



# Santee Cooper Resource Planning

## Stakeholder Working Group Meeting #5

February 26, 2025



# Welcome and Agenda

Stewart Ramsay, Meeting Facilitator  
VANRY Associates

# Meeting Agenda

- 1:00 pm Welcome and Agenda
- 1:15 pm Working Group Business
- 1:50 pm 2024 IRP Update Status
- 2:15 pm BREAK
- 2:25 pm Coal Retirement Methodology
- 3:35 pm BREAK
- 3:45 pm 2025 Load Forecast
- 4:15 pm 2026 Demand Side Management Market Potential Studies
- 4:45 pm Meeting Closeout

# Guest Speakers



**Greg McCormack**  
Director Financial Forecast  
Santee Cooper



**Steven Roys**  
Manager Program Development  
Santee Cooper

# New Working Group Members



Please share...

- Name
- Organization
- Role
- Prior IRP experience

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 – J. Pollock Century Aluminum Nucor Messer Google
Municipal Customer	South Carolina Association of Municipal Power Systems
Residential/Commercial	3 Individual Representatives
NGOs	Carolina Clean Energy Business Association Conservation Voters of South Carolina Coastal Conservation League South Carolina Energy Justice Coalition <b>South Carolina Appleseed Legal Justice Center</b> <b>South Carolina Research Authority</b> Southern Alliance for Clean Energy Southern Environmental Law Center Sierra Club Vote Solar

# Introducing David Millar

- Director of Resource Planning, Santee Cooper
- Previous Experience
  - **Wärtsilä Energy** Principal, Markets, Legislative and Regulatory Policy; 2022-2024.
  - **Ascend Analytics** Managing Director, Resource Planning and Procurement Services; 2017-2022
  - **PG&E** Principal of Energy Policy and Procurement. Expert Load Forecaster; 2013-2017
  - Lawrence Berkeley National Lab, KEMA (DNV), Tetra Tech
- Education
  - Master of Environmental Management (*Energy Economics and Policy*) – Duke University
  - B.A. Politics, B.S. Earth Sciences – UC Santa Cruz





# Working Group Business

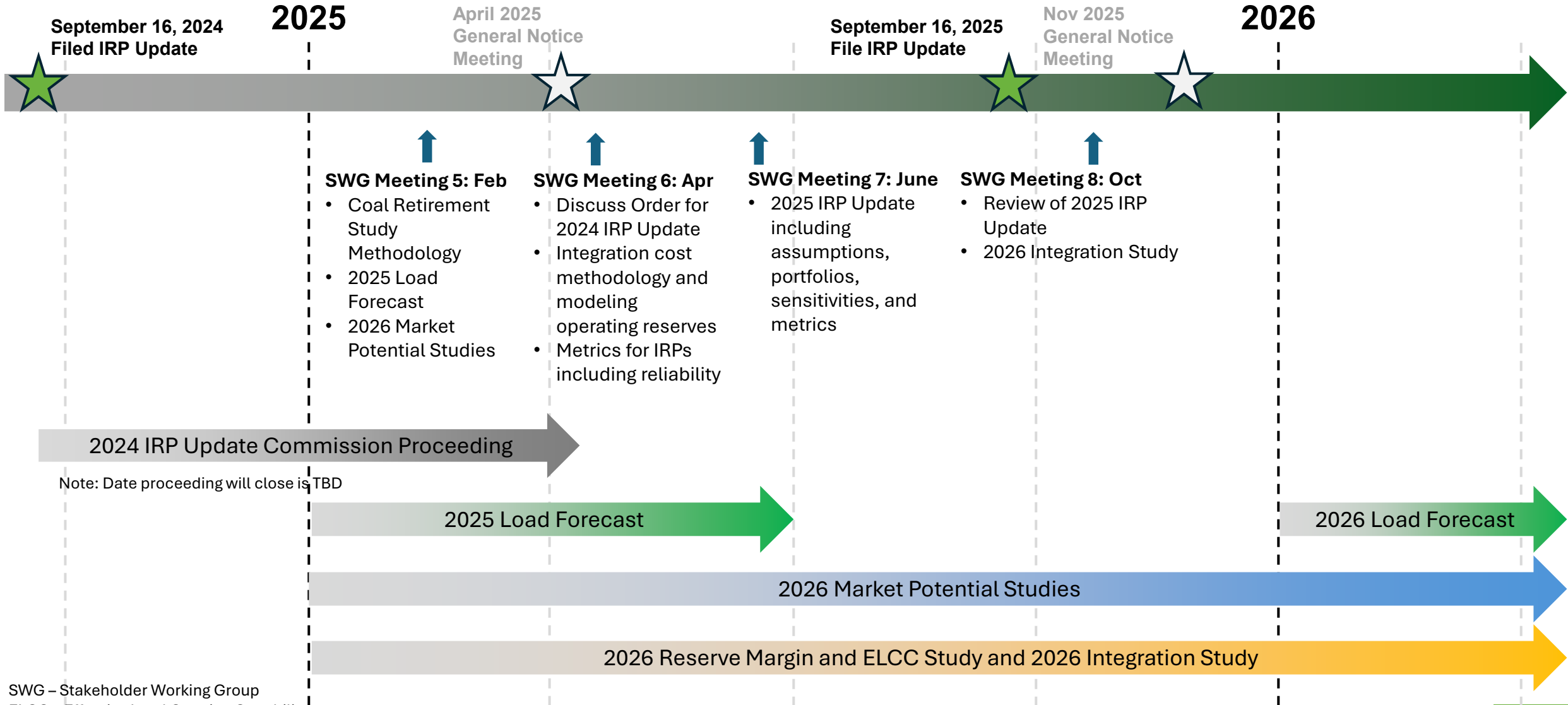
Clay Settle, Manager Resource Planning  
Santee Cooper

