

National Association of State Energy Officials

## Electricity Markets Education Initiative

### DERRISC

Developing Education on Resilience, Resource Adequacy, and Integrated Resource Planning in States for Various Market Contexts (DERRISC)

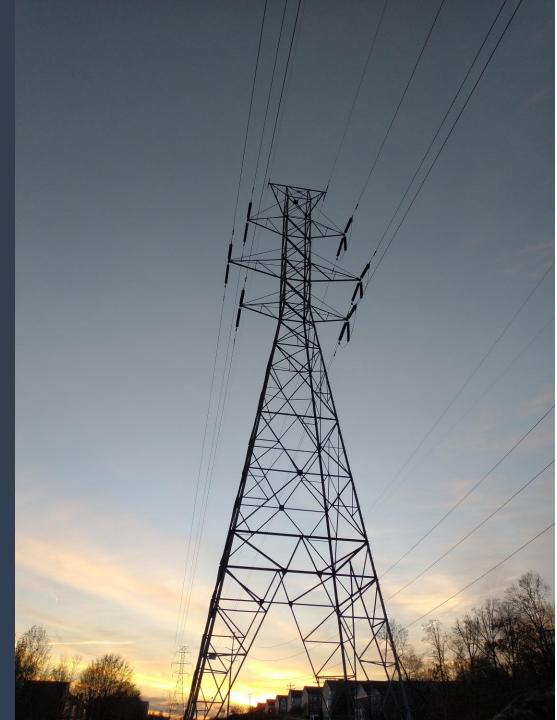
> Southeast Regional Cohort Meeting #1 May 28, 2025



# Agenda

- Welcome and Introductions
- Electricity Markets Education Initiative
- Overview of Markets Discussions in the Southeast
  - Trey Gowdy, Duke University Nicholas Institute
- Participant Poll
- Cohort Feedback
  - Prioritization of Topics
  - Identification of Stakeholders
- Next Steps
  - Next Regional Cohort Meeting Wednesday, July 30, 10amET
  - Workshop Week of August 25, 2025

# Project Overview



## Overview of the Project

A 3-year educational project to provide participating State Energy Offices with information, analysis, and technical support in understanding how resiliency, reliability, regional resource adequacy, and regional planning function within different wholesale electricity market constructs.

To inform and educate key decision-makers on different proposed market structures and resource adequacy constructs in non-RTO/ISO regions and how any market construct implemented in the future could affect state and regional goals

To enable states outside of an RTO/ISO to understand policy decisions made within an RTO/ISO that can have broad regional reliability and resource adequacy implications

### **Project Goals**

To examine how state-level integrated resource planning can be coordinated with broader regional plans to enable states' successes To engage local governments and other stakeholders (such as the private sector and community groups) that State Energy Offices interact with on resilience, reliability, and market issues.

# Project Team and Cohort Structure

NASEO	Technical Advisors	Advisory Group	Modeling Consultant
<ul> <li>Prime</li> <li>Administrative Lead</li> </ul>	<ul><li>Frank Felder</li><li>Marion Gold</li><li>Amanda Ormond</li></ul>	<ul><li>State Direction</li><li>Meets Quarterly</li></ul>	<ul> <li>Subject Matter Experts</li> <li>Analysis Support</li> </ul>

<b>Regional Cohort</b>	Advisory Group Members	Additional State Energy Offices Invited
Southeast	Florida, Kentucky, North Carolina, Tennessee	Georgia, Alabama, South Carolina
West	Arizona, Colorado, Idaho, New Mexico, Montana, Oregon	Nevada, Utah, Washington, Wyoming

# **Regional Cohorts**

- Role of Regional Cohorts
  - convene virtually every other month deepening the topics outlined based on a regional need
  - providing states with a forum to discuss technical and policy issues

<b>Regional Cohort</b>	Advisory Group Members	Additional State Energy Offices Invited
Southeast	Florida, Kentucky, North Carolina, Tennessee	Georgia, Alabama, South Carolina
West	Arizona, Colorado, Idaho, New Mexico, Montana, Oregon	Nevada, Utah, Washington, Wyoming

Overview of Markets Discussions in the Southeast



# **Electricity Markets**

Trey M. Gowdy, Research Lead Duke University | Nicholas Institute for Energy, Environment & Sustainability

NASEO Electricity Markets 5.28.25





### Celebrating 20 Years of Impact

The <u>Nicholas Institute</u> accelerates solutions to critical energy and environmental challenges through actionable research, sustained engagement with decision-makers, and delivery of transformative experiences to empower future leaders.

