Southeastern Regional TRANSMISSION PLANNING

SERTP – 3rd Quarter Meeting

2nd RPSG Meeting

September 23rd, 2025

Web Conference

Housekeeping

- This is a virtual meeting.
  - **Virtual attendees**, please use the  function to ask questions.
- All attendees, please state your name and company when asking and answering questions.
- We plan to take a 30-minute lunch break at 11:30 am CT/12:30 pm ET.

Process Information

- The SERTP process is a transmission planning process.
- Please contact the respective transmission provider for questions related to real-time operations or Open Access Transmission Tariff (OATT) transmission service.
- Contact Info:
  - SERTP Website Address: www.southeasternrtp.com
  - Email Inbox: southeasternrtp@southernco.com

Purposes & Goals of Meeting

- **Economic Planning Studies**
  - Preliminary Results
  - Stakeholder Input/Discussion
- **Miscellaneous Updates**
- **Next Meeting Activities**

SERTP Preliminary

Economic Planning Studies

Economic Planning Studies Process

- Economic Planning Studies were chosen by the Regional Planning Stakeholder Group “RPSG” in March at the 2025 SERTP 1st Quarter Meeting.

- Key study criteria, methodologies, and input assumptions were finalized on April 30, 2025.

- These studies represent analyses of hypothetical scenarios requested by the stakeholders and **do not** represent an actual transmission need or commitment to build.

Economic Planning Studies Process

- **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 company-specific planning criteria

- **1898 & Co. was contracted to perform the analysis and, along with sponsors, develop potential strategic solutions for these studies**

- **Models used to perform the analysis incorporate the load forecasts and resource decisions as provided by LSEs**
  - Power flow models are made available to stakeholders to perform additional screens or analysis

Economic Planning Studies and Cases

Study 1	**SPP to TVA** • 800 MW Generation to Load Transfer (2030 Winter Peak)
Study 2	**FRCC to SOCO** • 1,500 MW Generation to Load Transfer (2030 Shoulder)
Study 3	**MISO South to DEP/DEC** • 1,000 MW Generation to Generation Transfer (2030 Winter Peak) ➢DEC = 600 MW ➢DEP = 400 MW
Study 4	**MISO South to DEP/DEC** • 2,000 MW Generation to Generation Transfer (2030 Winter Peak) ➢DEC = 1,200 MW ➢DEP = 800 MW
Study 5	**MISO South to DEP/DEC** • 2,000 MW Generation to Generation Transfer (2030 Summer Peak) ➢DEC = 1,200 MW ➢DEP = 800 MW

Load Flow Cases:

2025 Series Version 2 SERTP Regional Models
- 2030 Winter Peak
- 2030 Summer Peak
- 2030 Shoulder

Preliminary Report Components

- ***At a minimum*, the SERTP reported results on elements of 115 kV and greater with:**
  - Thermal loadings greater than 90% for facilities that are negatively (+5%) impacted by the proposed transfers; or
  - Voltages appropriate to each participating transmission owner's planning criteria; and
  - Overloaded facilities that had a low response to the requested transfer and issues identified that are local in nature were also excluded.
- **For each economic planning study request, the results of that study include:**
  - Limiting Elements and their Contingencies
  - Potential transmission enhancement(s) to address the limit(s)
  - Planning-level cost estimates and in-service dates for the potential transmission enhancement(s)

Process Information

- The following information depicts potential enhancements for the proposed transfer levels above and beyond existing, firm commitments. Therefore, this information does not represent a commitment to proceed with the recommended enhancements nor imply that the recommended enhancements could be implemented by the study dates.

- These potential solutions only address constraints identified within the SERTP Sponsors' areas that are associated with the proposed transfers. Other Balancing Areas were not monitored, which could result in additional limitations and required system enhancements.

- These are preliminary results to address the identified issues and could be refined for the final report and presentation.

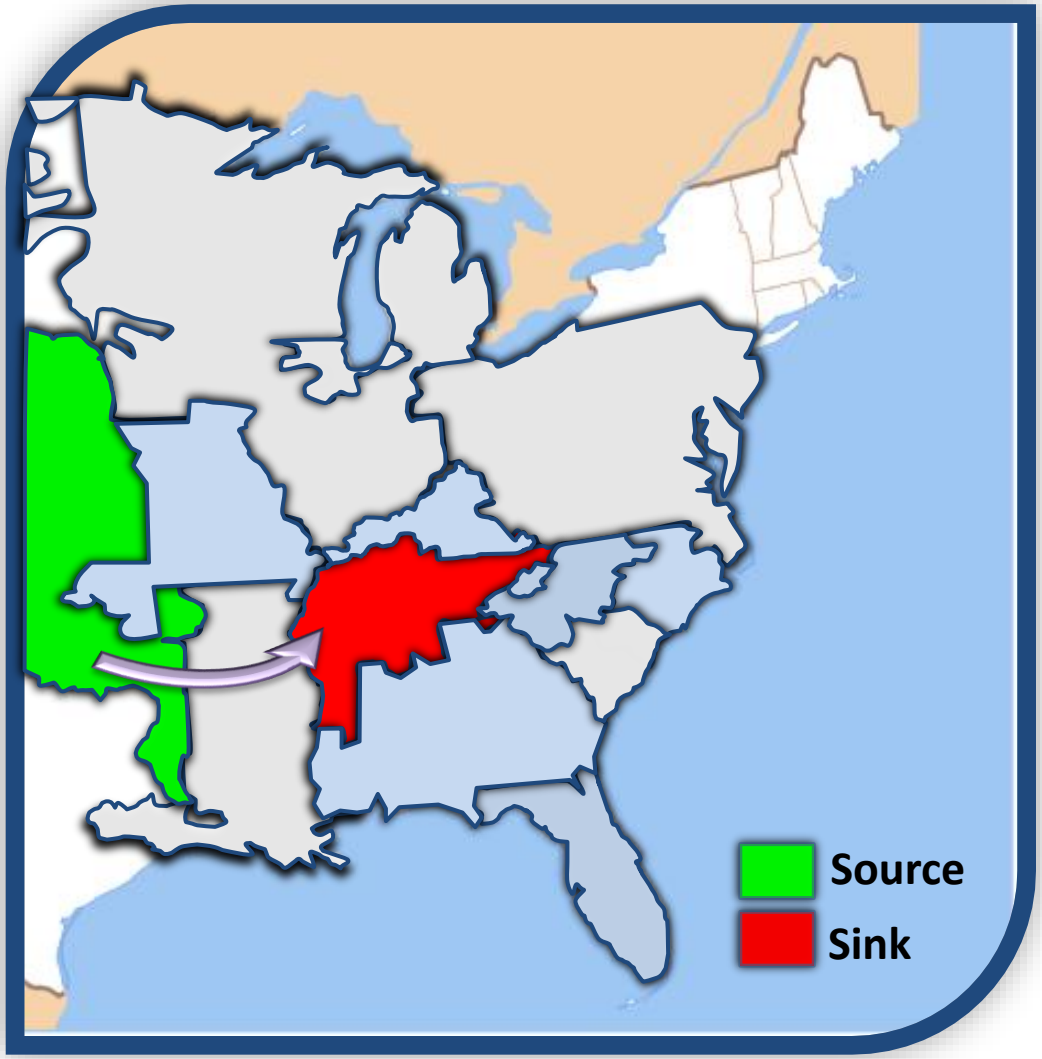
Economic Planning Studies – Preliminary Results

Study 1:
SPP to TVA – 800 MW

SPP to TVA – 800 MW (30W)

