



PJM – SERTP Planning Process Overview

*Order 1000 Biennial Regional Transmission
Plan Review Meeting – Presentation 1 of 2*

May 8th, 2018

Georgia Power Corporate Headquarters

Atlanta, GA

Agenda

- SERTP – Process Overview
 - Background
 - SERTP Region Scope
 - Processes and Timelines

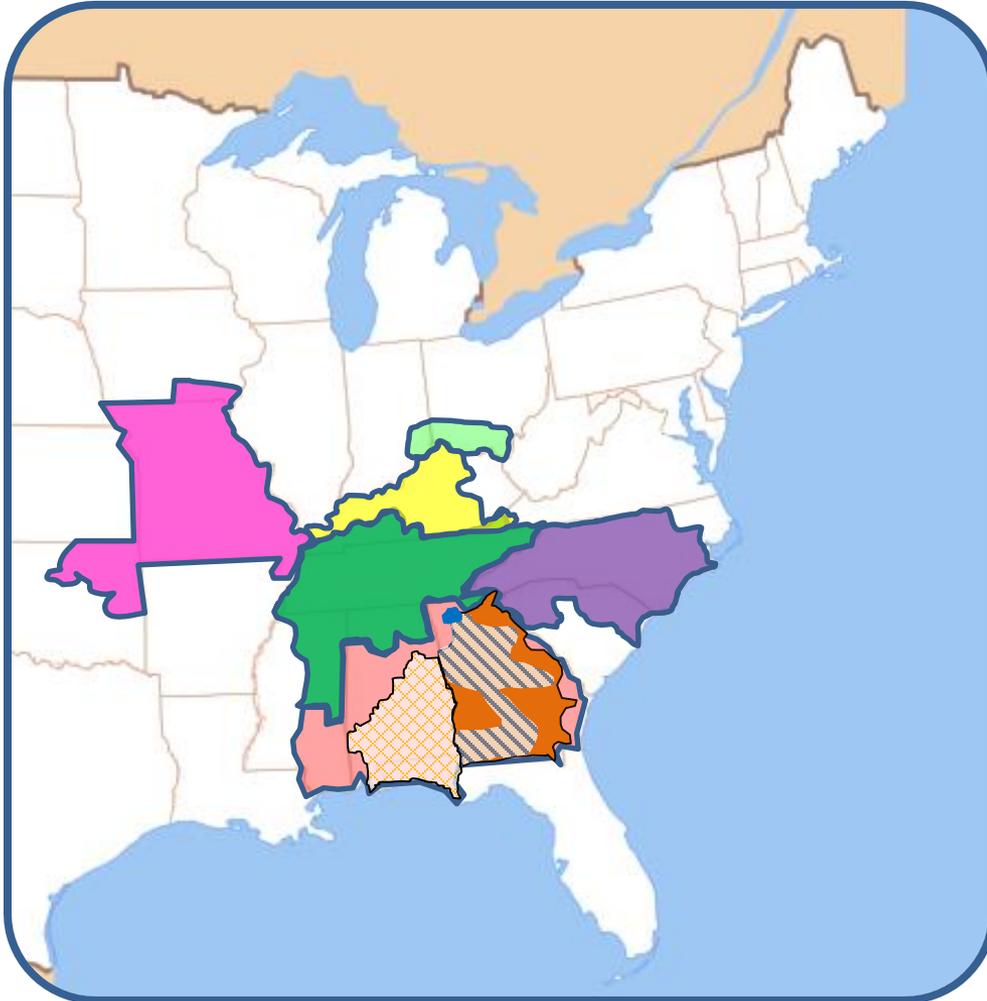
SERTP PROCESS OVERVIEW

SERTP Background

Southeastern Regional Transmission Planning Process (SERTP)

- Originally formed in 2007 to comply with FERC Order 890
- Provides open and transparent transmission planning forum for transmission providers to engage with stakeholders regarding transmission plans in the region
- Region has expanded several times in both size and scope since formation (most recently in 2014) to currently include 10 Sponsor utilities
- Began regional implementation of Order 1000 requirements on June 1, 2014
- Began interregional implementation of Order 1000 on January 1, 2015

