



# Santee Cooper Resource Planning

## Stakeholder General Notice Meeting #3

December 3, 2025



# Welcome and Agenda

Stewart Ramsay, Meeting Facilitator  
VANRY Associates

# Meeting Guidelines

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## Principles to guide today's session

- Participation welcome
- Respectful dialogue
- Transparency of all questions & answers
  - Questions and comments are public and will be shared via the IRP webpage
- Limited collection of personal information
  - Participant email address use is limited to IRP communications
  - Email list is not being shared or made public

**The value of this process is in your participation  
... please ask questions!**

1. Why are we using this format?
2. Use the **Q&A** for comments or questions throughout the meeting – we have a team of people helping to answer your questions.
3. **“Raise Hand”** if you would like the chance to speak, we will call on people in the order that they raised their hands. We will wait to call on people until the presenter has concluded their presentation.

*Note: We are not using the Chat function; it is disabled.*

# Desired Outcomes of this Meeting

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- Stakeholders will know more about Santee Cooper's Integrated Resource Plan (IRP)
  - Factors driving load growth
  - Our plan to meet the growing electricity needs of our state
  - Resource development activities
  - Energy efficiency and demand response programs
- Stakeholders will have the chance to ask questions and provide feedback today and will learn how to submit feedback after the meeting

# Meeting Agenda

- |         |   |
|---------|---|
| 2:30 pm | <b>Welcome and Agenda</b><br>Stewart Ramsay, Meeting Facilitator, VANRY Associates            |
| 2:40 pm | <b>2025 Load Forecast</b><br>Greg McCormack, Director Financial Forecast                      |
| 3:10 pm | <b>Integrated Resource Plan (IRP) Update</b><br>Clay Settle, Senior Manager Resource Planning |
| 3:40 pm | <b>BREAK</b>  |
| 3:50 pm | <b>Resource Update</b><br>Clay Settle, Senior Manager Resource Planning                       |
| 4:10 pm | <b>2025 Reserve Margin Study</b><br>Joel Dison, Technical Manager PowerGEM                    |
| 4:35 pm | <b>2026 Integrated Resource Plan</b><br>David Millar, Director Resource Planning              |
| 4:45 pm | <b>Meeting Closeout</b>   |

# Presenters



**Stewart Ramsay**  
Meeting Facilitator  
VANRY Associates



**David Millar**  
Director Resource Planning  
Santee Cooper



**Greg McCormack**  
Director Financial Forecast  
Santee Cooper



**Clay Settle**  
Senior Manager Resource Planning  
Santee Cooper



**Joel Dison**  
Technical Manager  
PowerGEM

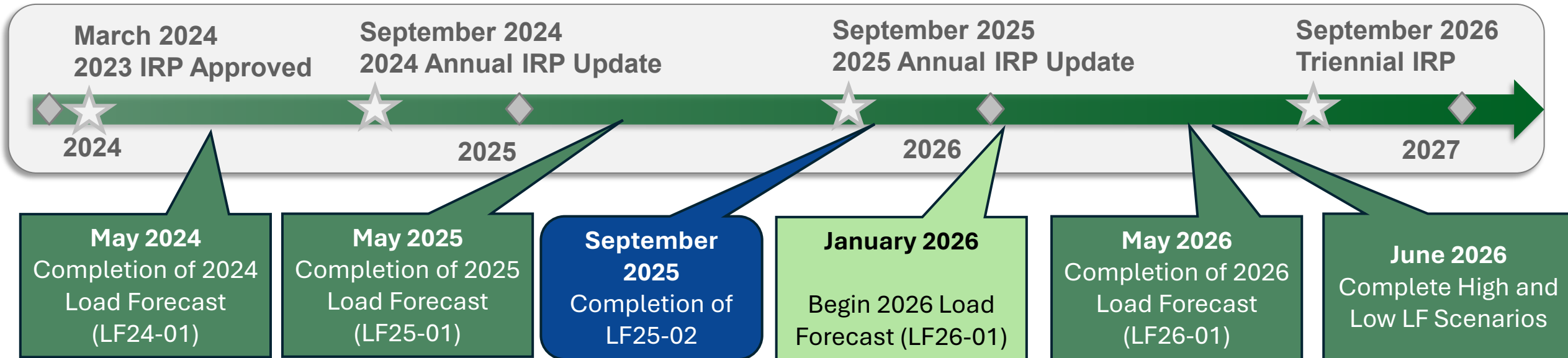


# 2025 Load Forecast

Greg McCormack, Director Financial Forecast  
Santee Cooper



# Load Forecast | Timeline



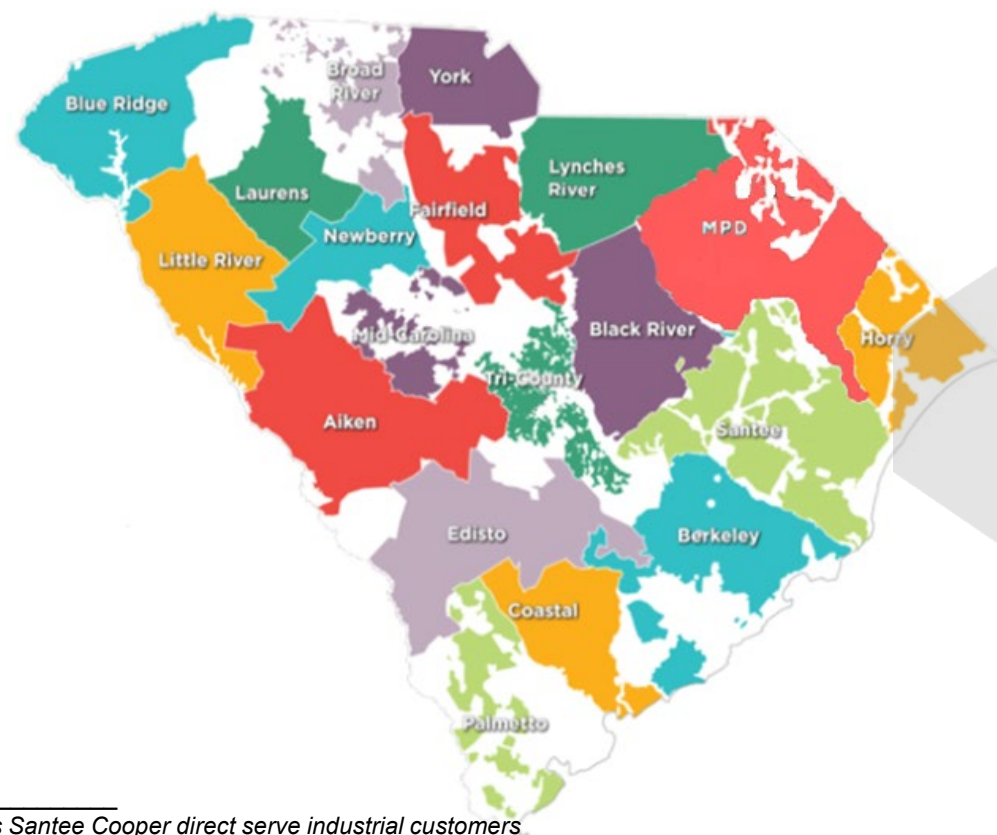
- Update to 2025 Load Forecast for customer expansion (LF25-02)
- Upcoming 2026 Load Forecast will begin in **January 2026** as 2025 data becomes available
- Forecast will be developed and refined in preparation for its finalization in **May 2026**

Class	Customer Segment Composition	Originator
<b>Central Member Cooperatives</b>	<ul style="list-style-type: none"><li>Wholesale customer serving 19 distribution cooperatives, comprising 60% of system energy</li></ul>	Central
<b>Direct Serve Residential and Commercial</b>	<ul style="list-style-type: none"><li>Approximately 217,000 directly served accounts, comprising 16% of system energy</li></ul>	GDS and Santee Cooper
<b>Direct Serve Industrial</b>	<ul style="list-style-type: none"><li>29 large industrial customers currently served directly by Santee Cooper, comprising 22% of the system energy</li></ul>	Santee Cooper
<b>Off-system and Municipal Sales</b>	<ul style="list-style-type: none"><li>Wholesale sales to Bamberg, Georgetown, PMPA, Seneca, and Waynesville (NC)</li><li>Sales to PMPA are on a partial requirements basis</li><li>Municipal and off-system sales comprise 2% of system energy</li></ul>	Santee Cooper, GDS, and Customer

