SEIA Solar Energy Industries Association®

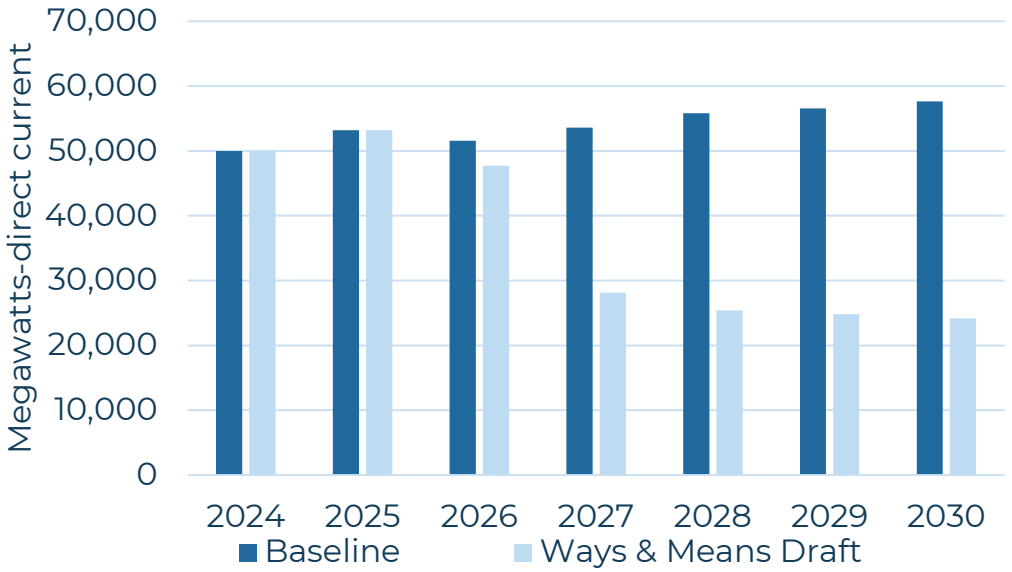
Impact of the Ways and Means Committee Proposal: An Economic and Energy Boom Upended

Updated: 5/16/2025

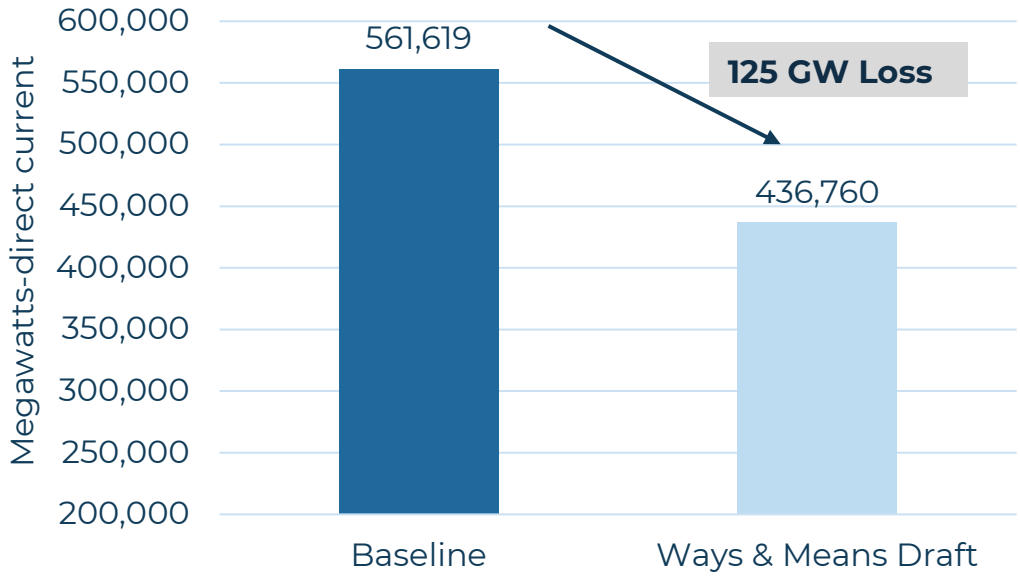
Policies in House Ways and Means Proposal Could Cost **125 GWdc** of Solar Capacity by 2030

- At a time when there are no other viable options to meet growing demand for electricity.
- Eliminating 25D would cost 9.5 GW over 5 years on top of losses from other credit changes.