# Review of Action Items

Meeting Identified	Action Item (as recorded in meeting summaries)	Progress
Meeting 4	To note the TIA information sharing decision as being an unsatisfactory resolution to Eddy Moore's request.	Done: Noted in the Meeting 4 Summary
Meeting 4	To commit to looking for ways to address the concern of making the General Meeting more accessible and participative and increased attendance.	Done: Improvements are in progress
Meeting 4	To make sure that the potential opportunity to get data centers to pay for the costs associated with retiring the coal plant earlier is further investigated.	Done: The intent of the action item was for Vanry to share their perspective and research with Santee Cooper and the working group
Meeting 4	To provide information regarding detailed process improvements from Duke's North Carolina experience and information the CTPC has put together related to how the MVST process works.	Done
Meeting 4	Stakeholders will send Santee Cooper and working group members feedback they would like the company to consider for how to determine transmission costs and incorporate the costs into the IRP modeling by the end of the year.	Done: Stakeholders provided no additional input
Meeting 4	Discuss internally performing portfolio resource adequacy analysis.	Done: Committed to performing portfolio resource adequacy analysis for the 2026 IRP
Meeting 4	Provide resources for reducing costs of debt for consideration and send to Will – borrowing rates, DOE programs that are relevant.	Done



# Resource Planning Working Schedule



SWG – Stakeholder Working Group  
ELCC – Effective Load Carrying Capability



# 2024 IRP Update Status

Clay Settle, Manager Resource Planning  
Santee Cooper

# 2024 IRP Update Status



## Commission Procedural Schedule

Schedule Item	Date	Days Between
Santee Cooper's IRP Update filed with the Commission	September 16, 2024	
ORS to File a Report regarding Santee Cooper's IRP Update	January 14, 2025	120
Intervenors/Other Parties of Record to File Comments Regarding Santee Cooper's IRP Update	February 14, 2025	31
Santee Cooper's Reply Comments in Response to ORS's Report and All Other Parties' Comments to ORS' Report	March 14, 2025	28
Proposed Order Due	March 24, 2025	10
Commission Issues Final Order	TBD	