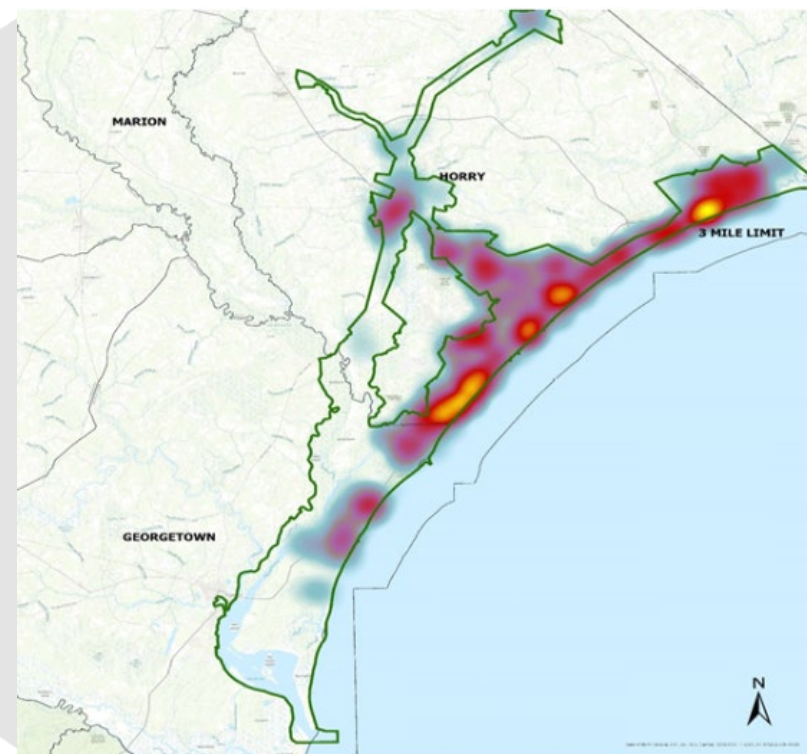
*Note: Percent based on 2025 IRP forecasted system energy.*

**Santee Cooper is a blended wholesale and retail power provider.**

**Wholesale: ~60% of load<sup>2</sup>**



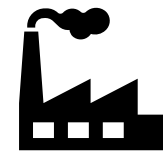
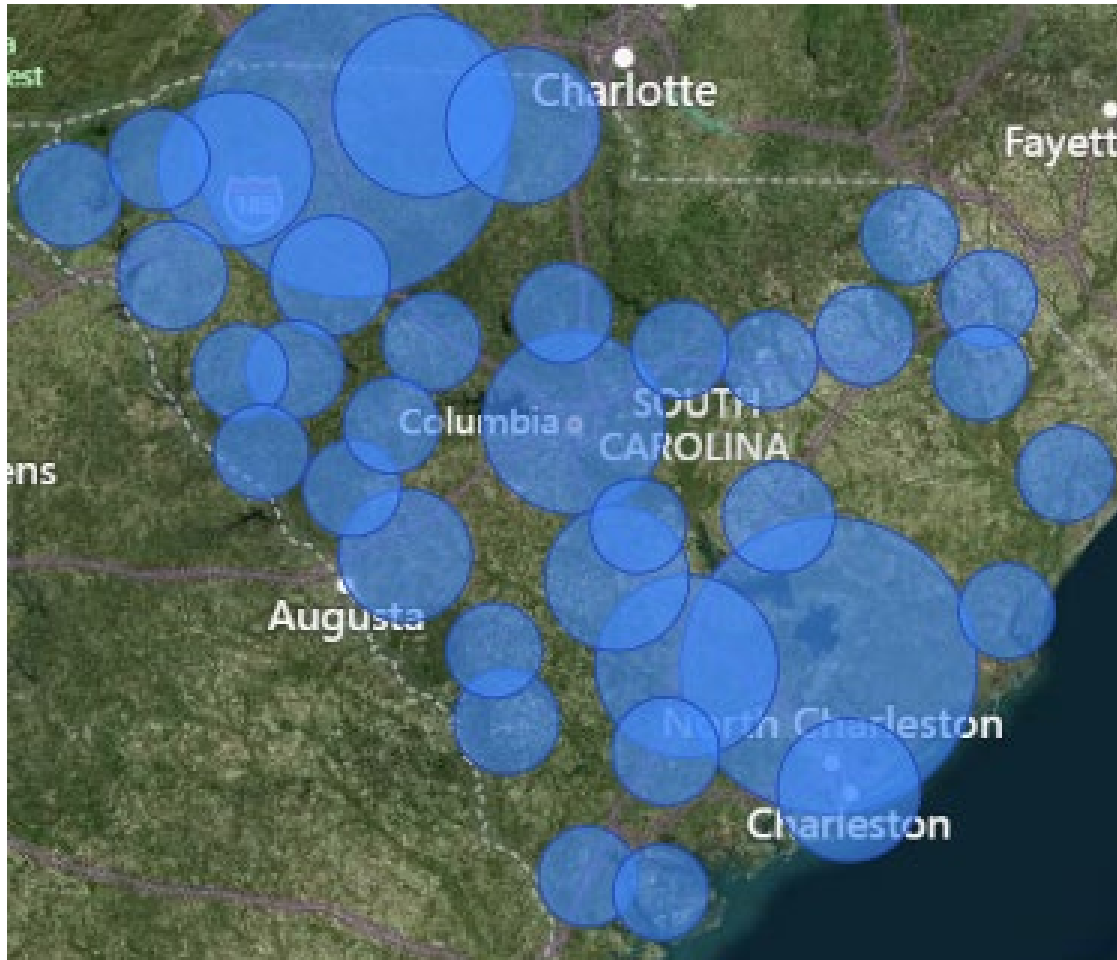
**Retail Territory<sup>1</sup>: ~40% of load**



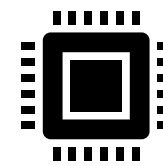
1. Includes Santee Cooper direct serve industrial customers

2. Blue Ridge, Broad River, Laurens, Little River, and York are outside of Santee Cooper's Balancing Authority.

Significant actual and projected growth due to global, national, and local trends. Since 2022, South Carolina has seen ~\$36 billion in economic development announcements.



**Reshoring and heavy industry** locating in South Carolina at an increasing rate



**Data centers** grow their existing footprint as computing demand increases



Substantial **in-migration** in the Southeast generally and South Carolina specifically



“Santee Cooper should engage stakeholders to **discuss the additional economic development in the state and how best to incorporate and anticipate new loads into its load forecast....**the Commission remains cognizant that these new loads are appearing quickly, creating additional energy and capacity constraints.” — SCPSC – Docket # 2023-154-E

