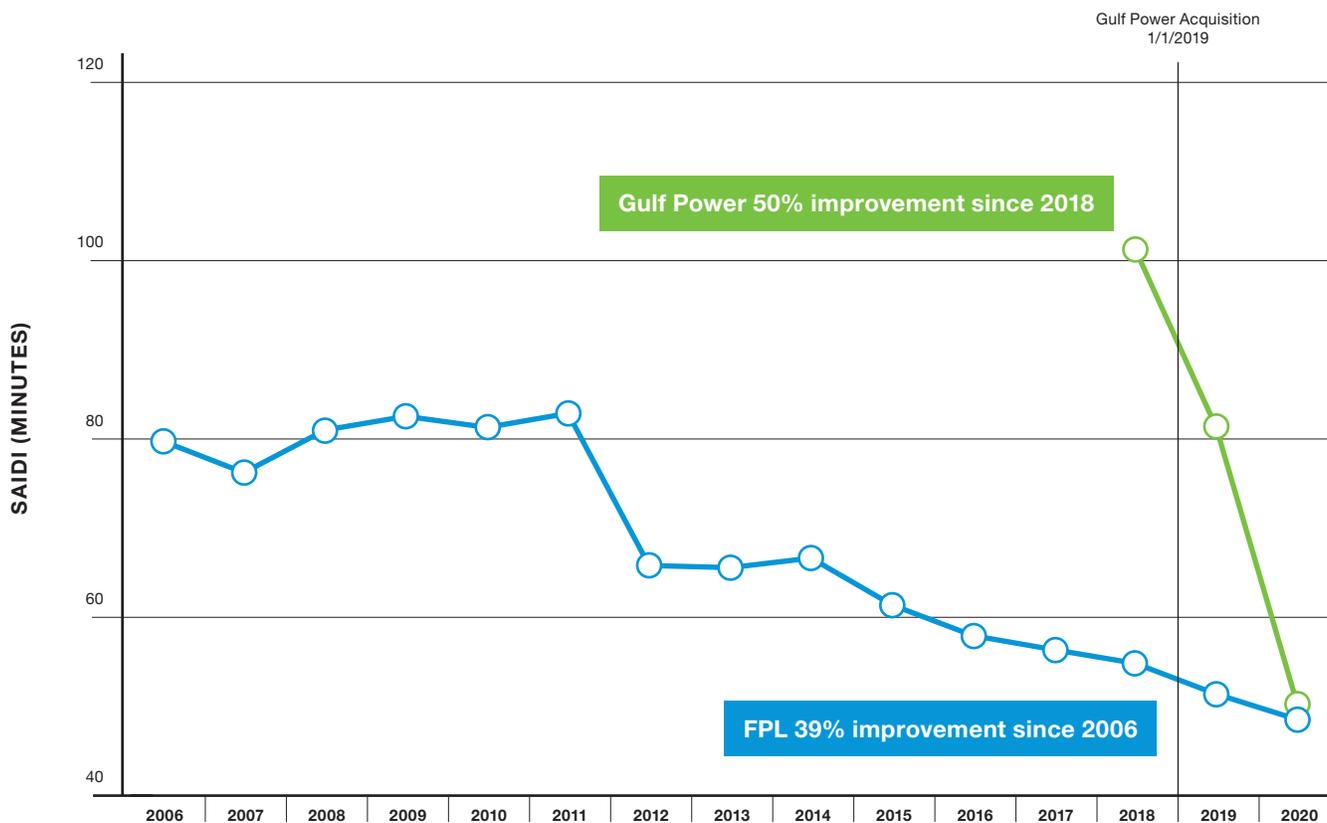
**Florida Power & Light Company**

**SUPPLEMENT 2 - GULF STANDALONE INFORMATION IN MFR FORMAT SPONSORED OR  
CO-SPONSORED BY MICHAEL SPOOR**

<b>Schedule</b>	<b>Period</b>	<b>Title</b>
<b>CO-SPONSOR:</b>		
B-15	Test Subsequent	PROPERTY HELD FOR FUTURE USE - 13 MONTH AVERAGE
B-24	Test Subsequent	LEASING ARRANGEMENTS
C-08	Test Subsequent	DETAIL OF CHANGES IN EXPENSES
C-34	Subsequent	STATISTICAL INFORMATION
E-07	Test Subsequent	DEVELOPMENT OF SERVICE CHARGES