Study 1 Assumptions

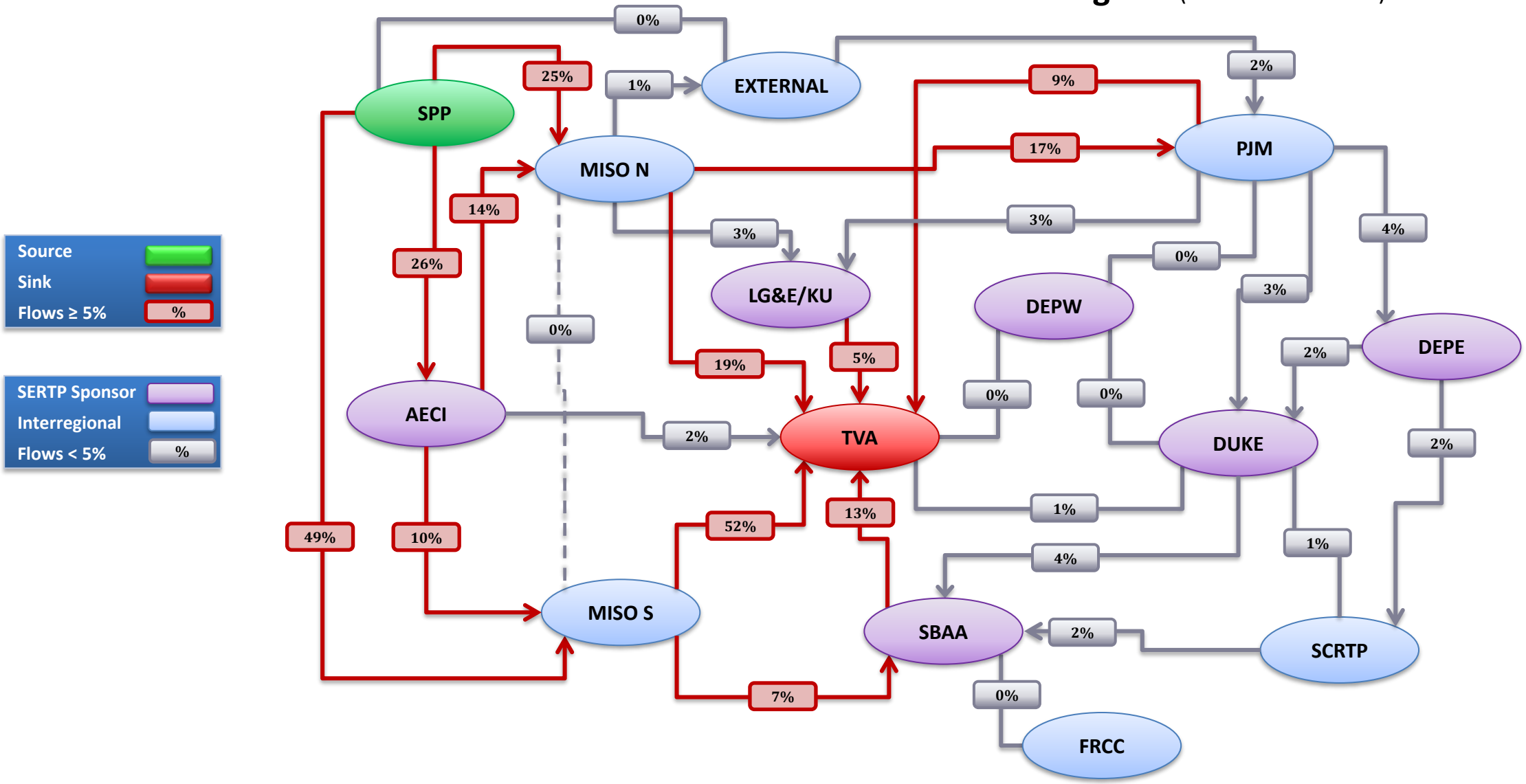
- **Source:** Generation scale within SPP
- **Sink:** Load scale within TVA
- **Transfer Type:** Generation to Load
- **Year:** 2030
- **Load Level:** Winter Peak



Southeastern Regional
TRANSMISSION PLANNING

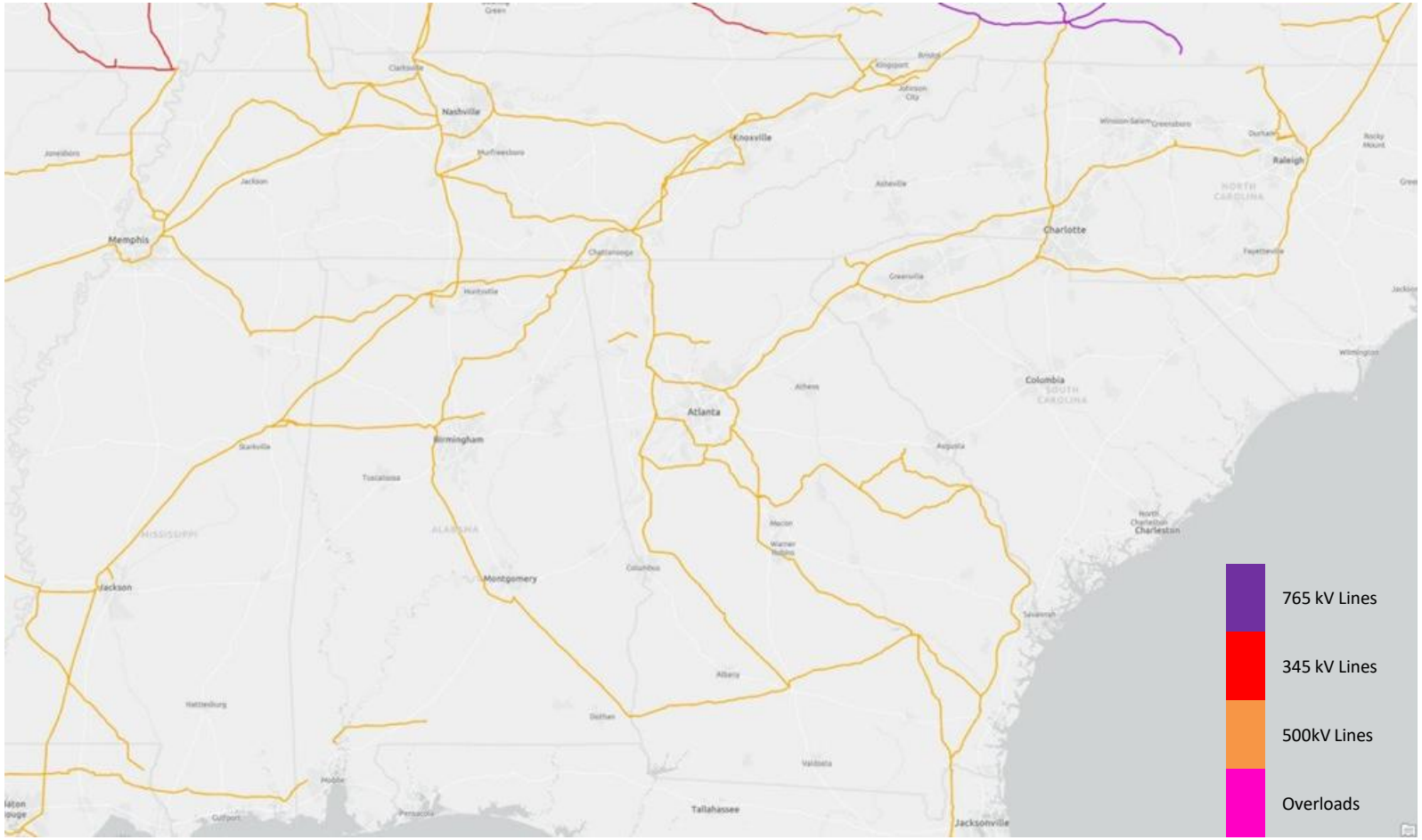
SPP to TVA – 800 MW (30W)

Transfer Flow Diagram (% of Total Transfer)



SPP to TVA – 800 MW (30W)

Transmission System Impacts - *SERTP*



Facility Violations
0
Potential Enhancements Identified
-
SERTP TOTAL ($2025)
-

SPP to TVA – 800 MW (30W)

Potential Enhancements Identified

Item	Potential Enhancement	Area	Planning Level Cost Estimate
-	**None Identified**	-	-
TOTAL ($2025)			**$0** (1)

(1) Total planning level cost estimate does not include the cost of projects that are included in SERTP Sponsors' expansion plans and are scheduled to be completed by June 1st of the study year. The studied transfer depends on these projects being in-service, and the cost to support the study transfer could be greater than the total shown above if any of these projects are delayed or cancelled.

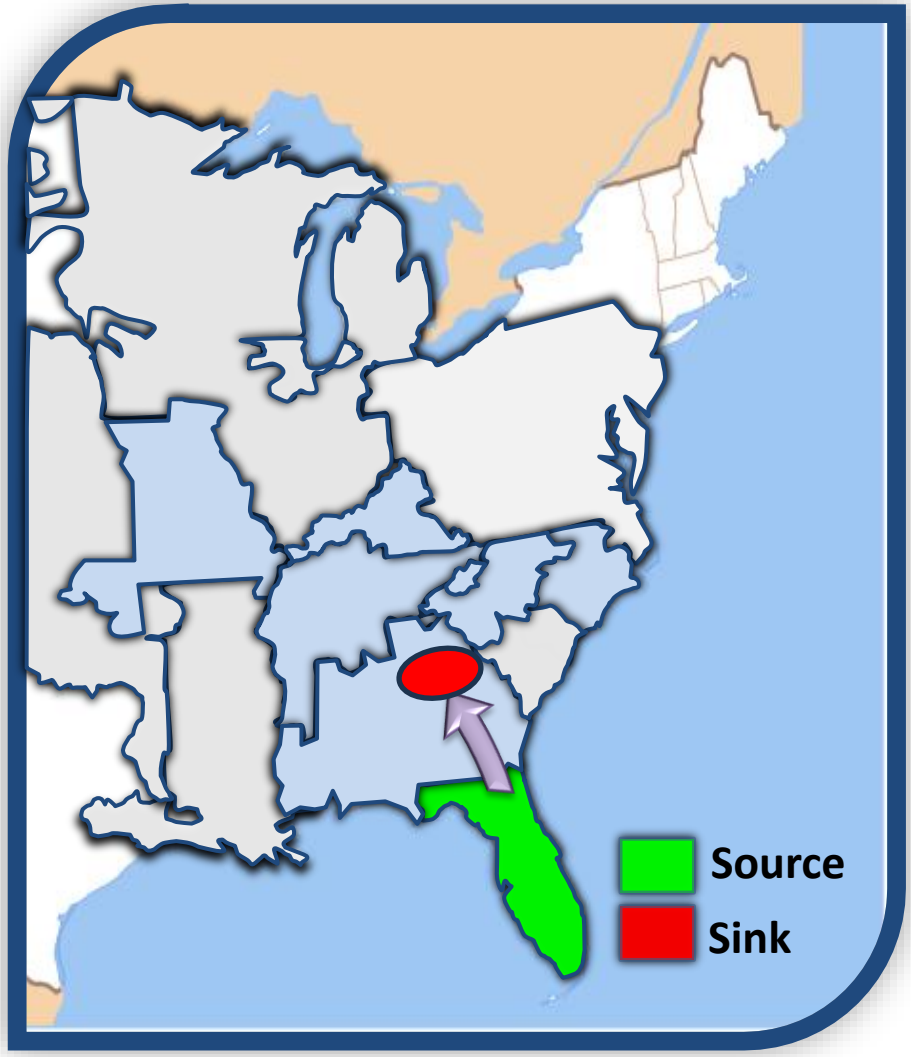
Economic Planning Studies – Preliminary Results