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Content covered in this presentation are provided for informational purposes only.

### Integrated Resource Planning Filing Intervals and Planning Horizons

By Public Utility/Service Commission/Entity in the Southeast

Integrated Resource Plan Submission Frequency



Some dates may be approximate / based on most recent activities.

Chart: Nicholas Institute 2025 • Created with Datawrapper

### SUMMARY OF the CONTINUUM OF COMPETITION

- Offer consumer choice, third-party participation options.
- Requires changes to cost-of-service model but leaves the general architecture intact.
- Require VIUs to purchase generation from other entities.
- Alternatively, require VIUs to demonstrate self-generation is lowest cost.
- Share resources through existing power pools across VIUs, rural coops, and municipal utilities in the region.
- Can leverage regional resources to meet demand.
- Operate an Energy Imbalance Market (EIM) through a nearby power market for voluntary participation by southeastern utilities.
- Participating utilities can offer reserve transmission capacity for use by the grid operator.
- Encourage or direct VIUs to form or join an RTO/ISO.
- Grid operator controls transmission and dispatches utility, merchant resources based on cost.
- Restructure utilities.

A

B

C

D

E

F

• Most restructured states sit in the footprint of an organized market, but a utility need not be restructured to join a market.

#### Generation Transmission Distribution **Retail Customers** Brattle 2023 study assessing market 品も activities in SC **Resource Operations Interregional Energy Trade Distribution System Customer Deliveries** • Utility: Manages · Utilities: Manages • Utility: Plans & · Utility: Sources all generation & generation & builds distribution electricity supply Status Quo: transmission transmission scheduling and bills system Vertically scheduling • SEEM: Utilities run & customers for Integrated participate in SEEM, to associated cost Supply Investments support enhanced Utility • Utility: Conducts bilateral trade integrated planning. **Transmission System** Builds and owns · Utility: Plans & builds resources bulk transmission **Resource Operations Interregional Energy Trade** • JDA, EIM or RTO: · JDA, EIM or RTO: Wholesale Uses regional Maximize benefits of regional trade coordination or Market **Transmission System** marketplace to Reforms schedule generation RTO: Supports interand transmission regional transmission planning **Supply Investments** Resource • IPPs: Can develop Planning & new resources Competitive (competing on price) Investments **Customer Deliveries** Customers: Select Retail retail provider to Market procure needed supply (compete Reforms on price, green, or other values)

Source/Notes: This figure illustrates which roles in each section of the electricity value chain are changed by each area of reform. Blank areas indicate where there are no or minimal changes to the existing industry structure under a given reform area. JDA = Joint Dispatch Authority.

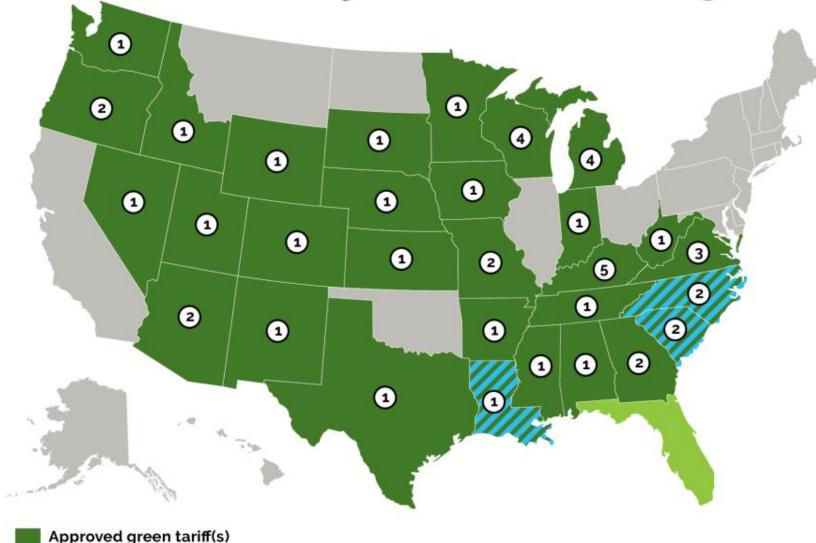
#### FIGURE 3: CATEGORIES OF POTENTIAL ELECTRICITY MARKET REFORMS EXAMINED IN THIS STUDY

