ATTACHMENT C

Methodology to Assess Available Transfer Capability

This Attachment C describes Florida Power and Light Company's ("FPL") methodology used to assess Total Transfer Capability and Available Transfer Capability. FPL's methodology is consistent with the Florida Reliability Coordinating Council's ("FRCC") ATC Calculation and Coordination Procedures, which can be found on the FRCC website at https://www.frcc.com/atcwg/default.aspx. The FRCC ATC Calculation and Coordination Procedures have been established by the FRCC and its members in a collaborative process in accordance with FRCC procedures for use by the FRCC members in calculating ATCs.

The methodology and criteria contained in this Attachment C also conform to North American Electric Reliability Corporation's ("NERC") Reliability Standards. FPL shall incorporate future changes in NERC Reliability Standards and North American Energy Standards Board ("NAESB") business practices related to ATC calculations in this Attachment C as required.

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This document is formatted and contains information in the following order

DEFINITION OF TERMS:

FPL adheres to the NERC definitions as modified by NERC from time to time.

i) **Available Transfer Capability ("ATC")**
A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. It is defined as Total Transfer Capability less existing transmission commitments (including retail customer service), less a Capacity Benefit Margin, less a Transmission Reliability Margin.

ii) **Total Transfer Capability ("TTC")**

The amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission systems by way of all transmission lines (or paths) between those areas under specified system conditions.

iii) **Transmission Reliability Margin ("TRM")**

The amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.

iv) **Capacity Benefit Margin ("CBM")**

The amount of firm transmission transfer capability preserved by the transmission provider for Load-Serving Entities (LSEs), whose loads are located on that Transmission Service Provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation eligibility requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

The following terms used in this Attachment C are not currently defined in the NERC Glossary.

v) **Existing Transmission Commitments – Firm ("ETC_f")**

Committed uses of the transmission system, including: (1) native load commitments; network service; (2) grandfathered transmission rights; (3) firm point-to-point reservations; and if required (4) rollover rights associated with long-term firm service. Existing commitments modeled in the load flow base cases determine the initial flows on the facilities. To the extent there are existing transactions that qualify for rollover rights, they would be incorporated in the committed usage.

vi) **Existing Transmission Commitments – Non-firm ("ETC_{nf}")**

Committed uses of the transmission system, including: (1) native load non-firm commitments; non-firm network service; (2) grandfathered non-firm transmission rights; and (3) non-firm point-

to-point reservations. Existing commitments modeled in the load flow base cases determine the initial flows on the facilities.

vii) **Scheduling Horizon** – The time period in the same day and real-time.

viii) **ATC Operating Horizon** – The time period in the day ahead and pre-schedule.

ix) **ATC Planning Horizon** – The time period beyond the ATC Operating Horizon through 13 months in the future.

x) **Interruptible Demand** - Load that by contractual provisions may be interrupted or reduced either automatically or manually.

Methodology

FPL uses the network ATC calculation method to determine ATC. Industry standard load flow tools are used to calculate the impact of transactions on network elements. ATC is determined by calculating the incremental flow that can be transmitted before a limit is reached on a facility following the contingency simulation of the instantaneous loss of a generator or transmission facility (line, auto-transformer). The load flow cases that FPL uses in determining ATC are developed by the FRCC collaboratively, on a region wide basis by its members. These load flow cases incorporate inputs (expected loads, generation dispatch and availability, transmission facility maintenance outages) from FRCC members in the region. Included in these inputs are base transfers resulting from network resources that serve both native and network customer load, and firm point to point transactions. Established operating procedures, such as switching to mitigate facility overloads are incorporated into ATC calculations. Operating procedures, including any revisions, are coordinated and shared as part of the FRCC procedures.

