William P. Cox
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March 11, 2026

-VIA ELECTRONIC FILING-

Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 20260020-EI
Petition for determination of need for Andytown-Oasis transmission lines project in Broward and Miami-Dade Counties, by Florida Power & Light Company.

Dear Mr. Teitzman:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") in the above-referenced docket is FPL's Petition for determination of need for Andytown-Oasis transmission lines project in Broward and Miami-Dade Counties and Exhibit A to the Petition. Contemporaneous herewith, FPL will file the testimony and exhibits of FPL witness Miguel A. Yanes, which support the Petition.

Please feel free to contact me at 561-304-5662 if you have any questions about this transmittal.

Sincerely,

/s/ William P. Cox
William P. Cox
Senior Counsel
Florida Bar No. 0093531

Enclosure

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Determination of Need for Andytown-Oasis Transmission Lines in Broward and Miami-Dade Counties, by Florida Power & Light Company	))))	Docket No. 20260020-EI Filed: March 11, 2026

PETITION OF FLORIDA POWER & LIGHT COMPANY TO DETERMINE NEED FOR ELECTRICAL TRANSMISSION LINES

Florida Power & Light Company ("FPL"), hereby petitions the Florida Public Service Commission ("Commission") to determine, pursuant to Section 403.537, Florida Statutes (2025), and Rules 25-22.075 and 25-22.076, Florida Administrative Code, that there is a need for the proposed electrical transmission lines described herein. In support of its Petition, FPL states:

1. The name and address of the affected agency are:

Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

2. FPL is an investor-owned electric utility that provides electric service to customers in its service area. FPL's full name and business address are:

Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

3. All pleadings, motions, notices, staff recommendations, orders, and other documents filed or served in this proceeding should be served upon the following individuals on behalf of FPL:

William P. Cox Senior Counsel Christopher T. Wright Assistant General Counsel Florida Power & Light Company	Kenneth A. Hoffman Vice President Regulatory Affairs Florida Power & Light Company 134 West Jefferson Street Tallahassee, Florida 32301

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4. The Andytown-Oasis transmission lines project involves the construction of four new transmission lines: (1) one 500 kV line starting at FPL's existing Andytown substation in Broward County and ending at FPL's planned Oasis substation in Miami-Dade County; (2) one 500 kV line starting at FPL's existing Quarry substation in Miami-Dade County and ending at FPL's planned Oasis substation in Miami-Dade County; (3) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Quarry substation in Miami-Dade County; and (4) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Levee substation in Miami-Dade County (collectively, the "Andytown-Oasis Project" or "Project"). The Project has a planned in-service date of December 2033.

5. The Andytown-Oasis Project is subject to the Florida Electric Transmission Line Siting Act ("TLSA"), Sections 403.52-403.5365, Florida Statutes (2025). The Project consists of four related transmission lines that are each necessary and appropriate to address and support the need for the Project as further explained in the pre-filed direct testimony of FPL witness Miguel A. Yanes. Each of these four related transmission lines will be located within the same transmission corridor for purposes of TLSA review and certification by the Florida Department of Environmental Protection and the TLSA Siting Board. Consistent with the unified TLSA review and certification, FPL seeks a single determination of need for the entire Project in this proceeding, rather than filing four separate petitions. FPL submits that proceeding in one filing promotes administrative efficiency and a complete record by allowing the Commission and any

interested parties the opportunity to evaluate the Project's need on a consolidated basis, avoids duplicative proceedings, costs, and inefficiencies, and aligns the timing of the need determination with the TLSA certification process.[1]

6. Pursuant to the TLSA and Section 403.537, Florida Statutes (2025), and Rules 25-22.075 and 25-22.076, Florida Administrative Code, the Commission has jurisdiction to determine the need for the Andytown-Oasis Project, applying the standards set forth in Section 403.537(1)(c), Florida Statutes (2025). The information required to be supplied for the petition for determination of need pursuant to Rule 25-22.076, Florida Administrative Code, is set forth in Exhibit A hereto and is incorporated herein by reference.

7. FPL is responsible for serving existing and new customers within its service area. Currently, FPL forecasts additional transmission capacity is needed to support continued customer load growth in Miami-Dade County. The proposed Andytown-Oasis Project will inject the additional capacity needed to support this customer load growth beyond 2033.

8. The data and analyses contained in Exhibit A demonstrate the need for the Andytown-Oasis Project by the proposed timeframe as the most cost-effective alternative available, taking into account the growing demand for electricity, transmission system reliability and integrity, and low-cost electric service to ensure the continued economic well-being of residents in the state of Florida, as well as other relevant matters pursuant to Section 403.537(1)(b), Florida Statutes (2025).

[1] *See* Section 403.522(7), Fla. Stat. ("'Certification' means the approval by the board of a license for a corridor proper for certification pursuant to subsection (10) and the construction, operation, and maintenance of transmission lines within the corridor with the changes or conditions as the siting board deems appropriate. Certification shall be evidenced by a written order of the board."); *see also* Fla. Admin. Code R. 25-22.076, Contents of Petition (referencing "proposed transmission line or lines" in petitions to commence a determination of need proceeding before the Commission); *see also In re: Florida Power and Light Company need determination request for Midway-Jensen-Crane 230 kV electrical transmission lines*, Docket No. 820433-EU, Order No. 11464 (F.P.S.C., 1982) (approval of determination of need for two 230 kV transmission lines).

9. Pursuant to Rule 25-22.076(5), Florida Administrative Code, Exhibit A to this Petition and the pre-filed direct testimony of FPL witness Miguel A. Yanes, submitted contemporaneously with this Petition, explain in detail why the Andytown-Oasis Project is needed. In summary, absent timely construction of the Project, FPL's planning studies indicate that the transmission system serving Miami-Dade County will not have sufficient capability by December 2033 to reliably serve forecasted load and withstand required contingency conditions without unacceptable thermal overloads and low-voltage conditions. Those conditions would result in noncompliance with the North American Electric Reliability Corporation's ("NERC") mandatory Reliability Standards TPL-001-5.1 and NUC-001-4,[2] and would materially increase the risk of customer outages and service degradation to customers in Miami-Dade County. Accordingly, the Andytown-Oasis Project is needed by December 2033 to: (a) address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4; (b) maintain transmission reliability for FPL customers in Miami-Dade County; and (c) increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.

10. In compliance with the notice requirements of Section 403.537(1)(a), Florida Statutes (2025) and Rule 25-22.075, Florida Administrative Code, FPL previously filed a Notice of Intent to File Petition for Transmission Line Need Determination on February 9, 2026. The Commission has set the final hearing for this docket for April 23, 2026. FPL has published the notice of that hearing in the appropriate newspapers in accordance with the statutory

[2] The current inflation-adjusted maximum civil monetary penalty for violation of a NERC Reliability Standard is in excess of $1.5 million per violation per day. *See* 18 CFR § 385.1602(d) (2025).

requirements and the requirements of Rule 25-22.075(4), Florida Administrative Code.

WHEREFORE, FPL respectfully requests that the Commission:

A. Hold a hearing on this Petition in accordance with Section 403.537, Florida Statutes (2025), Chapter 120, Florida Statutes (2025), and applicable rules of the Commission.

B. Determine that there is a need for the Andytown-Oasis Project, with the appropriate starting and ending points in Broward and Miami-Dade Counties as specified in this Petition and the testimony of FPL witness Miguel A. Yanes; and

C. Enter a final order finding and determining that there is a need for the Andytown-Oasis Project.

Respectfully submitted,
By: *s/ William P. Cox*

William P. Cox
Senior Counsel
Florida Bar No. 0093531
Christopher T. Wright
Assistant General Counsel
Fla. Auth. House Counsel No. 1007055
Florida Power & Light Company
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing was furnished by Electronic Mail to the following on the 11th day of March, 2026:

Adria E. Harper, Esq., General Counsel
Carlos Marquez II, Esq., Senior Attorney
Office of the General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399
aharper@psc.state.fl.us
cmarquez@psc.state.fl.us

By: *s/ William P. Cox*
William P. Cox, Esq.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20260020-EI

FLORIDA POWER & LIGHT COMPANY

MARCH 11, 2026

IN RE: PETITION FOR DETERMINATION OF NEED FOR ANDYTOWN-OASIS TRANSMISSION LINES PROJECT IN BROWARD AND MIAMI-DADE COUNTIES, BY FLORIDA POWER & LIGHT COMPANY

EXHIBIT A TO THE PETITION

The Andytown-Oasis Project

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Executive Summary

This Petition provides the background information concerning the Andytown-Oasis Project ("AOP" or "Project"), as well as the need for and benefits resulting from the AOP. The need for the AOP is based on the following considerations:

- Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1[1] and NUC-001-4[2];
- Maintain transmission reliability for FPL customers in Miami-Dade County; and
- Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.