SERTP Region

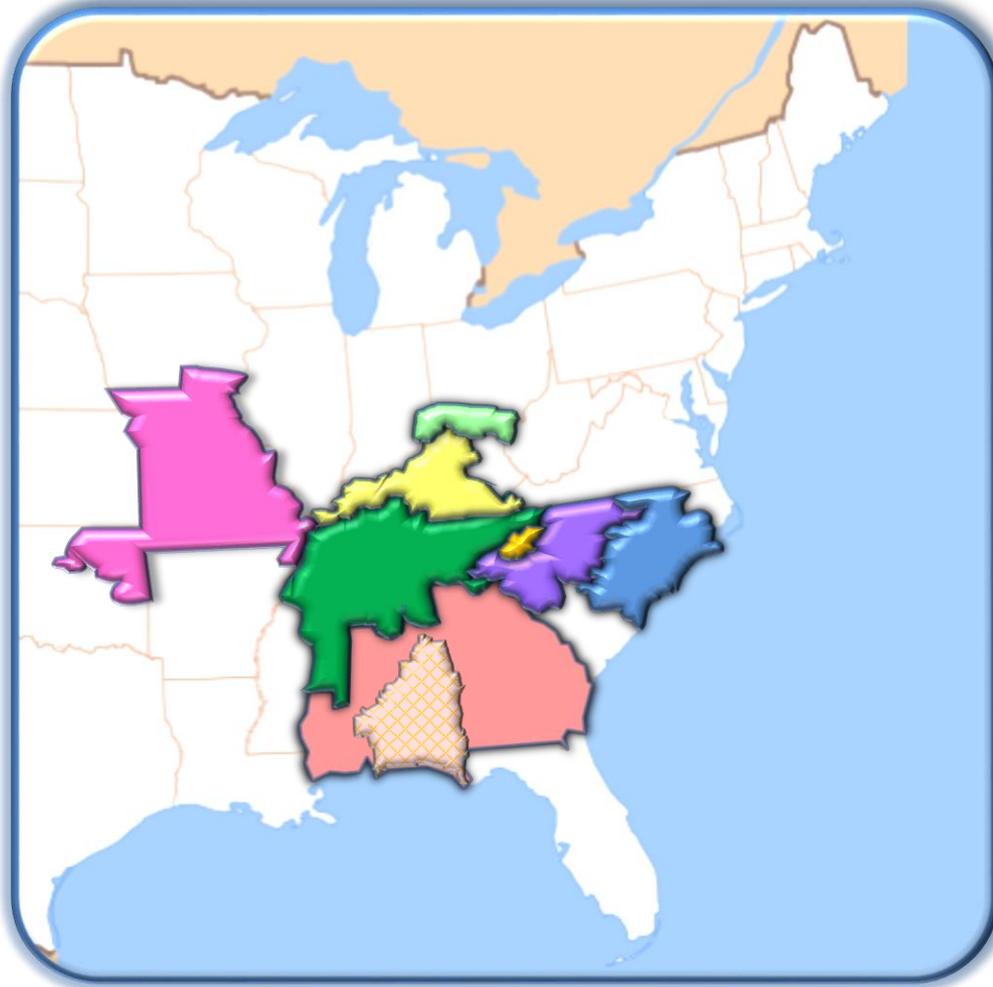


SERTP Sponsors

-  AECI
-  Dalton
-  Duke Energy
-  GTC
-  LG&E / KU
-  MEAG
-  OVEC
-  PowerSouth
-  Southern
-  TVA