Firm Point to Point and Network transactions are treated comparably as both are included in the load flow cases. Both Point to Point and Network transactions are modeled with an economic dispatch in the load flow cases in order to meet the forecasted load to be served. Firm Point to Point transactions of duration less than one month are not included in the initial load flow ATC cases, from which the ATC is calculated. However, these shorter duration firm transactions are accounted for subsequently in the automatic re-calculation of firm ATC by the Open Access Technologies Incorporated ("OATI") OASIS system which subtracts any such transactions. Non-firm point-to-point transactions are not included

initially in the load flow cases. However, these non-firm transactions are accounted for subsequently in the automatic re-calculation of non-firm ATC by the OATI OASIS system which subtracts any such transactions.

As discussed above, FPL uses industry standard load flow tools to develop its ATCs. These tools are used to calculate the impact of transactions on network elements (transmission lines, auto-transformers) and identify the most limiting contingencies and attendant limiting facilities. The load flow cases developed by the FRCC incorporate the Existing Commitments. These load flow cases represent seasonal load profiles, in-service generating units, in-service transmission facilities and firm interchange contracts. The FRCC uses this information to develop load flow cases of planned operations, modeling the expected load levels, facility outages, and unit maintenance outages for use by FRCC members in calculating ATC. Established operating procedures, such as switching to mitigate overloads, are incorporated into ATC calculations. Revisions to operating procedures are coordinated and shared (coordination procedure attached)

In the ATC Operating and ATC Planning Horizons, FPL uses cases developed by the FRCC in the manner described above. These load flow cases represent the best available information for the week ahead, and monthly cases representing the current and next 12 months. These cases have each entity's generation dispatched economically to meet its respective commitments.

Reserved, but unscheduled transmission capacity is released as non-firm capacity in the Scheduling Horizon automatically. The OATI OASIS which FPL uses contains a function such that in the Scheduling Horizon non-firm ATC is calculated based on the electronically tagged quantity scheduled instead of the reservation. Therefore, firm and non-firm capacity that is reserved but not scheduled is released as non-firm ATC.

MATHEMATICAL FORMULAE AND ALGORITHMS:

DIRECT LINK TO FPL'S OASIS WEBSITE ATC ALGORITHMS:
HTTPS://WWW.OATIOASIS.COM/FPL/FPLDOCS/ATC_ALGORITHM.DOC

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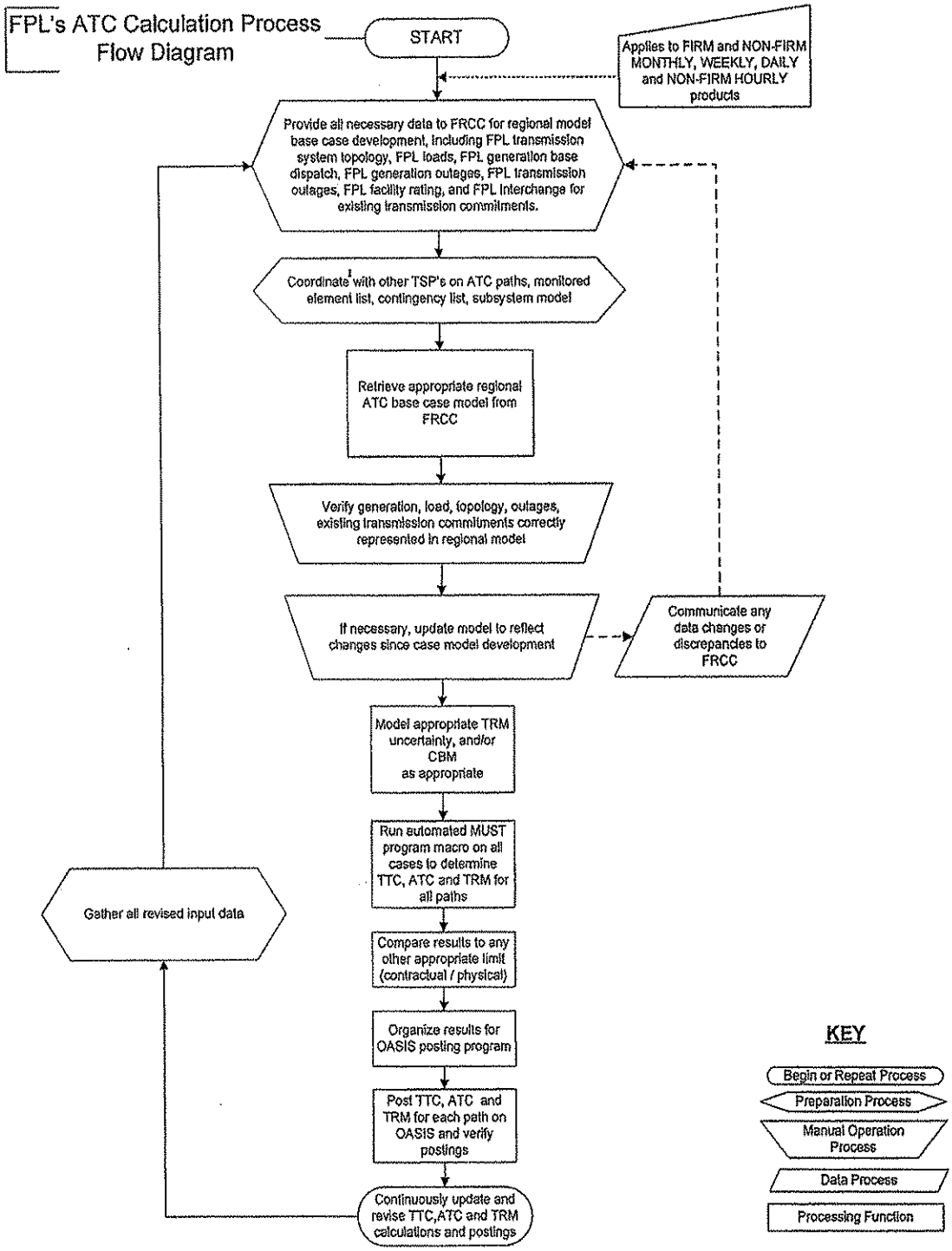
PROCESS FLOW DIAGRAM:



Endnote

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[1] **FPL COORDINATION PROCEDURES:**

(These procedures are excerpts from FRCC documents)

A. FRCC Data Exchange Coordination

1. FRCC member utilities jointly prepare on an annual basis a loadflow databank for a ten-year horizon containing annual winter and summer peak cases. This databank includes an interchange database for a variety of system load conditions and economic dispatch tables to facilitate preparation of loadflow cases for off-peak conditions. These loadflow databank cases contain all long term firm transactions, individual utility generation dispatch, projected load for the time period under evaluation, planned generation or transmission facility additions in the future, and designation of generation resources to serve all network load. These cases provide the starting point for all ATC determination.

   The cases above are modified to develop operating base cases for the timeframe under study between the next hour to up to thirteen months in the future. Depending on the operating timeframe, the base cases are modified to reflect the load forecast for the timeframe under study, planned generation and transmission outages, forced generation or transmission outages, system constraints or equipment deratings, and reserved and scheduled firm purchase/sale transactions on the transmission system. Cases developed by the ATCWG are stored in a common area available to transmission providers.

2. On a seasonal basis, the FRCC ATCWG compiles a tabulation of the most active commercially viable common paths, requests the TTC, monthly firm and non-firm ATC values from each transmission provider, and convenes a meeting to coordinate the TTC and ATC values to be posted and to ensure compliance with the FRCC ATC Methodology. The FRCC documents the results of these meetings. These meetings are typically scheduled in the spring for the upcoming summer season, and in the fall for the upcoming winter season.

3. The FRCC OPC has the responsibility to evaluate system security for planned operations for future days two through seven, thus ensuring that planned maintenance outages and system configurations will not result in security problems that the Security Coordinator will have to deal with. The OPC has the authority to seek resolution with parties whose planned actions will affect system security. The OPC also obtains maintenance and reservations data which is shared with and posted by the ATCWG in the common area available to transmission providers.