FPL evaluated multiple transmission alternatives for meeting the identified needs, which resulted in the selection of the AOP. The AOP presents the overall best alternative to address the continued customer load growth in Miami-Dade County, current and planned generation expansion in Miami-Dade County, compliance with mandatory NERC Reliability Standards, and maintaining reliability in Miami-Date County for both existing and future customers. The AOP will continue to support low-cost electricity for the economic well-being of residents of the state of Florida.

[1] NERC Reliability Standard TPL-001-5.1 defines the scenarios and expected levels of system performance the Bulk Electric System ("BES") must comply within the long-term planning horizon. https://www.nerc.com/globalassets/standards/reliability-standards/tpl/tpl-001-5.1.pdf

[2] NERC Reliability Standard NUC-001-4 establishes coordination requirements between nuclear plant generator operators and transmission entities to ensure reliable long term system planning and operation. https://www.nerc.com/globalassets/standards/reliability-standards/nuc/nuc-001-4.pdf

I. Description of FPL Electrical Facilities

In order to provide an overview of FPL's existing electrical transmission system, a map of FPL's transmission network indicating the general location of generating plants, major substations, and transmission lines is shown in Attachment 1. As shown in Attachment 1, the load in the Miami-Dade County area is currently served by existing generation resources in Miami-Dade County and several 500 kV, 230 kV, and 138 kV circuits running north-south from Broward County.

A listing of FPL's historical and forecasted peak demand is provided in Schedules 3.1 and 3.2 of Florida Power & Light Company Ten Year Power Plant Site Plan (2025-2034) submitted on April 1, 2025, to the Florida Public Service Commission ("Commission"), which are incorporated herein as Attachments 2 and 3.

II. The Andytown-Oasis Project

Over the past three years (2023-2025), FPL's service area in Miami-Dade County has reported summer peak loads between 6,014 MW and 6,239 MW. FPL's 2025 forecast projects that by 2033, the summer peak load in Miami-Dade County will be approximately 7,200 MW. Transmission assessment studies conducted by FPL in 2025 identified potential system limitations that will require additional facilities to meet transmission reliability and increase transfer capability for Miami-Dade County as shown in Attachment 7. These studies have identified that by 2033, FPL's existing transmission network will not be able to support the growing load demand in Miami-Dade County, and a need for a new transmission solution is required to maintain transmission reliability in the area.

The AOP will include building four new transmission lines: (1) one 500 kV line starting at FPL's existing Andytown substation in Broward County and ending at FPL's planned Oasis substation in Miami-Dade County; (2) one 500 kV line starting at FPL's existing Quarry substation in Miami-Dade County and ending at FPL's planned Oasis substation in Miami-Dade County; (3) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Quarry substation in Miami-Dade County; and (4) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Levee substation in Miami-Dade County. The AOP will effectively address potential overloads and low voltage conditions in Miami-Dade County under contingency events, maintain transmission reliability for customers in the County, and increase the power transfer capability for the transmission system to support the growing customer demand in the County. Attachment 4, Page 1 is a map showing the AOP, featuring the study area for the

project with the existing facilities in the area and the location of the proposed project lines. Page 2 of Attachment 4 is a more detailed system view of the study area with the existing and proposed project facilities.

The estimated construction costs for AOP include design, engineering, right-of-way preparation, and land acquisition, in nominal or year-of-installation dollars. Attachment 10 is the estimated construction schedule for AOP.

Project Costs	$MM
Andytown-Oasis Project Estimated Construction Costs	$781.89 ($699.8 CPVRR)

III. Transmission Planning Criteria and Process

FPL plans, designs, and operates its transmission system in accordance with the mandatory Reliability Standards established by the North American Electric Reliability Corporation ("NERC"). Specifically, FPL's transmission system is designed and operated to meet the system performance and long-term planning horizon for the BES required by NERC Reliability Standard TPL-001-5.1. Additionally, FPL's transmission system is designed and operated to comply with the applicable provisions of NERC Reliability Standard NUC-001-4, which establishes coordination requirements between nuclear plant generator operators and transmission entities to ensure reliable long term system planning and operation.[3]

In general, the transmission system must remain stable, with both thermal and voltage limits maintained within applicable facility ratings for each of the contingency categories listed on Table 1 of NERC Reliability Standard TPL-001-5.1, which is provided in Attachment 5. FPL adheres to these NERC standards, both TPL-001-5.1 and NUC-001-4, as part of its comprehensive transmission planning criteria. FPL's transmission planning process consists of five major steps: (1) the preparation of system models, (2) the assessment of the transmission system performance to comply with NERC Reliability Standards, (3) the development and evaluation of transmission expansion alternatives, (4) the selection and approval of the preferred alternatives, and (5) the incorporation of the expansion plan into the Florida Reliability Coordinating Council ("FRCC") Regional Planning Process. A more detailed discussion of these steps is provided in Attachment 6.

[3] FPL's transmission planning incorporates the Nuclear Plant Interface Requirements ("NPIR") of NERC Reliability Standard NUC-001-4 that support nuclear plant reliability, which is provided in Attachment 9.

IV. Discussion of Need and Benefits

The need for the AOP is based on the following considerations:

- Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4;
- Maintain transmission reliability for FPL customers in Miami-Dade County; and
- Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.

As a result of the growing customer base and electric demand load in Miami-Dade County, the FPL transmission system is projected to exceed voltage and thermal facility ratings under several contingency scenarios. These studies have identified that by 2033, FPL's existing transmission network will not be able to support the growing load demand in Miami-Dade County, and a need for a new transmission solution is required to maintain transmission reliability in the area. In addition, the transmission assessment studies conducted by FPL in 2025 identified system limitations exceeding transmission criteria required by NERC Reliability Standards TPL-001-5.1 and NUC-001-4. The AOP will address NERC TPL-001-5.1 and NUC-001-4 system reliability deficiencies and provide a resilient, hardened path from Broward County into Miami-Dade County. A detailed description of the system improvements follows.

Address Future Thermal Overloads and Low Voltage Conditions

Appendix A shows the load flow diagrams that illustrate the AOP's capability to address potential future thermal overloads and low voltage conditions.

FPL studies have identified the following contingency event as one of the most critical scenarios for the system: [redacted]. For this scenario, the [redacted] could drop below required levels. Critically, pursuant to NERC Reliability Standard NUC-001-4, the [redacted]

Page 1 of Appendix A shows the power flow diagram depicting the low voltage scenario in Summer 2033 at [redacted] without the AOP implemented. In order to mitigate the low voltage condition mentioned above, it would be necessary to implement load shedding measures and disrupt power to customers in Miami-Dade County to preserve the integrity of the FPL transmission grid, which would result in violation of NERC Reliability Standards TPL-001-5.1 and NUC-001-4.

FPL's studies have also identified thermal overloads under the contingency of a [redacted] line section. Under this contingency scenario, the [redacted] line loading would exceed (as high as [redacted]) its thermal rating (see Appendix A page 5). Overloaded electric lines occur when demand exceeds capacity, causing the wires to overheat, damaging the equipment and creating significant safety hazards and risk of power outages. In order to mitigate the overloads

mentioned above, it would be necessary to implement load shedding measures and disrupt power to customers in Miami-Dade County to preserve the integrity of the FPL transmission grid, which would result in violation of NERC Reliability Standard TPL-001-5.1.

Appendix A pages 2 and 6 show load flow output diagrams for Summer 2033 peak conditions with the AOP in-service under the contingencies described above. With the construction of the AOP, there is a new, resilient 500 kV north to south connection which resolves the low voltage condition at the [redacted] and avoids the potential overloads on the [redacted] line.

Maintain Transmission Reliability

Appendix B shows the load flow diagrams that illustrate the AOP's capability to maintain transmission reliability.

FPL studies determined that the following contingency scenario will adversely impact the reliability of system: [redacted]. Under this contingency scenario, the loading on [redacted] line would exceed (as high as [redacted] its thermal rating (see Appendix B page 1). In order to mitigate these overloads, it would be necessary to implement load shedding measures and disrupt power to customers in the South Area of FPL's service area.

FPL's studies have also identified thermal overloads under the contingency of the [redacted] Under this

contingency scenario, the loading on the [redacted] would exceed (as high as [redacted]) its thermal rating (see Appendix B page 5). In order to mitigate the overloads mentioned above, it would be necessary to implement load shedding measures and disrupt power to customers in Miami-Dade County.

With the construction of the AOP, thermal overloads on the [redacted] and [redacted] will be resolved, and there will be no reliability impacts to customers due to these contingency events. Appendix B pages 2 and 6 show load flow output diagrams for Summer 2033 peak conditions with the AOP in-service under the contingencies described above.

Increase Power Transfer Capability

Appendix C shows the load flow diagrams that illustrate AOP's increased power transfer capability.

Currently, the existing transmission system between Broward and Miami-Dade County has three (3) 500 kV lines (the backbone of the transmission system) flowing power north to south. Together, these existing lines deliver [redacted] to Miami-Dade County for summer peak conditions with no contingencies, see Appendix C page 1. Under the contingency of an [redacted] the power flowing in the existing 500 kV lines into Miami-Dade County will increase to [redacted] to compensate for the loss of generation, see Appendix C page 5. The construction of the AOP will extend the 500 kV backbone into Miami-Dade County, injecting [redacted] deep into the most southern part of FPL's service area under these contingency conditions (see Appendix C page 6).