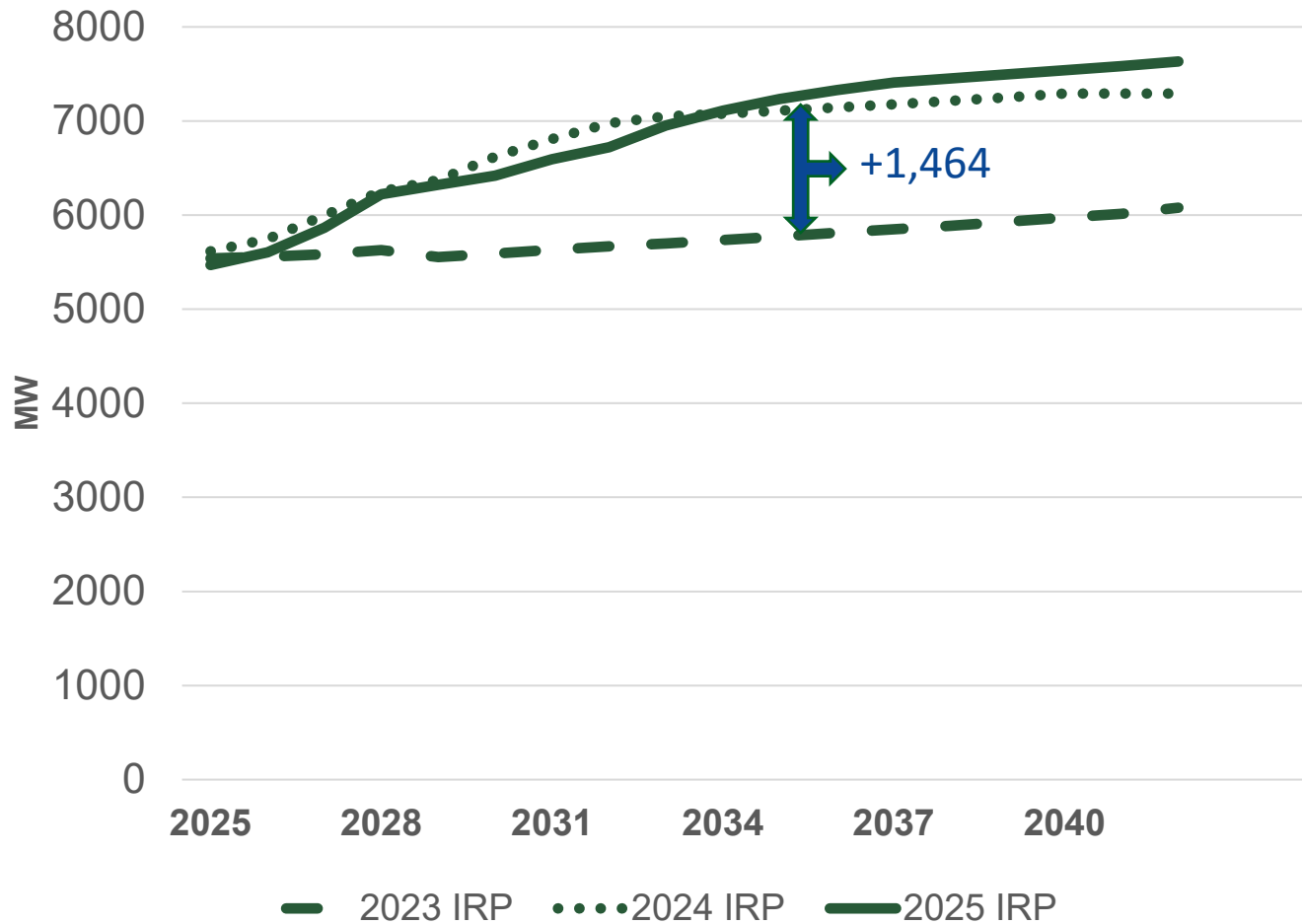


Top Picture Source: Post and Courier

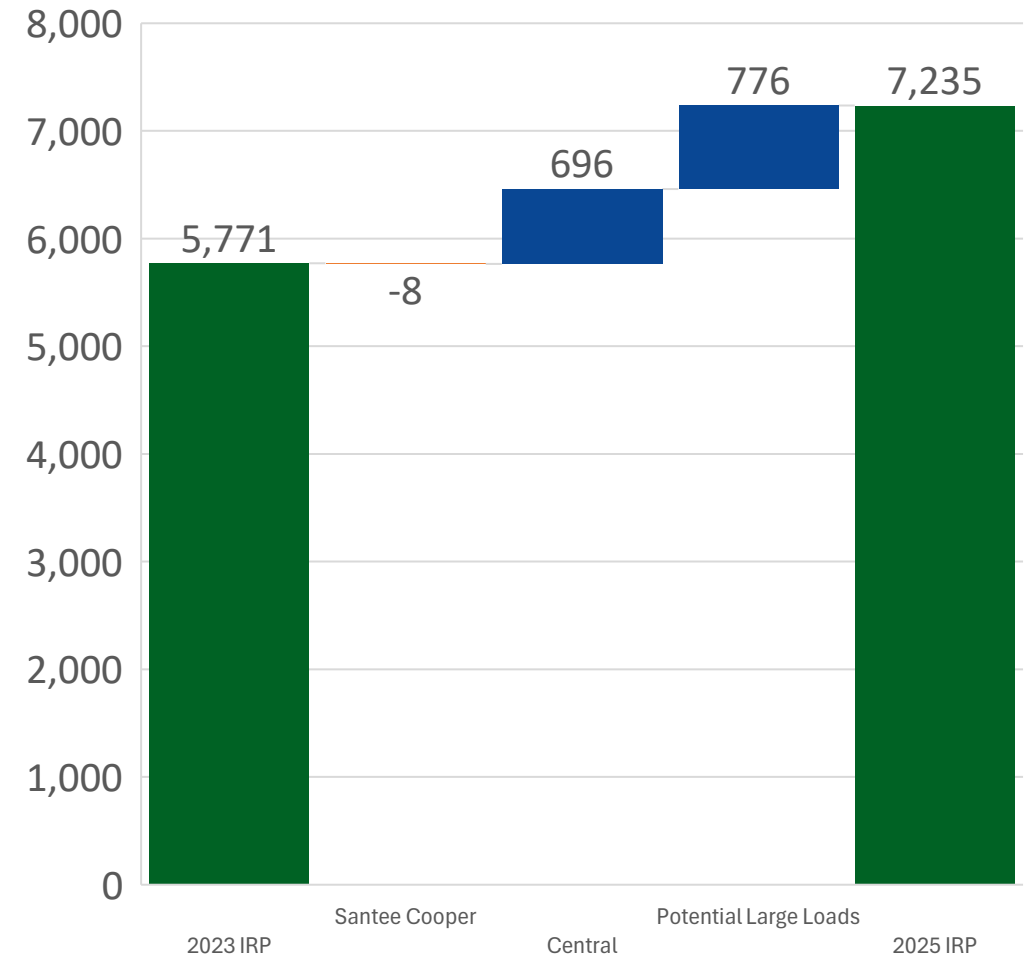
# Load Forecast | Changes since 2023 Triennial IRP Load Forecast