Study 2:
FRCC to SOCO – 1,500 MW

FRCC to SOCO - 1,500 MW (30H)

Study 2 Assumptions

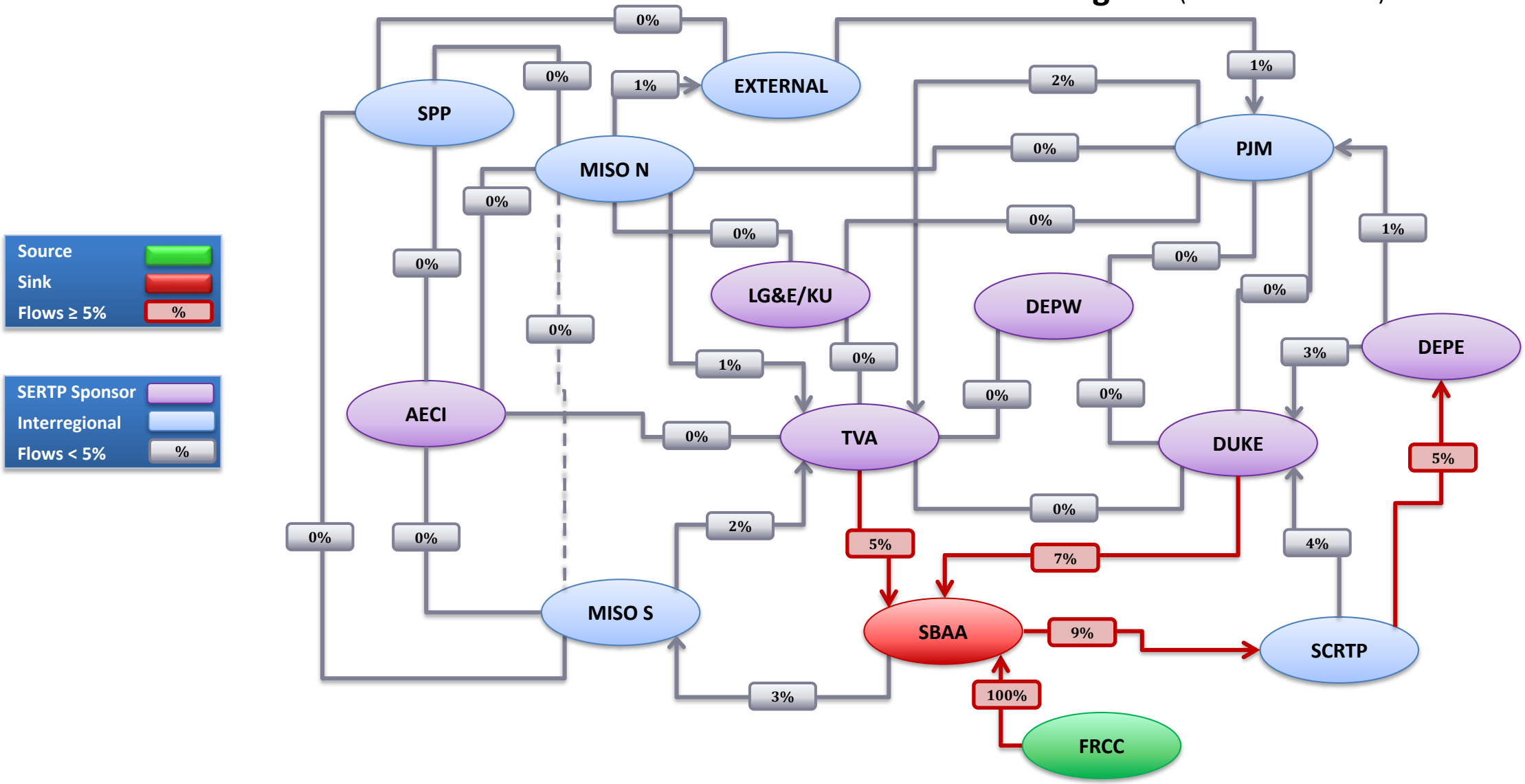
- **Source:** Generation scale within FRCC
- **Sink:** Load scale within SOCO
- **Transfer Type:** Generation to Load
- **Year:** 2030
- **Load Level:** Shoulder



Southeastern Regional
TRANSMISSION PLANNING

FRCC to SOCO – 1500 MW (30H)

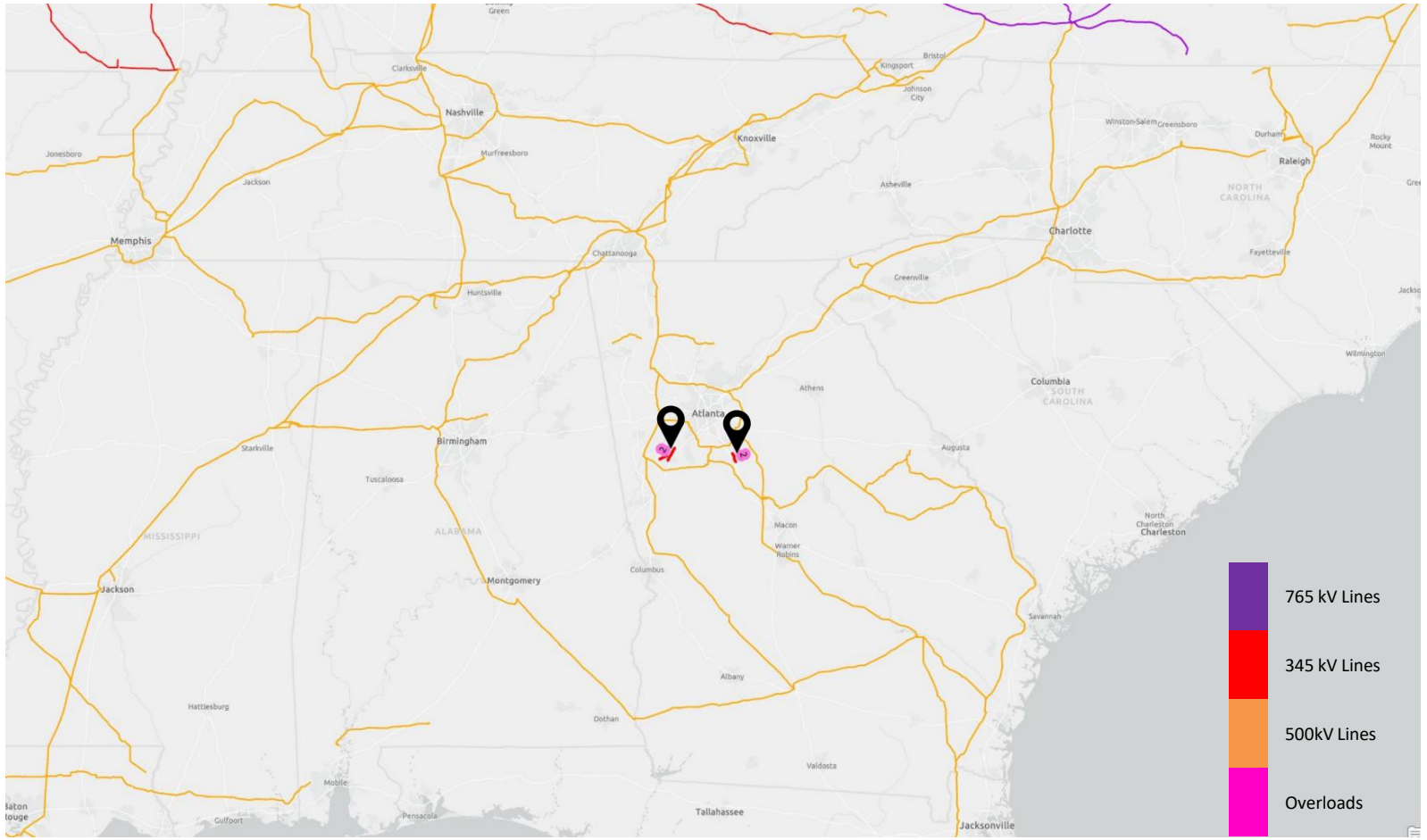
Transfer Flow Diagram (% of Total Transfer)



Southeastern Regional TRANSMISSION PLANNING

FRCC to SOCO – 1,500 MW (30H)

Transmission System Impacts - *SERTP*



Facility Violations
115 kV: 5 230/115 kV: 1
Potential Enhancements Identified
3
SERTP TOTAL ($2025)
$48,714,200

FRCC to SOCO – 1,500 MW (30H)

Potential Enhancements Identified

Item	Potential Enhancement	Area	Planning Level Cost Estimate
P1	**Rebuild 12.6 miles of the Dyer Road – Yamaha 115 kV transmission line with 1351 ACSS Martin at 200˚C.** ***[Advanced Conductor]***	**SBAA**	**$28,602,000**
P2	**Rebuild 3.06 miles of the Newman Primary – Corn Crib 115 kV transmission line with 1351 ACSS Martin at 200˚C.** ***[Advanced Conductor]***	**SBAA**	**$ 6,946,200**
P3	**Rebuild 5.8 miles of the McDonough – Locust Grove 115 kV transmission line with 1351 ACSS Martin at 200˚C.** ***[Advanced Conductor]***	**SBAA**	**$13,166,000**
TOTAL ($2025)			**$48,714,200** (1)

(1) Total planning level cost estimate does not include the cost of projects that are included in SERTP Sponsors' expansion plans and are scheduled to be completed by June 1st of the study year. The studied transfer depends on these projects being in-service, and the cost to support the study transfer could be greater than the total shown above if any of these projects are delayed or cancelled.