# ORS and Intervenorors

- Docket 2024-18-E for the 2024 IRP Update
  - <https://dms.psc.sc.gov/Web/Dockets/Detail/118785>
- ORS Report and Recommendations
  - Filed 1/14/2025
  - <https://dms.psc.sc.gov/Attachments/Matter/5eafca10-5afa-46d0-8e55-68987e848b9b>
- Intervenor Comments and Recommendations
  - Filed 2/14/2025
  - <https://dms.psc.sc.gov/Attachments/Matter/f2cccbe9-56e8-4273-aa10-1f5aa8757210>



Break





# Coal Retirement Methodology

Clay Settle, Manager Resource Planning, Santee Cooper  
Bob Davis, Executive Consultant, nFront Consulting

# Coal Retirement Methodology Discussion



- Santee Cooper plans to retire Winyah Generation Station upon the availability of replacement capacity and the ability to reliably serve system load
- Santee Cooper proposes to evaluate Cross Generation Station Retirement through scenarios
- Santee Cooper proposes to evaluate select years over the study period resulting in a cost curve across the scenarios that will indicate the value of continuing to operate or retire the Cross Generation Station

# Initial Study Design Concepts

- **Analytics**

- Model chosen retirement date and/or optimized portfolios with date certain retirements (e.g., 2035, 2040, 2045)
- Assess transmission investment cost impacts
- Explore sensitivities as necessary to understand impacts of key uncertainties

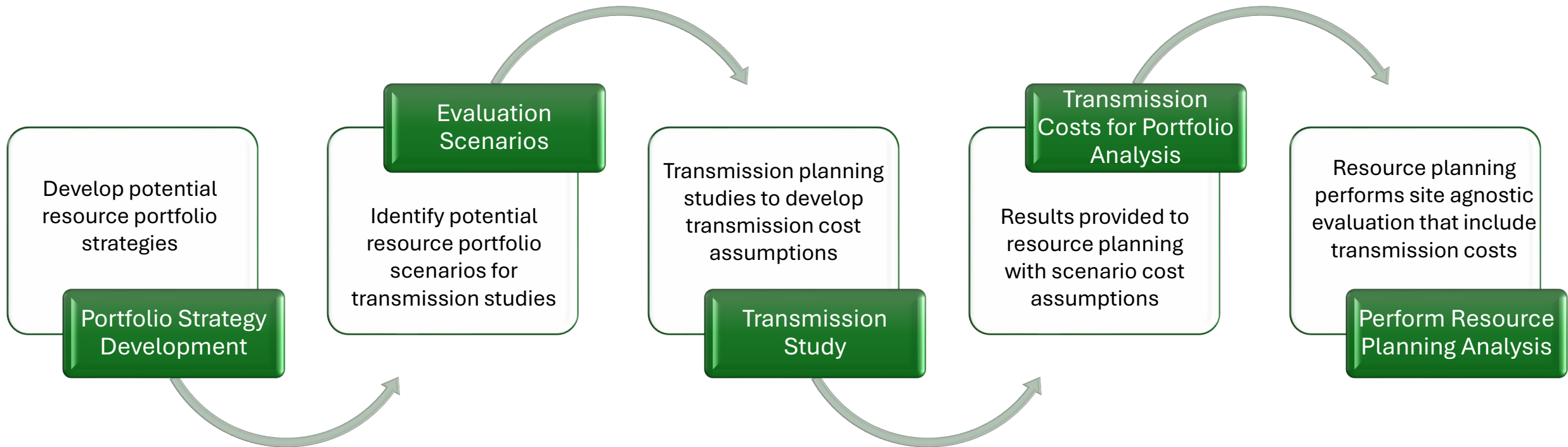
- **Initial scenario concepts**

- Baseline (no retirement during study period)
- Cross Retirement (retire full plant, retire Cross Units 1&2)
  - Unconstrained capacity expansion
  - No gas generation after a specific date (e.g. 2035) vs. no gas generation but allow peaking combustion turbines after that date
  - Small Modular Reactor (SMR) replacement



# Cross Retirement Methodology Discussion

The methodology will utilize the typical process for establishing portfolio scenarios, requesting transmission studies, and resource planning



- **Cross Retirement Study Schedule**
  - Transmission Study Scenario Development: January - March 2025
  - Transmission Studies: March - August 2025
  - Cross Retirement Evaluation: September 2025 - March 2026
- **Potential areas for Stakeholder feedback**
  - Scenario and sensitivity design
  - Technologies to consider
  - Others?