Annual Solar Installations



Cumulative Solar Generating Fleet in 2030



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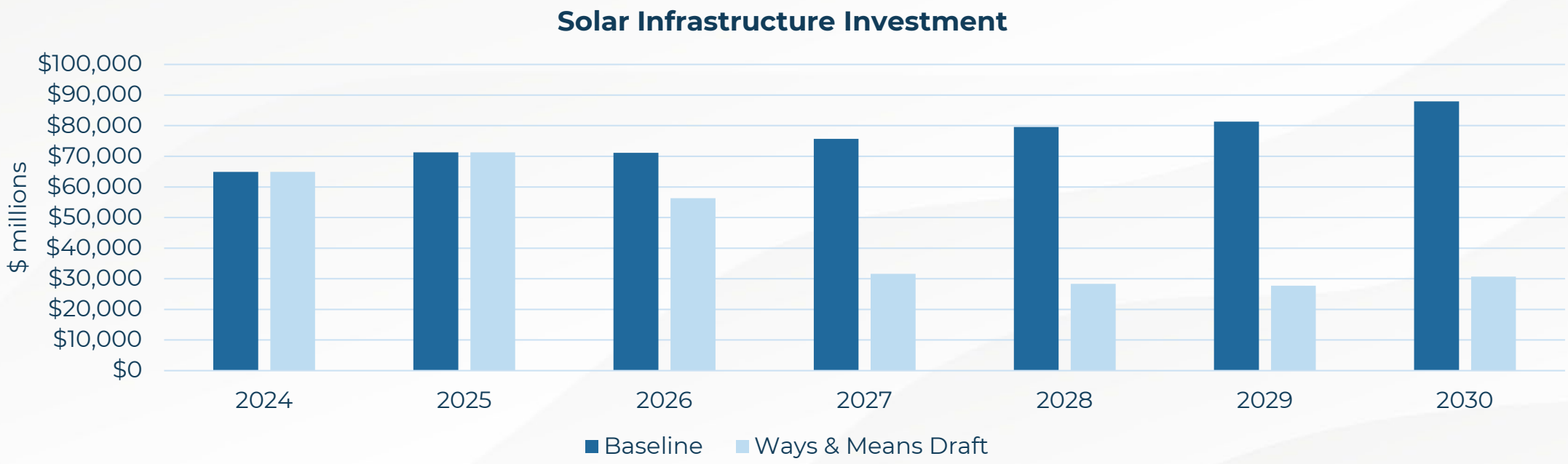
House Ways and Means Proposal Could Reduce Energy Infrastructure Investment by **$220 Billion by 2030**

- Lack of sufficient energy will also hold back investment in energy-intensive industries, like manufacturing and AI.