## FPL & Gulf Power's FPSC T&D SAIDI 2006-2020



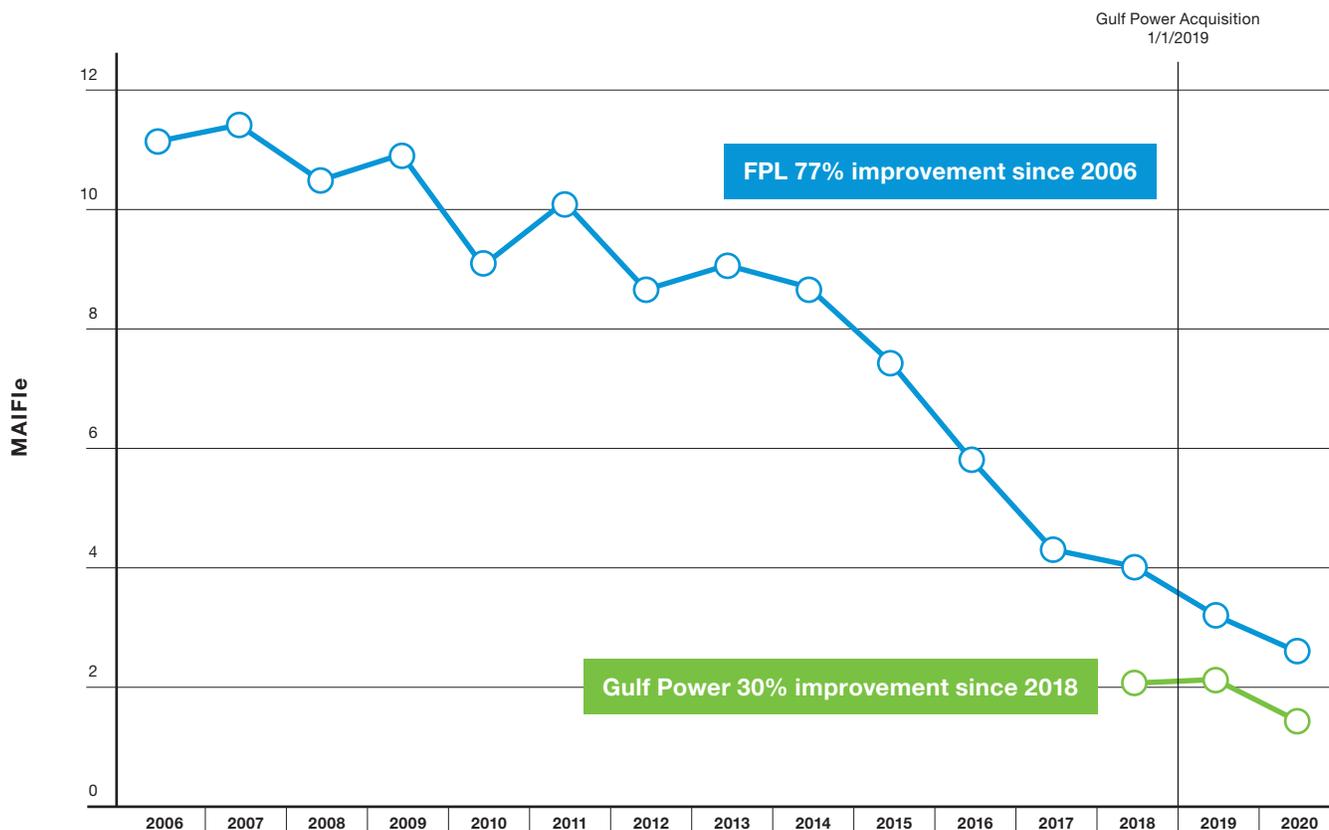
FPL & Gulf Power have significantly improved overall reliability for our customers

