South Carolina Regional Transmission Planning

Stakeholder Meeting

Teams

February 28, 2024

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Purpose and Goals for Today's Meeting

- Review and Discuss Key Assumptions and Data for the Next Planning Cycle
- Review and Discuss Major Transmission Expansion Plans
- Review Schedule for completing Transmission Planning Studies

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Key Assumptions and Data for the Next Planning Cycle

DESC – Edward Chapman

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Modeling Assumptions and Data

Dispersed Substation Load Forecast

- Summer/Winter Peak, Off-Peak and Seasonal Load Levels
- Resource Planning provides 10 Year system load forecasts
- Transmission Planning creates dispersed substation load forecasts

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Load Forecast Process

Resource Planning Input

- Develop 10-year projected forecast based on:
  - 10-year historical load summer and winter loads
  - Load factors by customer class
  - Considers weather, personal income, population growth, economic conditions, load management, energy efficiency, etc
  - Applies regression analysis to historical data to develop models
  - Applies forecasted growth rates to develop future projections

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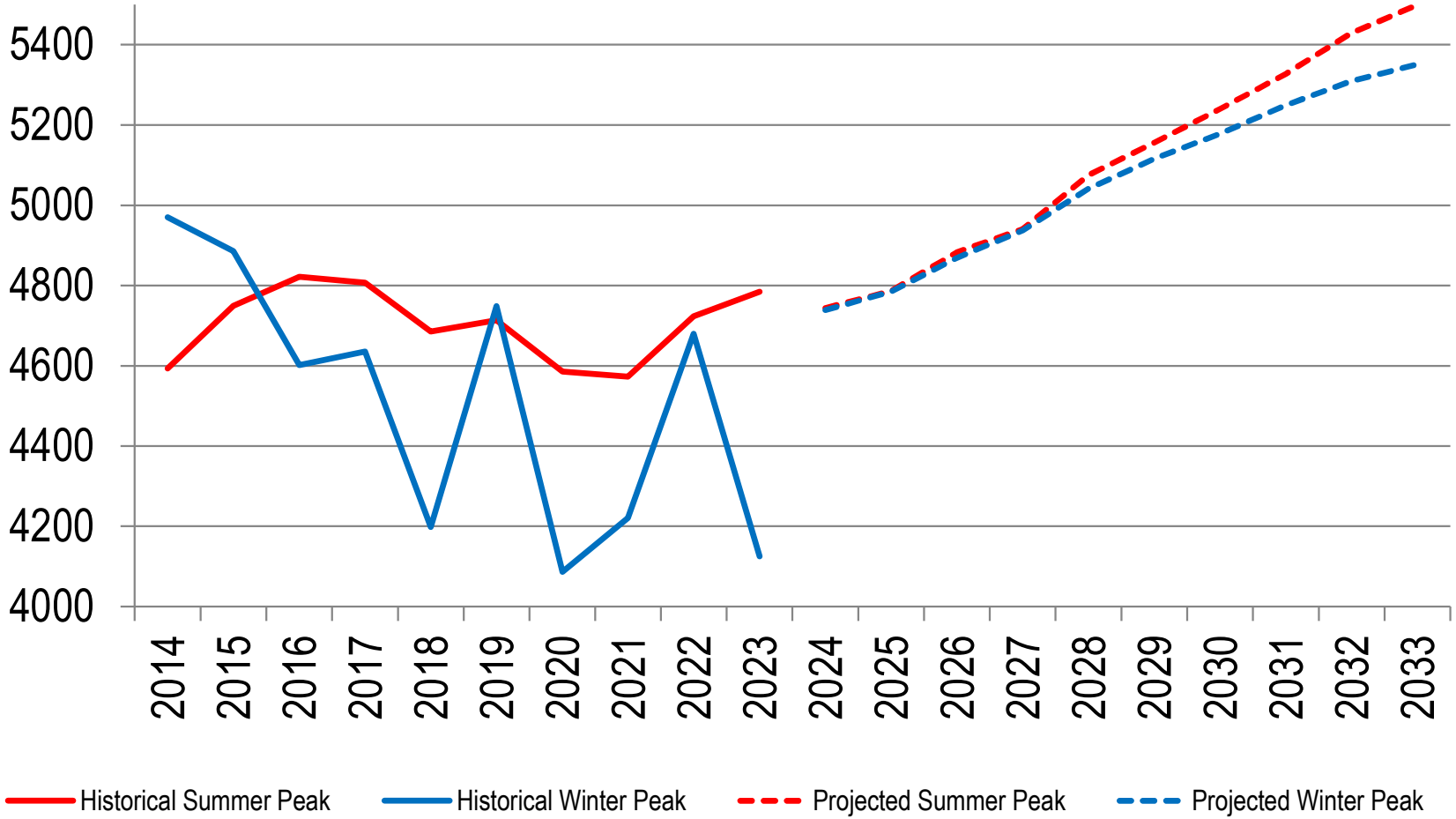
Load Forecast



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Load Forecast Process

Transmission Planning Input

- Obtain summer and winter snapshot meter data from most recent seasons and adjust for load switching
- Develop 10-year projected forecast based on:
  - 10-year historical loading
  - Feedback from Distribution Planning, Local Managers, Large Industrial Group and Transmission Services Manager
- Wholesale loads are modeled as provided by the customer
- Dispersed forecasted load points are integrated into corporate load forecast

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Modeling Assumptions and Data

Generation

- Annual generator ratings used
- Input from Generation Expansion Plan – Reductions/Additions
- Input from Generation Maintenance Schedule
- Generators dispatched economically
- Merchant Generators included

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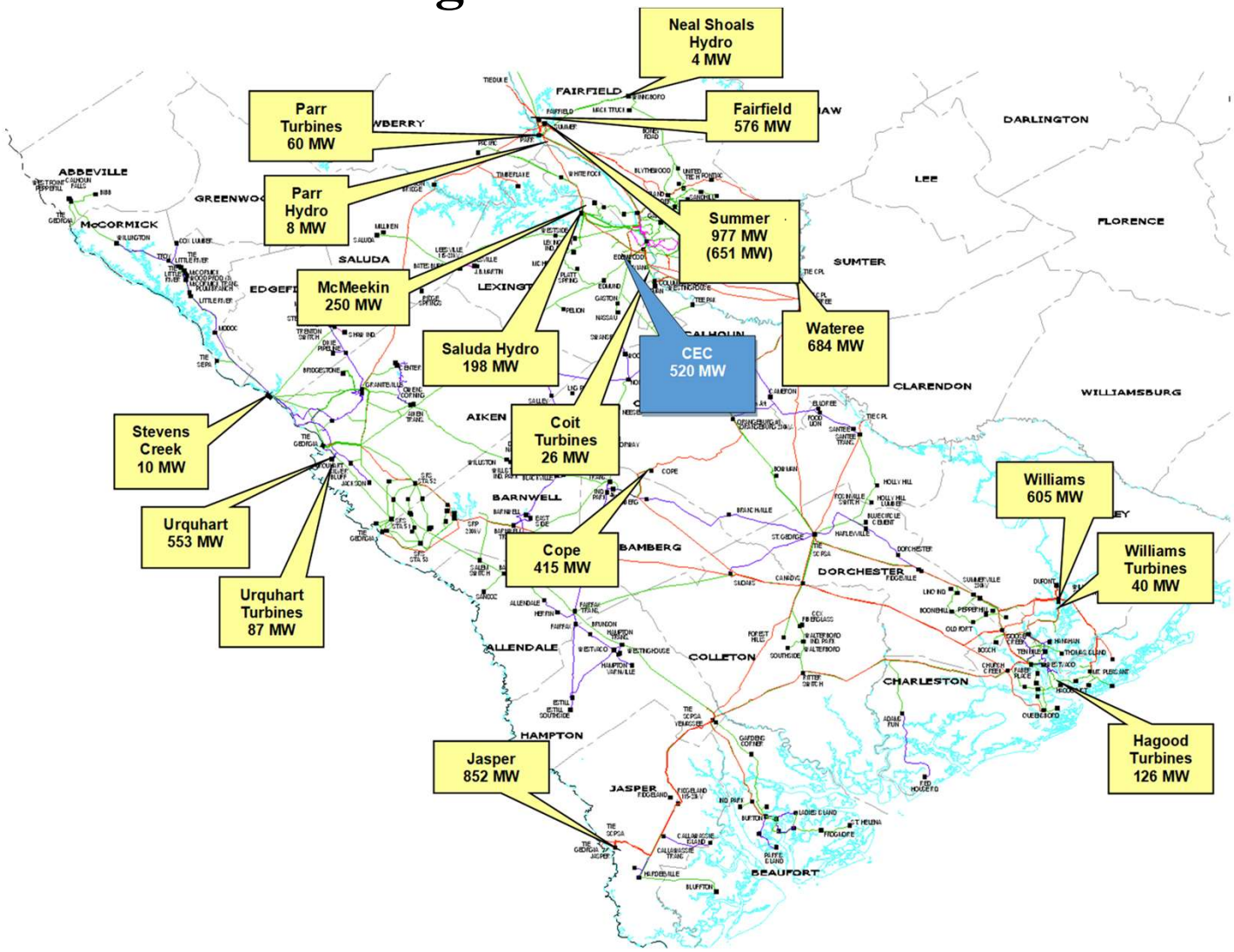
Existing Generation

DESC Owned Generation
5,665 MW



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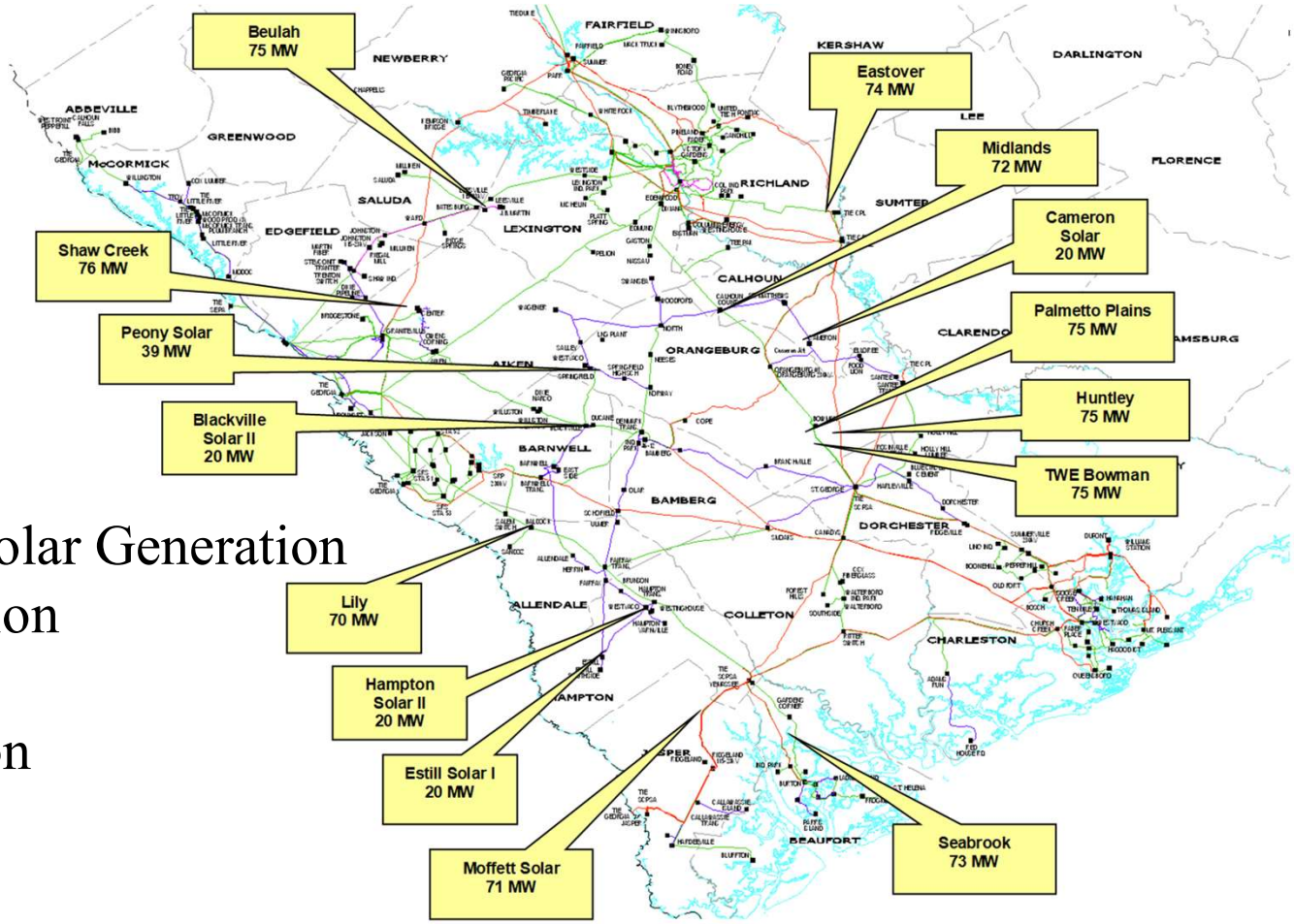
Merchant Generation



Additional Dispersed Solar Generation

- 855 MW Transmission
  - 18 MW Battery
- 193 MW Distribution

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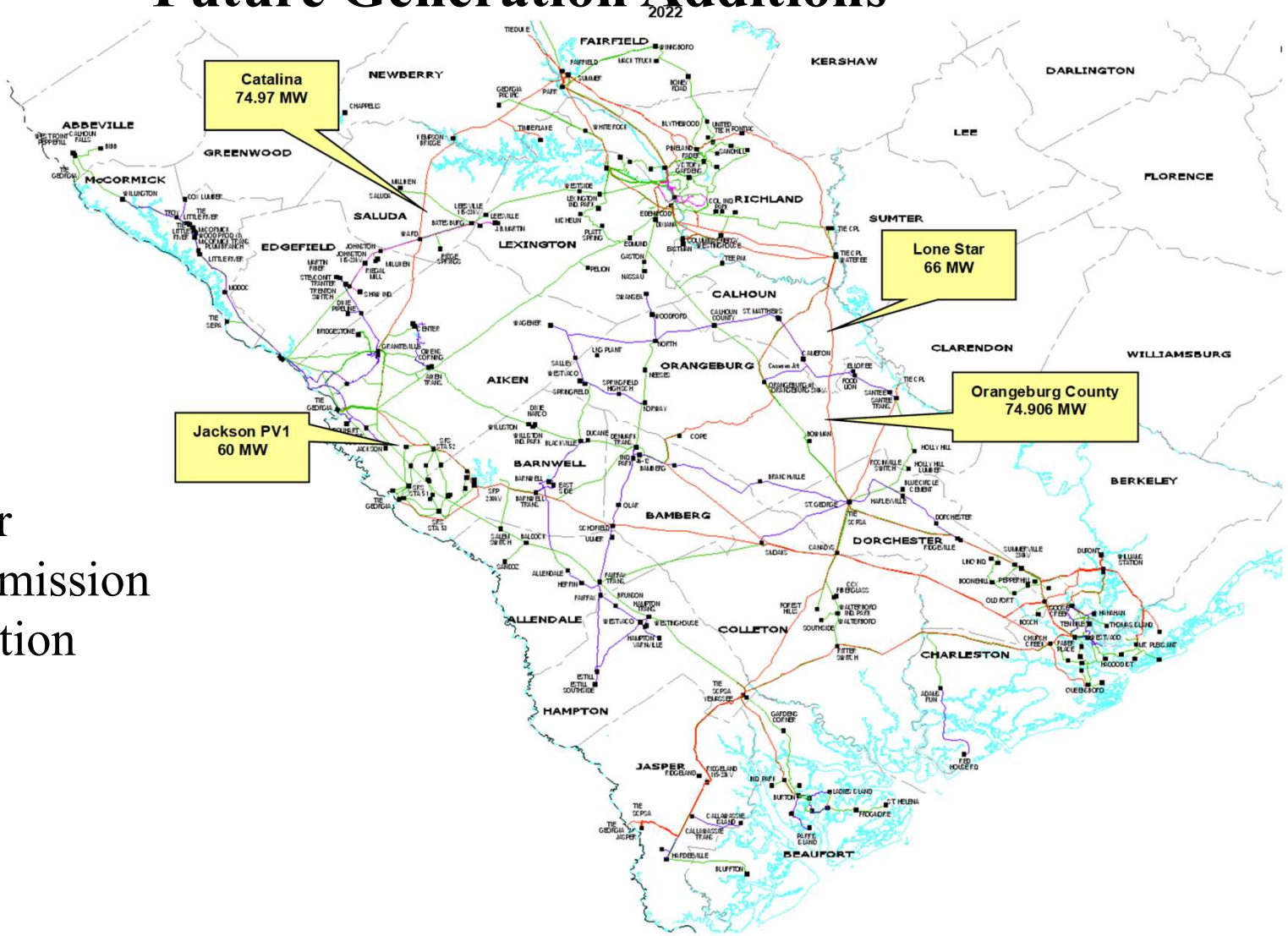
Future Generation Additions