Project Benefits

In summary, the construction of the AOP provides the following benefits to Miami-Dade County:

- Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4;
- Maintain transmission reliability for FPL customers in Miami-Dade County;
- Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County; and
- Provides resilient, hardened transmission service to the area.

V. Discussion of Project Transmission Alternatives

In order to maintain a reliable transmission system for Miami-Dade County and meet the identified needs discussed above, FPL evaluated multiple transmission alternatives. The factors used to evaluate the performance of these alternatives include cost, reliability, compatibility with long range plans, operational flexibility, and construction difficulty. Attachment 8 includes a matrix comparing each of the transmission alternatives.

Alternative I

The Conservation-Oasis Project ("Alternative I Project") consists of building four new transmission lines: one 500 kV line starting at FPL's existing Conservation substation in Broward County ending at FPL's planned Oasis substation in Miami-Dade County; one 500 kV line starting at FPL's existing Quarry substation in Miami-Dade County ending at FPL's planned Oasis substation in Miami-Dade County; one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County ending at FPL's existing Quarry substation in Miami-Dade County; and one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County ending at FPL's existing Flagami substation in Miami-Dade County. Similar to the AOP, the newly proposed transmission lines for the Alternative I Project would use portions of existing FPL right-of-way corridors, with additional right-of-way acquisition being required to complete the projects and address the anticipated transmission reliability concerns by 2033.

Page 2 of Attachment 4 provides a map showing the proposed Alternative I Project along with the existing electrical facilities in the area. The line route is conceptual and for illustrative

purposes only. The estimated construction cost of this alternative is $1,004.29 million ($925.2 million CPVRR).

This alternative was rejected for the following reasons:

1. The cost of this alternative is approximately $222.4 million higher than the AOP.
2. This alternative presents significant routing and permitting challenges through densely populated areas in Miami-Dade County where FPL has limited right-of-way for new transmission lines.

Alternative II

The Andytown-Oasis Two Circuits Project ("Alternative II Project") consists of building four new transmission lines: two 500 kV lines starting at FPL's existing Andytown substation in Broward County ending at FPL's planned Oasis substation in Miami-Dade County; one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Levee substation in Miami-Dade County; and one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County ending at FPL's existing Flagami substation in Miami-Dade County. Similar to the AOP, the newly proposed transmission lines for the Alternative II Project will use portions of existing FPL right-of-way corridors, with the acquisition of additional rights-of-way required to complete the Alternative II Project and address the anticipated transmission reliability concerns by 2033.

Page 3 of Attachment 4 provides a map showing the proposed Alternative II Project along with the existing electrical facilities in the area. The line route is conceptual and for illustrative

purposes only. The estimated construction cost of this alternative is $974.19 million ($876.6 million CPVRR).

This alternative was rejected for the following reasons:

1. The cost of this alternative is approximately $192.3 million higher than the AOP.
2. This alternative presents significant routing challenges through densely populated areas in Miami-Dade County where FPL has limited right-of-way for new transmission lines.

Attachment 8 shows the decision-making analysis which summarizes the points of comparison of the AOP and Alternatives I and II, described above. The points of comparison are cost, reliability, compatibility with long range plans, operational flexibility, and construction difficulty.

VI. Adverse Consequences of Not Constructing the Andytown-Oasis Project

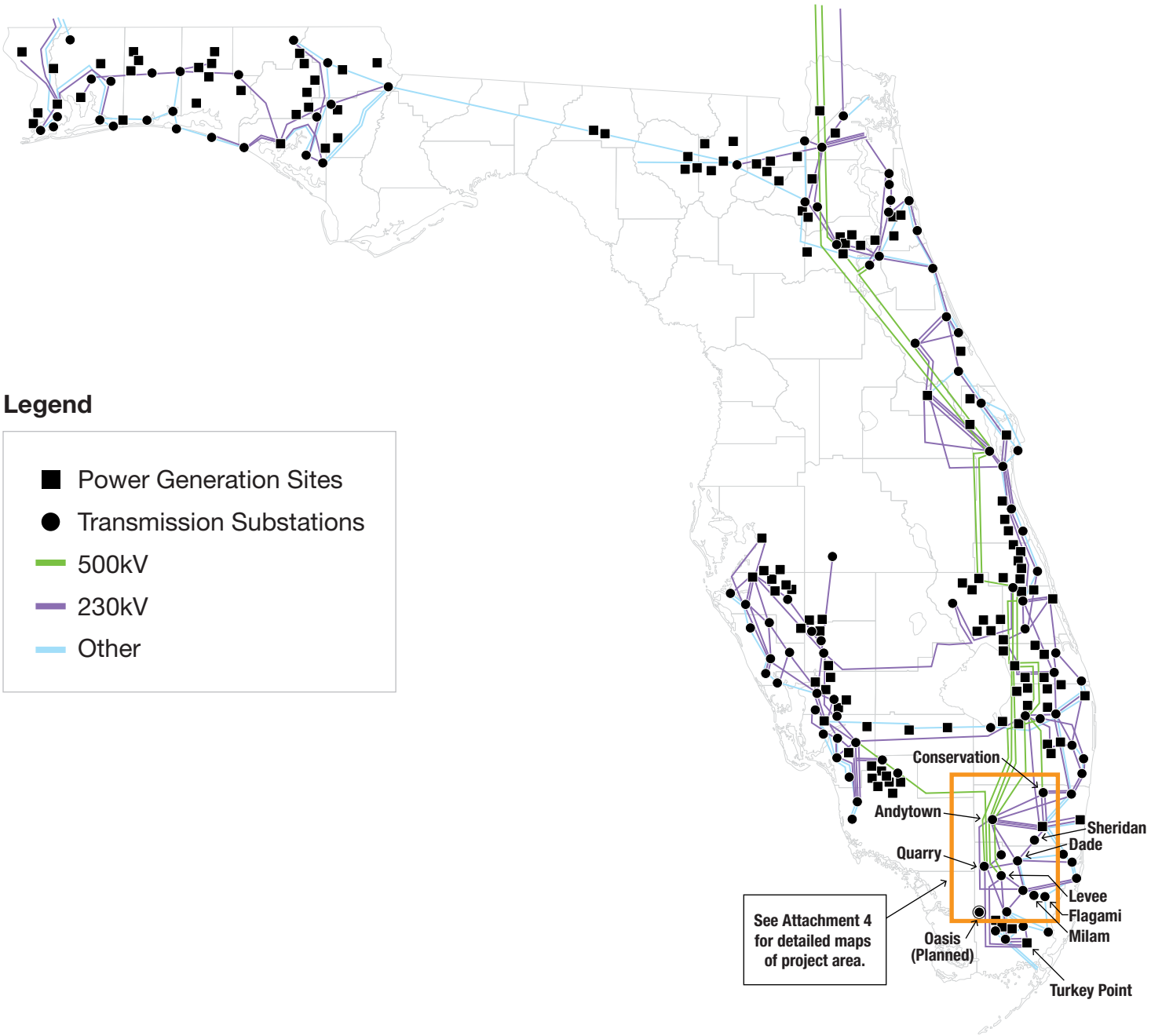
As shown in Attachment 7, the purpose and need for the AOP is to (a) address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4; (b) maintain transmission reliability for FPL customers in Miami-Dade County; and (c) increase power transfer capability of the transmission system to support growing demand in Miami-Dade County. If the AOP is not built by December 2033, the transmission system would experience potential overloads and/or low voltage conditions under contingency events, both resulting in NERC Reliability Standard and NPIR agreement violations and requiring load shedding in Miami-Dade County. In addition, sufficient transmission capacity would not be available to serve the existing and future customers in Miami-Dade County. Further, by virtue of the growing loads in the area, the transmission system and FPL customers in the area would experience negative impacts to their transmission reliability, such as NERC Reliability Standard violations, transmission system overloads, low voltage conditions, and customer load shedding due to insufficient transmission capacity.

VII. Conclusion

The AOP is needed by December 2033 to efficiently and effectively (a) address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4; (b) maintain transmission reliability for FPL customers in Miami-Dade County; and (c) increase power transfer capability of the transmission system to support growing demand in Miami-Dade County. The Project is the most cost-effective alternative, taking into account the demand for electricity, maintaining transmission reliability and integrity, and addressing the need for abundant, low-cost electrical energy to assure the economic well-being of the residents of this state. Furthermore, the Project meets area load requirements by serving potential future industrial, commercial, and residential customer load, while maximizing system reliability and minimizing cost to customers. The Commission, therefore, should grant FPL's Petition for a Determination of Need for the Andytown-Oasis Project and determine that the cost and reliability benefits of the Project would preserve and enhance electric system reliability and integrity in the area.

FPL Electrical Transmission Grid Map

General representation of FPL's transmission system



NOTE:
This map is a general representation of FPL's Transmission System.