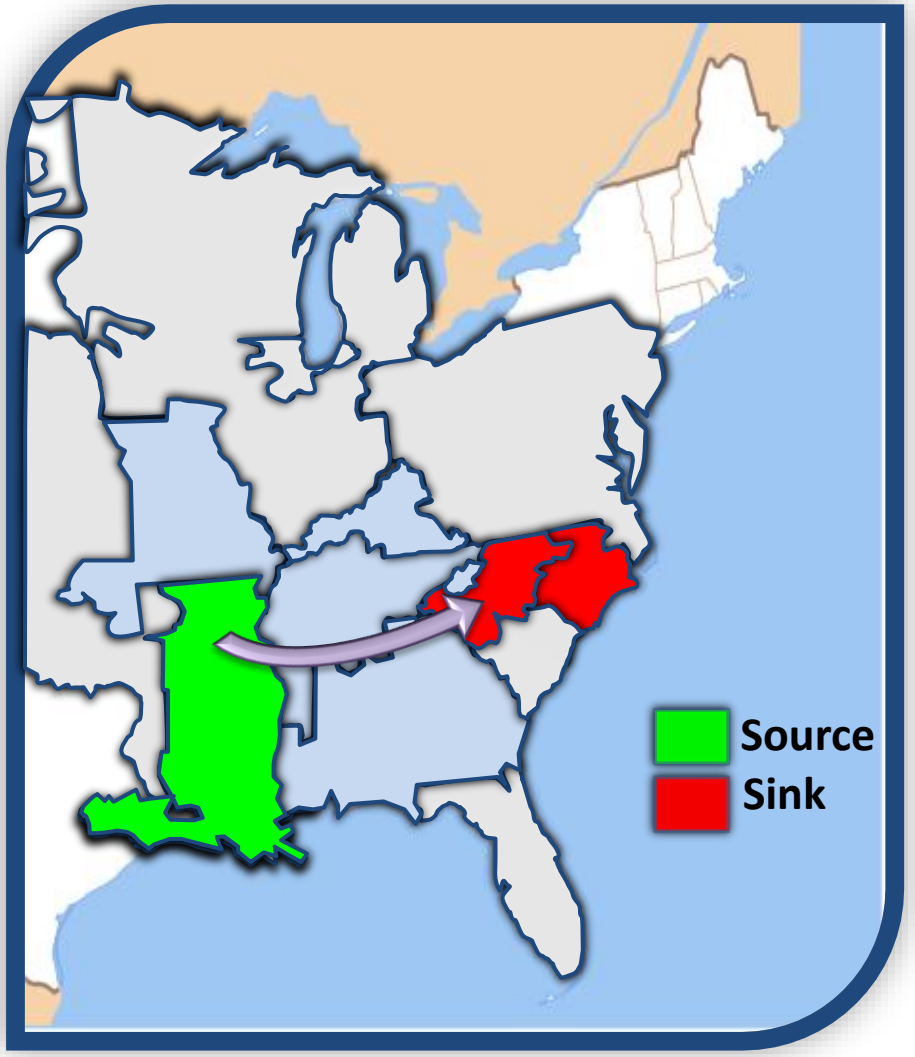
Economic Planning Studies – Preliminary Results

Study 3:
MISO S to DEC/DEP – 1,000 MW

MISO S to DEC/DEP – 1,000 MW (30W)

Study 3 Assumptions

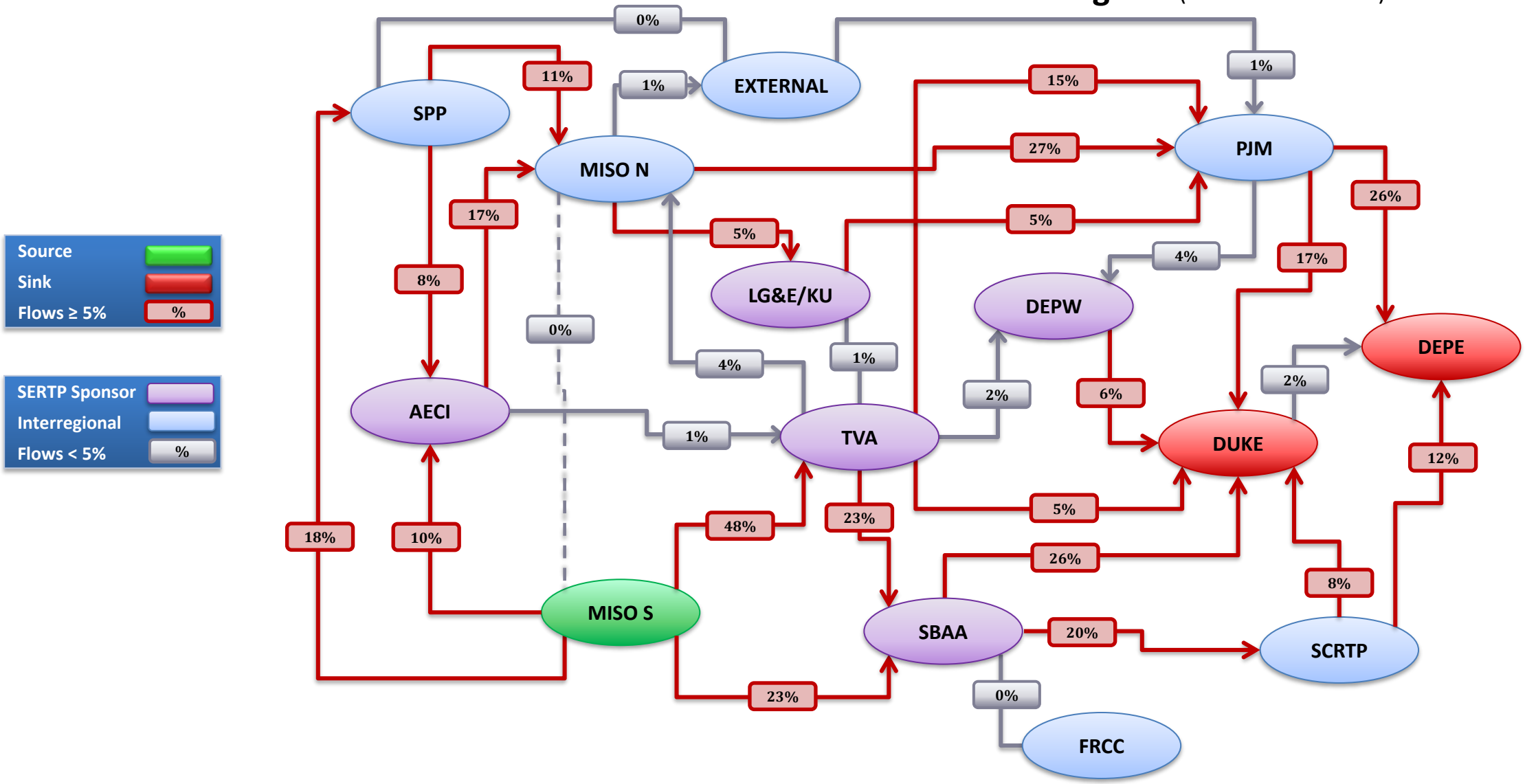
- **Source:** Generation scale within MISO South
- **Sink:** Generation scale within DEC/DEP
  - DEC: 600 MW
  - DEP: 400 MW
- **Transfer Type:** Generation to Generation
- **Year:** 2030
- **Load Level:** Winter Peak