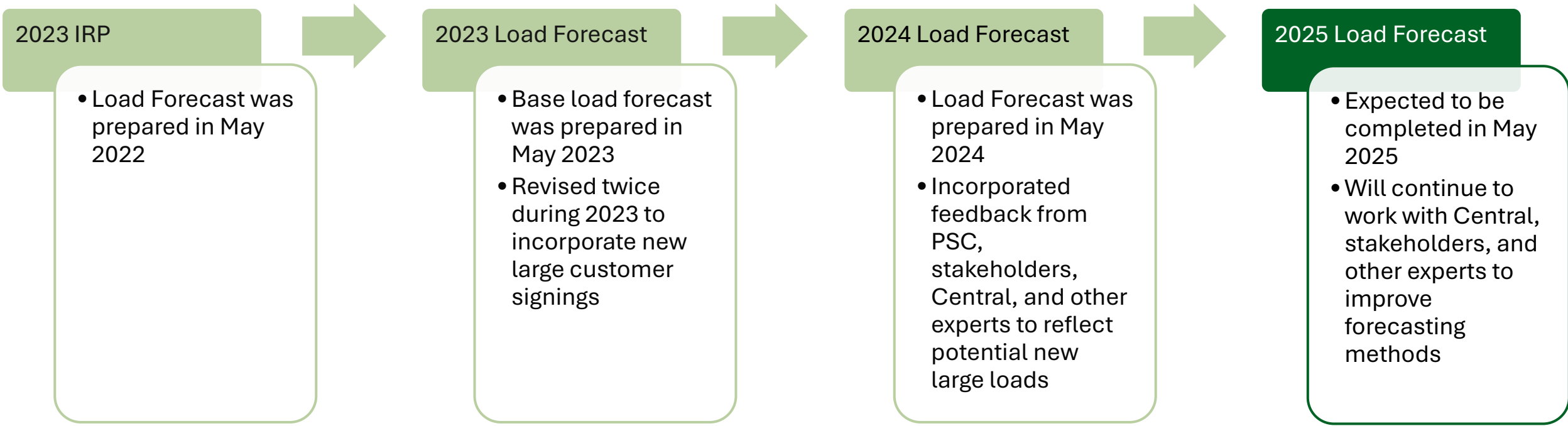
Break





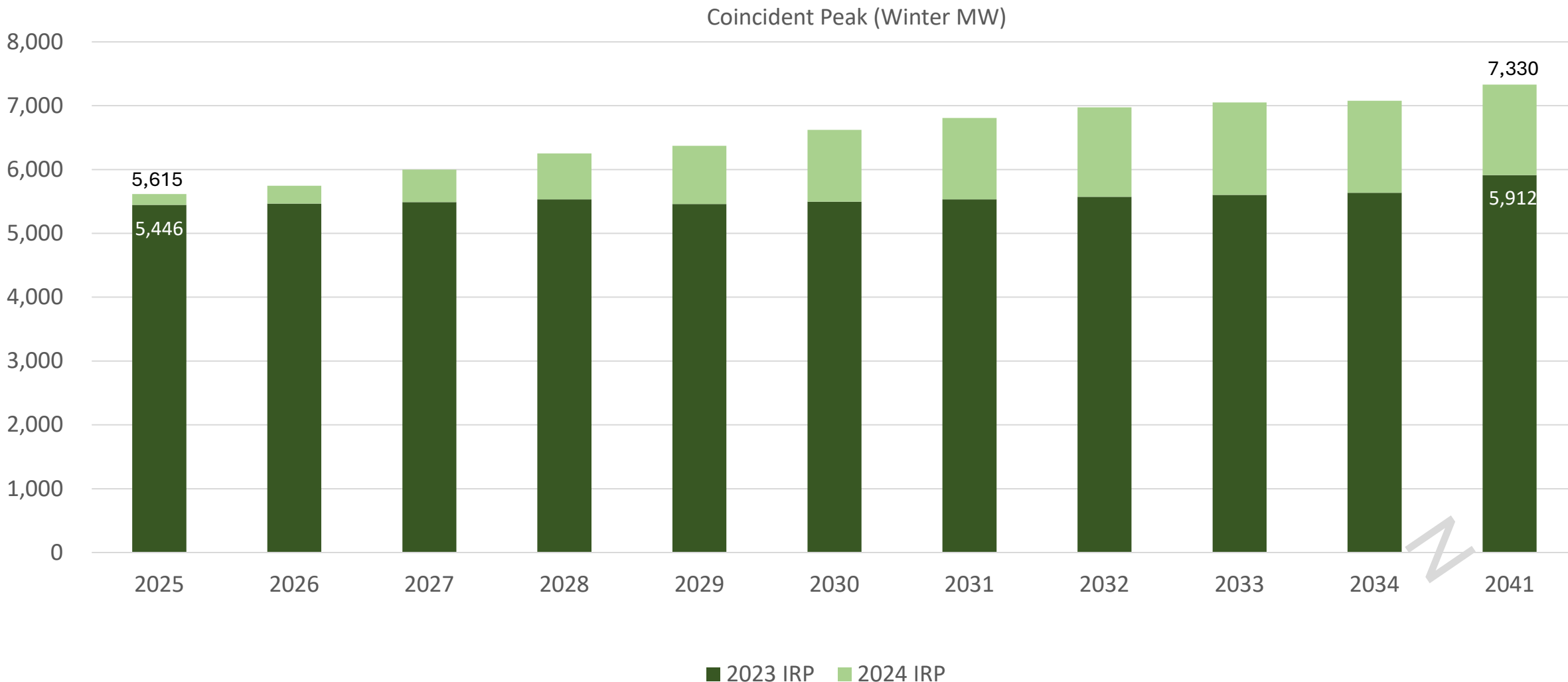
# 2025 Load Forecast

Greg McCormack, Director Financial Forecast  
Santee Cooper



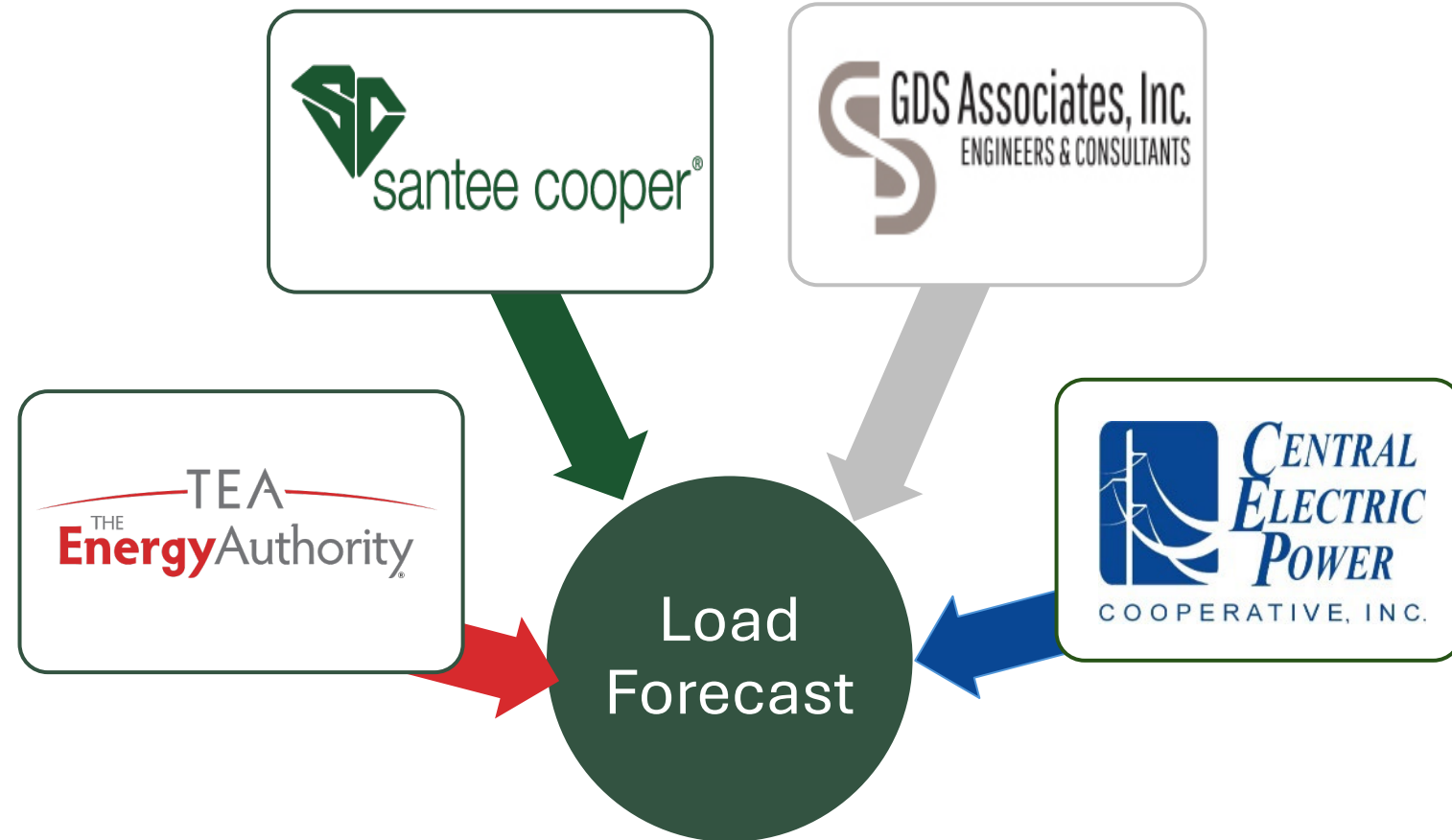
- Base load forecast is currently in development
  - Evaluating assumptions and methodologies
- 2025 Load Forecast will be basis for 2025 IRP Annual Update

# Load Forecast | 2024 Update vs 2023 IRP



1 - Inclusive of losses and existing DSM; exclusive of future DSM

- The corporate load forecast projects the energy and peak demand needs of our customers.
- Development is a collaborative effort with input from various experts and stakeholders



Class	Customer Segment Composition	Originator
<b>Distribution System Residential and Commercial</b>	<ul style="list-style-type: none"> <li>Approximately 214,000 direct served accounts, comprising 15% of system energy</li> </ul>	GDS
<b>Industrial</b>	<ul style="list-style-type: none"> <li>31 large industrial customers served directly by Santee Cooper, comprising 23% of the system energy</li> </ul>	Santee Cooper
<b>Central Member Cooperative</b>	<ul style="list-style-type: none"> <li>Wholesale customer serving 19 distribution cooperatives, comprising 60% of system energy</li> </ul>	Central
<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>Off-system sales comprise 2% of system energy</li> </ul>	Santee Cooper, GDS, and Customer