ATTACHMENT 2

Schedule 3.1
History of Summer Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2015	25,361	1,381	23,980	0	878	1,779	826	1,104	23,657
2016	26,044	1,443	24,601	0	882	1,809	836	1,119	24,326
2017	25,662	1,467	24,194	0	910	1,826	825	1,135	23,927
2018	25,411	1,418	23,993	0	866	1,839	866	1,149	23,679
2019	26,594	1,367	25,227	0	852	1,850	879	1,159	24,863
2020	26,400	1,595	24,805	0	845	1,861	887	1,175	24,668
2021	26,248	1,401	24,847	0	830	1,874	882	1,190	24,536
2022	26,429	1,572	24,857	0	827	1,886	871	1,201	24,731
2023	28,461	1,652	26,808	0	797	1,900	946	1,210	26,718
2024	28,266	1,731	26,535	0	863	1,917	961	1,221	26,442

Historical Values (2015 - 2024):

Col. (2) and Col. (3) are actual values for historical Summer peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 9) and may incorporate the effects of load control if load control was operated on these peak days. Col. (2) represents the actual Net Firm Demand.

Col. (5) through Col. (9) represent actual DSM capabilities and represent annual (12-month) values.

Col. (10) represents a hypothetical "Net Firm Demand" as if the load control values had definitely been exercised on the peak.
Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col.(6) + Col. (8).

ATTACHMENT 2

Schedule 3.1
Forecast of Summer Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
August of Year	Total	Wholesale	Retail	Interruptible	Res. Load Management*	Residential Conservation	C/I Load Management*	C/I Conservation	Net Firm Demand
2025	28,312	1,728	26,584	0	937	21	1,025	12	26,317
2026	28,664	1,727	26,937	0	925	40	1,032	19	26,648
2027	28,925	1,723	27,202	0	913	59	1,038	26	26,888
2028	29,333	1,708	27,625	0	902	77	1,043	34	27,277
2029	29,687	1,606	28,081	0	896	95	1,047	41	27,608
2030	29,982	1,484	28,498	0	893	113	1,051	49	27,877
2031	30,301	1,315	28,987	0	891	131	1,055	57	28,168
2032	30,823	1,319	29,504	0	889	148	1,059	65	28,662
2033	31,257	1,323	29,934	0	888	166	1,063	73	29,068
2034	31,677	1,327	30,351	0	887	183	1,067	81	29,459

Projected Values (2025 - 2034):

Col. (2) - Col. (4) represent forecasted peak and do not include incremental conservation, cumulative load management, or incremental load management.

Col. (5) through Col. (9) represent cumulative load management, incremental conservation, and load management.
All values are projected August values.

Col. (8) represents FPL's Business On Call, CDR, CILC, and curtailable programs/rates.

Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

* Res. Load Management and C/I Load Management include Lee County and FKEC whose loads are served by FPL.

ATTACHMENT 3

Schedule 3.2
History of Winter Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2015	21,961	1,403	20,558	0	822	1204	551	522	20,588
2016	18,826	1,167	17,659	0	742	1232	570	528	17,514
2017	19,320	1,187	18,133	0	759	1238	577	541	17,984
2018	21,533	1,332	20,201	0	750	1244	588	547	20,194
2019	17,941	1,498	16,442	0	706	1248	613	557	16,621
2020	19,569	1,312	18,257	0	702	1253	614	568	18,253
2021	17,486	1,344	16,142	0	689	1256	619	580	16,178
2022	21,027	1,230	19,797	0	681	1258	628	584	19,718
2023	19,271	1,214	18,057	0	670	1263	631	589	17,970
2024	18,595	1,093	17,502	0	743	1,272	657	597	17,195

Historical Values (2015 - 2024):

Col. (2) and Col. (3) are actual values for historical Winter peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 9) and may incorporate the effects of load control if load control was operated on these peak days. Col. (2) represents the actual Net Firm Demand.

Col. (5) through Col. (9) represent actual DSM capabilities and represent annual (12-month) values.

Col. (10) represents a hypothetical "Net Firm Demand" as if the load control values had definitely been exercised on the peak.
Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col.(6) + Col. (8).

ATTACHMENT 3

Schedule 3.2
Forecast of Winter Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
January of Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management*	Residential Conservation	C/I Load Management*	C/I Conservation	Net Firm Demand
2025	23,042	1,375	21,667	0	778	12	717	7	21,527
2026	23,323	1,377	21,946	0	766	23	722	12	21,800
2027	23,648	1,380	22,268	0	754	35	727	17	22,116
2028	24,136	1,364	22,772	0	742	46	732	22	22,594
2029	24,603	1,313	23,290	0	731	57	735	27	23,053
2030	25,011	1,216	23,795	0	726	68	739	32	23,446
2031	25,384	1,140	24,244	0	721	79	742	37	23,804
2032	25,852	1,144	24,707	0	716	90	746	43	24,256
2033	26,245	1,149	25,096	0	712	102	749	48	24,634
2034	26,638	1,153	25,485	0	708	113	752	54	25,011

Projected Values (2025 - 2034):

Col. (2) - Col. (4) represent forecasted peak and do not include incremental conservation, cumulative load management, or incremental load management.

Col. (5) through Col. (9) represent cumulative load management, incremental conservation, and load management.
All values are projected January values.

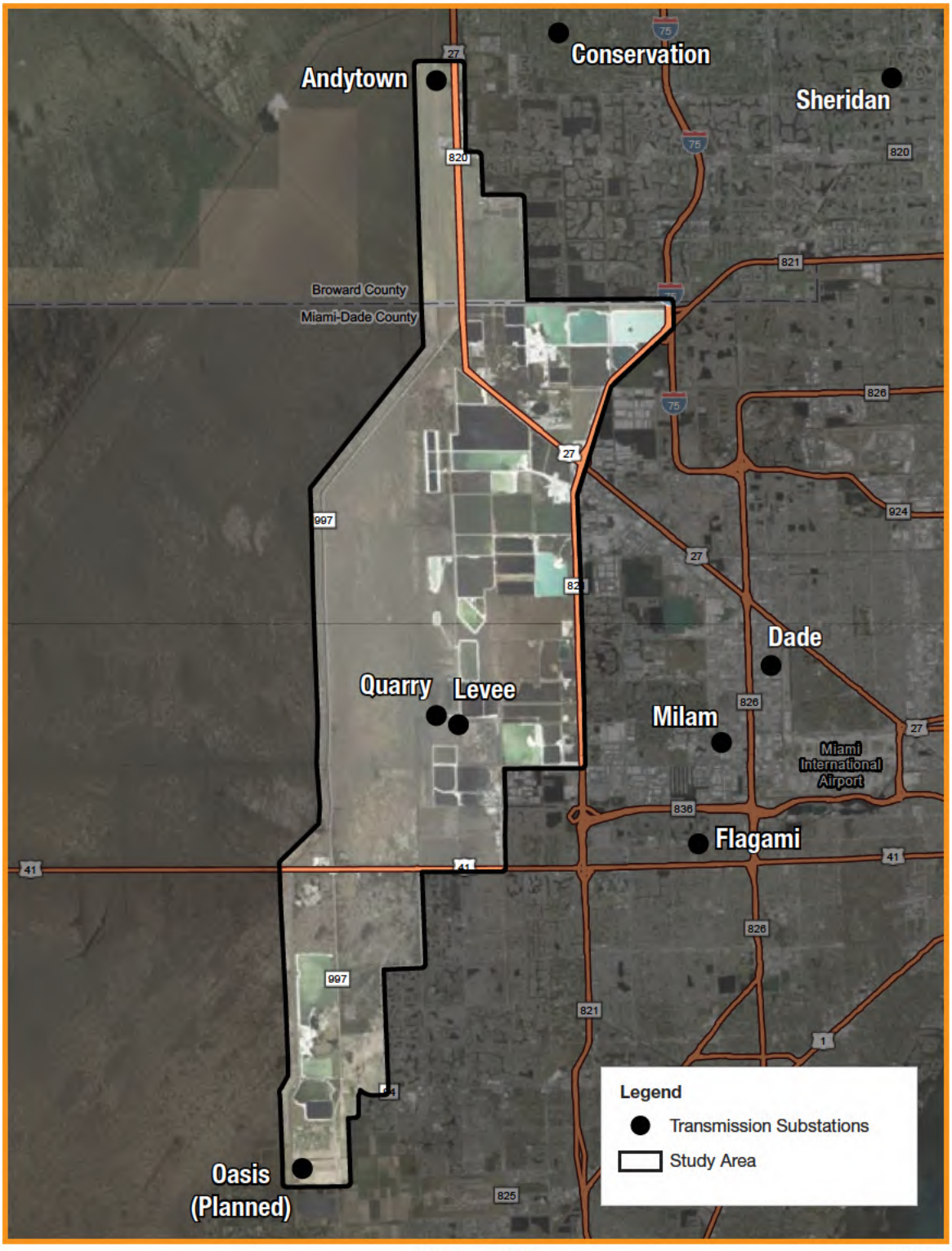
Col. (8) represents FPL's Business On Call, CDR, CILC, and curtailable programs/rates.

Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

* Res. Load Management and C/I Load Management include Lee County and FKEC whose loads are served by FPL.

Andytown-Oasis Project – Overview

Satellite View of Study Area



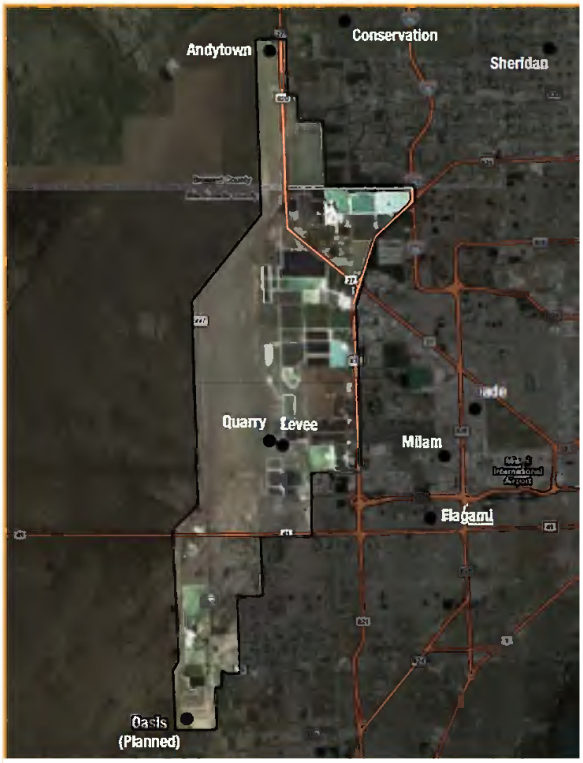
Andytown-Oasis Project – Detail

System View of Existing Facilities and Proposed Project

[redacted]

Legend

- Transmission Substations
- 500 kV Existing/Expected In Service Prior to AOP
- 230 kV Existing/Expected In Service Prior to AOP
- Other Existing/Expected In Service Prior to AOP
- Proposed 500 kV
- Proposed 230 kV



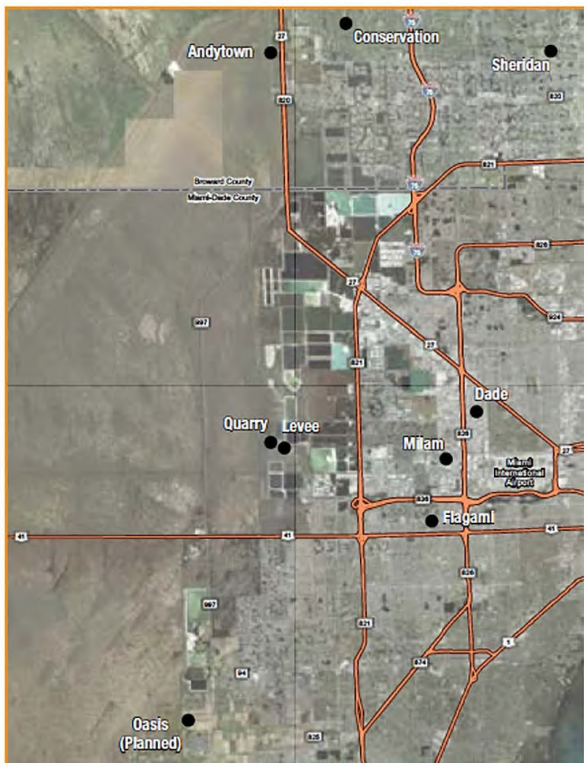
Project Alternative 1 (not recommended)

System View of Existing Facilities and Project Alternative 1

[redacted]

Legend

- Transmission Substations
- 500 kV Existing/Expected In Service Prior to AOP
- 230 kV Existing/Expected In Service Prior to AOP
- Other Existing/Expected In Service Prior to AOP
- Proposed 500 kV
- Proposed 230 kV



Project Alternative 2 (not recommended)

System View of Existing Facilities and Project Alternative 2

[redacted]

Legend

- Transmission Substations
- 500 kV Existing/Expected In Service Prior to AOP
- 230 kV Existing/Expected In Service Prior to AOP
- Other Existing/Expected In Service Prior to AOP
- Proposed 500 kV
- Proposed 230 kV

ATTACHMENT 5

The Transmission Planning Criteria

Florida Power & Light (FPL) plans, designs, and operates its transmission system in accordance with requirements established by the North America Electric Reliability Corporation (NERC) Reliability Standards. In addition to meeting the system performance expectations defined in NERC TPL-001-5.1 Reliability Standard which defines the scenarios and expected levels of system performance the Bulk Electric System (BES) must comply within the long-term planning horizon, FPL also complies with the applicable provisions of NERC Standard NUC-001-4. NUC-001-4 establishes coordination requirements between nuclear plant generator operators and transmission entities to ensure reliable long-term system planning and operation. FPL incorporates the requirements of NUC-001-4 that pertain to transmission planning in particular the Nuclear Plant Interface Requirements (NPIR) that support nuclear plant reliability. In general, the transmission system must remain stable, with both thermal and voltage limits maintained within applicable facility ratings for each of the contingency category listed on Table 1 of NERC Reliability Standard TPL-001-5.1 (see page 3 of this Attachment 5).

FPL adheres to these NERC standards both TPL-001-5.1 and NUC-001-4 as part of its comprehensive transmission planning criteria. The criteria are defined by the following categories: Category P0 system performance with no contingencies and all facilities in service. Categories P1 and P2 system performance following a single contingency. Categories P3 through P7 system performance following multiple contingencies. NERC further defines transmission system performance requirements following Extreme Events where multiple facilities are removed from service.

The need for transmission system upgrades is most frequently driven by potential overload and/or under-voltage conditions associated with Category P2 through P7 type contingencies. For each of these contingency types, FPL analyzes its transmission system to ensure system

performance, resulting conditions, and severity of potential overload and/or undervoltage conditions remain consistent with the NERC Reliability Standards. Generally, for Extreme Events, contingency analysis is used to identify potential risk of cascading interruptions and/or instability.

In certain cases, reliability concerns combined with other factors may warrant a more conservative approach in developing alternatives than the standard planning criteria. In addition to the requirements set forth by NERC reliability standards, FPL proposes projects in the short-term planning horizon to address system changes across the BES. These include power transfers across areas associated with transmission service, generator interconnection requests or generator retirements; mitigation of generation-to-load area imbalance in areas of FPL's service territory; and to improve overall reliability of the BES, such as providing loop service to customers and the addition of transmission level relay points to reduce potential reliability exposure to distribution stations.

The planned transmission system, inclusive of expected loads and transfers, must remain stable and within applicable facility ratings for all categories of contingency scenarios. The design of new transmission lines should consider and minimize, to the extent practical, the adverse consequences of all contingency categories and improve system reliability.

Table 1 – Steady State & Stability Performance Planning Events

Steady State & Stability:

a. The System shall remain stable. Cascading and uncontrolled islanding shall not occur.

b. Consequential Load Loss as well as generation loss is acceptable as a consequence of any event excluding P0.

c. Simulate the removal of all elements that Protection Systems and other controls are expected to automatically disconnect for each event.

d. Simulate Normal Clearing unless otherwise specified.

e. Planned System adjustments such as Transmission configuration changes and re-dispatch of generation are allowed if such adjustments are executable within the time duration applicable to the Facility Ratings.

Steady State Only:

f. Applicable Facility Ratings shall not be exceeded.

g. System steady state voltages and post-Contingency voltage deviations shall be within acceptable limits as established by the Planning Coordinator and the Transmission Planner.

h. Planning event P0 is applicable to steady state only.

i. The response of voltage sensitive Load that is disconnected from the System by end-user equipment associated with an event shall not be used to meet steady state performance requirements.

Stability Only:

j. Transient voltage response shall be within acceptable limits established by the Planning Coordinator and the Transmission Planner.