**Significant actual and projected growth due to global, national, and local trends.**

Comparison of Winter Peak Forecasts

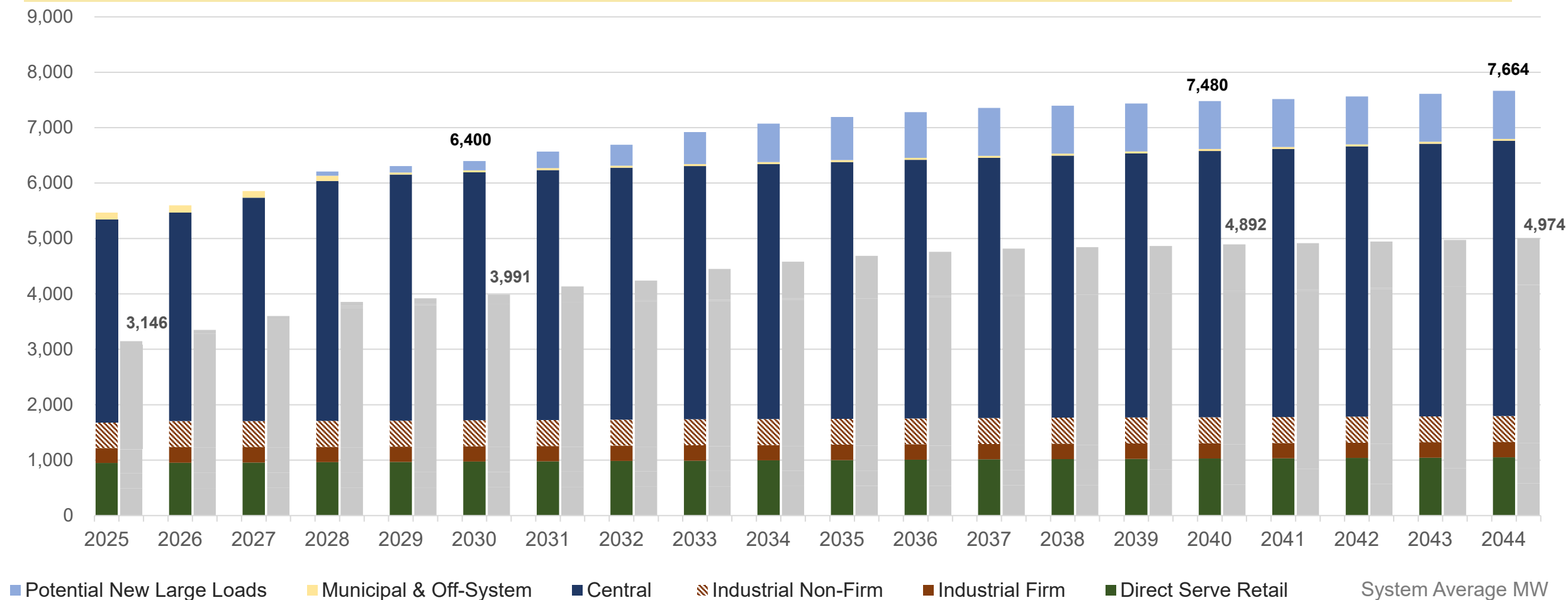


2035 Winter Peak



# Load Forecast | 2025 IRP Load Forecast (LF25-01)

## Winter CP (MW) and System Average MW<sup>2</sup>

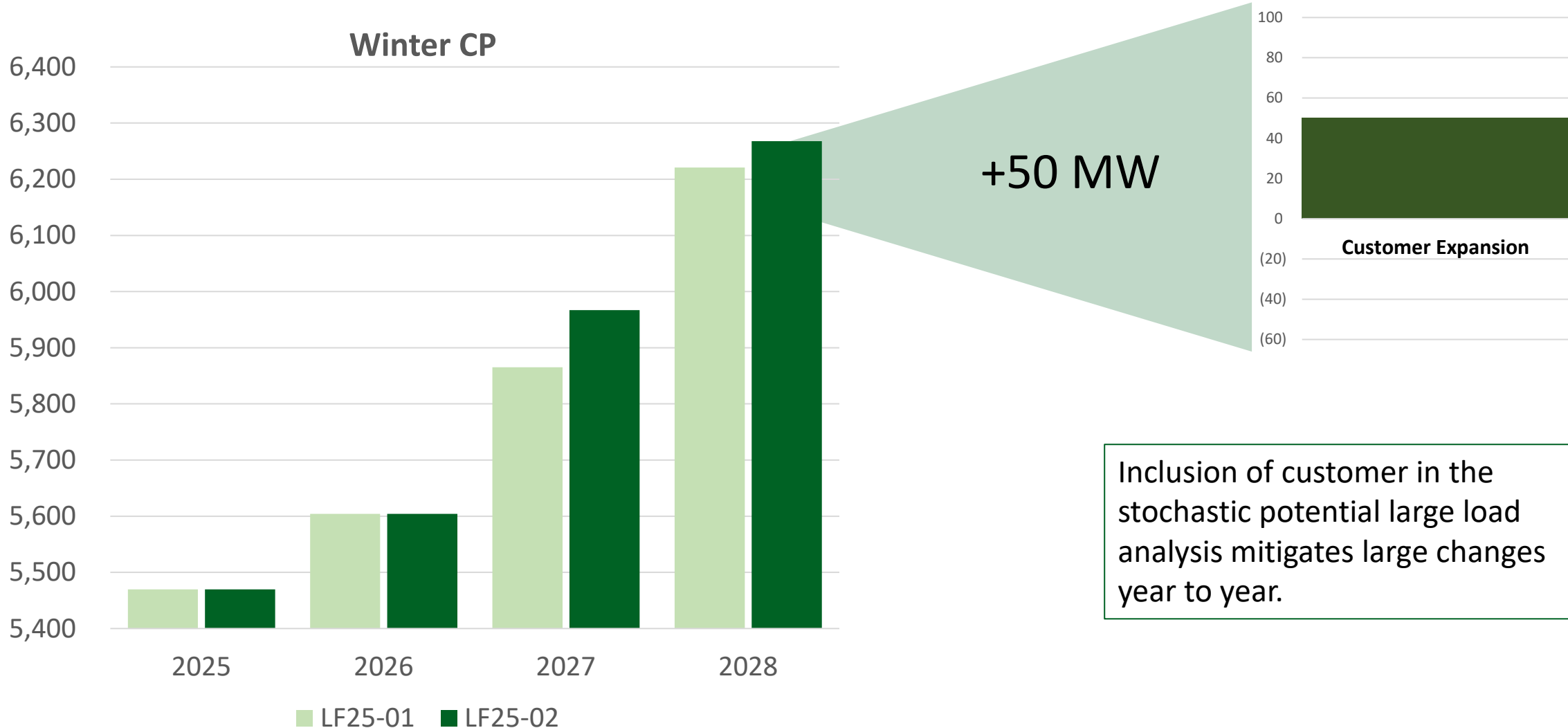


1. Includes transmission and distribution losses. Includes future DSM and EE.

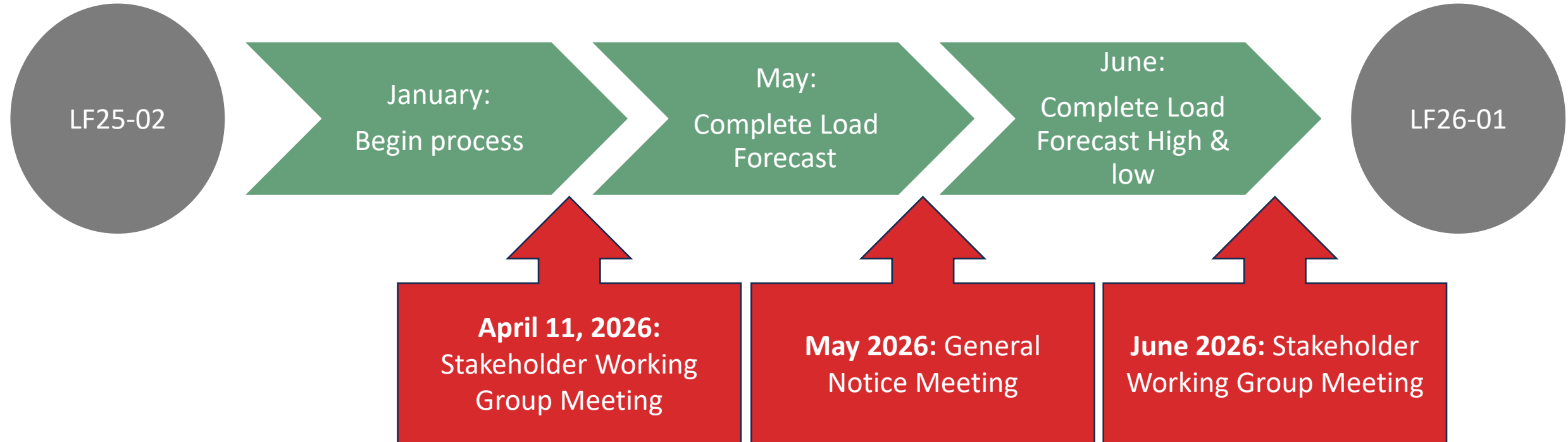
2. Calculated as Total Energy / 8760 hours

# Load Forecast | POST IRP Load Forecast Update: LF25-02

Since the filing of the 2025 IRP, a significant customer expansion necessitated a load forecast update for corporate planning









# Integrated Resource Plan Update

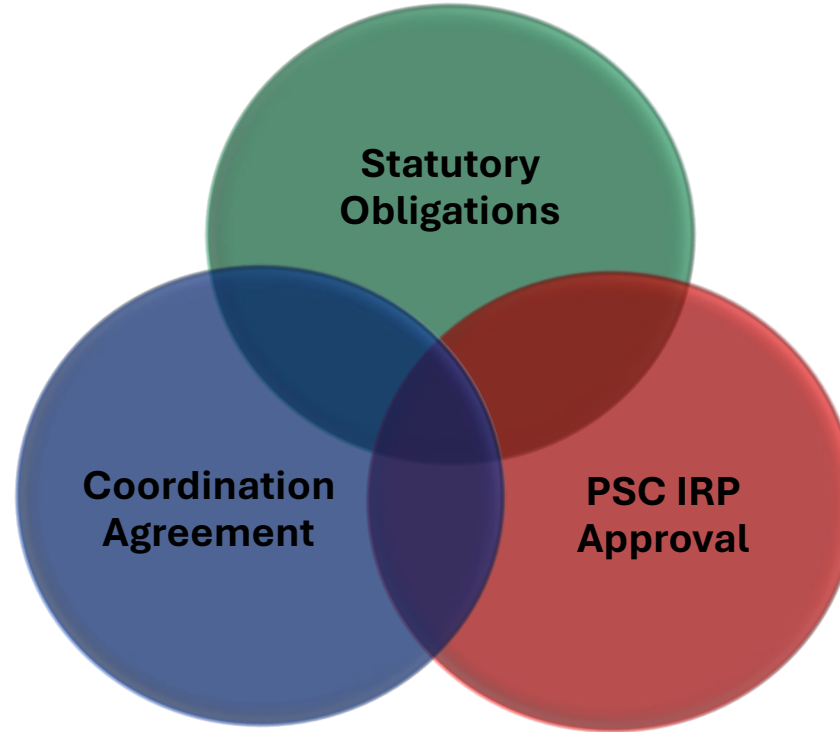
Clay Settle, Senior Manager Resource Planning

Santee Cooper

# Santee Cooper Planning Obligations

## Coordination Agreement:

- Joint planning framework
- Load Forecast, Generation Expansion Plan (GEP), Resource Commitment Process

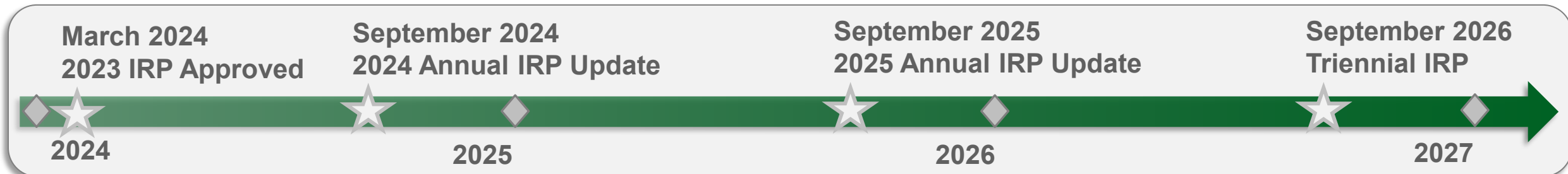


## Statutory Requirements:

File IRP every three years with annual updates, to PSC for approval

IRP annual update requirements:

- Update base planning assumptions relative to its most recently accepted Integrated Resource Plan (2023 IRP)
- Describe the impact of the updated base planning assumptions on the selected resource plan



# 2025 IRP Update Key Conclusions

- The key resource decisions are consistent with the portfolios identified in the 2023 IRP and 2024 IRP Update
  - Natural Gas Combined Cycle (NGCC) at Canadys (joint build with Dominion) is an economic resource decision
  - Combustion Turbines (CTs) and Battery Energy Storage Systems (BESS), sized to meet system peaking needs
  - Solar additions as economic
- Recent policy changes in Environmental Protection Agency (EPA) Greenhouse Gas regulations and One Big Beautiful Bill (OBBB) appropriately incorporated
  - No impact on key near-term resource decisions

# EPA GHG Rule Implications

- Santee Cooper evaluated the potential impacts of the 2024 GHG Rule and its proposed repeal under the 2025 GHG Rule
  - 2024 GHG Rule evaluation results in the selection of more NGCC and CT resources
  - 2025 GHG Rule evaluation results in the same portfolio as evaluated without GHG
- Near-term additions of CCs and CTs is an economic choice regardless of which GHG rule version prevails

# One Big Beautiful Bill Implications

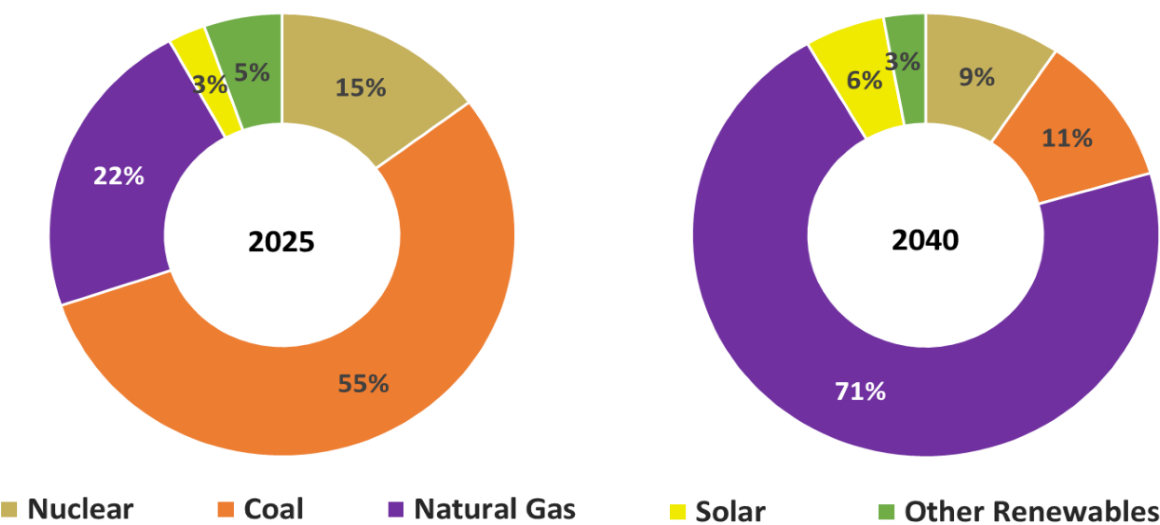
- Santee Cooper evaluated the potential impact of the new One Big Beautiful Bill Act, signed into law on July 4, 2025
- The bill accelerates the elimination of IRA tax incentives for solar and wind resources and phases out tax incentives for battery storage in the mid-2030s
- The evaluation supports greater need for energy efficient resources, such as NGCC in the mid-2030s

# Resource Portfolio Impact

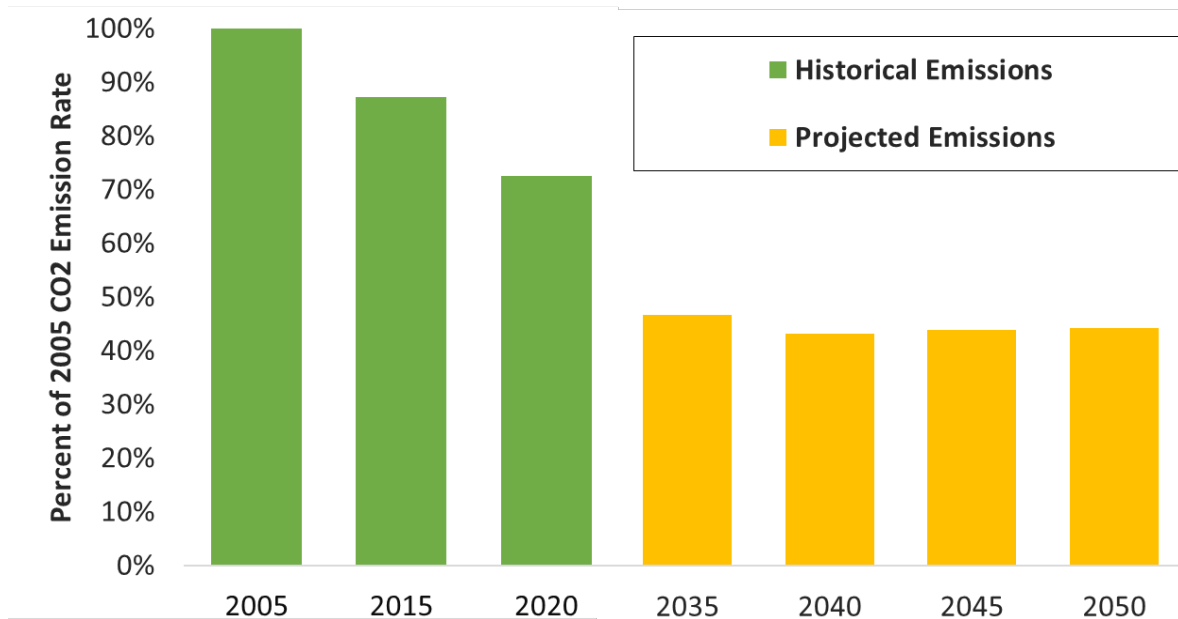
## Enhanced reliability through addition of new dispatchable resources

Reduced coal reliance  
Addition of flexible peaking through CTs and BESS  
New efficient NGCC

Generation by Resource Type (GWh, Energy)