Brattle, 2023

## Examples of market activities / policies in SE

- "Every southeastern state presently authorizes municipalities to form their own utility"
  - As of 2020, in six Southern states, more than 10% of electricity customers are served by municipal utilities or rural electric cooperatives (also known as electric membership corporations) Options on a Continuum of Competition for the Southeastern Electricity Sector (Konschnik and Chen 2020)
- SC General Assembly commissioned Assessment of Potential Market Reforms for South Carolina's Electricity Sector study in 2023
  - "Brattle consultants find annual savings over \$300 million from participation in a regional wholesale market" Brattle, 2023
- GA customers with manufacturing or commercial loads >900 kW have onetime choice in electricity supplier (since 1973) Georgia Public Service Commission
- Time-of-Use and/or Electric Vehicle Rates often available for residential and non-residential customers for much of the region (details vary)

### States with Utility Green Tariff Programs



- Approved green tariff(s) and green tariff pending approval
- Green tariff pending approval
- Customer program(s) that function like a green tariff
- (#) Number of utilities in the state with a green tariff

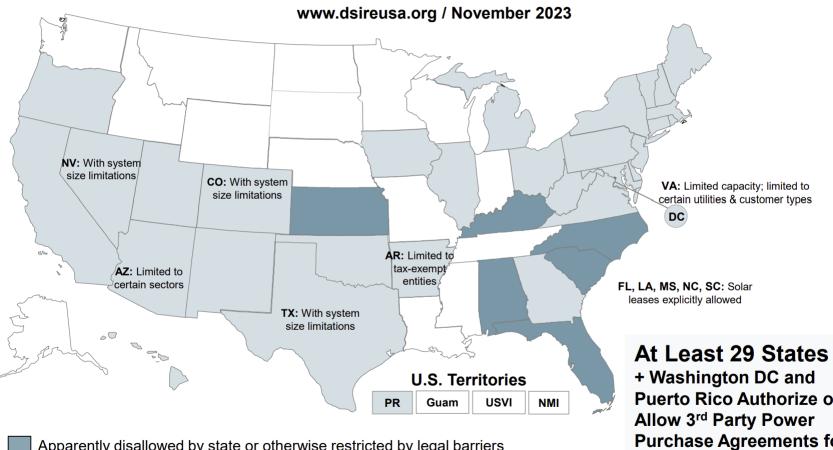
#### **U.S. EPA Green Power Partnership**

Map adapted from Clean Energy Buyers Association, U.S. Utility Green Tariff Report: January 2023 Update





### 3<sup>rd</sup> Party Solar PV Power Purchase Agreement (PPA)



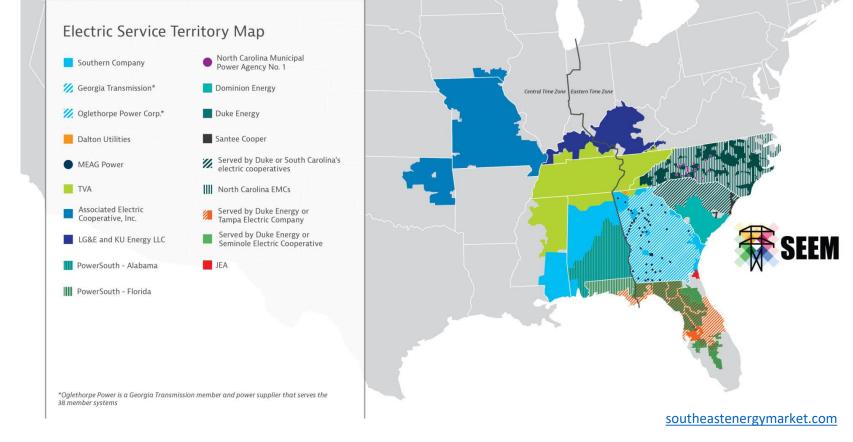
Apparently disallowed by state or otherwise restricted by legal barriers

Authorized by state or otherwise currently in use, at least in certain jurisdictions