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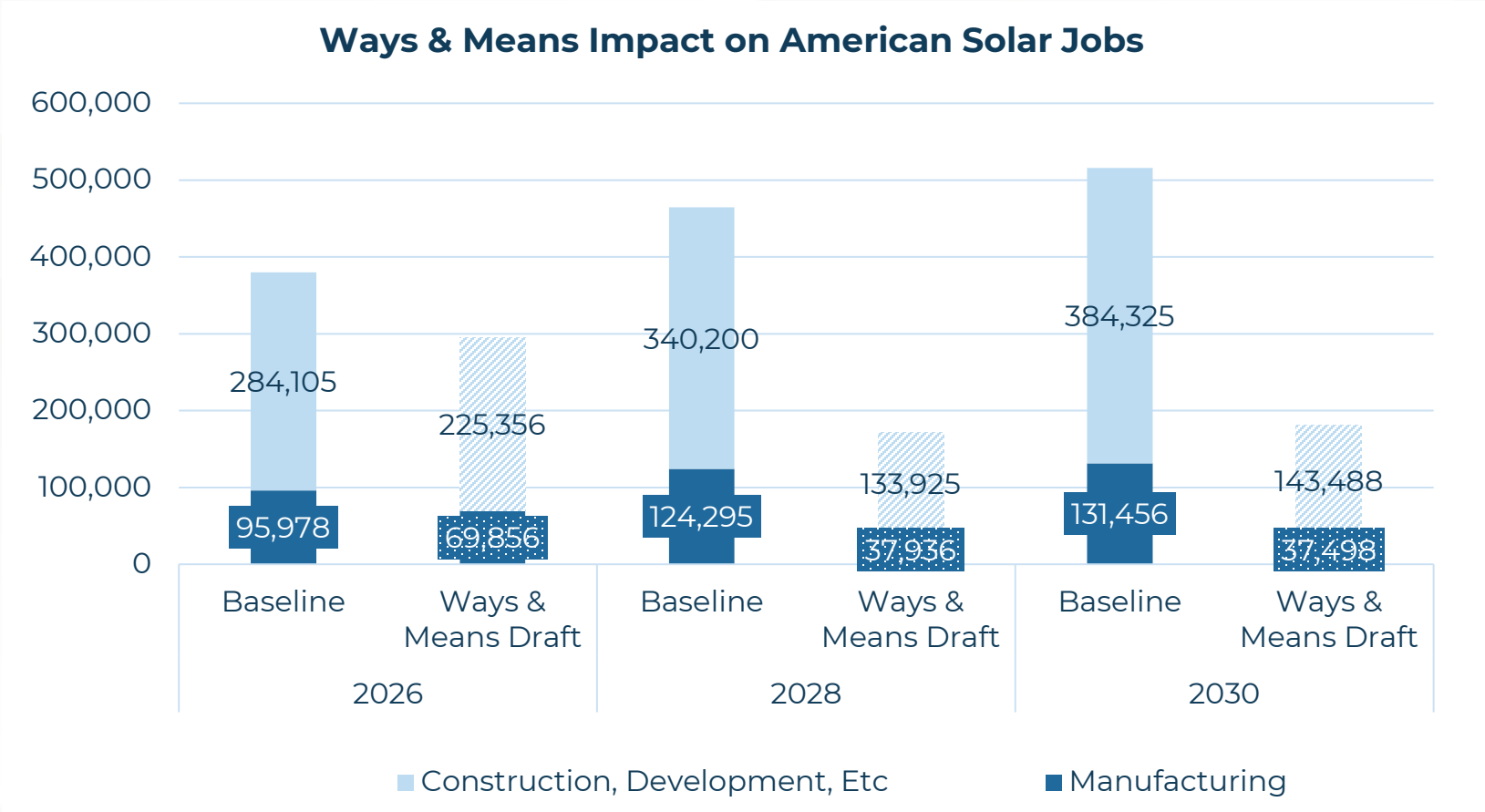