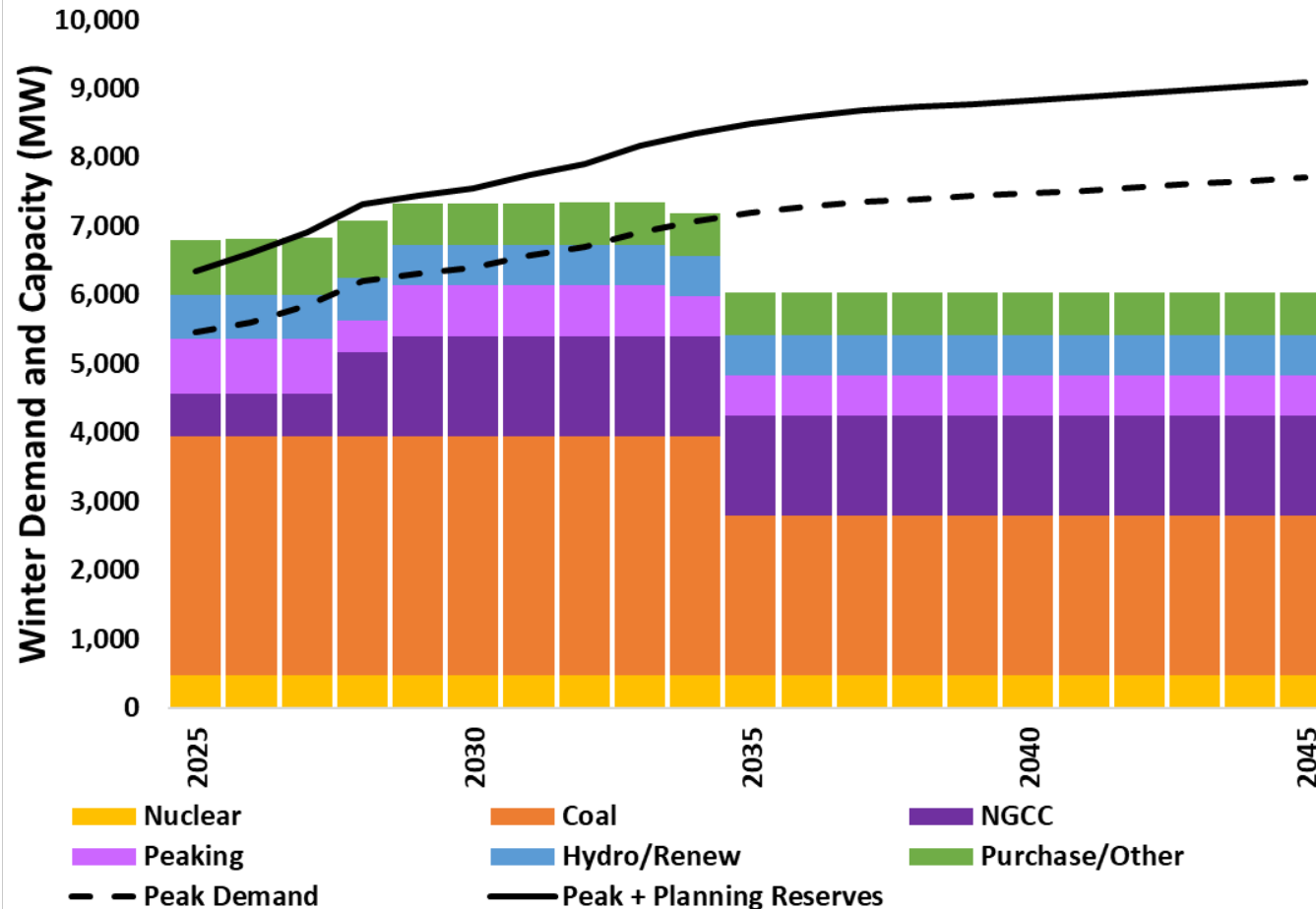


Projected CO<sub>2</sub> Emissions Rate as Percentage of 2005 Rate



# Capacity Need

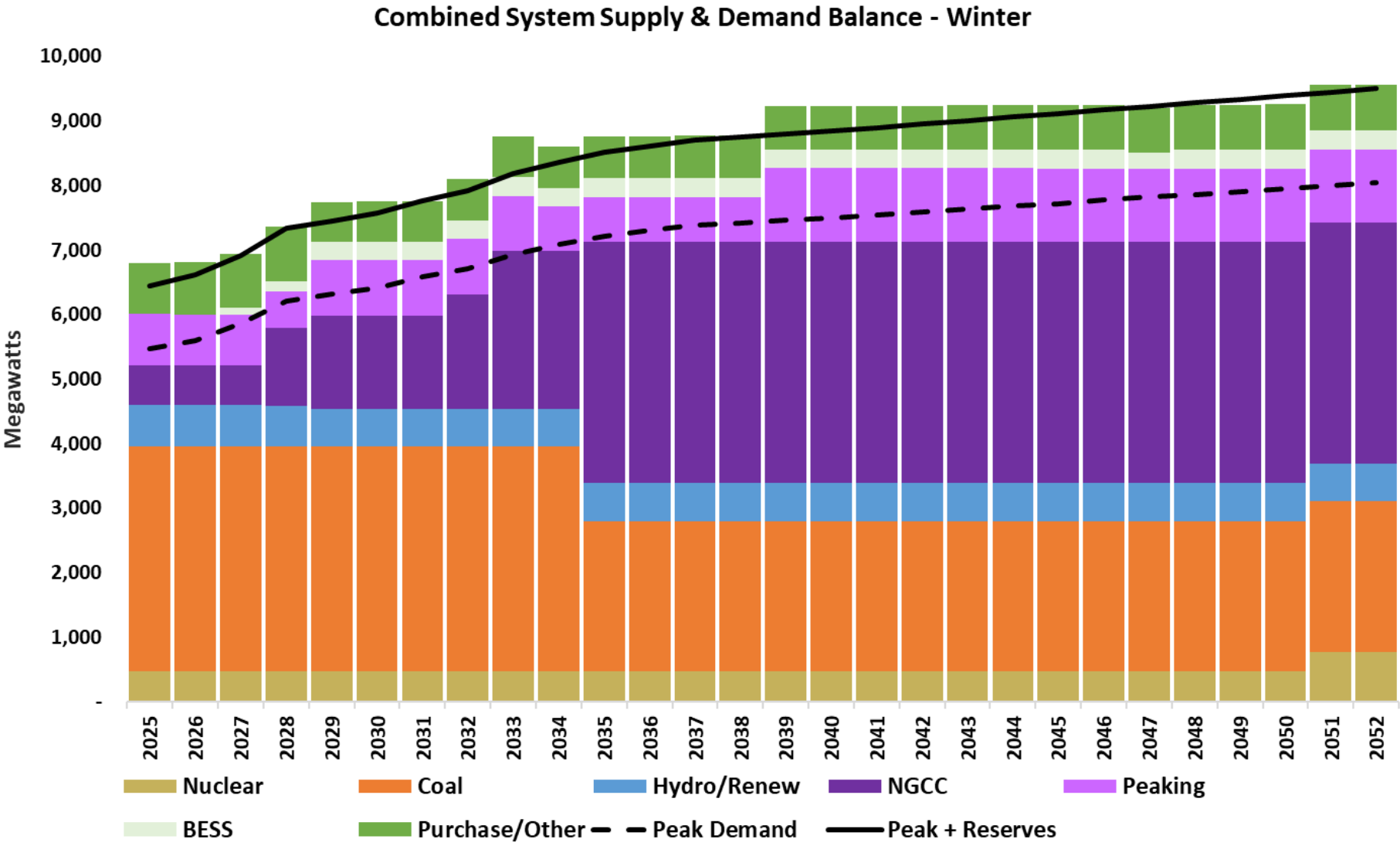
Combined System Supply and Peak Demand Balance Winter



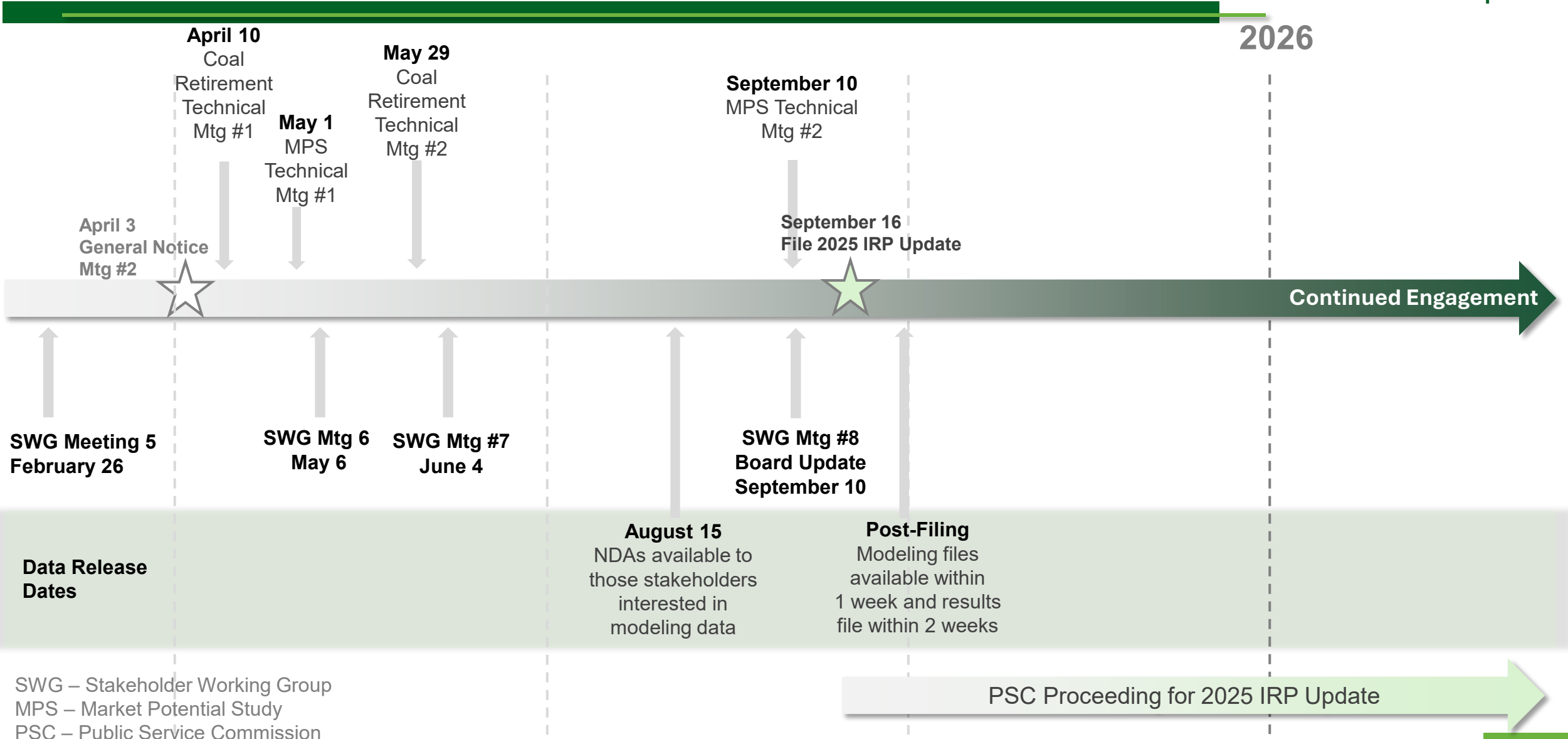
- Capacity need starting in 2027 and grows to approximately 2,000 MW after assumed retirement of Winyah Generating Station
- Winyah will be retired when sufficient resources are available to reliably serve growing load