- Spans portions of 14 states
- Includes 9 BAAs

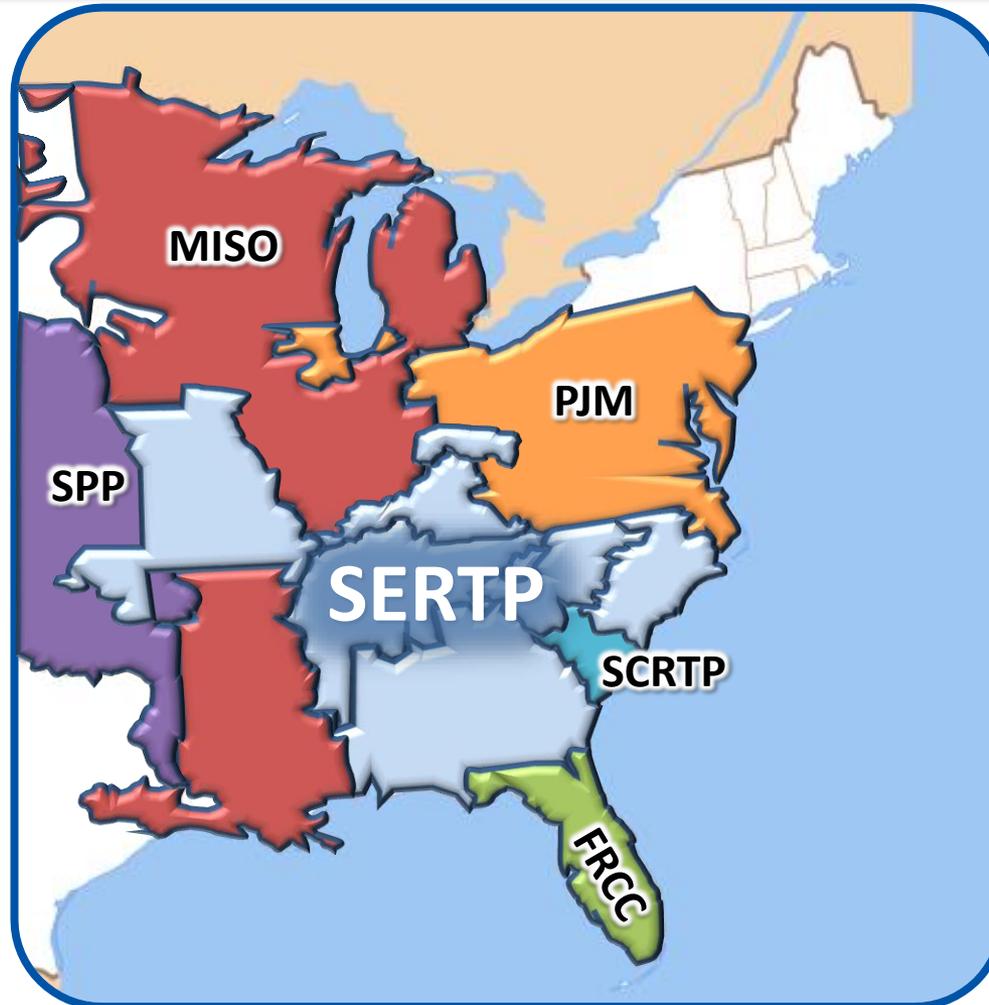
SERTP Region



Balancing Authority Areas

-  AECI
-  DUKE – Carolinas
-  DUKE – Progress East
-  DUKE – Progress West
-  LG&E/KU
-  OVEC
-  PowerSouth
-  Southern
-  TVA

SERTP Region - Interregional Seams



SERTP Regional Models

- SERTP Sponsors develop 12 coordinated regional models
- Models include latest transmission planning model information within the SERTP region
- Typically 3 versions created annually
- Available on the [Secure Area](#) of the SERTP website upon satisfying access requirements

No.	Season	Year
1	SUMMER	2019
2		2021
3		2023
4		2024
5		2026
6		2028
7	SHOULDER	2021
8		2023
9		2026
10		2028
11	WINTER	2023
12		2028

Regional Transmission Plan

Project Descriptions, Drivers, Contingencies

2017 SERTP Regional Transmission Plan

Southeastern Regional TRANSMISSION PLANNING

SERTP TRANSMISSION PROJECTS
SOUTHERN Balancing

Southeastern Regional TRANSMISSION PLANNING

Southeastern Regional TRANSMISSION PLANNING

Southeastern Regional TRANSMISSION PLANNING

2017

SERTP Southeastern Regional Transmission Planning



November 30, 2017

Regional Transmission Plan & Input Assumptions Overview

Generation Assumptions/Changes

Project Totals (Mileage, \$, etc.)

2017 SERTP Regional Transmission Plan

Southeastern Regional TRANSMISSION PLANNING

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SERTP Quarterly Stakeholder Meetings

Q1: 1st RPSG Meeting & Interactive Training Session

- Form RPSG
- Select Five Economic Planning Studies
- Stakeholder Training Session

Q3: 2nd RPSG Meeting

- Preliminary Results of the Economic Planning Studies
- Stakeholder Input & Feedback
- Previous Stakeholder Input on the Expansion Plan

Q2: Preliminary Expansion Plan Meeting

- Review Modeling Assumptions
- Preliminary 10 Year Expansion Plan
- Stakeholder Input & Feedback Regarding the Plan

Q4: Annual Transmission Planning Summit & Input Assumptions Meeting

- Final Results of the Economic Planning Studies
- Regional Transmission Plan
- Regional Analyses
- Stakeholder Input on Upcoming Year Transmission Model Input Assumptions