*Note: Percent based on 2024 IRP forecasted system energy.*

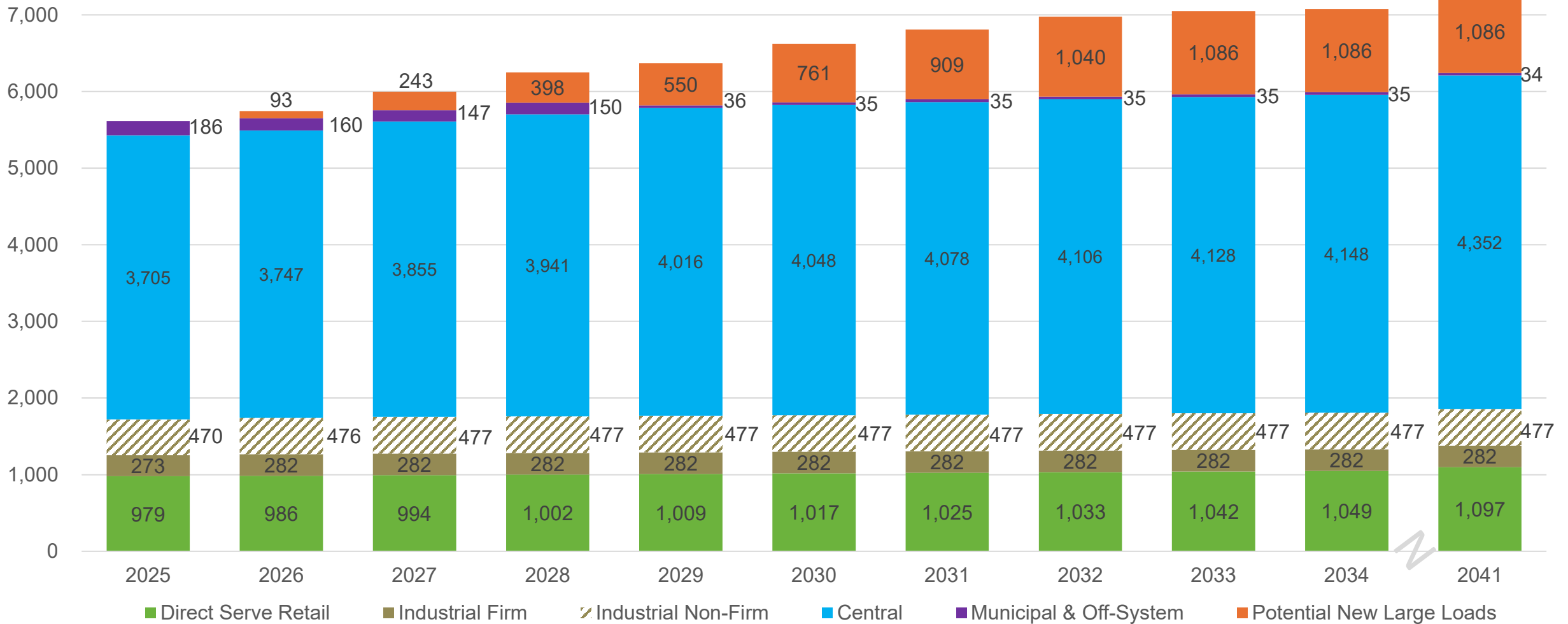


Class	
<b>Direct Serve - Residential and Commercial</b>	<ul style="list-style-type: none"><li>• Statistically adjusted end-use models</li><li>• Refined through discussion with distribution system staff</li><li>• Post-modeling adjustments for electric vehicle and rooftop solar impacts</li></ul>
<b>Direct Serve – Industrial (Existing Customers)</b>	<ul style="list-style-type: none"><li>• Basis is contractual agreement and historical consumption</li><li>• Refined using input from customers regarding future operations</li></ul>
<b>Central Member Cooperative</b>	<ul style="list-style-type: none"><li>• Prepared by Central staff</li><li>• Statistically adjusted end-use models</li><li>• Refined through discussion with local Cooperatives</li></ul>
<b>Off-system and Municipal Sales</b>	<ul style="list-style-type: none"><li>• Various methods depending on customer</li></ul>
<b>Potential New Large Loads</b>	<ul style="list-style-type: none"><li>• Large loads that are unsigned with Santee Cooper or Central Cooperatives but pose a substantial chance of doing so are tracked closely</li><li>• Stochastic analysis performed to add a risk adjusted, probabilistic adjustment to the load forecast</li><li>• This captures economic development projects, new data centers, and other large, discrete load changes</li></ul>