# Meeting Capacity Need Through a Mix of Resources



# 2025 Stakeholder Sessions



# 2025 IRP Update PSC Schedule

## Commission Procedural Schedule

Schedule Item	Date	Days Between
Santee Cooper's IRP Update filed with the Commission	September 16, 2025	
ORS to File a Report regarding Santee Cooper's IRP Update	December 15, 2025	90
Intervenors/Other Parties of Record to File Comments Regarding Santee Cooper's IRP Update	January 12, 2026	28
Santee Cooper's Reply Comments in Response to ORS's Report and All Other Parties' Comments to ORS' Report	January 26, 2026	14
Proposed Order Due	TBD	
Commission Issues Final Order	TBD	

- IRP Update PSC Docket: [Detail for 2025-18-E](#)



BREAK





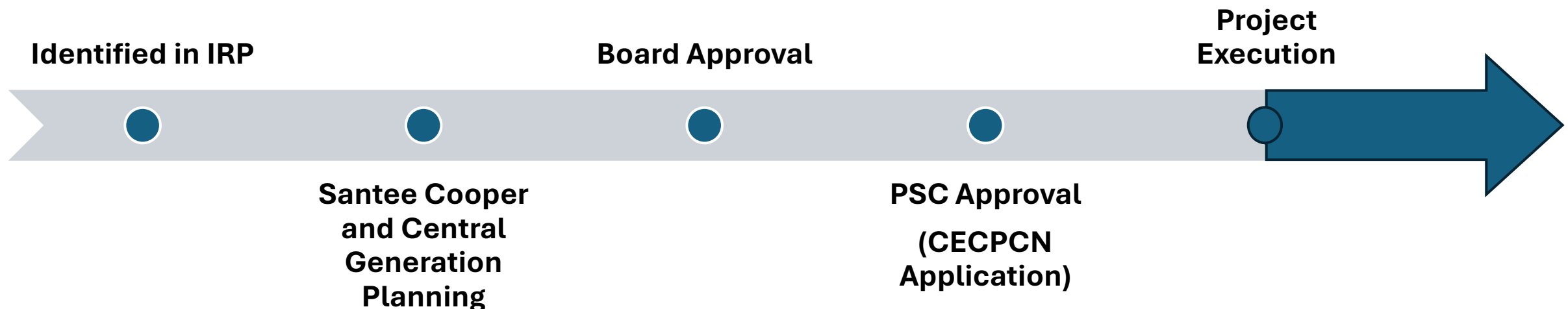
# Resource Update

Clay Settle, Senior Manager Resource Planning  
Santee Cooper

# Resource Approval Process

- **Act 90 – Passed by the General Assembly June 8, 2021**

- Santee Cooper must submit an IRP every 3 years and annual updates for PSC approval
- Santee Cooper is subject to the requirements of Utility Facility Siting and Environmental Protection Act (Siting Act)
  - Generation greater than 75 MW
  - Transmission lines greater than 125 kV
  - Power Purchase Agreements longer than 10 years



Project	Capacity (MW)
Rainey Generating Station Upgrades	250
Dual-fuel Aeroderivative Combustion Turbines at the Winyah Generation Site (LM6000s)	107
Battery Energy Storage System (BESS)	300
Natural Gas Combined Cycle Units (Canadys)	1,090
Completion of the AP1000 Nuclear Units in Fairfield County	TBD

**Public Service Commission Dockets:**

Rainey 2 CC CECPCN Docket: [Detail for 2024-264-E](#)

Winyah LM6000 CECPCN Docket: [Detail for 2025-246-E](#)

Canadys Station CECPCN Docket: [Detail for 2025-323-E](#)



# Review 2025 Reserve Margin Study

Joel Dison, Technical Manager  
PowerGEM



# Santee Cooper 2025 Reserve Margin Analysis

Joel Dison, Technical Manager  
PowerGEM



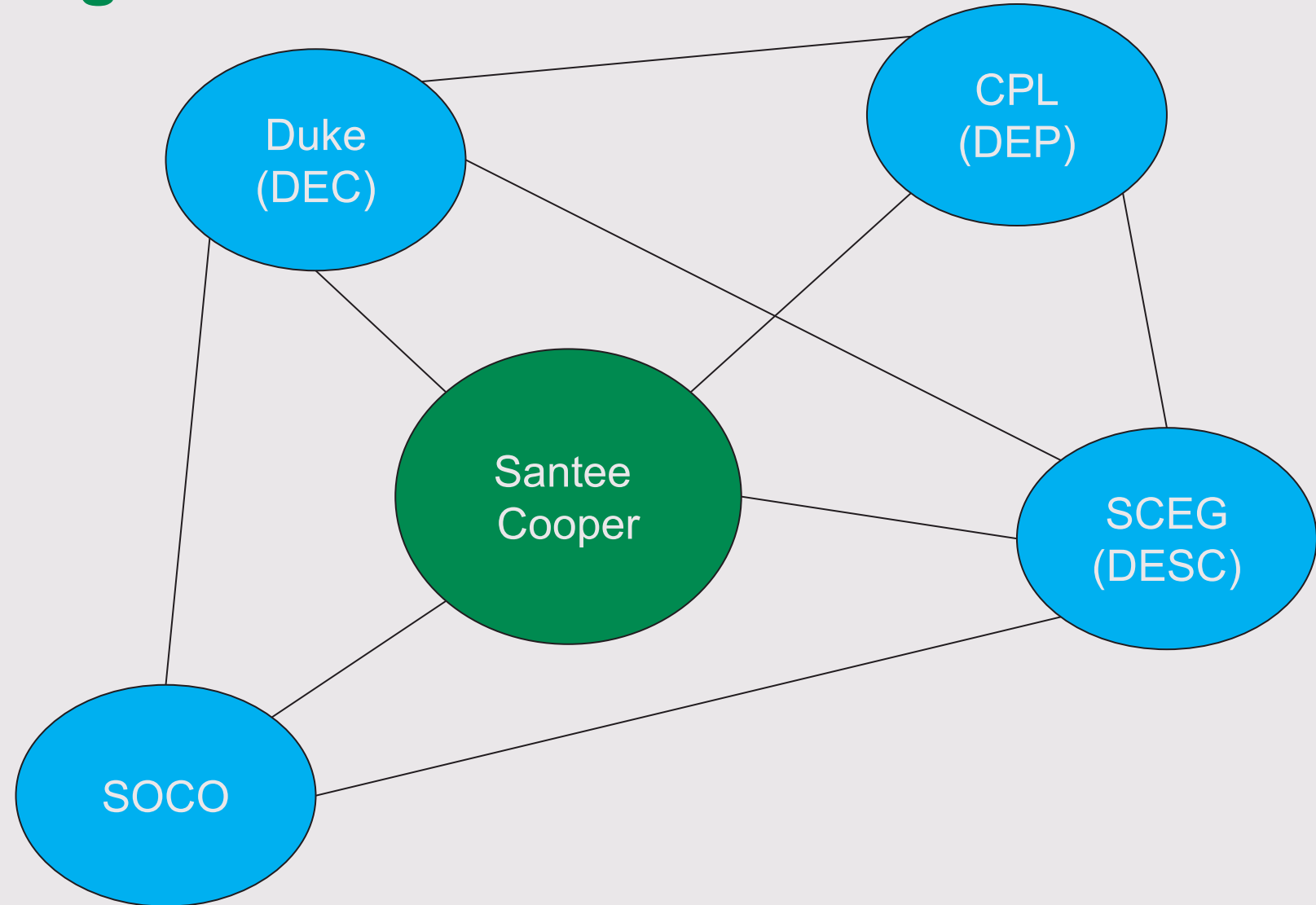
# Reserve Margin Fundamentals

- Reserve Margin is an amount of capacity above peak load (a.k.a., reserves) that is needed to maintain system reliability due to uncertainties in system operation.
- Types of uncertainties considered include,
  - Economic load forecast uncertainty
  - Load uncertainty due to weather (44 historical weather patterns modeled)
  - Resource uncertainty due to weather (hydro, renewables, etc.)
  - Resource availability uncertainty (hundreds of forced outage scenarios)
- The acceptable level of reserves is that necessary to maintain a Loss of Load Expectation of one day in 10 years (LOLE=0.1 days/year)