2018

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

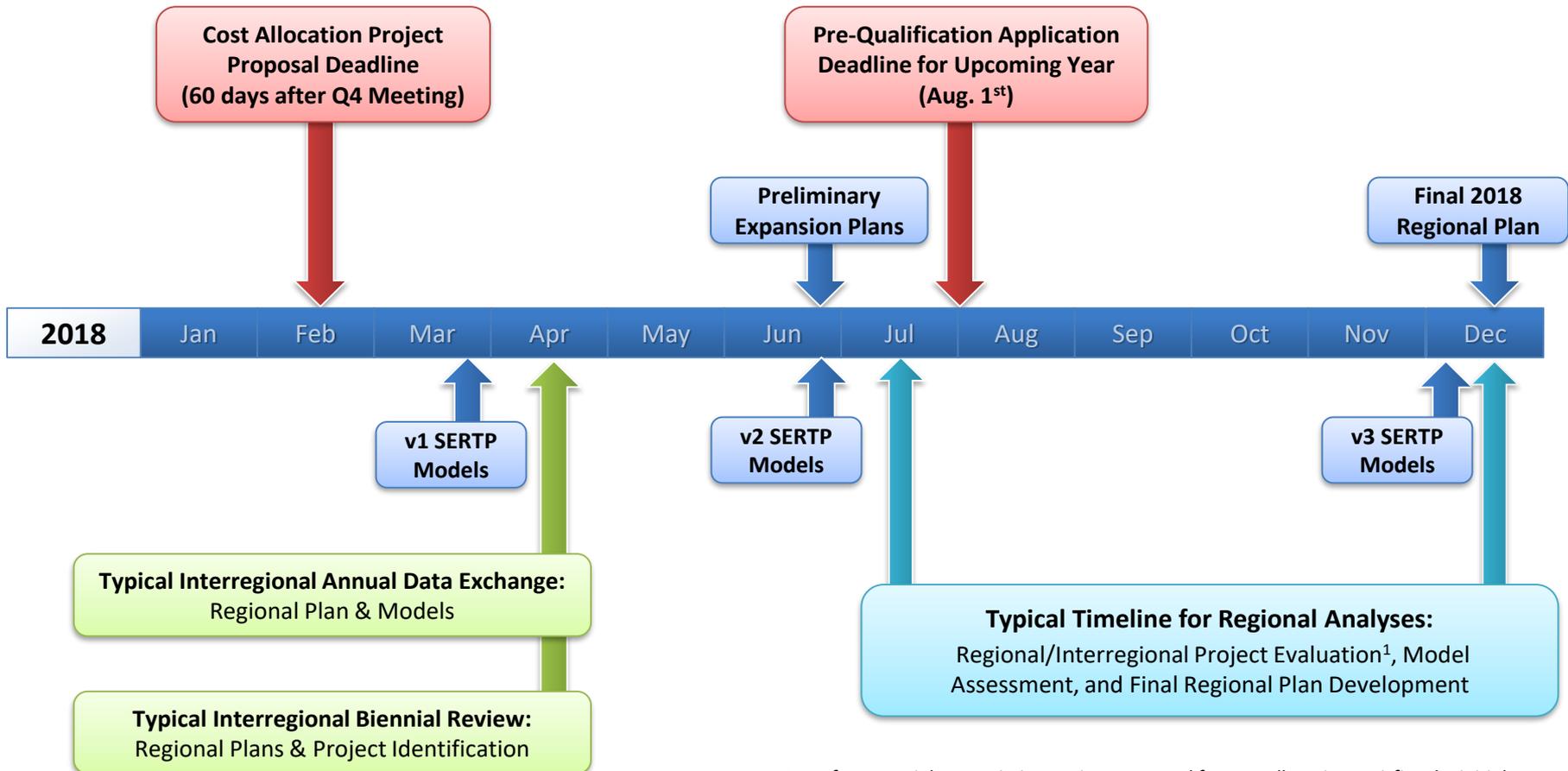
Sep

Oct

Nov

Dec

Regional/Interregional Process Timing



1. If a potential transmission project proposed for cost allocation satisfies the initial evaluation, a schedule will be developed in consultation with the transmission developer to provide additional detailed information for further detailed analysis.