# Load Forecast | 2024 IRP Update Load Forecast<sup>1</sup>



Winter CP (MW)



1 - Inclusive of losses and existing DSM; exclusive of future DSM



# 2026 Demand Side Management Market Potential Studies

Steven Roys, Manager Program Development  
Santee Cooper

- Demand Side Management (DSM): Initiatives and programs designed to manage and reduce energy consumption on the customer side of the meter.
- Energy Efficiency (EE) Programs: Objective is to reduce overall energy usage by encouraging customers to upgrade to higher efficiency equipment and/or install other energy-saving measures.
- Demand Response (DR) Programs: Objective is to reduce participants' demand for electricity when Santee Cooper's system demand for electricity is at its highest.

# 2026 DSM Market Potential Studies

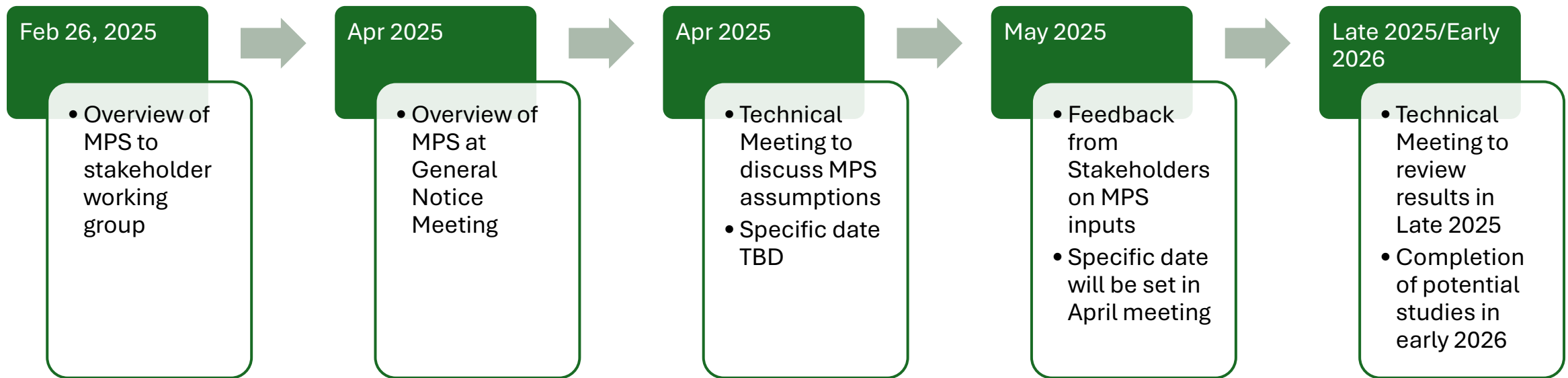


Not Technically Feasible	Technical Potential			
Not Technically Feasible	Not Cost-Effective	Economic Potential		
Not Technically Feasible	Not Cost-Effective	Market Barriers	Achievable Potential	
Not Technically Feasible	Not Cost-Effective	Market Barriers	Budget & Planning Constraints	Program Potential

EPA – National Guide for Resource Planning

# 2026 DSM Market Potential Studies

- We will be completing two separate studies
  - Energy Efficiency study
  - Demand Response study



- Assumptions for April Technical Meeting
  - Cost test methodology
  - Number of scenarios
  - Cost-effectiveness thresholds
  - Measures
  - Incentive thresholds
  - Input data sources
  - External influences



# Meeting Closeout

Stewart Ramsay, Meeting Facilitator  
VANRY Associates



- Review and agreement around action items
- Next steps
  - Vanry will send the meeting summary to members to provide comments
- Next working group meeting
  - Targeting late April 2025
  - If a member would like to present on a topic, let us know
- Next general notice meeting tentatively scheduled for April 3, 2025
- Session review and feedback

# 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

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