TPL-001-5.1 — Transmission System Planning Performance Requirements

Category	Initial Condition	Event [1]	Fault Type [2]	BES Level [3]	Interruption of Firm Transmission Service Allowed [4]	Non-Consequential Load Loss Allowed
P0 No Contingency	Normal System	None	N/A	EHV, HV	No	No
P1 Single Contingency	Normal System	Loss of one of the following: 1. Generator 2. Transmission Circuit 3. Transformer[5] 4. Shunt Device[6]	3Ø	EHV, HV	No[9]	No[12]
		5. Single Pole of a DC line	SLG			
P2 Single Contingency	Normal System	1. Opening of a line section w/o a fault [7]	N/A	EHV, HV	No[9]	No[12]
		2. Bus Section Fault	SLG	EHV	No[9]	No
				HV	Yes	Yes
		3. Internal Breaker Fault[8] (non-Bus-tie Breaker)	SLG	EHV	No[9]	No
				HV	Yes	Yes
		4. Internal Breaker Fault (Bus-tie Breaker)[8]	SLG	EHV, HV	Yes	Yes

ATTACHMENT 5

TPL-001-5.1 — Transmission System Planning Performance Requirements

Category	Initial Condition	Event [1]	Fault Type [2]	BES Level [3]	Interruption of Firm Transmission Service Allowed [4]	Non-Consequential Load Loss Allowed
P3 Multiple Contingency	Loss of generator unit followed by System adjustments[9]	Loss of one of the following: 1. Generator 2. Transmission Circuit 3. Transformer[5] 4. Shunt Device[6]	3Ø	EHV, HV	No[9]	No[12]
		5. Single pole of a DC line	SLG			
P4 Multiple Contingency *(Fault plus stuck breaker[10])*	Normal System	Loss of multiple elements caused by a stuck breaker[10](non-Bus-tie Breaker) attempting to clear a Fault on one of the following: 1. Generator 2. Transmission Circuit 3. Transformer[5] 4. Shunt Device[6] 5. Bus Section	SLG	EHV	No[9]	No
				HV	Yes	Yes
		6. Loss of multiple elements caused by a stuck breaker[10] (Bus-tie Breaker) attempting to clear a Fault on the associated bus	SLG	EHV, HV	Yes	Yes

TPL-001-5.1 — Transmission System Planning Performance Requirements

Category	Initial Condition	Event [1]	Fault Type [2]	BES Level [3]	Interruption of Firm Transmission Service Allowed [4]	Non-Consequential Load Loss Allowed
P5 Multiple Contingency *(Fault plus non-redundant component of a Protection System failure to operate)*	Normal System	Delayed Fault Clearing due to the failure of a non-redundant component of a Protection System[13] protecting the Faulted element to operate as designed, for one of the following: 1. Generator 2. Transmission Circuit 3. Transformer[5] 4. Shunt Device[6] 5. Bus Section	SLG	EHV	No[9]	No
				HV	Yes	Yes
P6 Multiple Contingency *(Two overlapping singles)*	Loss of one of the following followed by System adjustments.[9] 1. Transmission Circuit 2. Transformer [5] 3. Shunt Device[6] 4. Single pole of a DC line	Loss of one of the following: 1. Transmission Circuit 2. Transformer[5] 3. Shunt Device[6]	3Ø	EHV, HV	Yes	Yes
		4. Single pole of a DC line	SLG	EHV, HV	Yes	Yes
P7 Multiple Contingency *(Common Structure)*	Normal System	The loss of: 1. Any two adjacent (vertically or horizontally) circuits on common structure [11] 2. Loss of a bipolar DC line	SLG	EHV, HV	Yes	Yes

Table 1 – Steady State & Stability Performance Extreme Events

Steady State & Stability

For all extreme events evaluated:

a. Simulate the removal of all elements that Protection Systems and automatic controls are expected to disconnect for each Contingency.

b. Simulate Normal Clearing unless otherwise specified.

Steady State

1. Loss of a single generator, Transmission Circuit, single pole of a DC Line, shunt device, or transformer forced out of service followed by another single generator, Transmission Circuit, single pole of a different DC Line, shunt device, or transformer forced out of service prior to System adjustments.
2. Local area events affecting the Transmission System such as:
   a. Loss of a tower line with three or more circuits.[11]
   b. Loss of all Transmission lines on a common Right-of-Way[11].
   c. Loss of a switching station or substation (loss of one voltage level plus transformers).
   d. Loss of all generating units at a generating station.
   e. Loss of a large Load or major Load center.
3. Wide area events affecting the Transmission System based on System topology such as:
   a. Loss of two generating stations resulting from conditions such as:
      i. Loss of a large gas pipeline into a region or multiple regions that have significant gas-fired generation.
      ii. Loss of the use of a large body of water as the cooling source for generation.
      iii. Wildfires.
      iv. Severe weather, e.g., hurricanes, tornadoes, etc.
      v. A successful cyber attack.
      vi. Shutdown of a nuclear power plant(s) and related facilities for a day or more for common causes such as problems with similarly designed plants.
   b. Other events based upon operating experience that may result in wide area disturbances.

Stability

1. With an initial condition of a single generator, Transmission circuit, single pole of a DC line, shunt device, or transformer forced out of service, apply a 3Ø fault on another single generator, Transmission circuit, single pole of a different DC line, shunt device, or transformer prior to System adjustments.
2. Local or wide area events affecting the Transmission System such as:
   a. 3Ø fault on generator with stuck breaker[10] resulting in Delayed Fault Clearing.
   b. 3Ø fault on Transmission circuit with stuck breaker[10] resulting in Delayed Fault Clearing.
   c. 3Ø fault on transformer with stuck breaker[10] resulting in Delayed Fault Clearing.
   d. 3Ø fault on bus section with stuck breaker[10] resulting in Delayed Fault Clearing.
   e. 3Ø fault on generator with failure of a non-redundant component of a Protection System[13] resulting in Delayed Fault Clearing.
   f. 3Ø fault on Transmission circuit with failure of a non-redundant component of a Protection System[13] resulting in Delayed Fault Clearing.
   g. 3Ø fault on transformer with failure of a non-redundant component of a Protection System[13] resulting in Delayed Fault Clearing.
   h. 3Ø fault on bus section with failure of a non-redundant component of a Protection System[13] resulting in Delayed Fault Clearing.
   i. 3Ø internal breaker fault.
   j. Other events based upon operating experience, such as consideration of initiating events that experience suggests may result in wide area disturbances

ATTACHMENT 5

Table 1 – Steady State & Stability Performance Footnotes
(Planning Events and Extreme Events)

1. If the event analyzed involves BES elements at multiple System voltage levels, the lowest System voltage level of the element(s) removed for the analyzed event determines the stated performance criteria regarding allowances for interruptions of Firm Transmission Service and Non-Consequential Load Loss.
2. Unless specified otherwise, simulate Normal Clearing of faults. Single line to ground (SLG) or three-phase (3Ø) are the fault types that must be evaluated in Stability simulations for the event described. A 3Ø or a double line to ground fault study indicating the criteria are being met is sufficient evidence that a SLG condition would also meet the criteria.
3. Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as greater than 300kV and high voltage (HV) Facilities defined as the 300kV and lower voltage Systems. The designation of EHV and HV is used to distinguish between stated performance criteria allowances for interruption of Firm Transmission Service and Non-Consequential Load Loss.
4. Curtailment of Conditional Firm Transmission Service is allowed when the conditions and/or events being studied formed the basis for the Conditional Firm Transmission Service.
5. For non-generator step up transformer outage events, the reference voltage, as used in footnote 1, applies to the low-side winding (excluding tertiary windings). For generator and Generator Step Up transformer outage events, the reference voltage applies to the BES connected voltage (high-side of the Generator Step Up transformer). Requirements which are applicable to transformers also apply to variable frequency transformers and phase shifting transformers.
6. Requirements which are applicable to shunt devices also apply to FACTS devices that are connected to ground.
7. Opening one end of a line section without a fault on a normally networked Transmission circuit such that the line is possibly serving Load radial from a single source point.
8. An internal breaker fault means a breaker failing internally, thus creating a System fault which must be cleared by protection on both sides of the breaker.
9. An objective of the planning process should be to minimize the likelihood and magnitude of interruption of Firm Transmission Service following Contingency events. Curtailment of Firm Transmission Service is allowed both as a System adjustment (as identified in the column entitled 'Initial Condition') and a corrective action when achieved through the appropriate re-dispatch of resources obligated to re-dispatch, where it can be demonstrated that Facilities, internal and external to the Transmission Planner's planning region, remain within applicable Facility Ratings and the re-dispatch does not result in any Non-Consequential Load Loss. Where limited options for re-dispatch exist, sensitivities associated with the availability of those resources should be considered.

TPL-001-5.1 — Transmission System Planning Performance Requirements

Table 1 – Steady State & Stability Performance Footnotes
(Planning Events and Extreme Events)

10. A stuck breaker means that for a gang-operated breaker, all three phases of the breaker have remained closed. For an independent pole operated (IPO) or an independent pole tripping (IPT) breaker, only one pole is assumed to remain closed. A stuck breaker results in Delayed Fault Clearing.
11. Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for 1 mile or less.
12. An objective of the planning process is to minimize the likelihood and magnitude of Non-Consequential Load Loss following planning events. In limited circumstances, Non-Consequential Load Loss may be needed throughout the planning horizon to ensure that BES performance requirements are met. However, when Non-Consequential Load Loss is utilized under footnote 12 within the Near-Term Transmission Planning Horizon to address BES performance requirements, such interruption is limited to circumstances where the Non-Consequential Load Loss meets the conditions shown in Attachment 1. In no case can the planned Non-Consequential Load Loss under footnote 12 exceed 75 MW for US registered entities. The amount of planned Non-Consequential Load Loss for a non-US Registered Entity should be implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency in the non-US jurisdiction.
13. For purposes of this standard, non-redundant components of a Protection System to consider are as follows:
    a. A single protective relay which responds to electrical quantities, without an alternative (which may or may not respond to electrical quantities) that provides comparable Normal Clearing times;
    b. A single communications system associated with protective functions, necessary for correct operation of a communication-aided protection scheme required for Normal Clearing (an exception is a single communications system that is both monitored and reported at a Control Center);
    c. A single station dc supply associated with protective functions required for Normal Clearing (an exception is a single station dc supply that is both monitored and reported at a Control Center for both low voltage and open circuit);
    d. A single control circuitry (including auxiliary relays and lockout relays) associated with protective functions, from the dc supply through and including the trip coil(s) of the circuit breakers or other interrupting devices, required for Normal Clearing (the trip coil may be excluded if it is both monitored and reported at a Control Center).