Dispersed Solar
276 MW Transmission
0 MW Distribution

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Interconnection Transitional Cluster

- 1754 MW of gas/solar/BESS generation in cluster
- Phase 2 restudy in progress
  - PV Only: 224.8 MW
  - Hybrid:
    - 100 MW PV
    - 100 MW BESS
  - BESS Only: 0 MW
  - Uprates: 144.2 MW
  - 469 MW Total

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Interconnection DISIS 2023

- 3150 MW of gas/solar/BESS generation in cluster
- Phase 1 in progress
  - PV Only: 740 MW
  - Hybrid:
    - 629 MW PV
    - 595 MW BESS
  - BESS Only: 998 MW
  - Uprates: 124 MW
  - 2491 MW Total

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Modeling Assumptions and Data

Transmission Network

- Input from Transmission Plan
- Neighboring Transmission Systems Modeled

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Modeling Assumptions and Data

Planned Transmission Facilities

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2/22/2024

Dominion Energy South Carolina Planned Transmission Facilities

Planned Project	Tentative Completion Date
Modify Tap for Bushy Park 115kV Sub	Feb-24
Eastover - Square D 115kV - Rebuild	Jun-24
Church Creek - Ritter 230kV - Replace 25 Large Angles and Dead Ends	Jun-24
Emory 230-23 kV Sub and Fold-in Construct	Jul-24
Palmetto Railways 115-13.8 kV Sub and Tap Construct	Aug-24
Square D - Hopkins 115kV: Rebuild	Sep-24
Edenwood Sub: #1 & #2 230-115kV Autobanks, Replace with 336MVA	Dec-24
Summerville: Replace and Spare 230-115kV 336MVA Auto Bank	Dec-24
Burton-St Helena 115kV: Rebuild Burton-Frogmore Transmission Section	Dec-24
Goose Creek Reservoir: Rebuild Transmission Line Crossings	Dec-24
Okatie 230–115kV Sub and the Jasper – Yemassee Fold In	Dec-24
Stevens Creek - Hooks 115kV/LR Plumb Branch 46kV Rebuilds	Dec-24
Coit – Gills Creek 115kV: Construct	Dec-24
Hooks - Thurmond 115kV Tie Rebuild	Dec-24
Summerville 115 kV Loop Rebuild	Dec-24
Okatie-Bluffton 115kV: Rebuild	Jun-25
Orangeburg #1 - Cameron Jct 46kV Line Rebuild	Jun-25
Cainhoy - Hamlin 115kV: Rebuild Line and Cainhoy – Hamlin 115 kV #2: Construct New 115 kV Line	Dec-25
Jasper – Okatie 230 kV #2: Construct	Dec-25
Riverport Tap: Construct Tap	Dec-25
St George - Sumter 230kV Tie: Rebuild Line from Santee Substation - Duke/Progress Energy Tie	Dec-25
Stevens Creek – Clarks Hill 115/46 kV Rebuild	Dec-25
Burton-St Helena 115kV: Frogmore Distribution - St Helena	Dec-25
Hopkins-CIP 230kV: Rebuild	Dec-25
Wagener 115kV Tap: Construct Tap	Dec-25
Jackson 115-12 kV Sub and Tap ConstructkV	Dec-25
Batesburg - Saluda County 115kV: Rebuild Line	Dec-25
Flat Rock 115-12kV Sub and Tap Construct	Dec-25
Scout 230 kV Sub and Fold-in Construct	Mar-26
Eastover – Sumter 115kV DEP Tie: Rebuild with 1272 ACSR	May-26
Canadys – Ritter 115kV: Rebuild as 230/115kV Double Circuit	Jun-26
Urquhart – Toolebeck 115kV line: Rebuild 477 ACSR sections	Aug-26
Dawson 230 kV Sub and Fold-in: Construct and Rebuild	Oct-26
Williams St Sub: Replace Sw House & Relays and McMeekin Sub: Add Sw House	Dec-26
VCS1-Denny Terrace 230kV & VCS1-Pineland 230kV: Rebuild Single Circuit Sections	Dec-26
Cameron – St Matthews 46kV: Rebuild	Dec-26
Cameron Jct – Elloree 46 kV Rebuild	Dec-26
Harleyville 115KV Transmission Tap – Construct (1.4 miles)	Mar-27
Church Creek – Faber Place – Charleston Transmission: Add 230kV Line	May-27
Williams-Summerville 230kV: Upgrade to SPDC B1272 ACSR	May-27
Yemassee– Ritter 230kV #1 & #2: Construct SPDC with B-1272	Jun-27
Union Pier 115-13.8 kV Sub: Tap	Dec-27
Atomic Road 115-12 kV Sub Construct	Dec-27
Clements Ferry 115–23kV Sub: Construct; Jack Primus–Cainhoy 115kV with Clements Ferry Tap Construct	Dec-27
Coast Guard 115 kV Tap: Construct	Dec-27
Elloree – Santee City 46 kV: Rebuild	Dec-27

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Modeling Assumptions and Data

System Interchange

- Firm scheduled transfers included
- Coordinated with Neighbors

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Santee Cooper Transmission Planning Models Key Assumptions and Data

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Major Model Components

- Load Demand Forecast
- Transmission Network
- Generation Resources
- Actual System Operations

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Load Demand Forecast

- 10-year projected demand forecast
  - Wholesale customers load forecast
  - Industrial and municipality customer contracts
  - Santee Cooper Distribution load forecast
  - Transmission Planning produces dispersed substation load based on power factors derived from most recent meter data
- System Peak and off-peak load conditions

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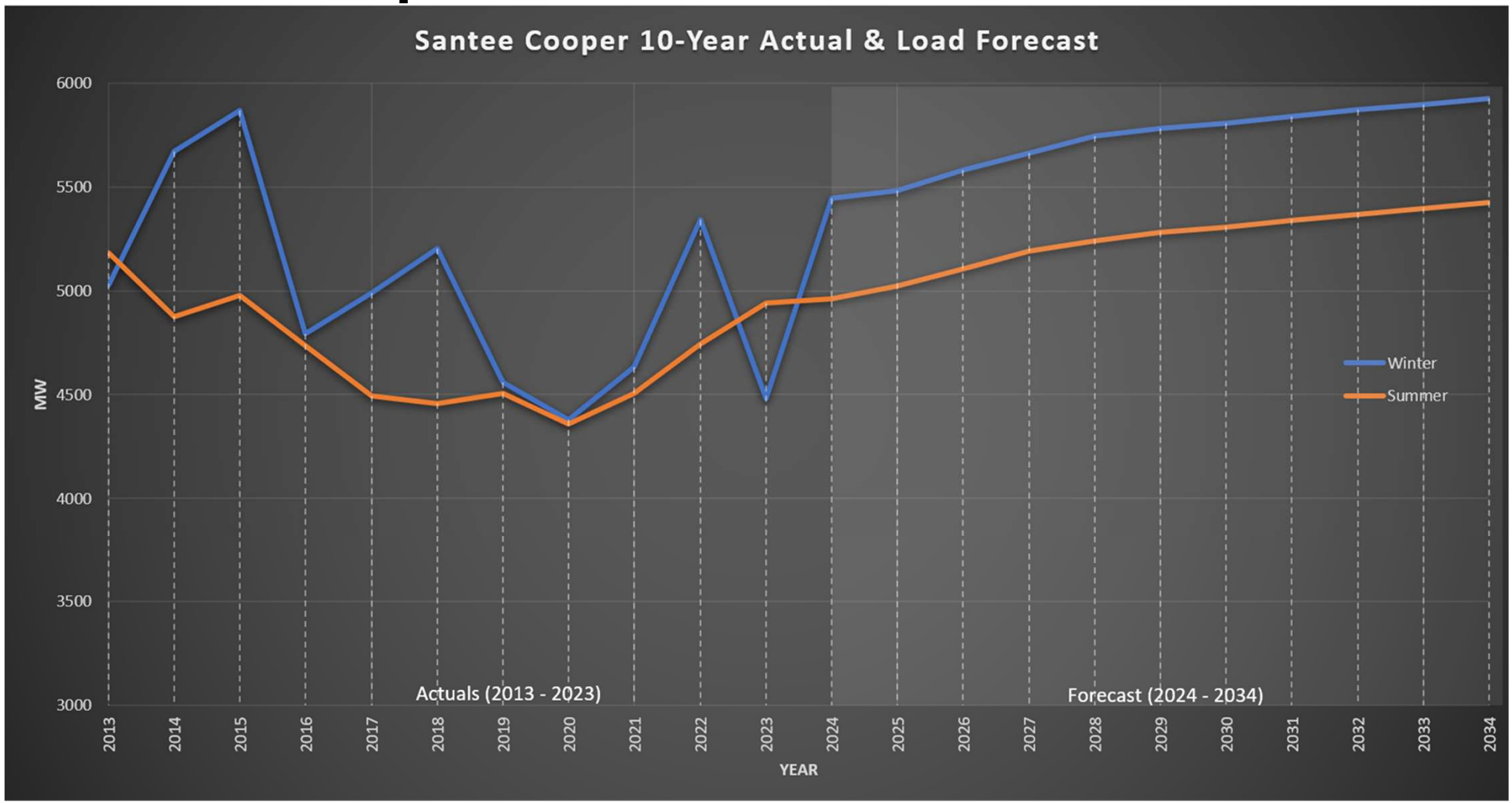
Santee Cooper 10-Year Actual & Load Forecast



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Transmission Network

Models include:

- Existing transmission system and committed projects
- Neighboring transmission system representations
- All facilities assumed to be available unless notified otherwise
- Normal operating status (in-service or out-of-service) of facilities is represented

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Transmission Network

- Uniform rating methodology is applied to transmission facilities
- Base case models are updated annually prior to annual transmission assessment
- Study models may be updated as needed prior to any study
- Neighboring and Regional system network from the latest MMWG models are used

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Committed Transmission Facilities

Project Title	In-service Date
Johns Island – Queensboro (DESC) 115 kV Line	TBD
Varnville 230-115 kV transformer replacement	4/1/2024
Wassamassaw 230-115 kV Substation	10/31/2024
Kingstree 230 kV Series Bus Tie Breaker	12/1/2024
Conway 230 kV Switching Station	12/1/2025
Marion-Conway 230 kV Line	12/1/2025
Upgrade Purrysburg 230-115 kV Transformer	12/1/2025
Carolina Forest 230-115 kV Substation: Add Transformer	12/1/2025
Conway - Perry Road 230 kV Line	12/1/2025
Wassamassaw-Pringletown #1 and #2 115 kV Line	12/1/2025
Replace Bluffton-Purrysburg 230 kV limiting Elements	3/1/2026
Install 2nd Wassamassaw xfmr at Wassamassaw	5/30/2026
Cross - Wassamassaw 230 kV #2 Line	6/1/2026
Wassamassaw-Canebay 115 kV line	6/1/2026
Indian Field 230-115 kV Substation	6/30/2026
Indian Field-Wassamassaw 230 kV Line	6/30/2026
Purrysburg Station Improvements	9/1/2026
Upgrade Batesburg 230-115 kV transformer	12/1/2026
Varnville to Nixville tap 69 kV Rebuild to 115 kV	12/1/2026
Rebuild Kingstree-Hemingway 115 kV Line as a Double Circuit 230/115 kV Line	6/1/2027
Varnville 230-115 kV substation	6/30/2027
Varnville - Indian Field 230 kV line	12/1/2027
Chime Bell 115 kV Switching Station	12/1/2027
Marion - Red Bluff 230 kV line	6/1/2028

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Generation Resources

Existing/Committed Generation

Cross Units 1- 4	J.S. Rainey Combined Cycle PB1
Winyah Units 1-4 (retire end of 2030)	J.S. Rainey 2A, 2B CTs
Hilton Head Turbines 1-3	J.S. Rainey 3-5 CTs
Myrtle Beach Turbines 1-5	Spillway Hydro
Jefferies Hydro 1, 2, 3, 4, 6	St. Stephen Hydro 1-3
Allendale (Merchant)	V.C. Summer #1 (shared output with DESC)
Cherokee Combined Cycle	Dorchester (Merchant)
Centerfield Solar (Merchant)	Domtar (Merchant)
Allora Solar (Merchant)	Gunsight Solar (Merchant)
Lambert I and II Solar (Merchant ISD 2024)	Landrace Solar (Merchant)