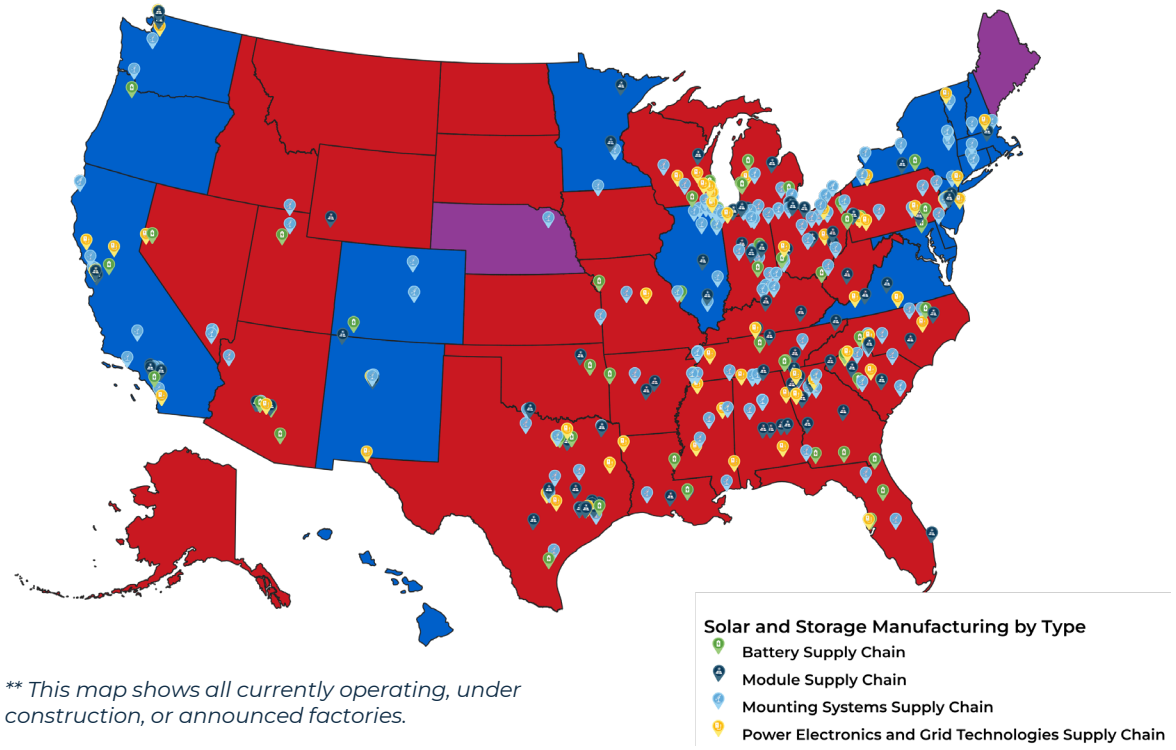
House Ways and Means Proposal Could Cost **292,000 Industry Jobs** by 2028