The Transmission Planning Process

The transmission planning process described in Chart 1 (as well as in the FPL Open Access Transmission Tariff-Attachment K) consists of five major steps: (1) the preparation of system models, (2) the assessment of the transmission system performance to comply with NERC Reliability Standards, (3) the development and evaluation of transmission expansion alternatives, (4) the selection and approval of the preferred alternatives, and (5) the incorporation of the expansion plan into the Florida Reliability Coordinating Council (FRCC) Regional Planning Process. These different steps are described in this section of the report.

STEP 1: Preparation of System Models

To prepare system models, regional load profiles must be developed for the current year and for representative years of the ten-year planning horizon (2026 through 2035). These profiles incorporate the latest available substation and system load forecasts for the FPL territory. The Distribution Planning groups in each region are requested to provide Transmission Planning with historical and projected substation loads, including future distribution substations, for incorporation into the Transmission Planning models. Each year the load forecasts are benchmarked against real-time historical station peak loads for validation of the forecasts and to make adjustments to future forecasts.

Once the load profiles have been developed, they are used as input to the load flow, fault analysis and stability models, for simulation of the performance of the transmission system. Other major inputs into these programs are the generation expansion plan, generation dispatch and the base transmission system representation including expected line and equipment performance data. The generation expansion plan modeled assumes expected dispatch profiles, typical maintenance profiles at off-peak load levels, and other power schedules (e.g., firm interchange, etc.). Additionally, firm

long-term transmission service obligations are incorporated into the models. The base transmission system representation incorporates existing and planned (budgeted) facilities. Appropriate operating criteria including thermal limits, voltage limits, generator reactive limits, and transformer taps are observed in developing the models. All other utilities in the FRCC Region are also represented in the models.

STEP 2: Assessing the Transmission System for Compliance

Planning for the FPL transmission system follows practices and criteria that are consistent and comply with the NERC Transmission Planning Reliability Standards. Standard TPL-001-5.1 describes scenarios to be tested and the required levels of system performance. In general, the system will remain stable and both thermal and voltage limits will be within applicable facility ratings for each of these categories:

Category P0 - Represents System performance with no contingencies and all facilities in service.

Category P1 - Represents System performance with single contingency events.

Category P2 - Represents System performance with single contingency events (fault on bus section or internal breaker).

Category P3 - Represents System performance under multiple contingencies (generator outage with single contingency events).

Category P4 - Represents System performance under multiple contingencies (fault plus stuck breaker).

Category P5 - Represents System performance under multiple contingencies (fault plus non-redundant component of a Protection System failure to operate).

Category P6 - Represents System performance under multiple contingencies (loss of one element followed by system adjustments and loss of a second element).

Category P7 - Represents System performance under multiple contingencies (common structure)

Table 1 of TPL-001-5.1 illustrates in more detail the specific NERC Reliability Standards mentioned above.

Using the system models developed in Step 1 and in accordance with NERC Reliability Standard TPL-001-5, contingencies are simulated using load flow and stability programs modeling snapshots of different system conditions. These contingencies consist of: (1) single events such as the loss of one transmission line section, autotransformer, or a generation unit, (2) single events with certain facilities unavailable (i.e., generators), and (3) credible multiple contingencies such as the loss of all transmission lines in a common transmission corridor. The latter have a lower probability of occurrence but can result in more severe consequences.

The need for transmission system upgrades is most frequently based on potential overload or under-voltage conditions associated with Category P2 through P7 type contingencies. For each of these types of contingencies, the response of the power system is analyzed to meet initial thresholds that are consistent with the NERC Reliability Standards in terms of system performance, resulting conditions, and severity. There may be isolated cases where reliability concerns combined with other factors may justify a more conservative approach in developing alternatives than the normal planning criteria.

The transmission system in Florida is electrically unique because it is tied to the Eastern Interconnection only to the North. Additionally, the major load center in Florida is in the most southern part of Florida, containing almost one half of the forecasted load. Because of its unique characteristics, Florida has a higher exposure to voltage and system stability issues such as system separation and under-frequency load shedding, than other parts of the country. Additional criteria have been developed to deal with Florida specific reliability concerns. Specific criteria are followed for internal improvements to the FPL transmission system as well as new interconnections are shown in FPL's Facility Interconnection Requirements documents (posted at):

https://www.oasis.oati.com/woa/docs/FPL/FPLdocs/FPL_Facility_Interconnection_Requirements_10312024.docx

STEP 3: Development and Evaluation of Alternatives

During the screening evaluation process, areas that do not initially meet the thresholds consistent with NERC Reliability Standards identified in Step 2 are assessed for mitigation alternatives. First, switching techniques and other operational procedures are tested. If satisfactory operational procedures are not readily available, alternatives for transmission system reinforcements are developed with input from Engineering. The alternatives are assessed using steady-state load-flow and dynamic stability analyses to identify the viability of the mitigation alternatives. Cost estimates for the viable alternatives are also obtained from Engineering. These alternatives are further evaluated considering pertinent factors such as reliability, electrical performance, cost, construction difficulties, and flexibility to respond to changing future conditions. The results are then vetted through a "Tollgate Process" involving, Project Management, Corporate Real Estate, External Affairs, Distribution Planning, Construction, Engineering, and other departments as necessary. This process is intended to identify and evaluate major milestones, or "Tollgates", and assign ownership that will ensure the most effective solution for project completion. Finally, during this step, previously budgeted projects are reviewed for need, timing, and electrical configuration. If necessary, revisions to the previously budgeted projects are addressed.

STEP 4: Selection and Approval

After careful evaluation of all alternative transmission system projects, and with the input provided in the Tollgate Process, a recommended transmission expansion plan is provided to management for budgeting and approval. Once approval is obtained, Power Delivery is requested to budget the projects to meet the required in-service dates.

STEP 5: FRCC Regional Transmission Planning Process[1]

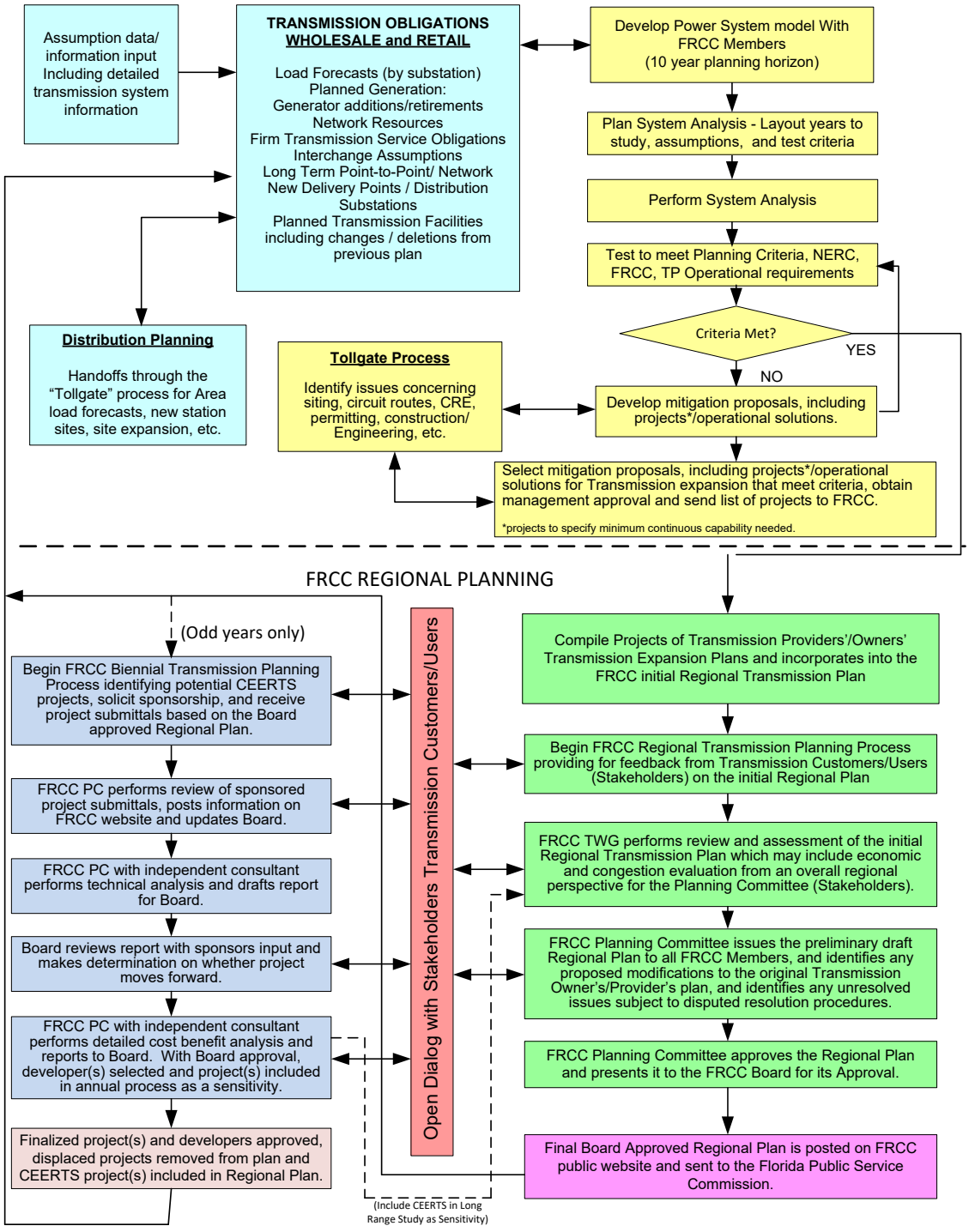
After the projects are approved, these are provided to the FRCC for incorporation into the Annual Transmission Planning Process portion of the FRCC's Regional Transmission Planning Process also shown in Chart 1. This process facilitates coordinated planning by all transmission providers, owners and stakeholders within the Florida Reliability Coordinating Council (FRCC) Reliability Region. The FRCC is a "Member Services Organization," under which it provides, coordinates, or administers a variety of services relating to the planning and operation of the bulk power system in the FRCC Reliability Region.