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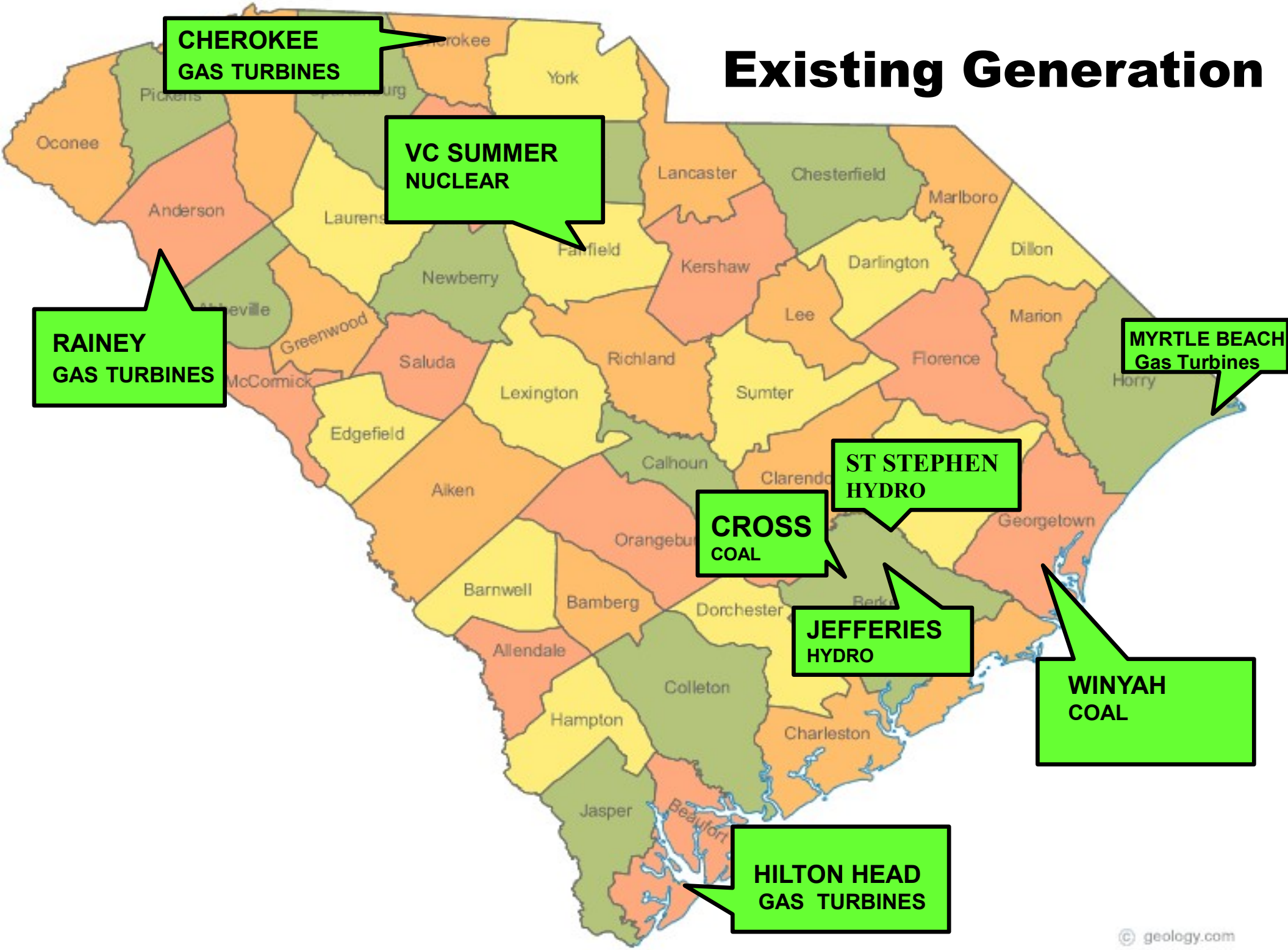
Existing Generation
CHEROKEE
GAS TURBINES
VC SUMMER
NUCLEAR
RAINEY
GAS TURBINES
MYRTLE BEACH
Gas Turbines
ST STEPHEN
HYDRO
CROSS
COAL
JEFFERIES
HYDRO
WINYAH
COAL
HILTON HEAD
GAS TURBINES
Oconee
Pickens
Anderson
Laurens
York
Lancaster
Chesterfield
Marlboro
Dillon
Darlington
Kershaw
Fairfield
Newberry
Greenwood
Saluda
McCormick
Edgefield
Lexington
Richland
Sumter
Lee
Florence
Marion
Horry
Calhoun
Aiken
Barnwell
Bamberg
Orangeburg
Dorchester
Allendale
Colleton
Hampton
Jasper
Beaufort
Charleston
Georgetown
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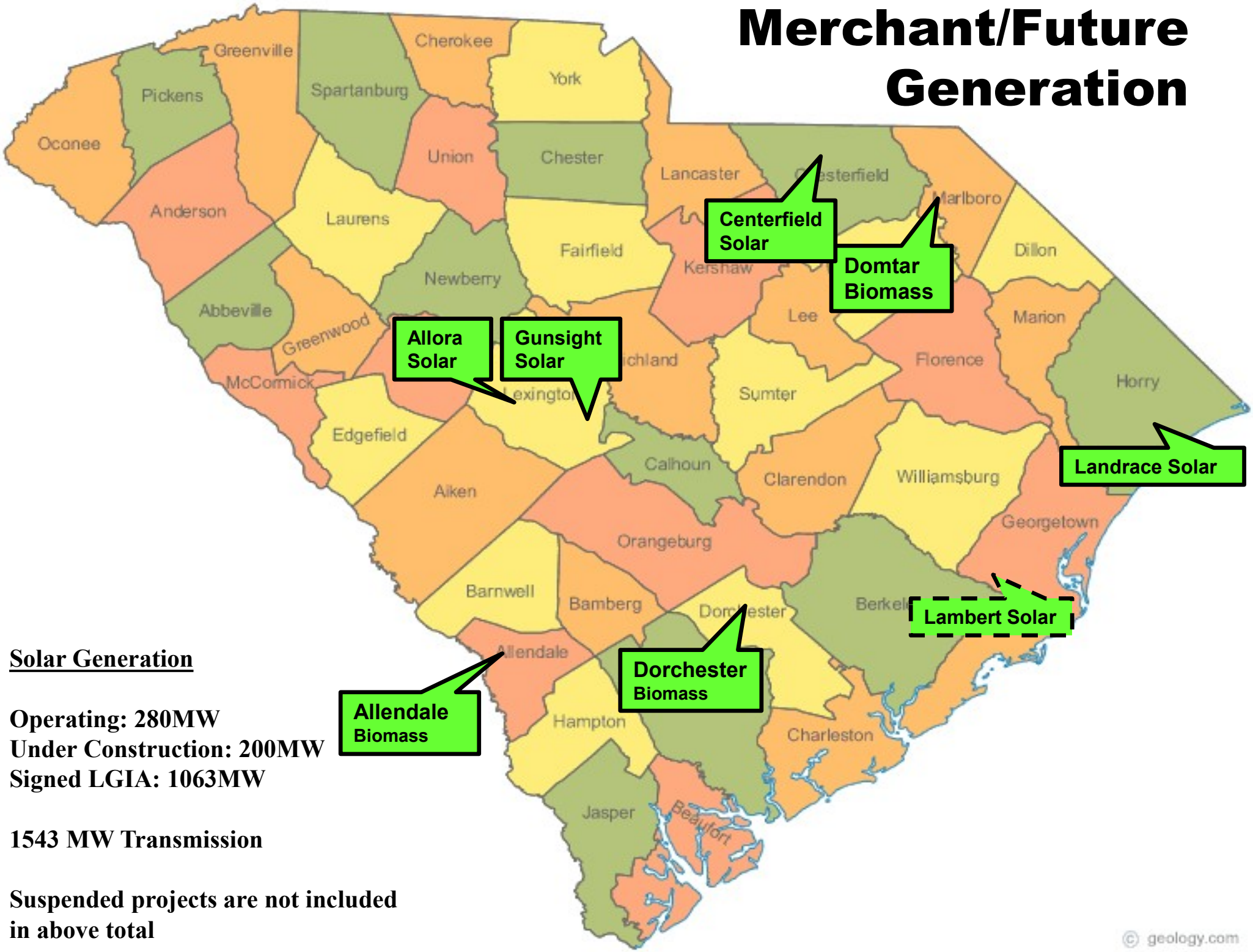
Merchant/Future Generation



Solar Generation

Operating: 280MW
Under Construction: 200MW
Signed LGIA: 1063MW

1543 MW Transmission

Suspended projects are not included in above total

Resources Assumptions and Data

- Generation data is verified with Generation Department
- Seasonal models account for unit maintenance outages, known at the time, based on planned maintenance schedules
- Confirmed firm transmission service reservations
- SEPA allocations and other contracted purchases

Economic dispatch order is used for generator dispatch in base cases

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Santee Cooper Planning Models
Data and Assumptions

Questions?

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Current DESC Transmission Expansion Plans

Alex Morrison

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Disclaimer

- The projects described in these presentations represent the current transmission plans within the SCRTP footprint.
- The expansion plan is continuously reviewed and may change due to changes in key data and assumptions.
- This presentation does not represent a commitment to build.

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Production Node Login

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Welcome to the Dominion Energy South Carolina OASIS

SCE&G is now Dominion Energy South Carolina

For transaction purposes, we will continue to use the "SCEG" company code for transmission reservations and tags.

News and Announcements

Hourly and Daily PTP Service Discounted.

The offer price for Hourly and Daily PTP service has been discounted effective March 1st, 2019.

Informational Postings

Notice: This document was last updated January 06, 2020.

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DESC Planned Transmission Facilities

Dominion Energy

2/22/2024

Dominion Energy South Carolina Planned Transmission Facilities

Planned Project	Tentative Completion Date
Modify Tap for Bushy Park 115kV Sub	Feb-24
Eastover - Square D 115kV - Rebuild	Jun-24
Church Creek - Ritter 230kV - Replace 25 Large Angles and Dead Ends	Jun-24
Emory 230-23 kV Sub and Fold-in Construct	Jul-24
Palmetto Railways 115-13.8 kV Sub and Tap Construct	Aug-24
Square D - Hopkins 115kV: Rebuild	Sep-24
Edenwood Sub: #1 & #2 230-115kV Autobanks, Replace with 336MVA	Dec-24
Summerville: Replace and Spare 230-115kV 336MVA Auto Bank	Dec-24
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Goose Creek Reservoir: Rebuild Transmission Line Crossings	Dec-24
Okatie 230–115kV Sub and the Jasper – Yemassee Fold In	Dec-24
Stevens Creek - Hooks 115kV/LR Plumb Branch 46kV Rebuilds	Dec-24
Coit – Gills Creek 115kV: Construct	Dec-24
Hooks - Thurmond 115kV Tie Rebuild	Dec-24
Summerville 115 kV Loop Rebuild	Dec-24
Okatie-Bluffton 115kV: Rebuild	Jun-25
Orangeburg #1 - Cameron Jct 46kV Line Rebuild	Jun-25
Cainhoy - Hamlin 115kV: Rebuild Line and Cainhoy – Hamlin 115 kV #2: Construct New 115 kV Line	Dec-25
Jasper – Okatie 230 kV #2: Construct	Dec-25
Riverport Tap: Construct Tap	Dec-25
St George - Sumter 230kV Tie: Rebuild Line from Santee Substation - Duke/Progress Energy Tie	Dec-25
Stevens Creek – Clarks Hill 115/46 kV Rebuild	Dec-25
Burton-St Helena 115kV: Frogmore Distribution - St Helena	Dec-25
Hopkins-CIP 230kV: Rebuild	Dec-25
Wagener 115kV Tap: Construct Tap	Dec-25
Jackson 115-12 kV Sub and Tap ConstructkV	Dec-25
Batesburg - Saluda County 115kV: Rebuild Line	Dec-25
Flat Rock 115-12kV Sub and Tap Construct	Dec-25
Scout 230 kV Sub and Fold-in Construct	Mar-26
Eastover – Sumter 115kV DEP Tie: Rebuild with 1272 ACSR	May-26
Canadys – Ritter 115kV: Rebuild as 230/115kV Double Circuit	Jun-26
Urquhart – Toolebeck 115kV line: Rebuild 477 ACSR sections	Aug-26
Dawson 230 kV Sub and Fold-in: Construct and Rebuild	Oct-26
Williams St Sub: Replace Sw House & Relays and McMeekin Sub: Add Sw House	Dec-26
VCS1-Denny Terrace 230kV & VCS1-Pineland 230kV: Rebuild Single Circuit Sections	Dec-26
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Church Creek – Faber Place – Charleston Transmission: Add 230kV Line	May-27
Williams-Summerville 230kV: Upgrade to SPDC B1272 ACSR	May-27
Yemassee– Ritter 230kV #1 & #2: Construct SPDC with B-1272	Jun-27
Union Pier 115-13.8 kV Sub: Tap	Dec-27
Atomic Road 115-12 kV Sub Construct	Dec-27
Clements Ferry 115–23kV Sub: Construct; Jack Primus–Cainhoy 115kV with Clements Ferry Tap Construct	Dec-27
Coast Guard 115 kV Tap: Construct	Dec-27
Elloree – Santee City 46 kV: Rebuild	Dec-27

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DESC

2024 - 2028

Planned Transmission Facilities

Scout 230kV Sub and Fold-in: Construct

Project Description
Construct 230kV Transmission Line for Scout Customer Substation and modify VCS1 and Killian terminals.

Project Need
Load growth.

Project Status
Planned

Planned In-Service Date
March 2026

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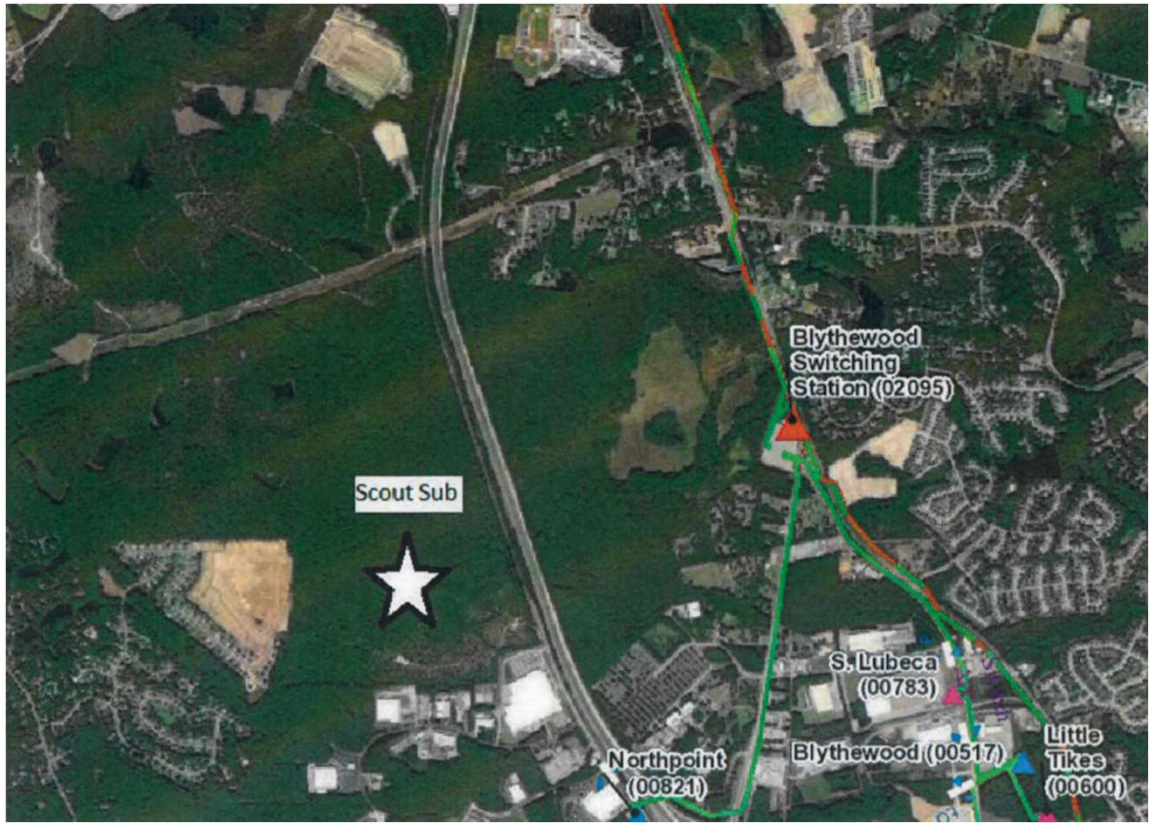

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Dawson 230kV Sub and Fold-in: Construct and Rebuild

Project Description
Construct Dawson 230kV substation. Fold in the existing Canadys – Church Creek and Canadys – Faber Place 230kV lines at the Dawson 230kV substation (phase 1). Rebuild Canadys – Dawson 230kV #1 and #2 with B1272 ACSR (phase 2).

Project Need
Load growth.

Project Status
Planned

Planned In-Service Date
October 2025 (phase 1) and October 2026 (phase 2)

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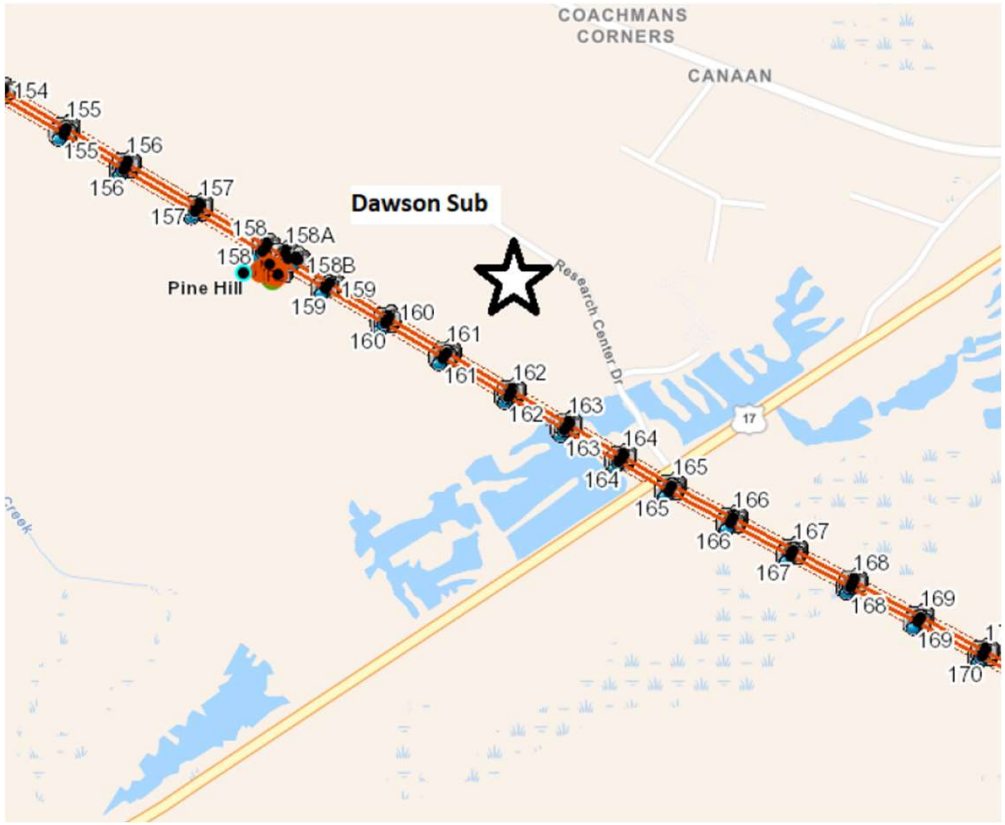

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Ritter – Yemassee 230kV and 115kV Transmission System Expansion

Project Description
Construct Ritter – Yemassee 230kV #1 and #2 SPDC with B1272 ACSR on both sides. Convert the existing Ritter – Yemassee 230kV to 115kV operation. Convert and add terminals at Ritter and Yemassee. Add 230kV bus tie at Ritter and upgrade the Yemassee 230kV bus tie.