Southeastern Regional
TRANSMISSION PLANNING

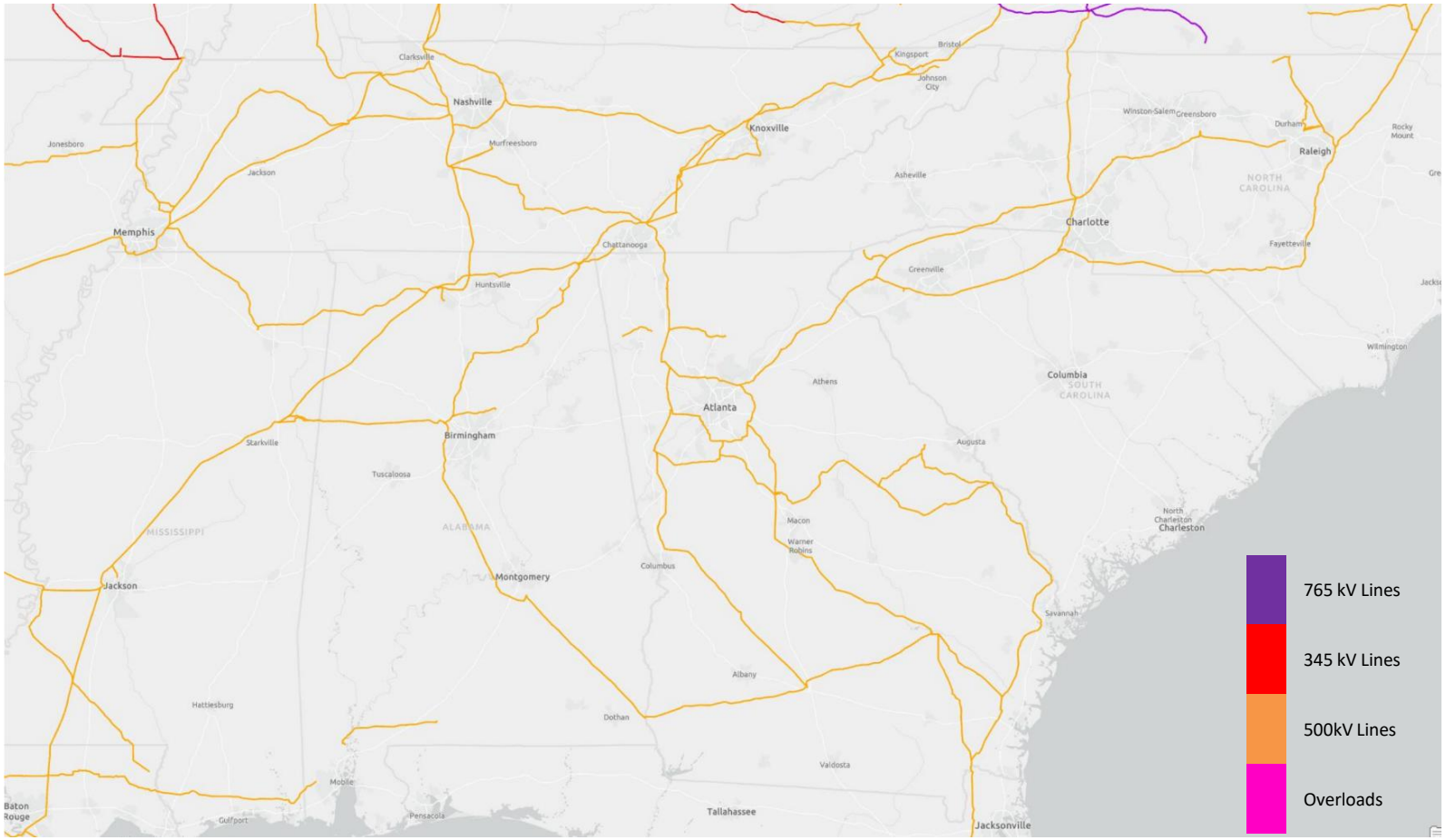
MISO S to DEC/DEP – 1,000 MW (30W)

Transfer Flow Diagram (% of Total Transfer)



MISO S to DEC/DEP – 1,000 MW (30W)

Transmission System Impacts - *SERTP*



Facility Violations
0
Potential Enhancements Identified
-
SERTP TOTAL ($2025)
-

MISO S to DEC/DEP – 1,000 MW (30W)

Potential Enhancements Identified

Item	Potential Enhancement	Area	Planning Level Cost Estimate
-	**None Identified**	-	-
TOTAL ($2025)			**$0** (1)

(1) Total planning level cost estimate does not include the cost of projects that are included in SERTP Sponsors' expansion plans and are scheduled to be completed by June 1st of the study year. The studied transfer depends on these projects being in-service, and the cost to support the study transfer could be greater than the total shown above if any of these projects are delayed or cancelled.

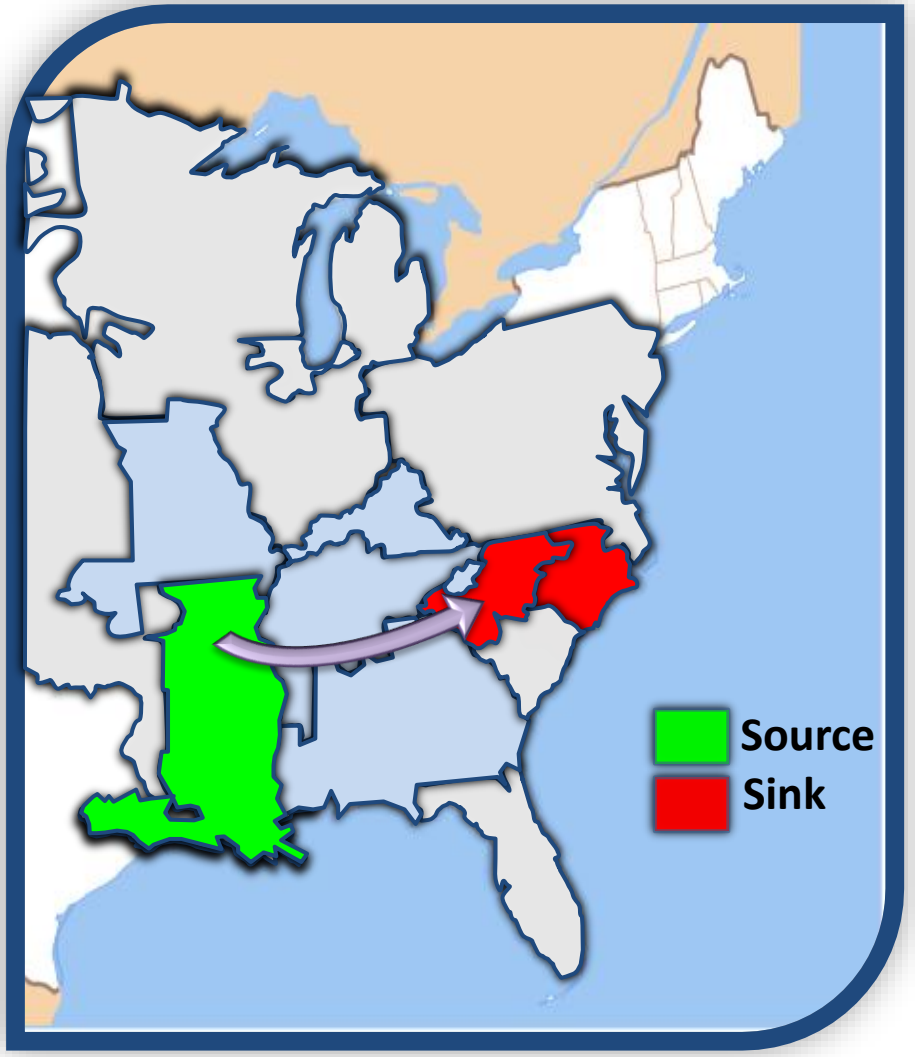
Economic Planning Studies – Preliminary Results

Study 4:
MISO S to DEC/DEP – 2,000 MW

MISO S to DEC/DEP – 2,000 MW (30W)