Regional Cost Allocation

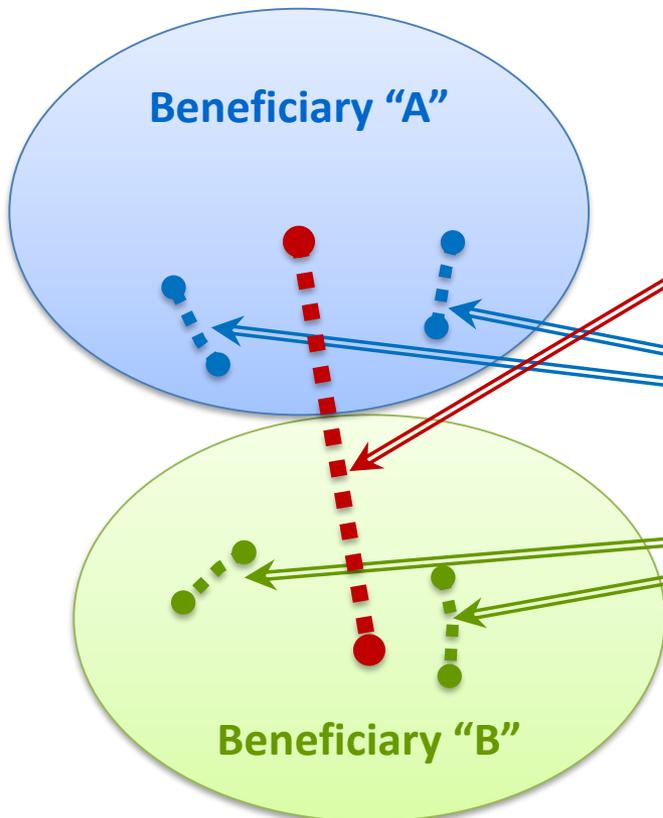
- **Scope of a Regional Project Eligible for Cost Allocation**
 - Transmission line located in the SERTP region
 - 300 kV or greater
 - Spans at least 50 miles
 - Must have significant electrical or geographical differences from projects already under consideration
- **Benefits Considered**
 - Avoided costs of displaced transmission
 - Real power loss savings (regional only)
- **Evaluations**
 - Qualitative & Quantitative – 1.25 Benefit-to-Cost (BTC) Ratio
 - Feasibility
 - State jurisdictional and/or governance authorities opportunity for review

Simplified Cost Allocation Example

- Proposed Regional Facility
- Displaced Transmission Facility – **Beneficiary “A”**
- Displaced Transmission Facility – **Beneficiary “B”**

Regional Project Cost	Σ Displaced Project Cost	Regional Benefit-to-Cost Ratio
\$100 M	\$150 M	1.50

Beneficiary	Displaced Transmission Cost	Regional Cost Allocation %	Allocated Cost of Regional Project
“A”	\$90 M	60%	\$60 M
“B”	\$60 M	40%	\$40 M
Total	\$150 M	100%	\$100 M



Interregional Cost Allocation

Interregional Project for Cost Allocation Must:

- Interconnect to facilities in both the SERTP and PJM regions
- Have a combined Interregional BTC of 1.25
- Meet regional qualifications
- Be proposed in both regional processes

Interregional Coordination

- Meet annually to facilitate coordination procedures
- Website postings
- Annually exchange power-flow models
- Annually exchange regional transmission plans
- Meet biennially to review regional transmission plans
- Coordinate on any joint evaluations of potential interregional transmission projects

[SERTP Website / Interregional](#)

Southeastern Regional
TRANSMISSION PLANNING

SECURE AREA | PLANNING CRITERIA | REFERENCE LIBRARY | INTERREGIONAL | CONTACT US

Interregional

FRCC >> MISO >> PJM >> SC RTP >> SPP >> Return Home >>

Interregional - FRCC (+/-) FRCC

Interregional - MISO (+/-) MISO

- MISO Stakeholder Registration Link
 - MISO Stakeholder Committee Registration Link
- MISO and SERTP Interregional Transmission Planning Procedures
 - Interregional Transmission Planning Coordination Between the SERTP and MISO Regions

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Interregional - PJM (+/-) PJM

Interregional - SC RTP (+/-) SC RTP

Interregional - SPP (+/-) SPP

QUESTIONS?

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Economic Planning Studies

- SERTP stakeholders can request up to five economic planning studies be performed annually
- These studies represent analyses of hypothetical scenarios requested by the stakeholders and do not represent an actual transmission need or commitment to build
- SERTP Sponsors identify the transmission requirements needed to move large amounts of power above and beyond existing long-term, firm transmission service commitments
 - Analysis is consistent with NERC standards and company-specific planning criteria
- [2017 SERTP Economic Planning Study Report](#)

Regional Transmission Analyses

- **Regional Transmission Analyses are performed during the course of each transmission planning cycle in order to:**
 - 1) Assess if the then current regional transmission plan addresses the Transmission Provider's transmission needs
 - 2) Assess whether there may be more efficient or cost effective transmission projects to address transmission needs
- **[2017 SERTP Regional Analyses Summary](#)**

2017 Regional Transmission Analyses