FPL

Gulf Power



## FPL & Gulf Power's FPSC Distribution MAIFle 2006-2020



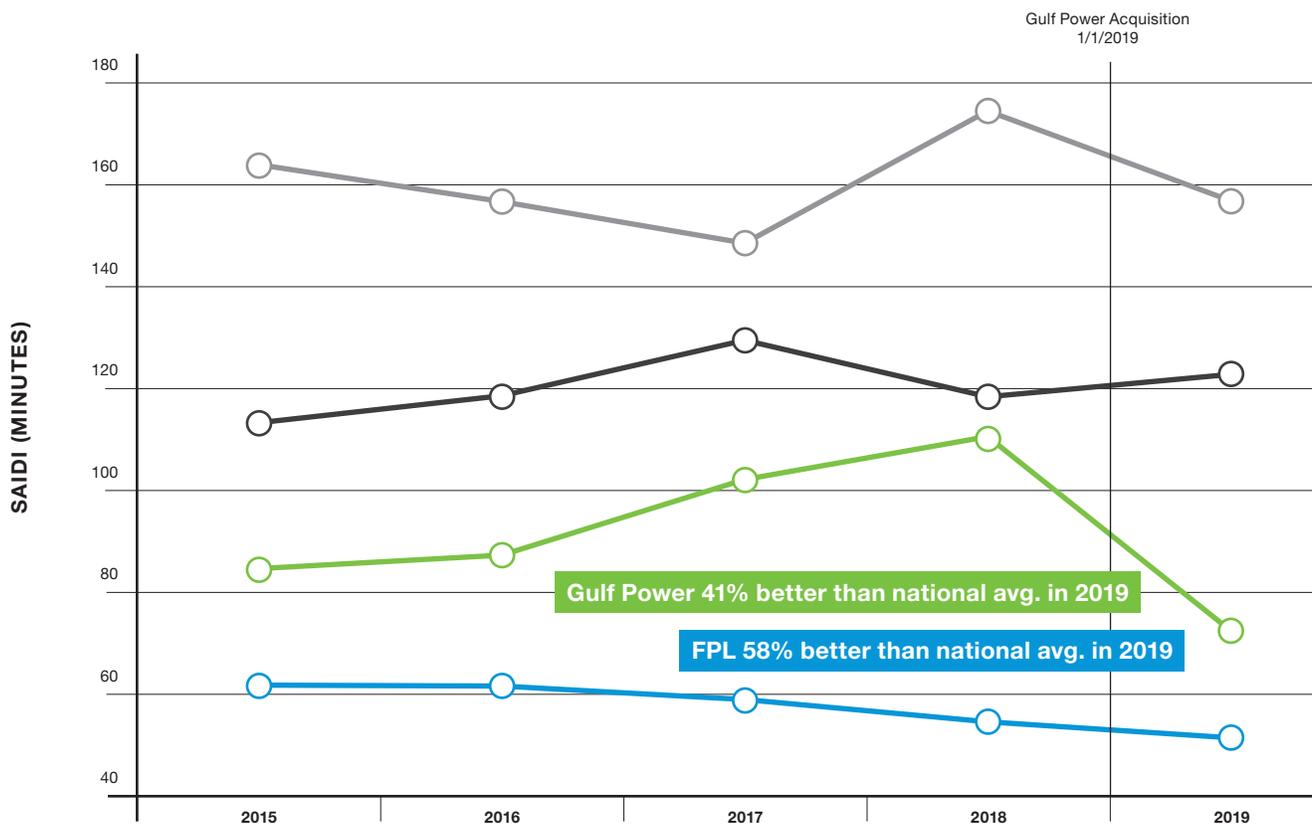
FPL & Gulf Power customers are experiencing significantly fewer momentary outages

FPL

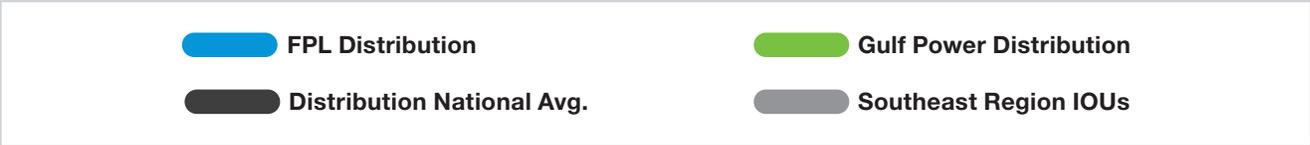
Gulf Power



## National & Regional Distribution SAIDI Benchmarking



**FPL & Gulf Power have significantly improved overall reliability for our customers**



FPL Distribution/Gulf Power Distribution - Calculated using the IEEE 2.5 beta methodology.

Distribution National Avg. - Based on PA Consulting's most recent reliability benchmarking analysis (2019 results), with data from 114 investor-owned utilities (IOU's), with the vast majority utilizing IEEE 2.5 beta methodology.

Southeast Region IOUs - Data source is PA Consulting. IOUs in the Southeast Region, excluding FPL and Gulf Power.



## AFS Devices are Significantly Reducing FPL's Customer Interruptions

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**With AFS – Avoided > 1.6 Million Customer Interruptions in 2020**