Study 4 Assumptions

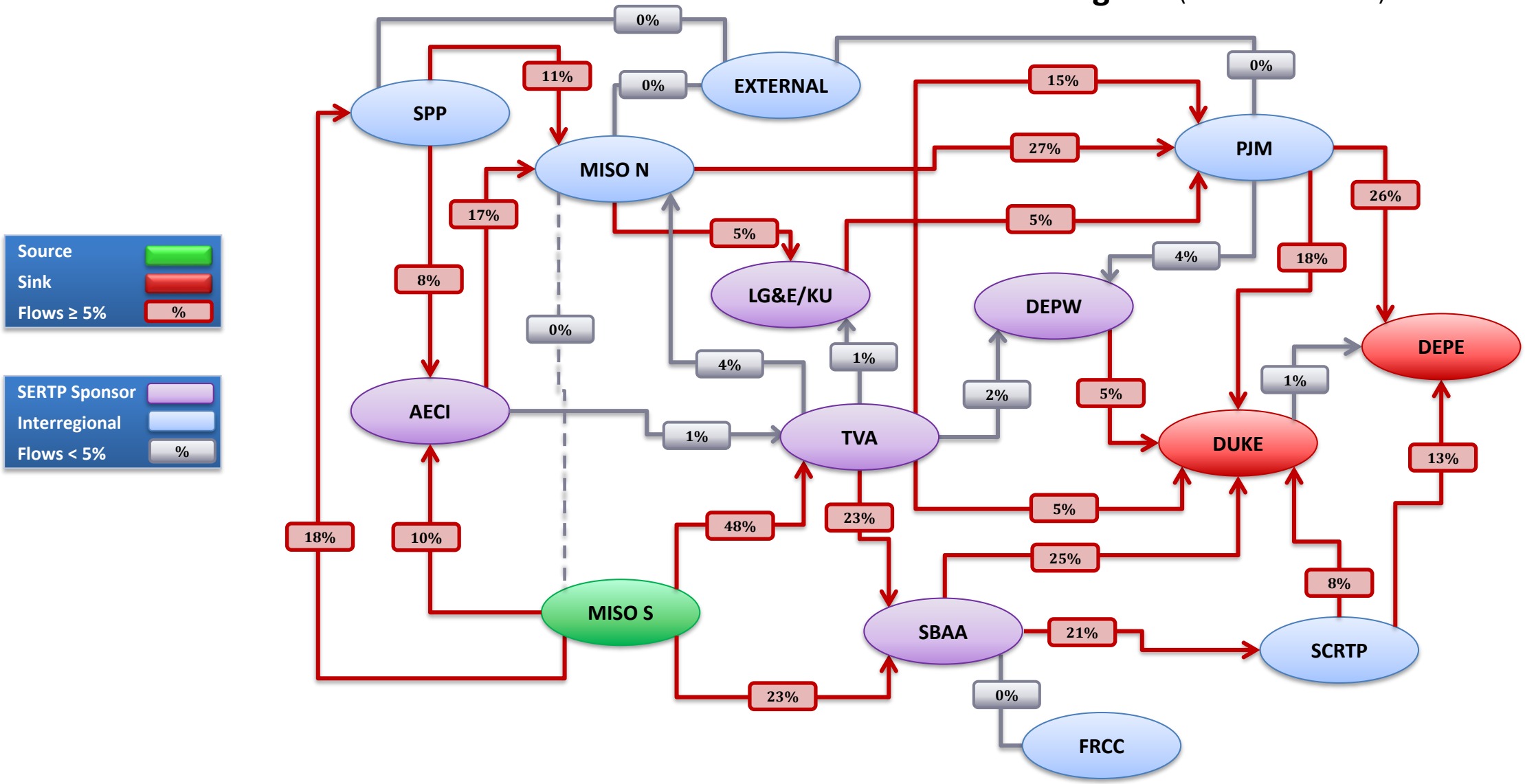
- **Source:** Generation scale within MISO South
- **Sink:** Generation scale within DEC/DEP
  - DEC: 1,200 MW
  - DEP: 800 MW
- **Transfer Type:** Generation to Generation
- **Year:** 2030
- **Load Level:** Winter Peak



Southeastern Regional
TRANSMISSION PLANNING

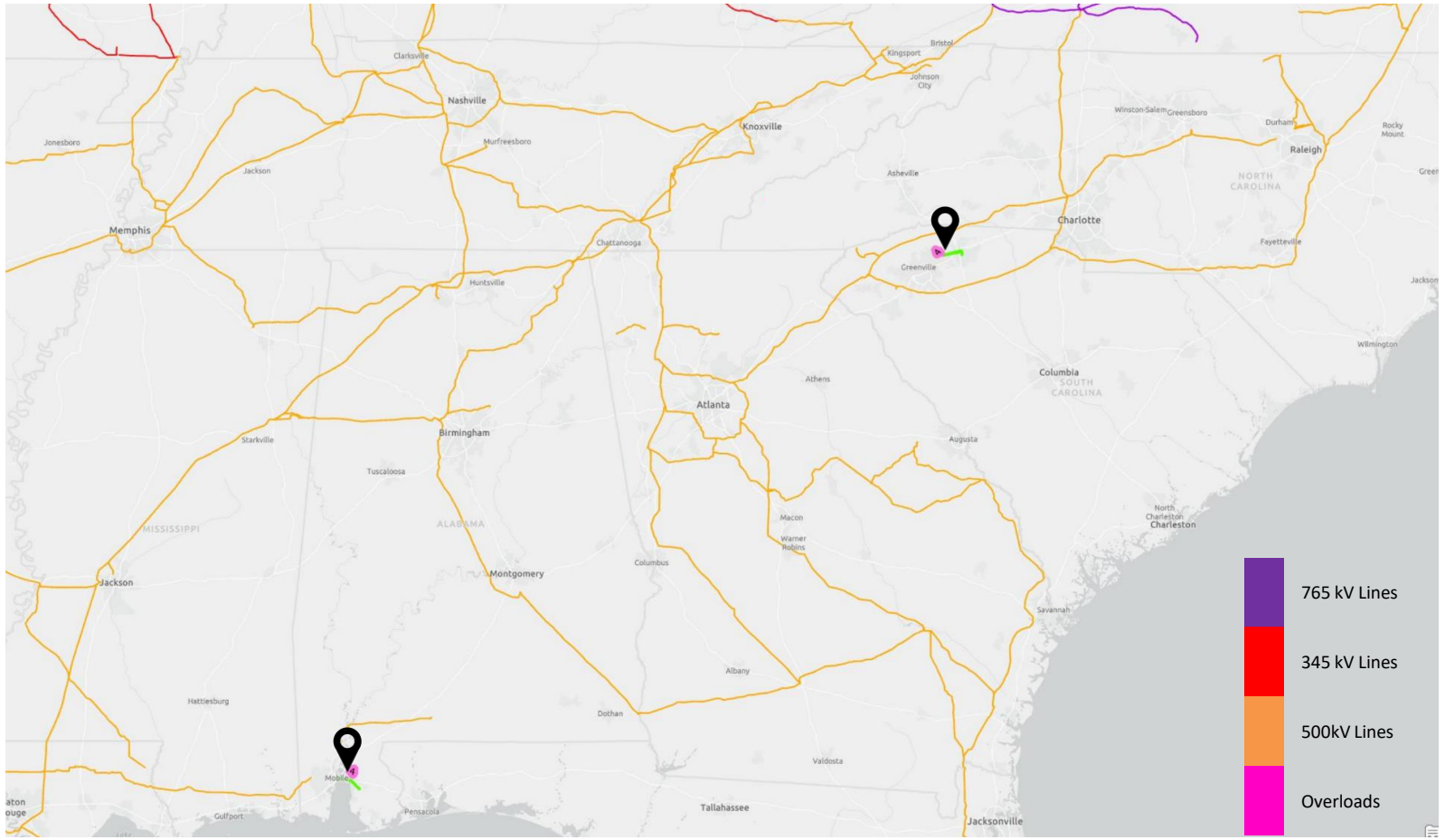
MISO S to DEC/DEP – 2,000 MW (30W)

Transfer Flow Diagram (% of Total Transfer)



MISO S to DEC/DEP – 2,000 MW (30W)

Transmission System Impacts - *SERTP*



Facility Violations
100 kV: 3 115 kV: 3
Potential Enhancements Identified
3
SERTP TOTAL ($2025)
$81,050,000

MISO S to DEC/DEP – 2,000 MW (30W)

Potential Enhancements Identified

Item	Potential Enhancement	Area	Planning Level Cost Estimate(1)
P1	**Rebuild 11.75 miles (entire line) of the Tiger Tie – West Spartanburg Tie 100 kV transmission line with 1158 ACSS/TW rated at 200°C.** ***[Advanced Conductor]***	DEC	$47,000,000
P2	**Rebuild approximately 8 miles of 115 kV transmission line from Blakely Island to Spanish Fort to 1351 ACSS at 200°C.** ***[Advanced Conductor]***	SBAA	$18,160,000
P3	**Reconductor approximately 7 miles of 115 kV transmission line from Spanish Fort to Belforest with Southwire C7 973 ACCS 20/7 at 180°C.** ***[Advanced Conductor]***	SBAA	$10,430,000(2)
TOTAL ($2025)			**$75.59 Million**(1),(2)

(1) Total planning level cost estimate does not include the cost of projects that are included in SERTP Sponsors' expansion plans and are scheduled to be completed by June 1st of the study year. The studied transfer depends on these projects being in-service, and the cost to support the study transfer could be greater than the total shown above if any of these projects are delayed or cancelled.

(2) Cost estimates were modified following the 2025 SERTP 3rd Quarter Meeting held September 23, 2025. These changes will be reflected in the final Economic Planning Study report posted during 4th quarter 2025.