[1] As a result of the Federal Energy Regulatory Commission's (FERC) Order 1000, the FRCC's Regional Transmission Planning Process ("RTPP") has been modified and expanded to include two simultaneous processes. The Annual Transmission Planning Process ("ATPP"), which coordinates the FPL Power Delivery Expansion Plan with the expansion plans of all of the FRCC member utilities, and the Biennial Transmission Planning Process ("BTPP"), which is separate and distinct from the ATPP, in that its purpose is to analyze previously approved transmission plans and develop more Cost Effective or Efficient Regional Transmission Solutions ("CEERTS") which could ultimately impact the FPL Power Delivery Expansion Plan. The complete RTPP is a public document and is posted at: https://www.frcc.com/sites/ml/Documents/FRCC%20Regional%20Transmission%20Planning%20Process.pdf?d=w97888f77ebee429193f66576c514a68e

ATTACHMENT 6

Chart 1

Transmission Planning Process Overview



Attachment 7
Summary Tables with Load
Flow Results,
Bates Number
000023
is Confidential in its Entirety

Attachment 8

DECISION STATEMENT		**Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4. Maintain transmission reliability for FPL customers in Miami-Dade County. Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.**								
OBJECTIVES		**ALTERNATIVES: All in service dates are based on the Regional Load forecast**								
		I/S YEAR		**Selected Project**	**I/S YEAR**		**Alternative I**	**I/S YEAR**		**Alternative II**
		2033		The Andytown-Oasis Transmission Lines project (AOP) consists of building four new transmission lines: (1) one 500 kV line starting at FPL's existing Andytown substation in Broward County and ending at FPL's planned Oasis substation in Miami-Dade County; (2) one 500 kV line starting at FPL's existing Quarry substation in Miami-Dade County and ending at FPL's planned Oasis substation in Miami-Dade County; (3) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Quarry substation in Miami-Dade County; and (4) one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County and ending at FPL's existing Levee substation in Miami-Dade County. The newly proposed transmission lines will use portions of existing FPL right of way corridors, with additional right of way acquisition being required to complete the projects and address the anticipated transmission reliability concerns by 2033.	2033		The Conservation-Oasis Project ("Alternative I Project") consists of building four new transmission lines: one 500 kV line FPL's existing Conservation substation in Broward County ending at FPL's planned Oasis substation in Miami-Dade County; one 500 kV line starting at FPL's existing Quarry substation in Miami-Dade County ending at FPL's planned Oasis substation in Miami-Dade County; one 230 kV line starting at FPL's planned Oasis substation ending at FPL's existing Quarry substation; and one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County ending at FPL's existing Flagami substation in Miami-Dade County. The newly proposed transmission lines for the Alternative I Project would use portions of existing FPL right-of-way corridors, with additional right of way acquisition being required to complete the projects and address the anticipated transmission reliability concerns by 2033.	2033		The Andytown-Oasis Two Circuits Project ("Alternative II Project") consists of building four new transmission lines: two 500 kV lines starting at FPL's existing Andytown substation in Broward County ending at FPL's planned Oasis substation in Miami-Dade County; one 230 kV line starting at FPL's planned Oasis substation to FPL's existing Levee substation; and one 230 kV line starting at FPL's planned Oasis substation in Miami-Dade County ending at FPL's existing Flagami substation in Miami-Dade County. The newly proposed transmission lines for the Alternative II Project will use portions of existing FPL right-of-way corridors, with the acquisition of additional rights-of-way required to complete the Alternative II Project and address the anticipated transmission reliability concerns by 2033.
REQUIREMENTS		**Yes**	**No**	**Information**	**Yes**	**No**	**Information**	**Yes**	**No**	**Information**
Alternative must provide for reliable service to area customers		X		Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4. Maintain transmission reliability for FPL customers in Miami-Dade County. Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.	X		Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4. Maintain transmission reliability for FPL customers in Miami-Dade County. Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.	X		Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4. Maintain transmission reliability for FPL customers in Miami-Dade County. Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.
Alternative Plan is feasible to construct		X		Construction is feasible with a combination of new and existing right-of-way.	X		Construction is feasible with a combination of new and existing right-of-way. Routing challenges through densely populated areas in Miami-Dade County where FPL has limited right-of-way for new transmission lines.	X		Construction is feasible with a combination of new and existing right-of-way. Routing challenges through densely populated areas in Miami-Dade County where FPL has limited right-of-way for new transmission lines.
DESIRES	**VL**	**Score**	**VL*S**	**Information**	**Score**	**VL*S**	**Information**	**Score**	**VL*S**	**Information**
Minimize Price (Present value of revenue requirements)	10.0	10.0	100	CPVRR is estimated to be $699.8M	5.0	50	CPVRR is estimated to be $925.2M	6.0	60	CPVRR is estimated to be $876.6M
Maximize reliability of service to customers	9.2	10.0	92	Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4.	10.0	92	Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4.	10.0	92	Address future thermal overloads and low voltage conditions in Miami-Dade County under contingency events in compliance with NERC Reliability Standards TPL-001-5.1 and NUC-001-4.
Maximize compatibility with Long range plans. Flexibility	6.1	9.5	58	Maintain transmission reliability for FPL customers in Miami-Dade County.	9.5	58	Maintain transmission reliability for FPL customers in Miami-Dade County.	9.5	58	Maintain transmission reliability for FPL customers in Miami-Dade County.
Provides operational flexibility	5.3	10.0	53	Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.	10.0	53	Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.	10.0	53	Increase power transfer capability of the transmission system to support growing demand in Miami-Dade County.
Minimize construction difficulties	4.9	10.0	49	Construction will consist of qty(2) single circuit 230 kV lines, and qty(2) single pole and/or H-frame 500 kV lines.	6.0	29	Construction will consist of qty(2) single circuit 230 kV lines, and qty(2) single pole and/or H-frame 500 kV lines.	6.0	29	Construction will consist of qty(2) single circuit 230 kV lines, and qty(2) single pole and/or H-frame 500 kV lines.
TOTAL VALUE SCORE			352			282			292	

Attachment 9
NERC Standard NUC-001
Nuclear Plant Interface
Coordination,
Bates Numbers
000024-000067
is Confidential in its Entirety

ATTACHMENT 10

Andytown-Oasis Expected Construction Schedule

Milestone	Begin	End
TLSA and FPSC Need Determination Process	Feb-26	Oct-27
Transmission Line and ROW Design & Material Orders	Mar-25	Dec-28
Substation Design & Material Orders	Mar-25	Dec-28
Permitting (station & line)	Mar-25	Dec-28
Andytown Site Preparation	N/A	N/A
Oasis Site Preparation	Oct-26	Dec-28
ROW Engineering/Surveying	Jan-26	Dec-28
ROW Acquisition	Jan-26	Jun-29
Transmission Line ROW Preparation	Jan-29	Jan-30
Substation Construction (Andytown, Oasis)	Jan-29	Nov-33
Transmission Line Construction	Jan-29	Nov-33
In-service/Commissioning	-	Dec-33

Appendices A, B and C,
Bates Numbers
000068-000105
are Confidential in Their
Entirety