Project Need
This project is needed to improve system performance and to meet NERC TPL and internal DESC Planning Criteria for reliability. Adding additional 230kV and 115kV paths in the Yemassee, SC area mitigates potential overloads and provides more paths towards load in the Charleston, SC area.

Project Status
Planned

Planned In-Service Date
June 2026

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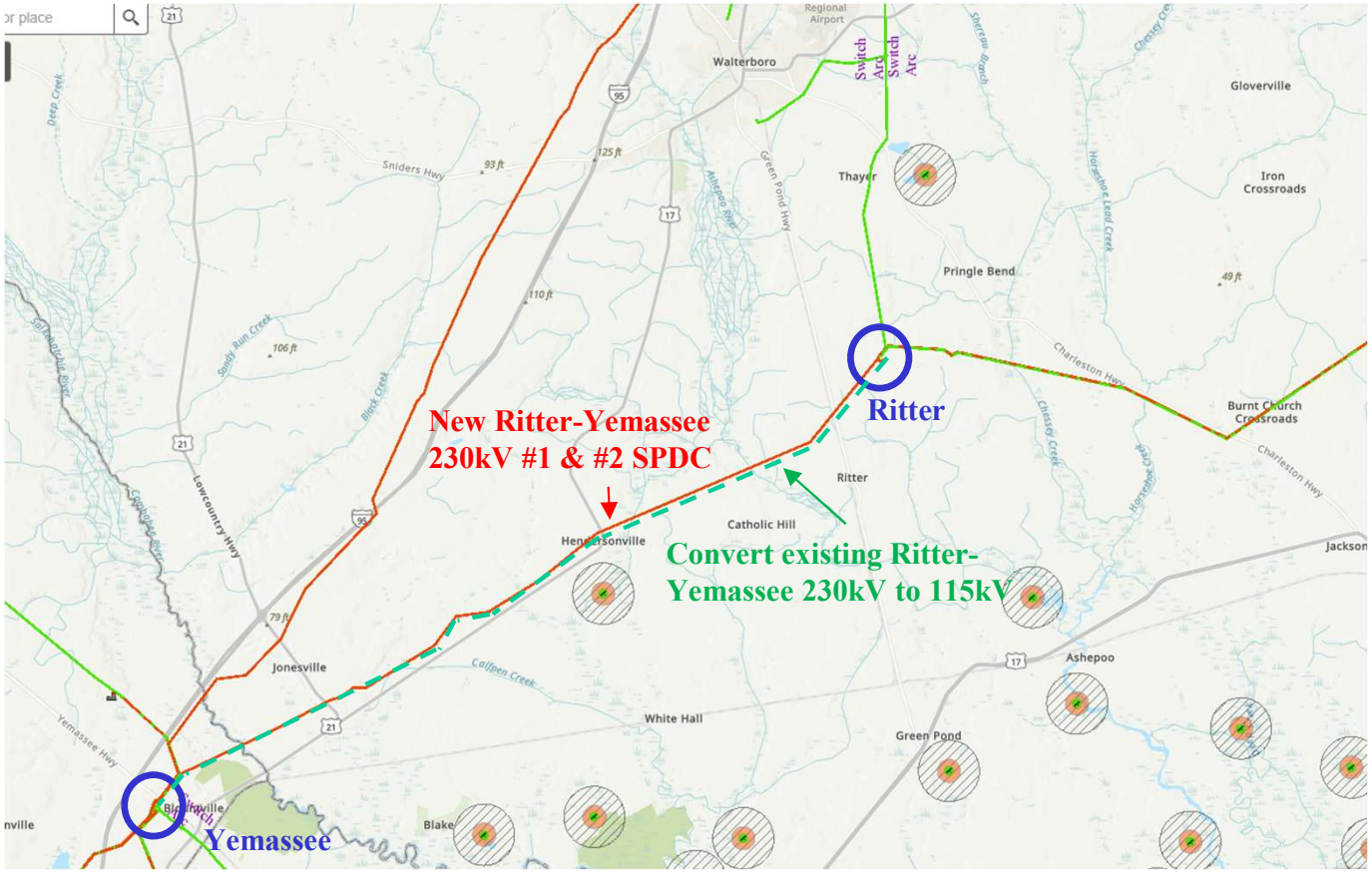

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Eastover – Sumter 115kV DEP Tie: Rebuild with 1272 ACSR

Project Description
Upgrade the DESC section (approx. 1 mile) of the tie line from 397.5 ACSR Ibis to 1272 ACSR.

Project Need
This project is needed to improve system performance and to meet NERC TPL and internal DESC Planning Criteria for reliability.

Project Status
Planned

Planned In-Service Date
May 2026

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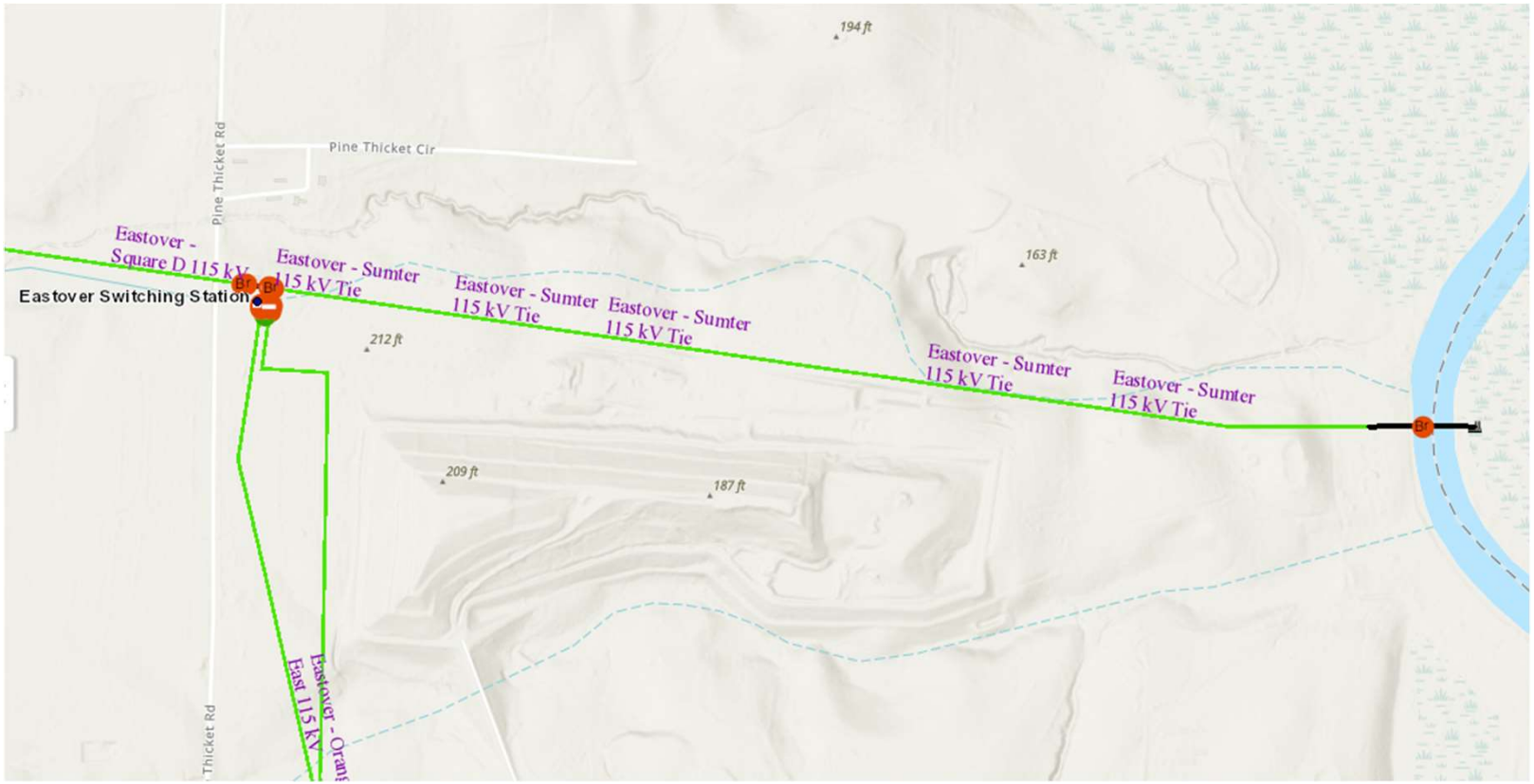

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Urquhart – Toolebeck 115kV Line: Rebuild 477 ACSR sections with 1272 ACSR

Project Description
Upgrade the 477 ACSR portions of the Urquhart – Toolebeck 115kV line to 1272 ACSR. Replace existing structures with Single Pole Double Circuit Structures. Approximately 12.5 miles.

Project Need
This project is needed to improve system performance and to meet NERC TPL and internal DESC Planning Criteria for reliability.

Project Status
Planned

Planned In-Service Date
August 2026

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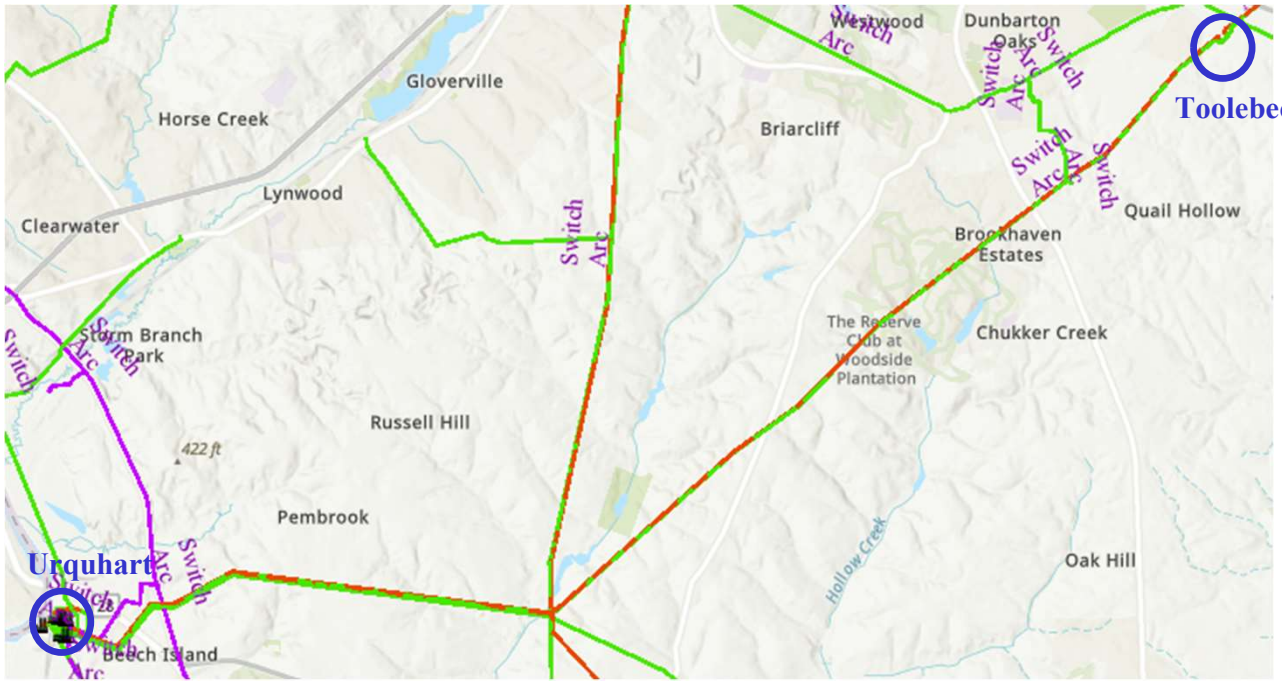

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Load growth Projects

- Scout 230kV Sub and Fold-in: Construct
- Dawson 230kV Sub and Fold-in: Construct and Rebuild
- Union Pier 115-13.8 kV Sub: Tap
- Harleyville 115KV Transmission Tap – Construct (1.4 miles)
- Riverport Tap: Construct Tap
- Wagener 115kV Tap: Construct Tap
- Coit – Gills Creek 115kV: Construct
- Cainhoy 115kV Tap: Construct
- Jack Primus 115kV Tap: Construct
- Coast Guard 115kV Tap: Construct

Solar projects

- Lone Star Solar: Construct 230kV Switching Station
- Catalina Solar 115kV Switching Station: Construct
- Orangeburg County Solar: Construct 230kV Switching Station
- Jackson PV1 Solar 115kV Switching Station: Construct
  - Upgrade portions of Urquhart – Salem SS 115kV from 336 to 1272 ACSR
  - Upgrade the Urquhart-Urquhart Junction portion of the Urquhart-Toolebeck 115kV line to 1272 ACSR

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Questions?

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Major Transmission Expansion Plans

Emily Morgan

Dominion Energy®

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Transmission Projects 2024-2028

Project Title	In-service Date
Varnville 230-115 kV transformer replacement	4/1/2024
Wassamassaw 230-115 kV Substation	10/31/2024
Kingstree 230 kV Series Bus Tie Breaker	12/1/2024
Johns Island – Queensboro (DESC) 115 kV Line	12/1/2025
Conway 230 kV Switching Station	12/1/2025
Marion-Conway 230 kV Line	12/1/2025
Upgrade Purrysburg 230-115 kV Transformer	12/1/2025
Carolina Forest 230-115 kV Substation: Add Transformer	12/1/2025
Conway - Perry Road 230 kV Line	12/1/2025
Wassamassaw-Pringletown #1 and #2 115 kV Line	12/1/2025
Replace Bluffton-Purrysburg 230 kV limiting Elements	3/1/2026
Install 2nd Wassamassaw xfmr at Wassamassaw	5/30/2026
Cross - Wassamassaw 230 kV #2 Line	6/1/2026
Wassamassaw-Canebay 115 kV line	6/1/2026
Indian Field 230-115 kV Substation	6/30/2026
Indian Field-Wassamassaw 230 kV Line	6/30/2026
Purrysburg Station Improvements	9/1/2026
Upgrade Batesburg 230-115 kV transformer	12/1/2026
Varnville to Nixville tap 69 kV Rebuild to 115 kV	12/1/2026
Rebuild Kingstree-Hemingway 115 kV Line as a Double Circuit 230/115 kV Line	6/1/2027
Varnville 230-115 kV substation	6/30/2027
Varnville - Indian Field 230 kV line	12/1/2027
Chime Bell 115 kV Switching Station	12/1/2027
Marion - Red Bluff 230 kV line	6/1/2028

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Wassamassaw 230-115kV Substation

Project Description

Fold in the existing Carnes-Cross 230 kV line and Jefferies-Harleyville 115 kV line into the new Wassamassaw 230-115kV Substation with the addition of one 230-115 kV transformer initially and 2nd transformer in the near future.

Project Need

Additional support is required for load growth in the Dorchester and Berkeley County area. This project is necessary to mitigate thermal loading issues under contingency conditions. The Wassamassaw 230-115kV Substation will be configured such that additional facilities can be added to provide support for continued load growth in the area.