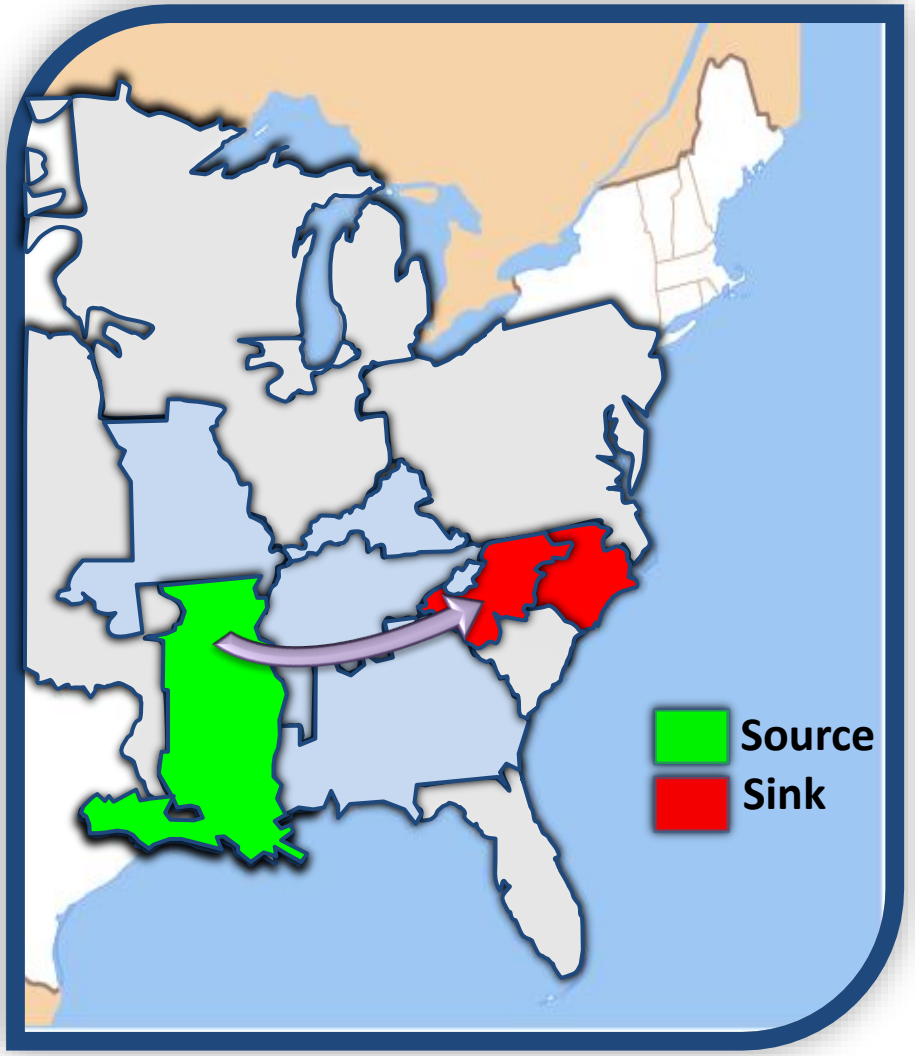
Economic Planning Studies – Preliminary Results

Study 5:
MISO S to DEC/DEP – 2,000 MW

MISO S to DEC/DEP – 2,000 MW (30S)

Study 5 Assumptions

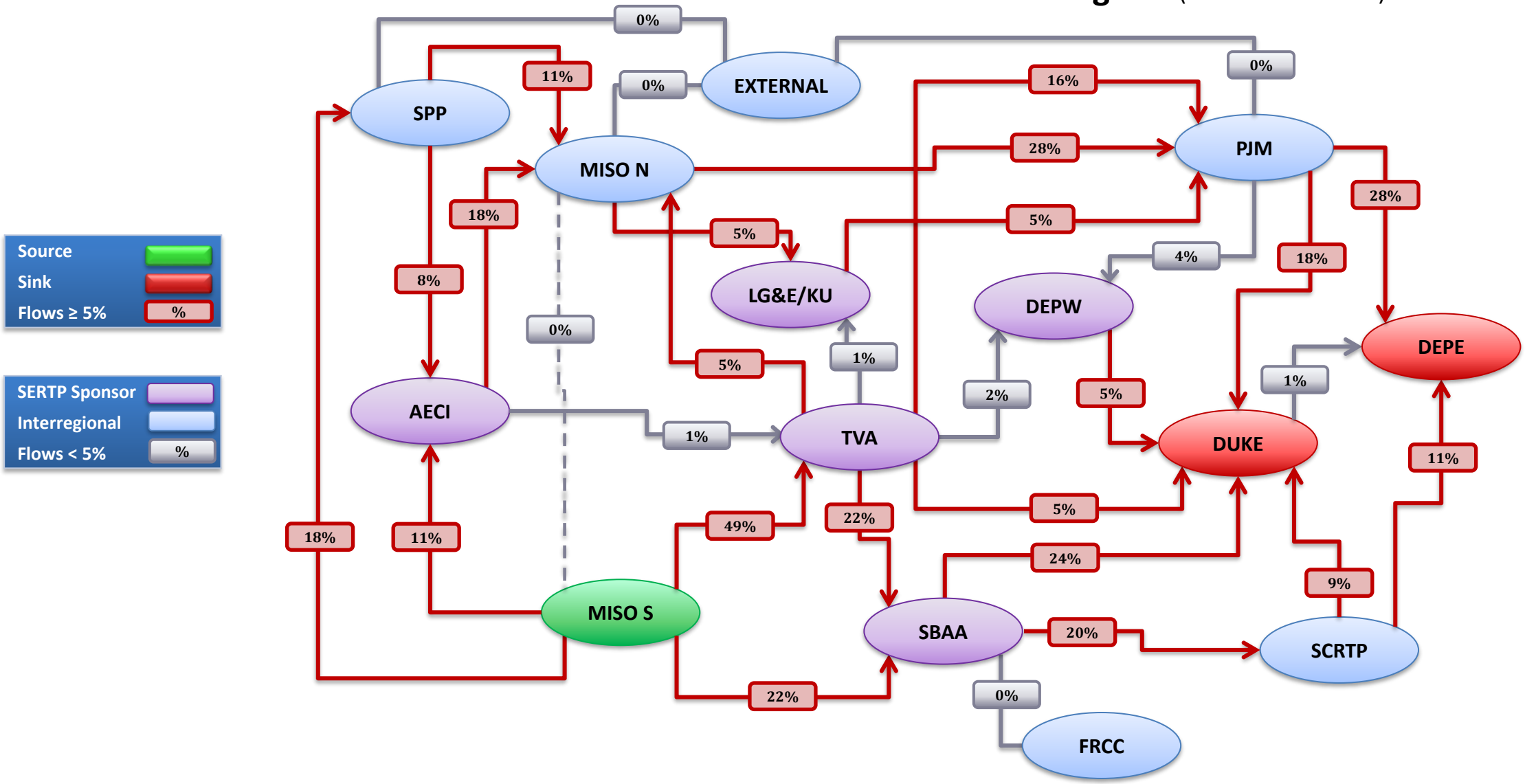
- **Source:** Generation scale within MISO South
- **Sink:** Generation scale within DEC/DEP
  - DEC: 1,200 MW
  - DEP: 800 MW
- **Transfer Type:** Generation to Generation
- **Year:** 2030
- **Load Level:** Summer Peak



Southeastern Regional
TRANSMISSION PLANNING

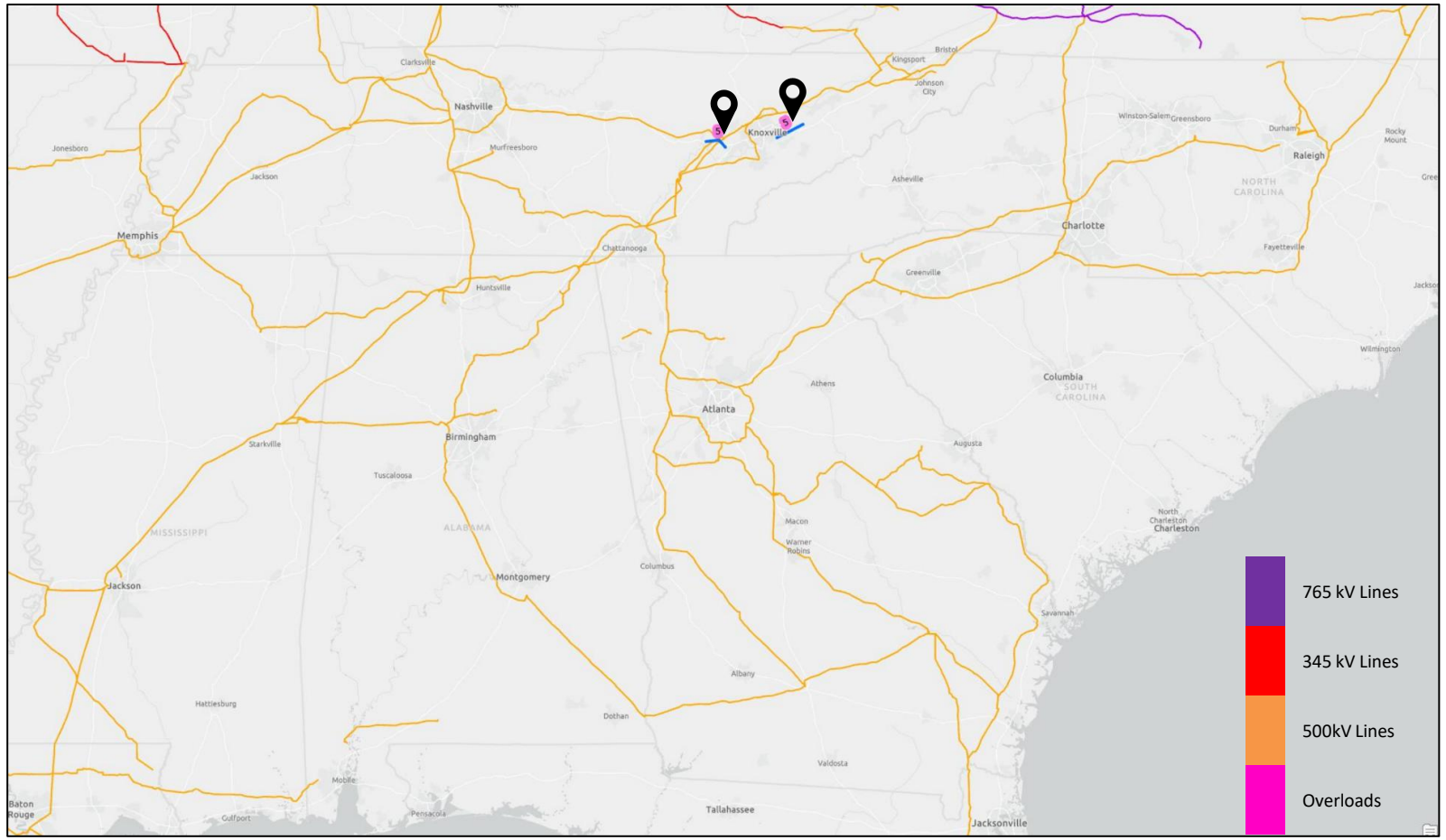
MISO S to DEC/DEP – 2,000 MW (30S)