# Study Parameters

- Study Year: 2030
- Historical Weather Years: 1980-2023
- Regions (Balancing Authority Areas) Modeled
  - Santee Cooper
  - Southern
  - Duke Energy Carolinas
  - Duke Energy Progress
  - Dominion Energy of SC
- Assumed resource generation mix from 2024 IRP Update by 2030
  - Existing Resources, 240 MW BESS, Central 672 MW NSR PPAs, 1,500 MW Solar additions
- Load Curtailment: Maintain Minimum Regulating Reserves of 100 MW

# System Configuration



# Preliminary Winter Planning Reserve Margin Results

**Base Case: 20.01%**

## **Sensitivities**

- Islanded System: 32.06%
- Alternate Renewable Penetration: 20.03%
  - Reduced solar additions by 50 percent
- High HLF Load Penetration: 19.42%
  - Doubled data center load
- Low Transmission Import: 20.53%
  - Reduced Santee Cooper import capability by 50 percent



# Key Drivers in PRM Changes since prior IRP

- System Load Response to Extreme Weather
  - Load shapes incorporated effects of Elliot and Gerri
- Updated Forced Outage Modeling
  - Most recent five years of GADS with adjustments by SC SMEs to reflect future expectations
- Load Modeling Adjustments
  - Scaling of load shapes adjusted to ensure greater consistency with Santee Cooper weather normal definitions
- Increased Penetration of Large Loads



# 2026 Integrated Resource Plan

David Millar, Director Resource Planning  
Santee Cooper

## IRP Stakeholder Engagement

- Public Stakeholder Process
- 3<sup>rd</sup> Party Facilitator
- Information accessible on Santee Cooper's website

### Three Types of Meetings:

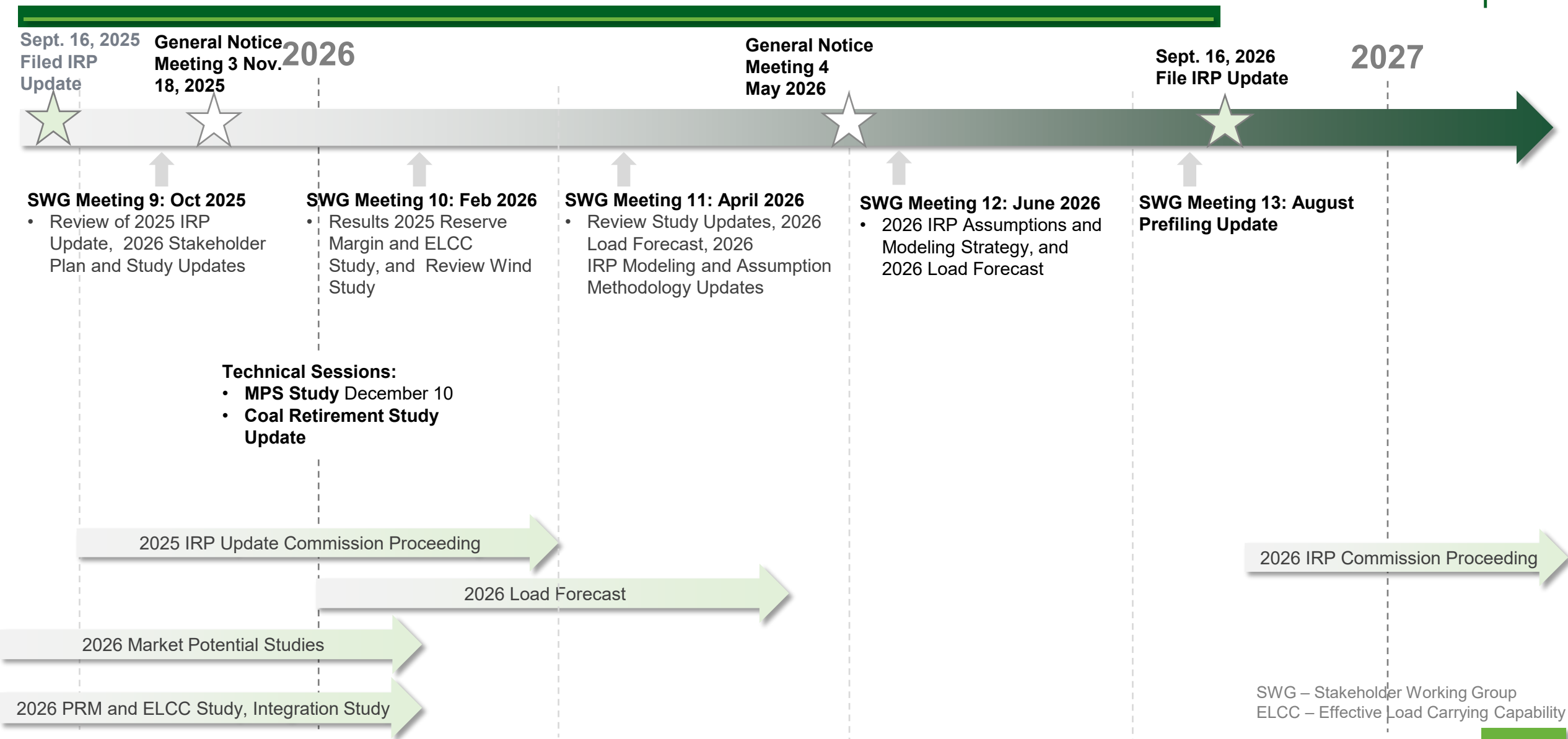
- Stakeholder Working Group
- Technical Sessions
- General Notice



# Stakeholder Working Group

Category	Organization/Individual
Regulatory/Government	Office of Regulatory Staff South Carolina Department of Consumer Affairs South Carolina Department of Natural Resource South Carolina Dept. of Health and Environmental Control
Central	Central Electric
Industrial Customers	Industrial Customer Association Century Aluminum Nucor Messer Google
Municipal Customer	South Carolina Association of Municipal Power Systems
Residential/Commercial	3 Individual Representatives
Non-Governmental Organizations (NGOs)	Carolina Clean Energy Business Association Conservation Voters of South Carolina Coastal Conservation League South Carolina Energy Justice Coalition South Carolina Appleseed Legal Justice Center South Carolina Research Authority Southern Alliance for Clean Energy Southern Environmental Law Center Sierra Club Vote Solar

# 2026 IRP Stakeholder Engagement Plan



## Santee Cooper IRP

[www.santeecooper.com/irp](http://www.santeecooper.com/irp)



## Santee Cooper IRP Stakeholder Process

[www.santeecooper.com/about/integrated-resource-plan/2026-irp-stakeholder-process](http://www.santeecooper.com/about/integrated-resource-plan/2026-irp-stakeholder-process)



# Meeting Closeout

Stewart Ramsay, Meeting Facilitator  
VANRY Associates

## Any questions we haven't answered today?

- Comments can be provided:
  - IRP Stakeholder Forum - provide comments, feedback, and post documents at [www.santeecooper.com/IRP](http://www.santeecooper.com/IRP)
  - [SanteeCooperIRP@vanry.com](mailto:SanteeCooperIRP@vanry.com) - for thoughts and input on meeting structure and engagement
- Meeting summaries and other materials will be posted and made available at [www.santeecooper.com/IRP](http://www.santeecooper.com/IRP)

# Thank you!

Do you have more you'd like to share  
about the session?

**Please complete our survey**  
that will appear in your browser as you leave the meeting

# Other Topics of Interest to Stakeholders

- 2025 rate adjustment
  - <https://www.santeecooper.com/residential/defeat-the-peak/>
- Residential customer services and information
  - <https://www.santeecooper.com/residential/>
- Programs and incentives offered by Santee Cooper
  - <https://www.santeecooper.com/programs-incentives/>
- Santee Cooper community involvement and programs
  - <https://www.santeecooper.com/community/>
- Information on Nuclear project
  - <https://www.scnuclear.com/>
- Information on Canadys Station
  - [Canadys Station - Santee Cooper](#)

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