Project Status

In progress

Planned In-Service Date

October 2024

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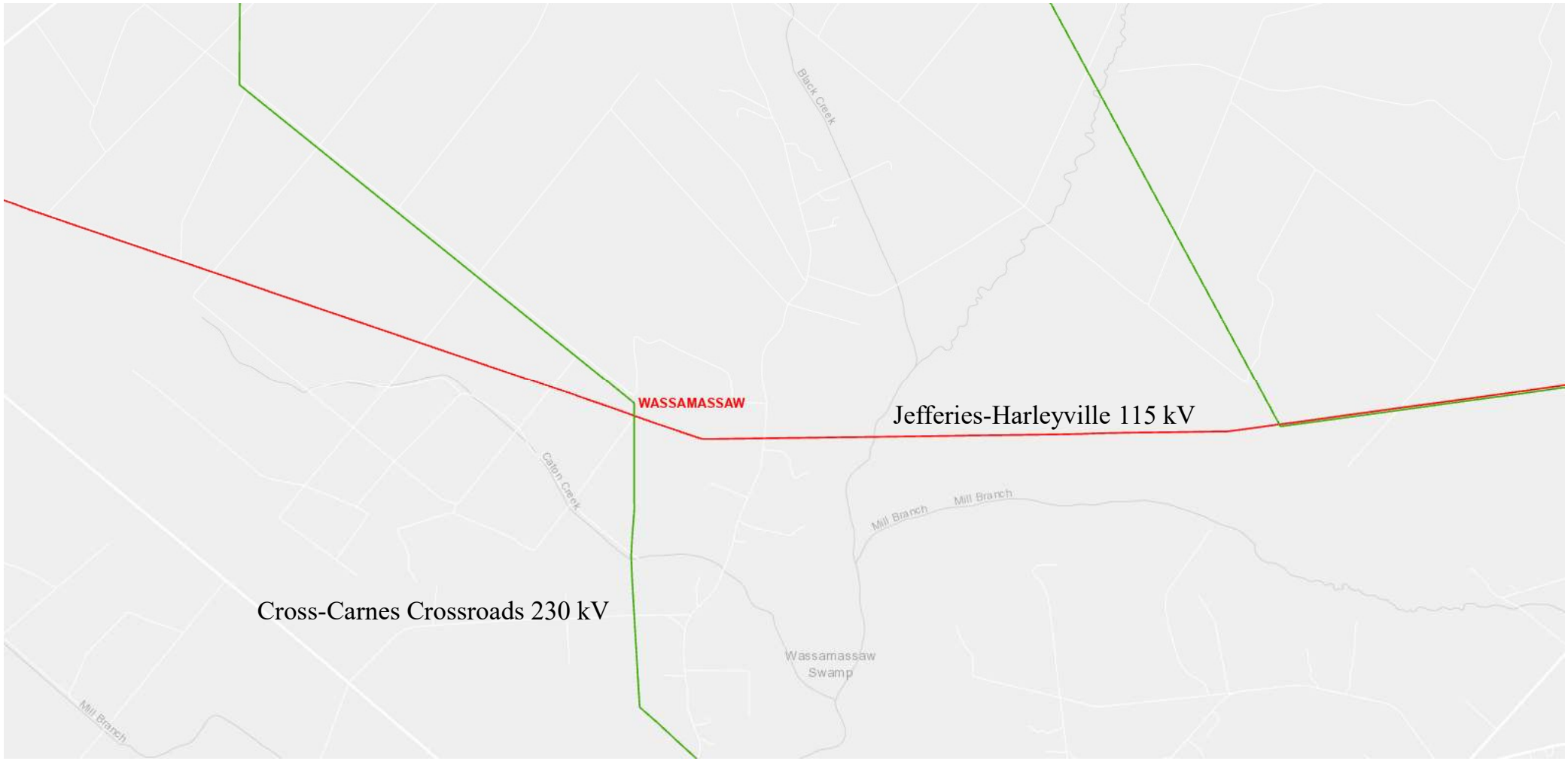
Wassamassaw 230-115 kV Substation



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Kingstree 230 kV Series Bus Tie Breakers

Project Description

Reconfigure the Kingstree 230 kV Switching Station as required to install a second 230 kV Bus Tie Breaker in series with the existing 230 kV Bus Tie Breaker. Install redundant bus differential protection relays.

Project Need

The intent of this project is to mitigate thermal loading and voltage violations in multiple regions of the transmission system by eliminating a specific contingency that would result in loss of all 230 kV facilities at this station.

Project Status

Planned

Planned In-Service Date

December 2024

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John's Island (SC)-Queensboro (DESC) 115 kV Line

Project Description

Construct a new 115 kV transmission line using 1272 ACSR conductor, approximately 6 miles in length, from the Johns Island 230-115 kV Substation to a mutually agreed upon location on Johns Island. Construct a new 115 kV line terminal at Johns Island 230-115 kV Substation.

Project Need

This new interconnection will provide an additional transmission source to Johns Island, which will mitigate contingency conditions that could result in significant load loss, thus increasing transmission reliability to the Johns Island area.

Project Status

In Progress – Delayed due to construction permit through some areas

Planned In-Service Date

TBD

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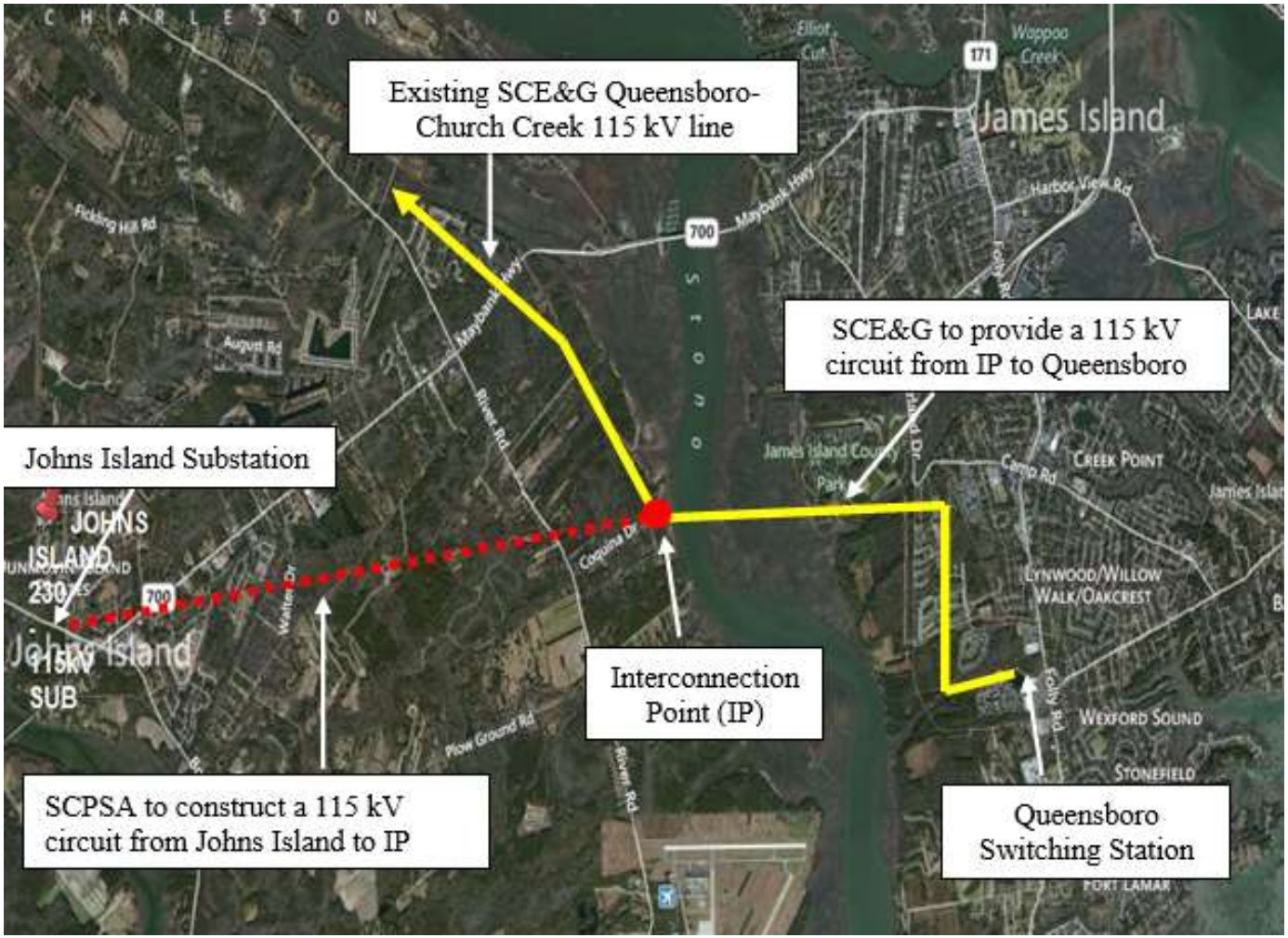
John's Island (SC)-Queensboro (DESC) 115 kV Line



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Conway 230 kV Switching Station and Marion-Conway 230 kV Line

Project Description

Fold the Hemingway-Red Bluff 230 kV Line into the new Conway 230 kV Switching Station. Construct a 230 kV line approximately 34 miles in length from the Marion 230-115-69kV Substation to the Conway 230 kV Switching Station. Rebuild the existing Marion-Conway 115 kV Line for 230/115 kV double-circuit using bundled 1272 ACSR for the 230 kV line and single 795 ACSR for the 115 kV line.

Project Need

Studies indicate thermal loading and voltage violations under contingency conditions in the Horry-Georgetown area that are mitigated by the additional support that the Marion-Conway 230 kV Line provides. The new Conway Switching Station will also enable additional 230 kV network expansion in the area.

Project Status

In Progress

Planned In-Service Date

December 2025

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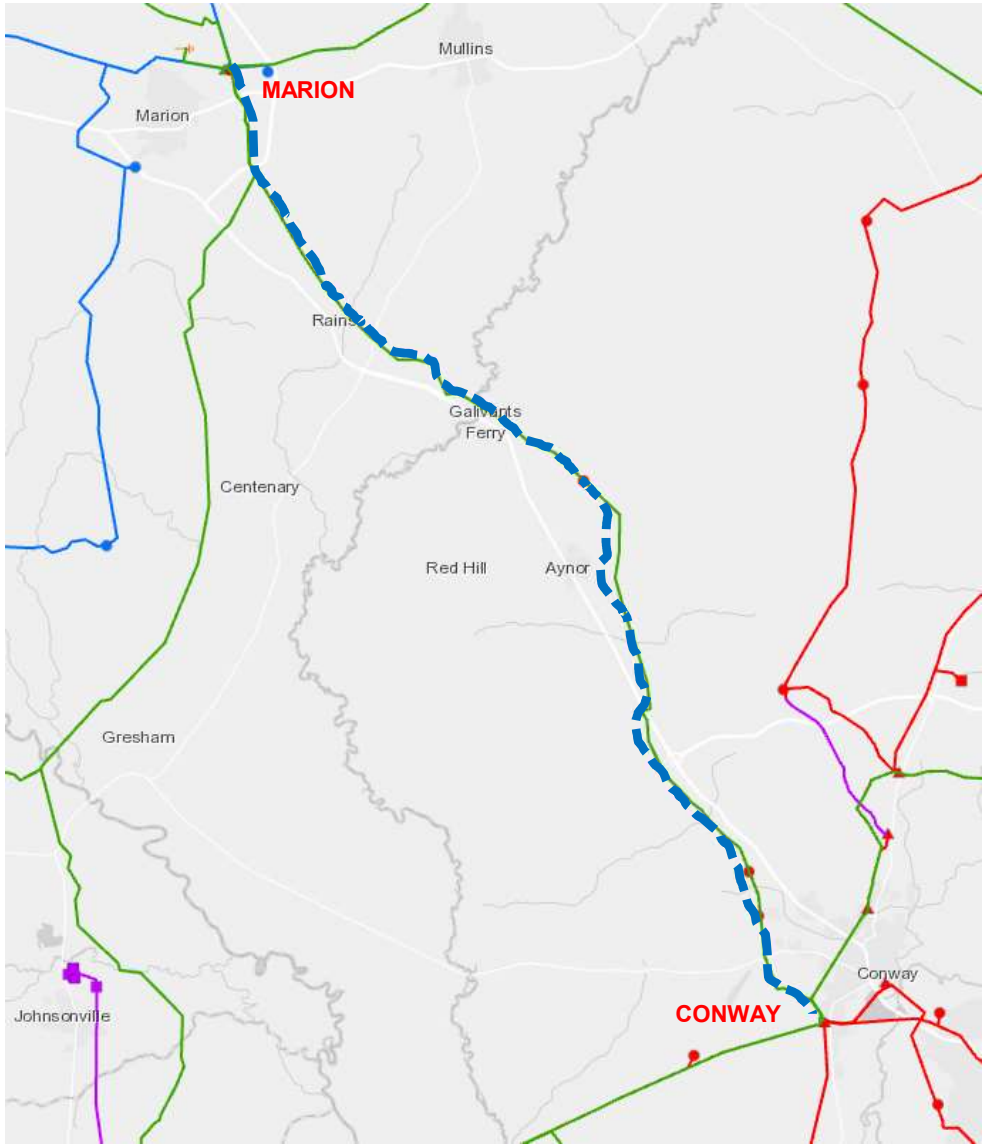
Conway 230 kV Switching Station
Marion-Conway 230 kV line

South Carolina Regional Transmission Planning

SCRTP



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Carolina Forest 230-115 kV Transformer #1 Addition

Project Description

Extend the existing 230 kV bus at Carolina Forest 230-115kV Substation to install a second 230-115 kV transformer to operate in parallel to the existing transformer.

Project Need

Additional transformer at this substation will provide additional transformer capacity required to serve this area and alleviate thermal loading concerns on the existing transformer at this location under contingency conditions.

Project Status

In Progress

Planned In-Service Date

December 2025

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Conway – Perry Road 230 kV Line

Project Description

Construct a new 230 kV line between the Conway 230 kV Switching Station and the Perry Road 230-115 kV Substation using bundled 1272 ACSR conductor.

Project Need

The Conway – Perry Rd 230 kV Line will alleviate thermal loading exceedances under contingency conditions shown in planning assessments. To provide the necessary loading relief and voltage support to its transmission system, this new 230kV Line will upgrade existing infrastructure, improving reliability and meet the NERC Transmission Planning Reliability Standard. It will also provide additional network support to Horry County, a highly concentrated load area of the Santee Cooper system that includes Myrtle Beach that continues to see significant load growth.

Project Status

Planned

Planned In-Service Date

December 2025

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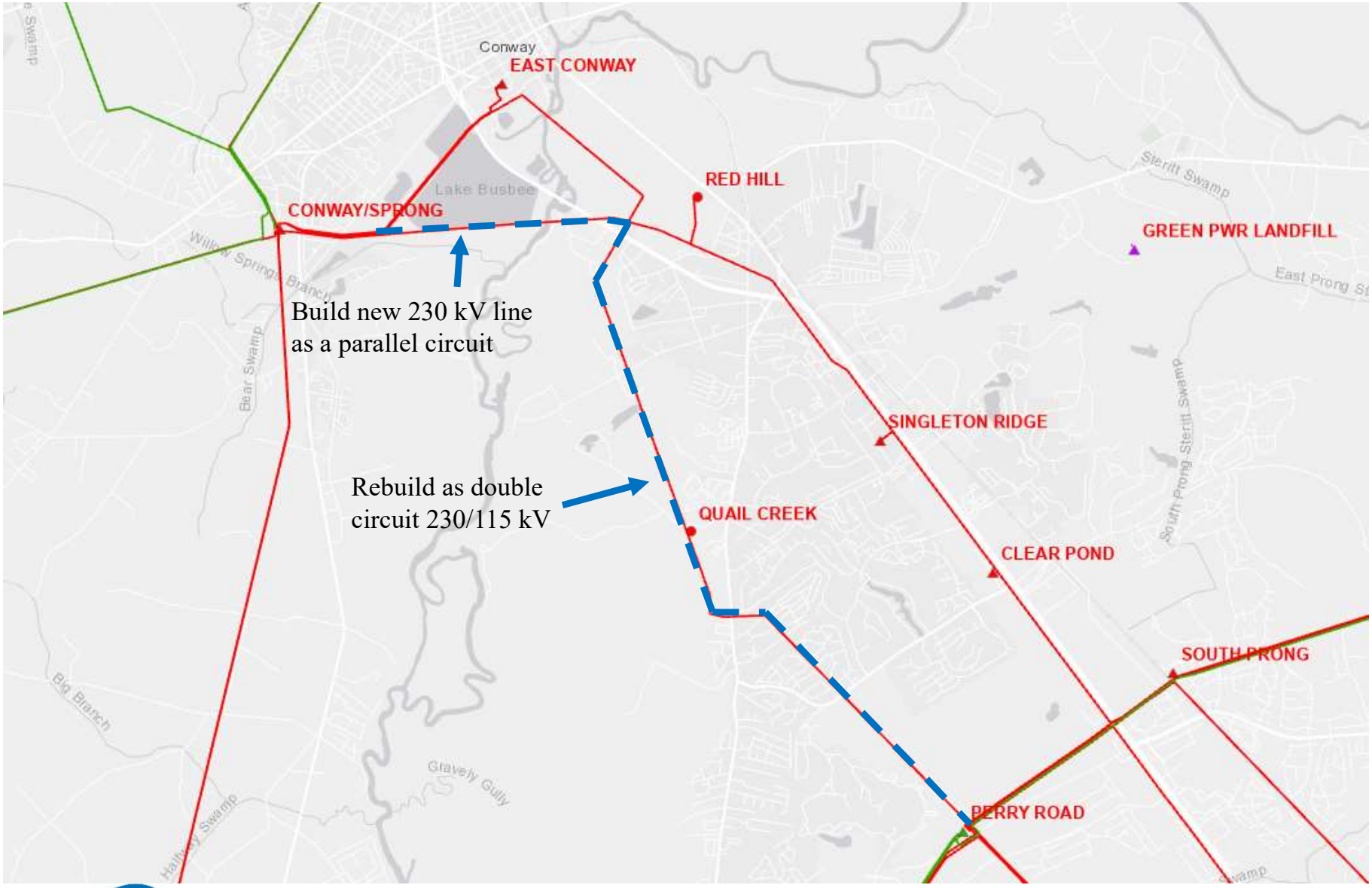
Conway – Perry Road 230 kV line



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Wassamassaw – Pringetown #1 & #2 115 kV lines

Project Description

Construct a new double circuit 230/115 kV transmission lines, approximately 7 miles in length, from the Wassamassaw 230-115 kV Substation to the Pringletown 115 kV Switching Station. The 230 kV circuit will be operated at 115 kV using bundled 1272 ACSR and 115 kV circuit using single 1272 ACSR conductor.