Transfer Flow Diagram (% of Total Transfer)



MISO S to DEC/DEP – 2,000 MW (30S)

Transmission System Impacts - *SERTP*



Facility Violations
115 kV: 4 161 kV: 10 230 kV: 1
Potential Enhancements Identified
2
SERTP TOTAL ($2025)
$15,500,000

MISO S to DEC/DEP – 2,000 MW (30S)

Potential Enhancements Identified

Item	Potential Enhancement	Area	Planning Level Cost Estimate
P1	**Uprate 8.1 miles of the Dumplin Valley – East Knox 161 kV transmission line to 90°C.**	**TVA**	**$5,300,000**
P2	**Reconductor 21.2 miles of the Kingston – Ft. Loudoun 161 kV transmission line to ACSS 795.0 26/7 and set to 110°C.** ***[Advanced Conductor]***	**TVA**	**$10,200,000**
TOTAL ($2025)			**$15.5 Million**(1)

(1) Total planning level cost estimate does not include the cost of projects that are included in SERTP Sponsors' expansion plans and are scheduled to be completed by June 1st of the study year. The studied transfer depends on these projects being in-service, and the cost to support the study transfer could be greater than the total shown above if any of these projects are delayed or cancelled.

RPSG Input and Feedback on EPS Preliminary Results

- Stakeholders may submit alternative(s) to the enhancement solutions identified in the preliminary results presented at this meeting.

- Additionally, alternative(s) to the enhancement solutions identified in the preliminary results presented at this meeting can be submitted by stakeholders via email to the SERTP sponsors no later than ***October 23, 2025*** (30 calendar days from the close of this meeting).

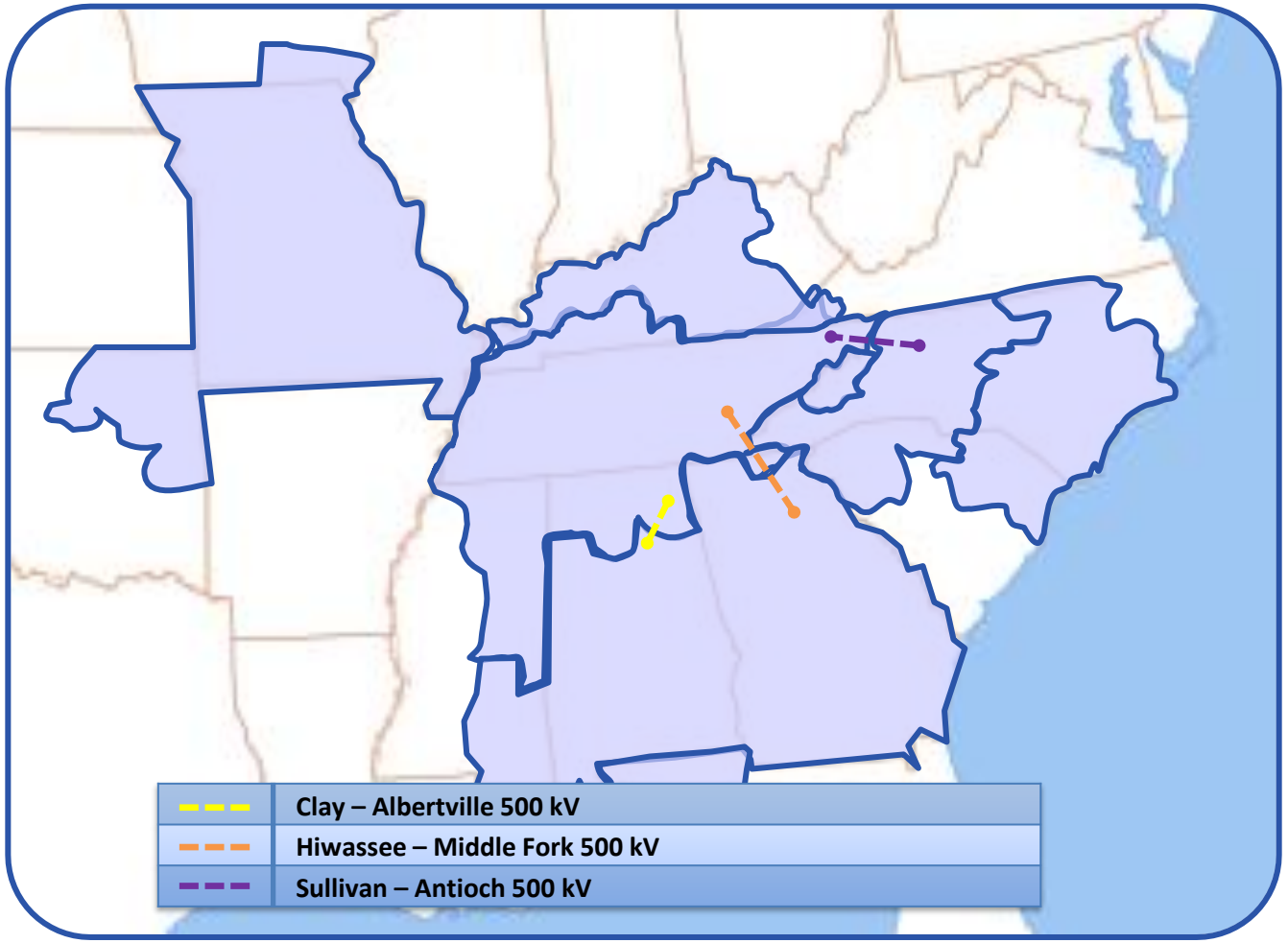
SERTP

Miscellaneous Updates

Regional and Interregional Planning Update

- Version 2 SERTP Regional Models available on SERTP Secure Website
- SERTP has now held interregional data exchange meetings with all neighbors:
  - SCRTP, SPP, MISO, PJM and FRCC
- SERTP Sponsors beginning analyses on regional models including assessment to identify and evaluate potential regional transmission projects

Preliminary List of Alternative Regional Transmission Projects



Preliminary List of Alternative Regional Transmission Projects

Alternative Regional Transmission Projects	Miles (Estimated)	From	To
		BAA (State)	BAA (State)
Clay – Albertville 500 kV	50	SBAA (AL)	TVA (AL)
Hiwassee – Middle Fork 500 kV	100	TVA (TN)	SBAA (GA)
Sullivan – Antioch 500 kV	90	TVA (TN)	DEC (NC)

SERC Regional Model Development Update

- SERC is one of the six regional electric reliability councils under the North American Electric Reliability Corporation authority (NERC).

- SERC oversees the implementation and enforcement of Reliability Standards among the bulk power system (BPS) users, owners, and operators.

SERC Regional Model Development Update

- **SERC Regional Model Development**
  - SERC Long-Term Working Group (LTWG)
    - Analyze the performance of the members' transmission systems
    - Evaluate the performance of bulk power supply facilities under both normal and contingency conditions for future years.
  - Data Bank Update (DBU)
    - The DBU is held to conduct an annual update of power flow models for the SERC Region to be used for operating and future year studies.

SERC Regional Model Development Update

- **SERC Regional Model Development**
  - Eastern Interconnection Reliability Assessment Group (ERAG)
    - The SERC Models are incorporated into the power flow models of the interconnected regions and updated annually by ERAG
    - Responsible for developing a library of solved power flow models of the Eastern Interconnection (Multi-regional Modeling Work Group – MMWG).
    - The updated Regional MMWG Models serve as the starting point model for the SERTP Regional Power Flow Models
    - MOD-032 Compliance (Data for Power System Modeling and Analysis)

SERC Regional Model Development Update

- **SERC Regional Model Development**
  - LTWG Schedule of Events for 2025
    - Data Bank Update (DBU) was finalized in June
    - Power flow cases were finalized in June
    - Future Study Year Case: 2029 Summer Peak Load
      - Nonpublic Study and Report was completed in September
      - Planning Coordination Subcommittee
  - ERAG Schedule of Events for 2025
    - MMWG Model Update performed from August – September
    - Power flow cases expected to be finalized in October

Next Meeting Activities

- **2025 SERTP 4th Quarter Meeting**
  Annual Transmission Planning Summit & Input Assumptions Meeting
  - **Location:** Atlanta, GA (hosted by GTC)
  - **Date:** December 10, 2025
  - **Purpose:**
    - Final Economic Planning Study Results
    - Final Regional Transmission Plan
    - Regional Analyses Results
    - 2026 Assumptions Input Session

Questions?

www.southeasternrtp.com

email: southeasternrtp@southernco.com