**Puerto Rico Authorize or Purchase Agreements for** Solar PV

Status unclear or unknown

### Southeast Energy Exchange Market



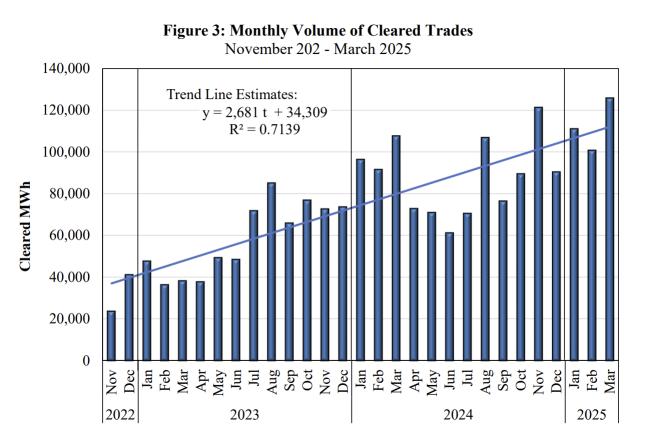
 "SEEM is a unique and thoroughly new approach to enhancing the existing bilateral market. The SEEM platform facilitates sub-hourly, bilateral trading, allowing participants to buy and sell power close to the time the energy is consumed, utilizing available unreserved transmission. Participation in SEEM is open to other entities that meet the appropriate requirements." (<u>SEEM</u>)

### • Started 2022

- <u>Reaffirmed by Federal Energy Regulatory Commission</u>, March 2025
  - "Order No. 888 requires public utilities that are members of loose power pools to file a joint system-wide OATT and to establish open, nondiscriminatory membership provisions that "allow any bulk power market participant to join, regardless of type of entity, affiliation, or geographic location." We find that SEEM does not contain any discounted or special terms and therefore is not a loose power pool."

### Data available from SEEM

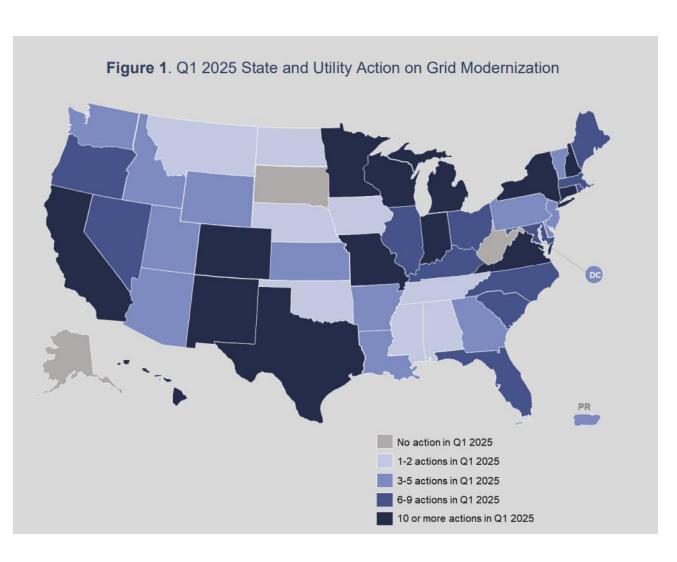
- Public Monthly Information Reports
- Public Daily Information Reports
- Public Hourly Information Reports
  - Posted (15) minutes after applicable hour
- Public Auditor Reports
  - Generated by SEEM Auditor
  - March 2025 is most recent monthly report

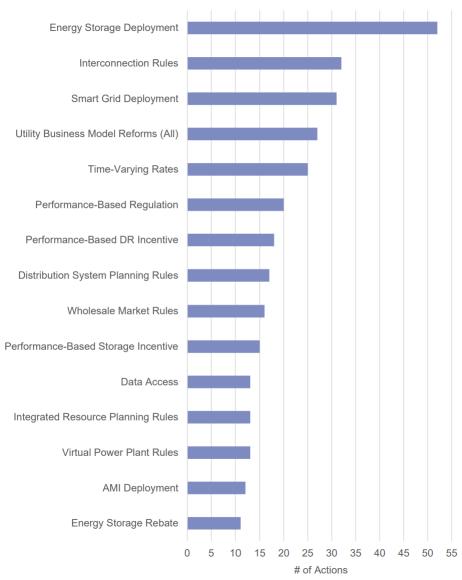




Monthly Audit Report on the Southeast Energy Exchange Market for March 2025 (Potomac Economic)

#### Figure 3. Most Common Types of Actions Taken in Q1 2025





The 50 States of Grid Modernization: Utilities Pursue Tools for Demand Management and Grid Flexibility in Q1 2025 (NC State University, 2025)