Project Need

In addition to the proposed Wassamassaw 230-115 kV substation, these 115 kV lines will provide additional load serving capability for the load growth in the Camp Hall Commerce Park area.

Project Status

In progress

Planned In-Service Date

December 2025

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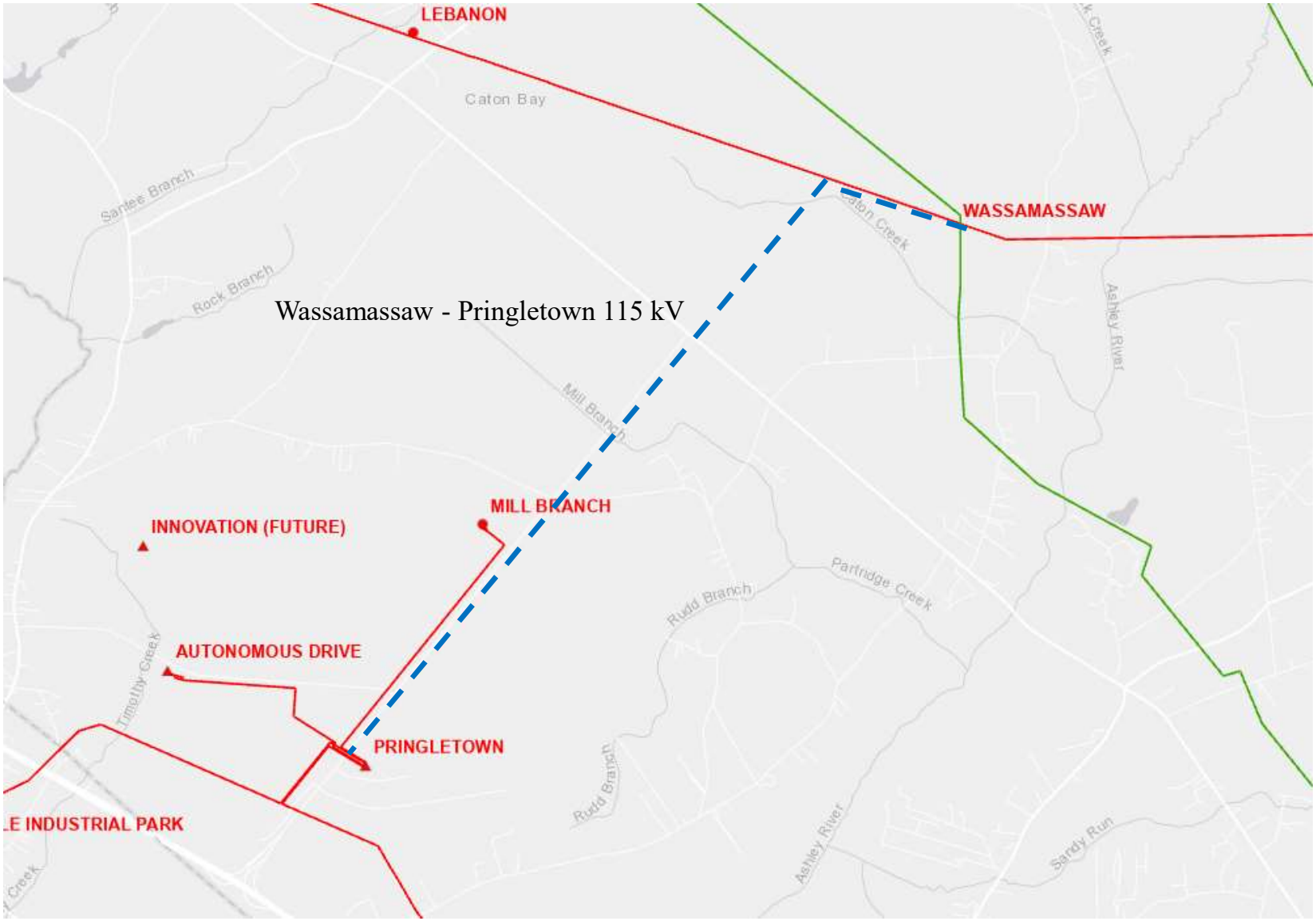
Wassamassaw – Pringletown #1 & #2 115 kV



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Cross – Wassamassaw 230 kV #2 Line

Project Description

Construct a second 230 kV transmission line, approximately 18.3 miles in length, from the Cross 230 kV Switchyard to the Wassamassaw 230-115 kV Substation along existing transmission right-of-way and using pre-existing double-circuit structures where possible

Project Need

Adding a second Cross – Wassamassaw 230 kV line will mitigate thermal loading exceedances under contingency conditions. These exceedances violates planning criteria and does not meet NERC transmission planning reliability standard.

Project Status

In progress

Planned In-Service Date

June 2026

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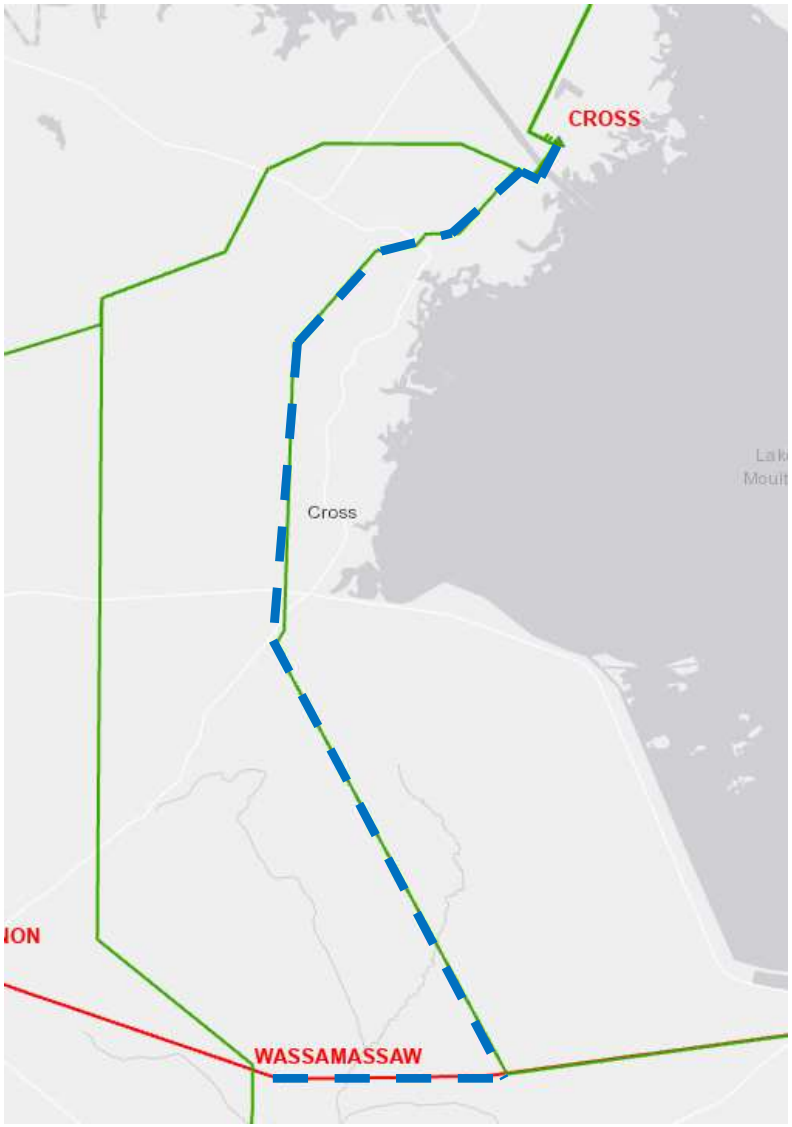
Cross – Wassamassaw 230 kV #2 line



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Wassamassaw – Carnes 115 kV Line

Project Description

Construct a new 115 kV transmission line, approximately 6.45 miles, from the Wassamassaw 230-115 kV Substation to the Cane Bay 115 kV tap using existing right-of-way where possible.

Project Need

This project will provide a new networked 115 kV path into Carnes Crossroads 230-115 kV substation to help mitigate thermal loading exceedances under contingencies for existing load and future load growth in the area. These thermal loading exceedances do not meet the transmission system planning performance requirements under NERC Reliability Standard TPL-001-5 or Santee Cooper's internal planning criteria.

Project Status

In Progress

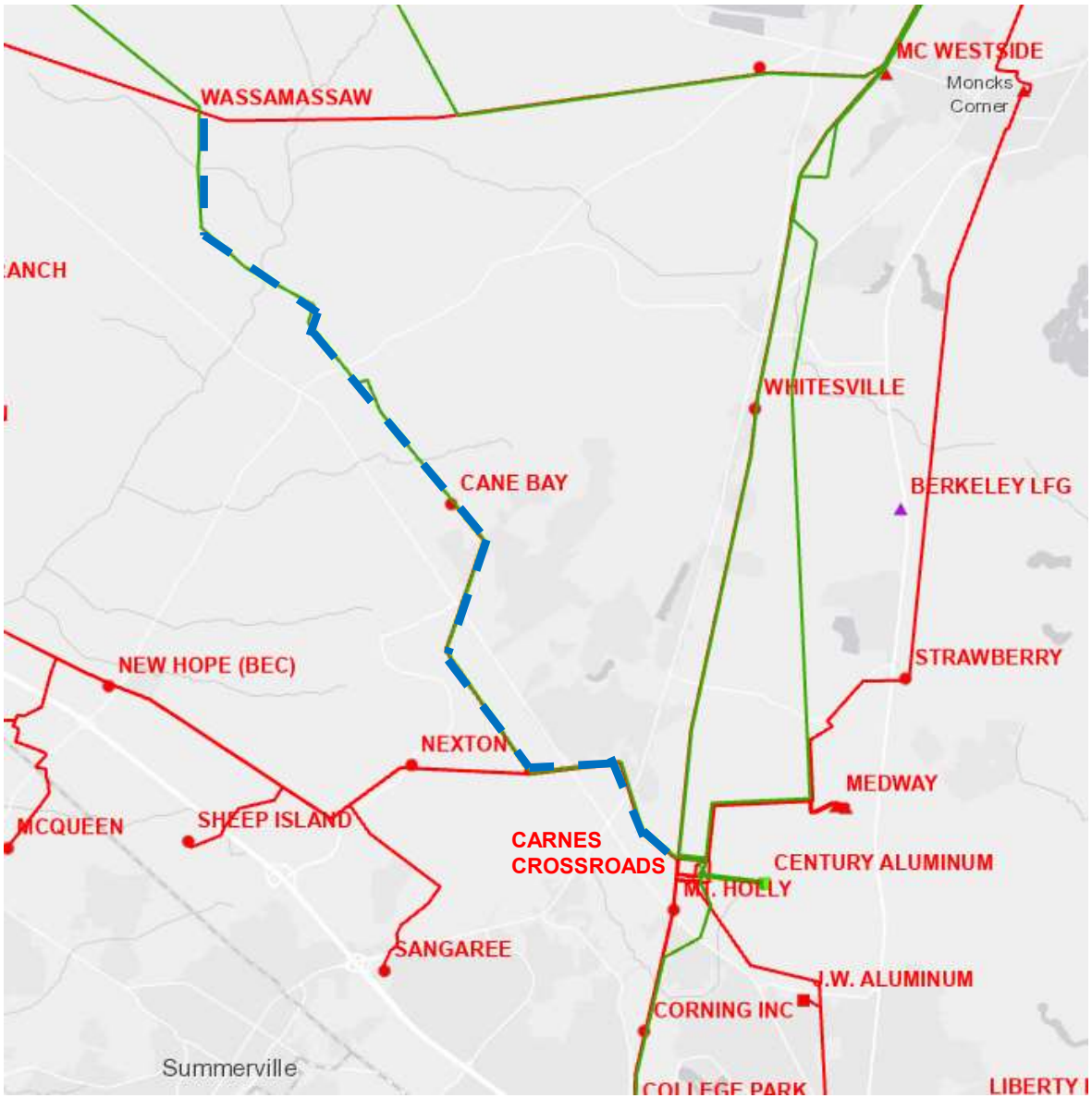
Planned In-Service Date

June 2026

Dominion Energy®

santee cooper

Wassamassaw – Cane Bay 115 kV line



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Indian Field 230-115 kV Substation

Project Description

Fold in the existing Harleyville – St. George 115 kV line into the new Indian Field 230-115 kV substation. The existing Byrds Tap 115 kV line will be terminated on the 115 kV bus #1 at the new Indian Field 230-115kV substation. A new 115 kV transmission line will be built as a 230/115 kV double circuit line for future 230 kV projects from St. George 115 kV Switching Station to the new Indian Field 230-115kV substation.

Project Need

The new Indian Field substation will support the Southern Area load growth and enable additional 230 kV network expansion in the area.

Project Status

Committed

Planned In-Service Date

June 2026

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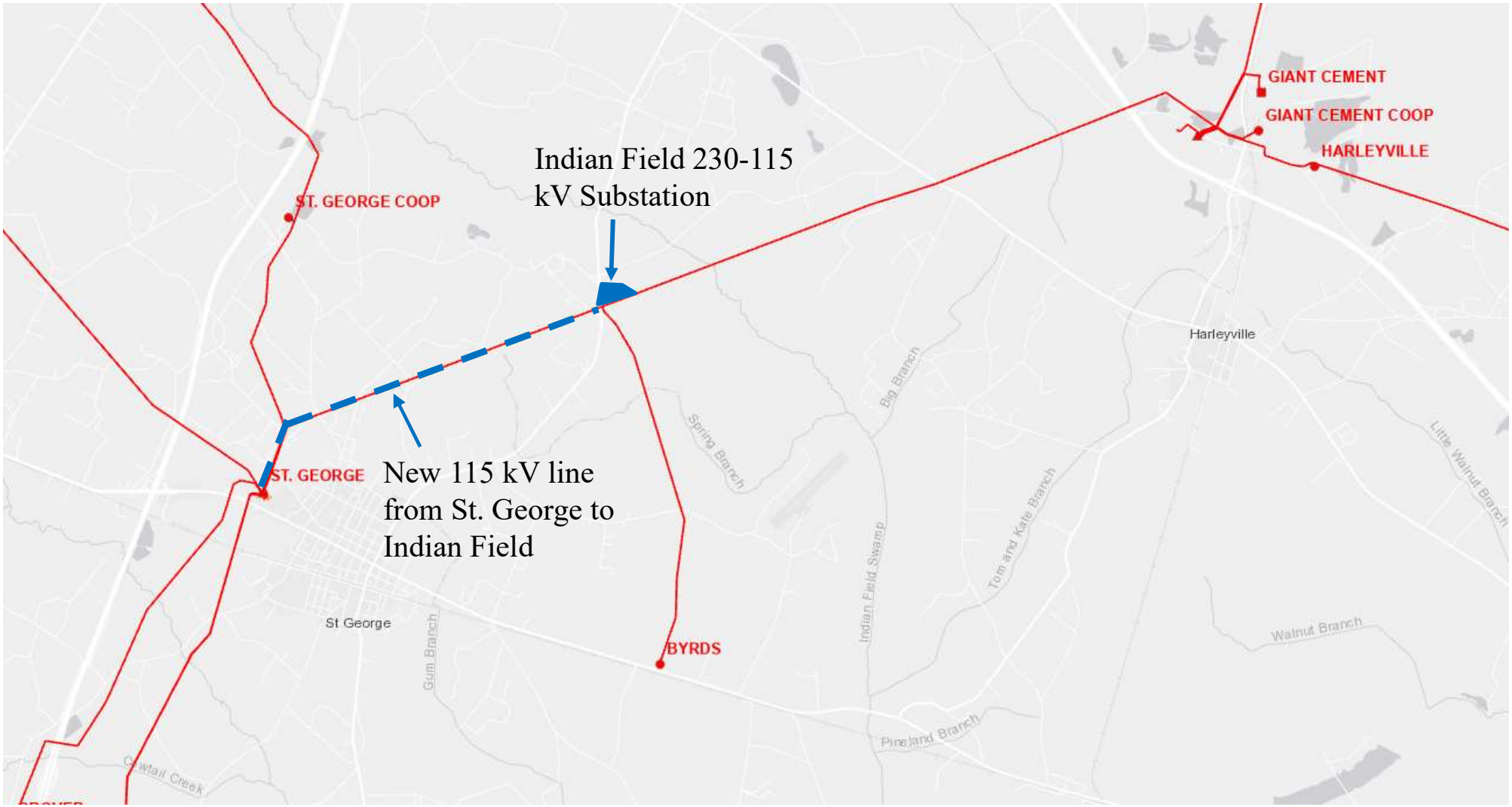
Indian Field 230-115 kV Substation



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Indian Field – Wassamassaw 230 kV Line

Project Description

Construct a 230 kV transmission line from the proposed Indian Field 230-115 kV Substation to the Wassamassaw 230-115 kV Substation. Design and construct with bundled 1272 ACSR conductor rated for 2,400 Ampere continuous operation at 230kV.

Project Need

This 230 kV line and the proposed Indian Field 230-115 kV substation together provides support for the load growth in the Southern area. In addition, with the proposed Indian Field – Varnville 230 kV line, this project establishes an additional network path required to support economic power transfer from the Southern interface toward the load center.

Project Status

Committed

Planned In-Service Date

June 2026

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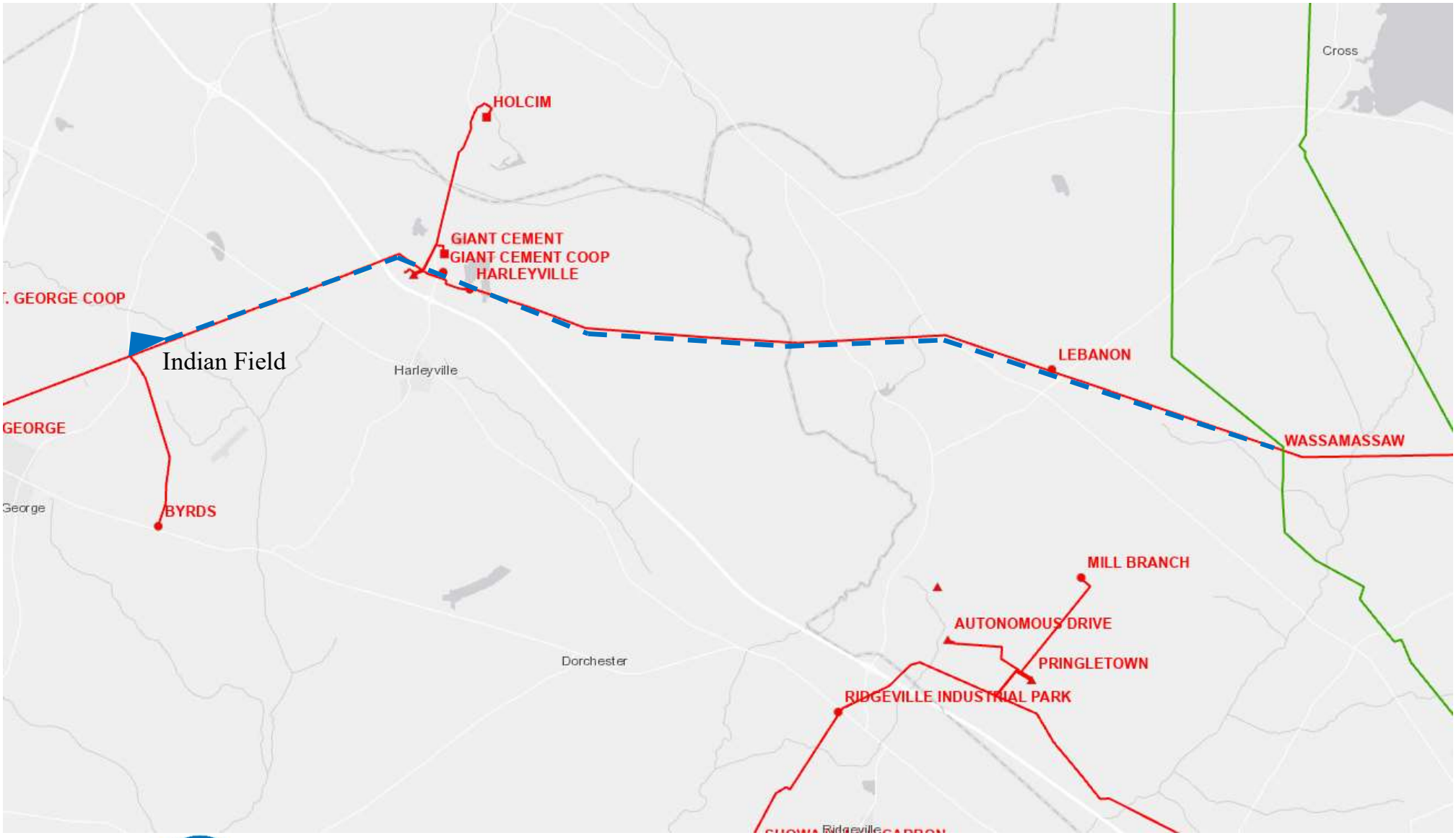
Indian Field – Wassamassaw 230 kV Line



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Rebuild Kingstree – Hemingway 115 kV Line as a Double Circuit 230/115 kV Line

Project Description

Construct a second 230 kV line, approximately 22 miles, from the Kingstree 230 kV Switching Station to the Hemingway 230-115 kV Substation by rebuilding the existing Kingstree – Hemingway 115 kV line for double circuit 230/115 kV construction.

Project Need

This additional 230 kV line from Kingstree to Hemingway will help provide thermal loading relief and voltage support for the eastern area. This line also creates an additional path to the eastern area.

Project Status

Committed

Planned In-Service Date

June 2027

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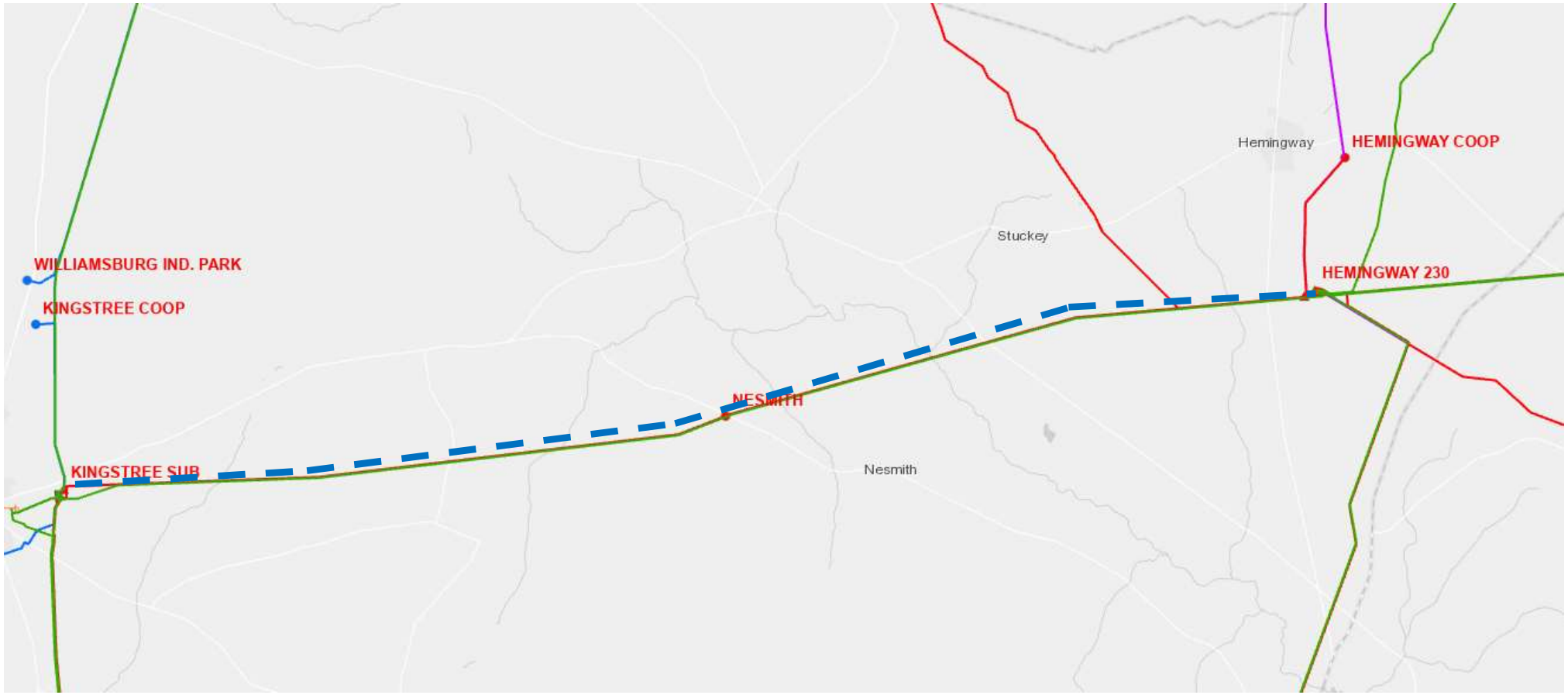
Kingstree – Hemingway 230/115 kV line



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Varnville 230-115 kV Substation

Project Description

Construct a new Varnville 230-115 kV substation on existing Santee Cooper transmission property and property acquired adjacent to the existing Varnville 230-115-69 kV Substation.

Project Need

Planning studies indicate the need to construct a new Varnville 230-115 kV substation to facilitate additional 230 kV transmission lines to support future transmission network expansion plans. The existing Varnville substation has space limitations and cannot accommodate additional 230 kV line terminals, transformation, and long-term plans to convert the 69 kV delivery points in the area to 115 kV service.

Project Status

Committed

Planned In-Service Date

June 2027

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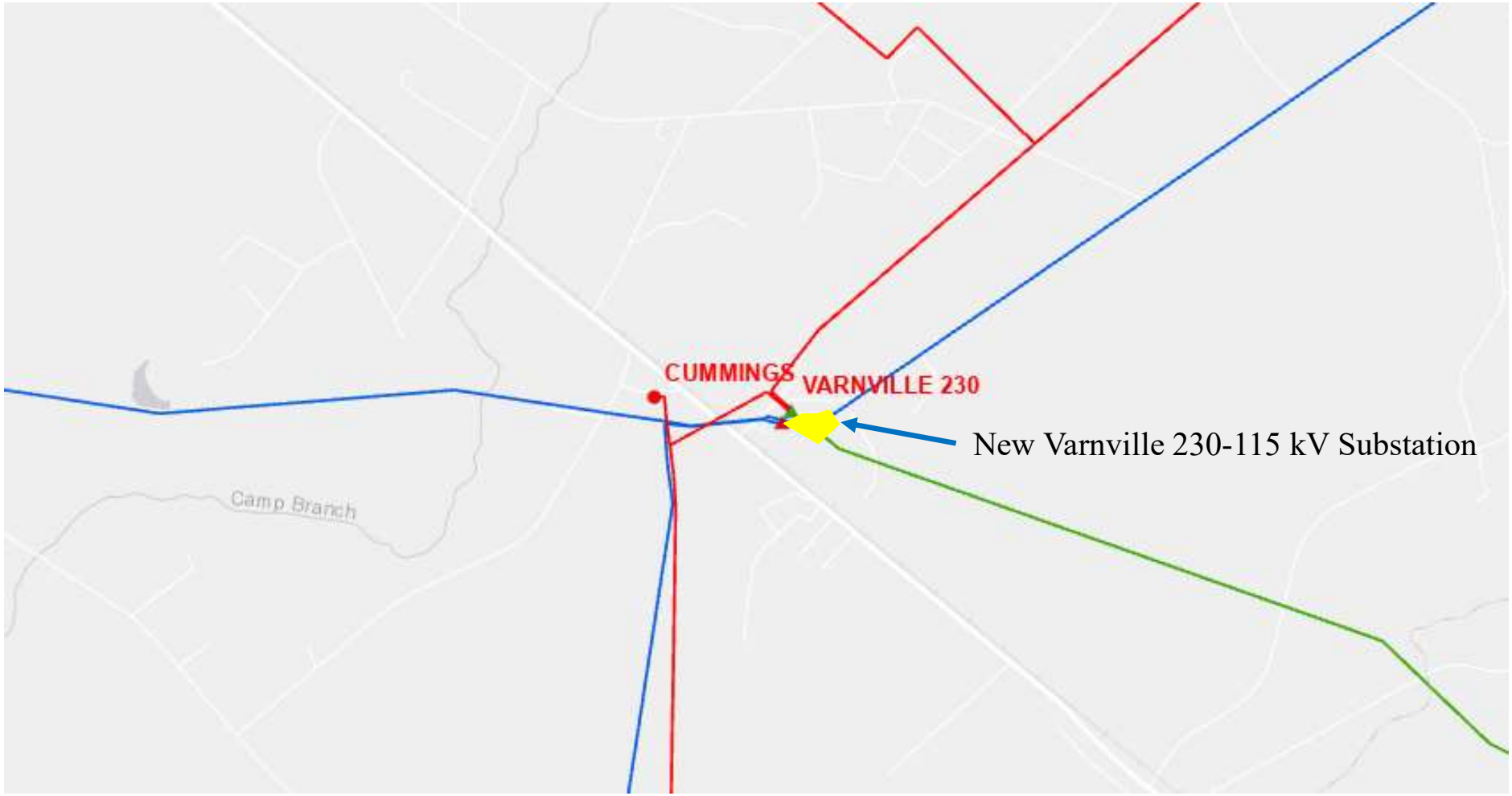
Varnville 230-115 kV Substation



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Varnville – Indian Field 230 kV Line

Project Description

Construct a 230 kV transmission line (approximately 38 miles) from the Varnville 230-115 kV Substation to the proposed Indian Field 230-115 kV Substation. Rebuild the existing Bells Crossroads – Varnville 115 kV Line for 230/115 kV double-circuit on the existing right-of-way. Rebuild the St. George – Bells Crossroads (via Smoaks) 115 kV Line #2 for 230/115 kV double-circuit on the existing right-of-way until the 230 kV line reaches just outside of St George 115 kV Switching Station.

Project Need

Planning studies indicate this project and Indian Field-Wassamassaw 230 kV line project is necessary to add an additional path for bulk power transmission from Southern region to Eastern region. Existing Southern path via Yemassee and Mateeba is a contingency constraint seen in the near-term and long-term planning studies.