50 States of Grid Modernization Q1 2025 Quarterly Report Executive Summary (NC State University, 2025)

### What's Next from the Nicholas Institute

- Power Sector Competitiveness Dashboard
  - Will provide set of metrics that measure power sector competitiveness in the Southeast
  - Metrics to include factors like consumer choice, the role of independent entities, policy implementation, and the use of regional resources
  - Consumers include residential and commercial customers, each with their own needs
  - Initial launch expected by Q4 2025

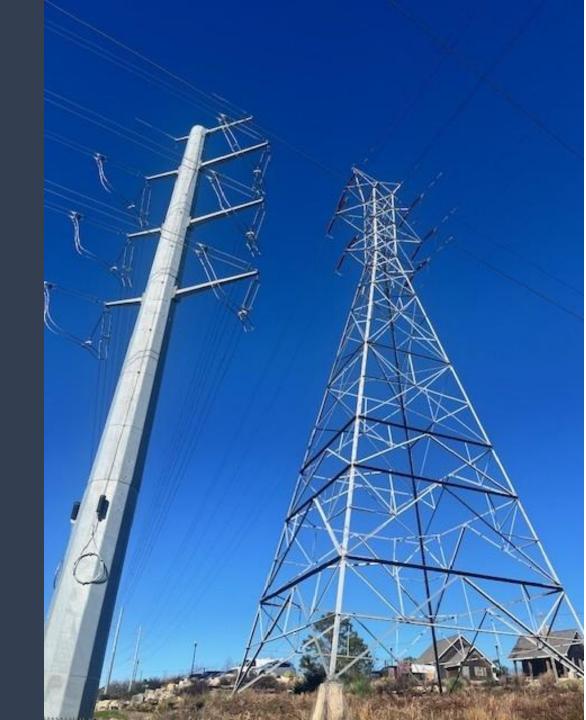




### Appendix: Other Policy Reviews / Resources

- <u>Chen, J. Evaluating Options for Enhancing Wholesale Competition and</u> <u>Implications for the Southeastern United States. NI PB 20-01.</u> <u>Durham, NC: Duke University.</u>
- <u>Competition Scorecard</u>
- <u>SPOT State Policy Opportunity Tracker for Clean Energy</u>

# Participant Poll

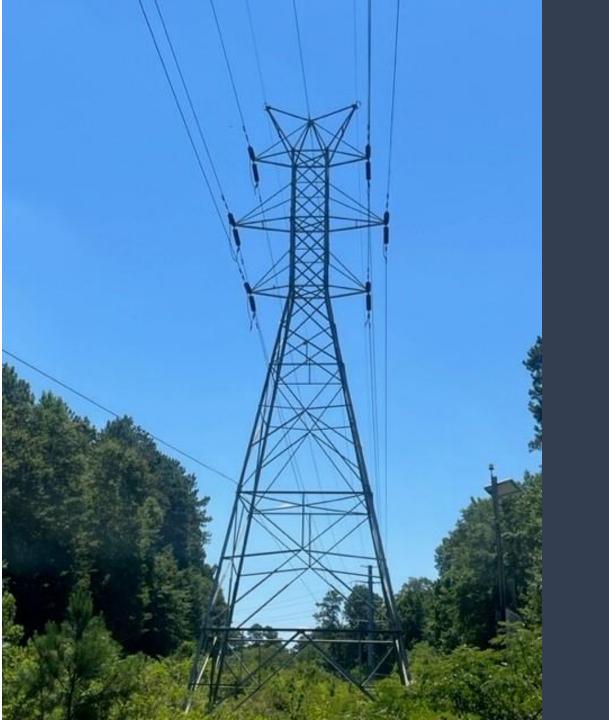




## Cohort Feedback

## Whiteboard Exercise

- Prioritization of Topics
- Identification of Stakeholders



# Next Steps

### Save the Dates

- FERC Commissioner-led Technical Conference Regarding the Challenge of Resource Adequacy in RTO and ISO Regions Wednesday-Thursday, June 4-5, 2025
- Next Regional Cohort Meeting Wednesday, July 30, 10am
- Electricity Markets Education Initiative Workshop - In-Person Week of August 25, 2025

## Thank You!

Kirsten Verclas kverclas@naseo.org

Catherine Reed creed@naseo.org

Camille Norton cnorton@naseo.org