Project Status

Committed

Planned In-Service Date

December 2027

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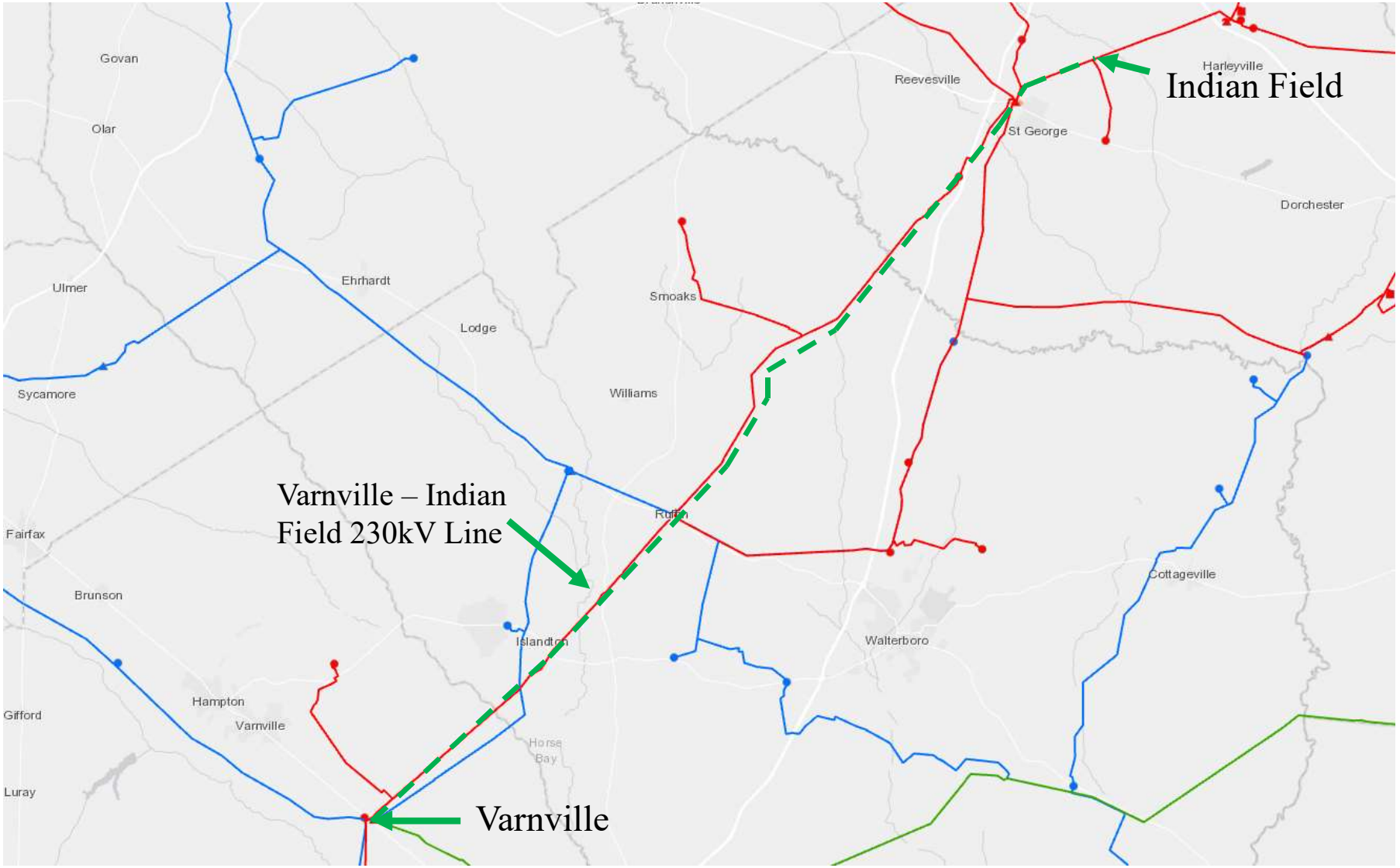
Varnville – Indian Field 230 kV Line



Chime Bell 115 kV Switching Station

Project Description

The proposed Chime Bell 115 kV Switching Station will be constructed by folding in the existing Aiken #1 – Aiken #3 115 kV #1 line between the New Ellenton and Warrenville Delivery Point Taps. This switching station will break up the long transmission lines between Aiken 1 and Aiken 3 stations. The exposure to outages due to transmission line length will be reduced with the addition of Chime Bell.

Project Need

As part of coordinated transmission system expansion planning with Central Electric Power Cooperative, Inc., Santee Cooper has planned to construct the proposed Chime Bell 115 kV Switching Station to enhance the reliability of transmission service to the cooperative delivery points in the Aiken Area.

Project Status

Committed

Planned In-Service Date

December 2027

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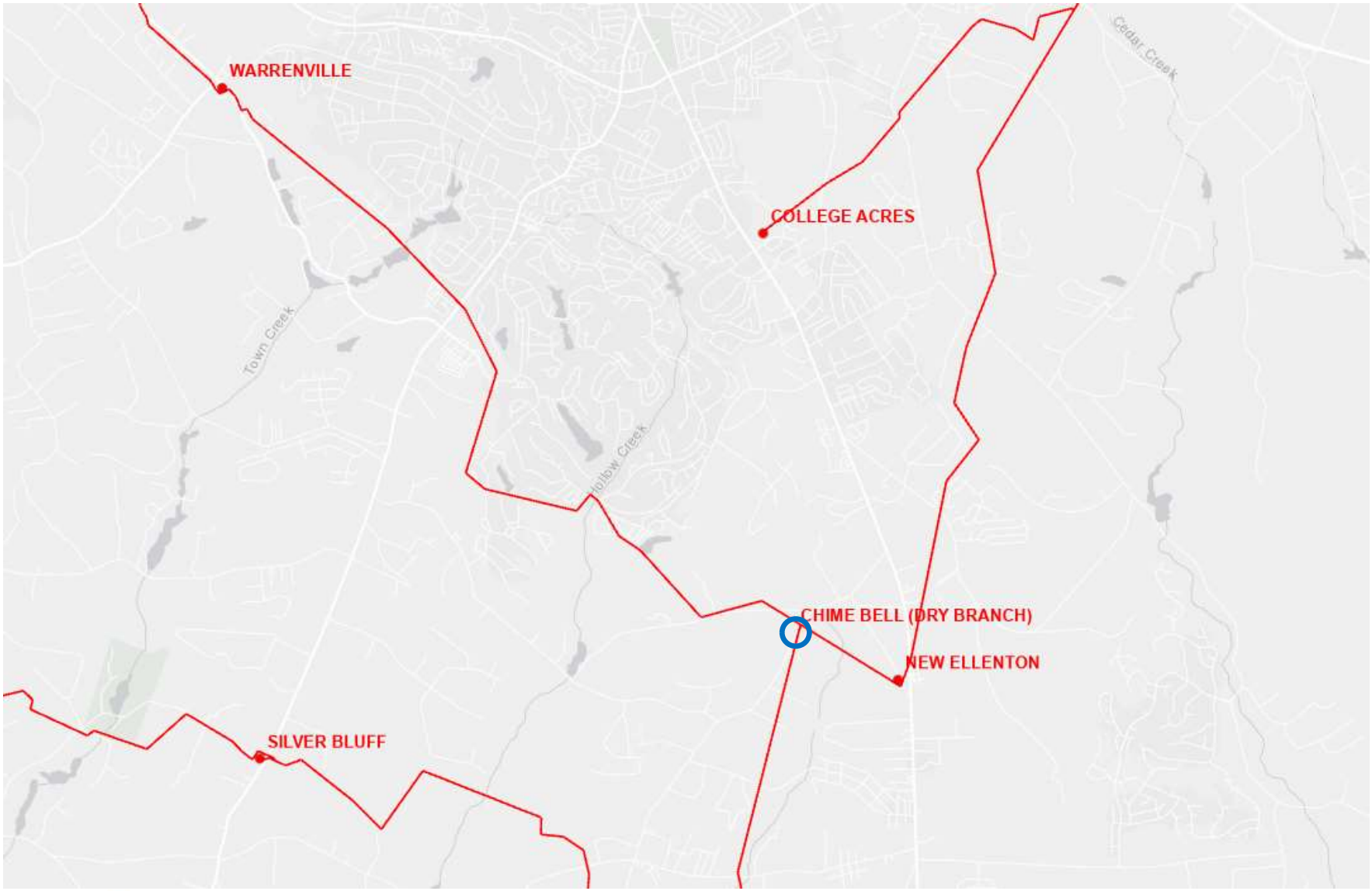
Chime Bell 115 kV Switching Station



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Marion – Red Bluff 230 kV Line

Project Description

Construct a new 230 kV transmission line from the Marion 230-115/230-69/115-69 kV Substation to the Red Bluff 230-115 kV Substation with bundled 1272 ACSR conductor rated for 2400 Ampere minimum continuous operation at 230 kV. Existing right-of-way will be used where possible, but new right-of-way will need to be obtained.

Project Need

Planning assessments have identified thermal loading and voltage violations under contingency conditions in the eastern region of the transmission system that are mitigated by the addition of a Marion – Red Bluff 230 kV Line. These thermal loading exceedances do not meet the transmission system planning performance requirements under NERC Reliability Standard or the planning criteria.

In addition, Santee Cooper's plans to retire Winyah Generating Station requires additional thermal and voltage support in this area to mitigate potential wide spread low voltage conditions under contingency conditions, which could pose serious risk to the reliability in the area and result in the need to curtail large amounts of load. This 230 kV line will also provide an additional source for a highly concentrated load area of the Santee Cooper system that continues to see significant load growth.

Project Status Committed

Planned In-Service Date June 2028

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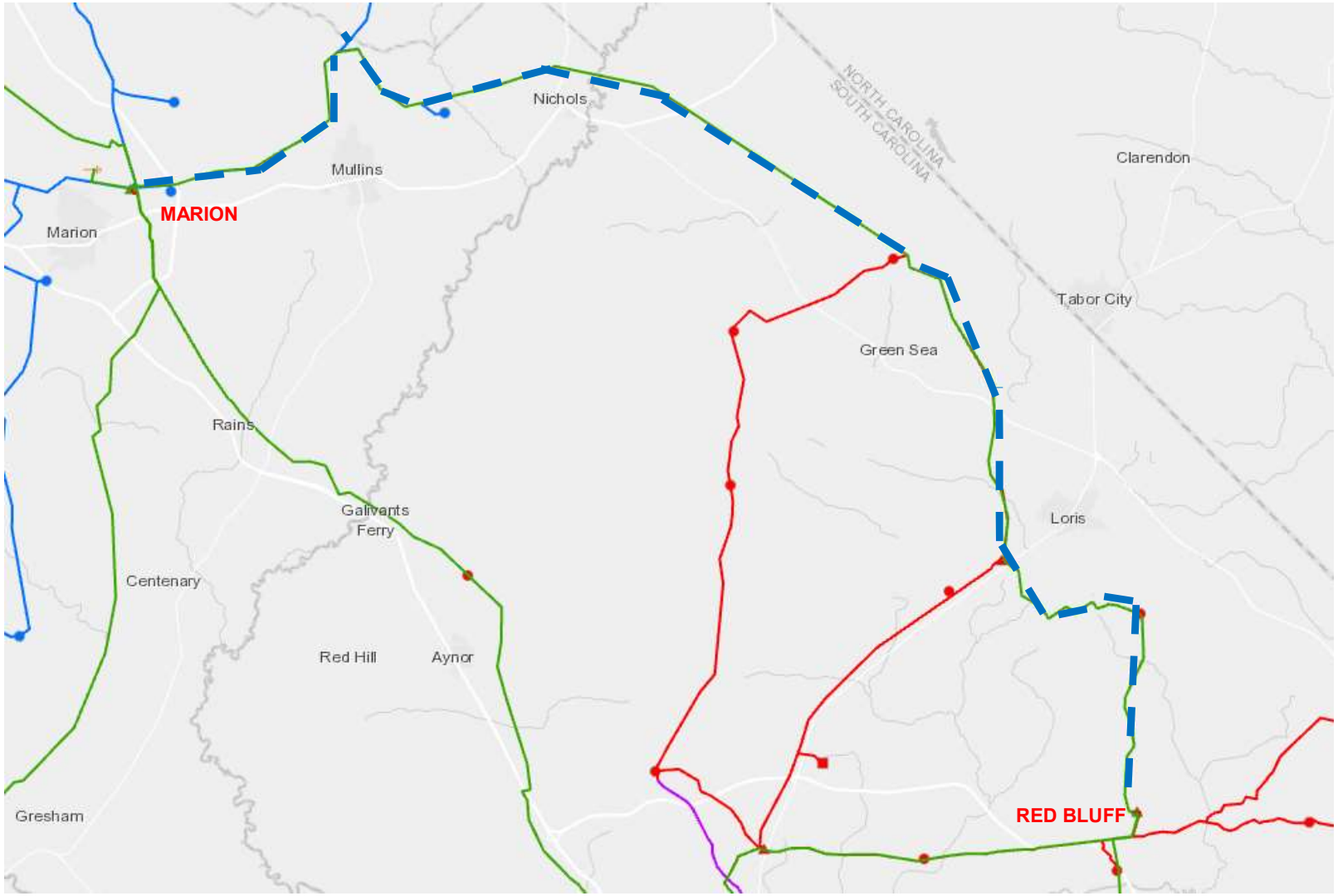
Marion – Red Bluff 230 kV line



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Santee Cooper
Transmission Expansion Plans

Questions?

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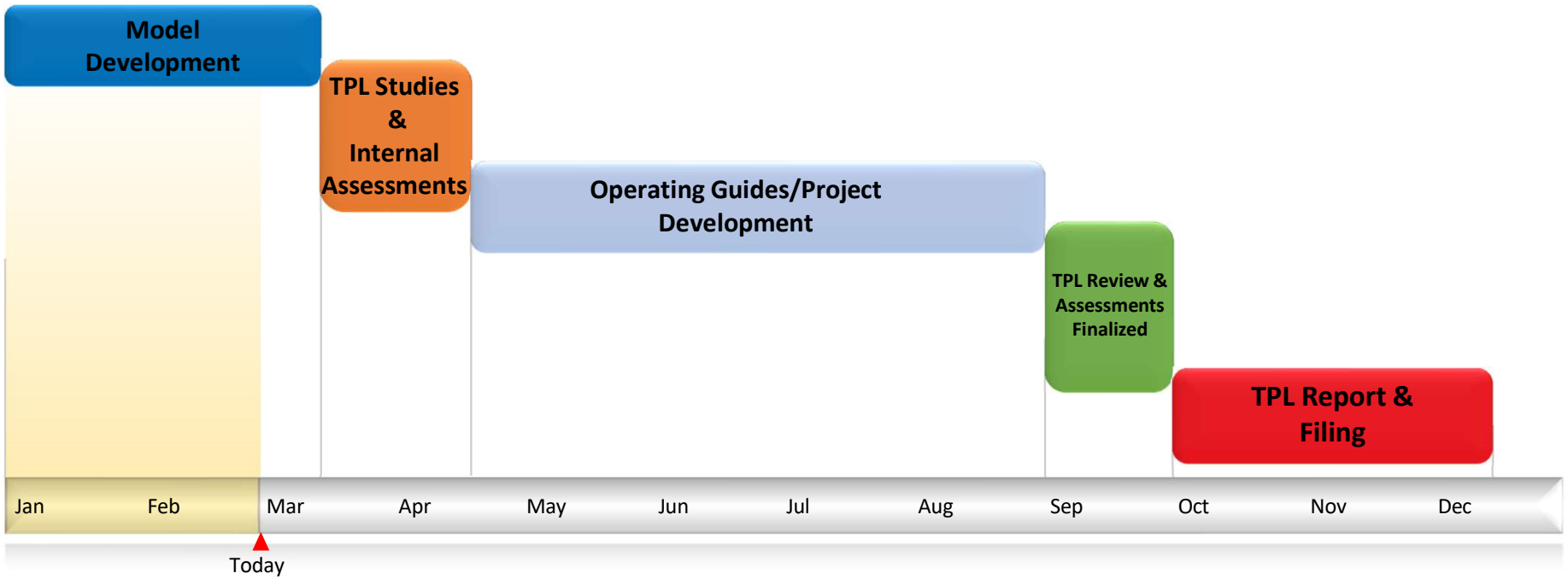
Reliability Transmission Planning Studies Timeline



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Next SCRTP Meeting

- Stakeholders will select up to 5 Economic Transmission Planning Studies
- Request Form will be posted on SCRTP website
- Review and discuss Multi-Party Assessment Studies
- SCRTP Email Distribution List will be notified
- Register online

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South Carolina Regional Transmission Planning

Stakeholder Meeting

Teams

February 28, 2024

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