- 86,000 manufacturing jobs at risk compared to baseline in 2028.
- 206,000 construction, development, distribution, O&M, etc. jobs at risk compared to baseline in 2028.
- In 2026, the early termination of Section 25D costs 84,000 jobs.

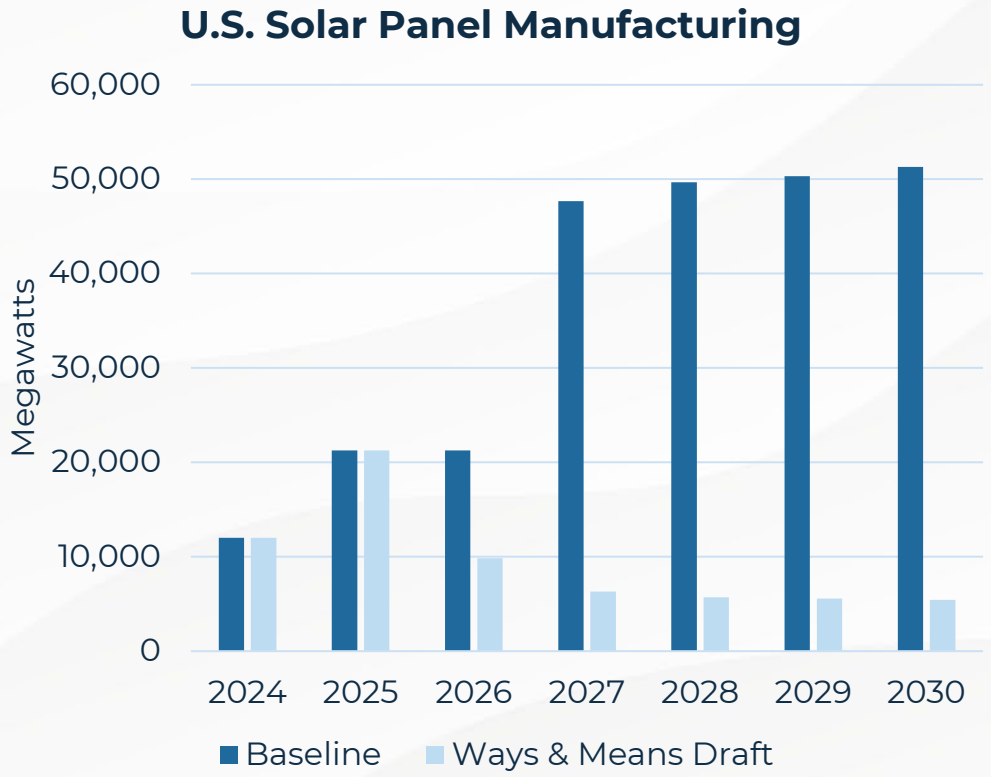


Solar and Battery Manufacturing Renaissance **at Risk**

- Operating, under construction and announced factories face different levels of risk under Ways & Means draft.
- Systems using 25D typically use domestic panels and inverters.



*** This map shows all currently operating, under construction, or announced factories.*



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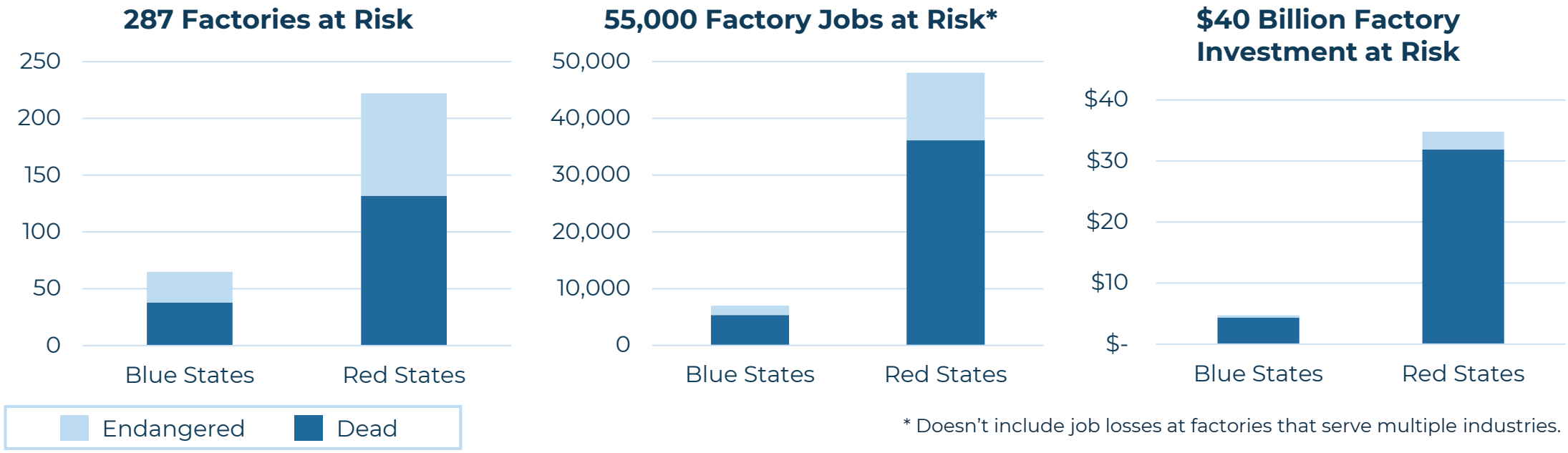
287 Factories, Mostly in Red States, At Risk of Closing or Never Coming Online

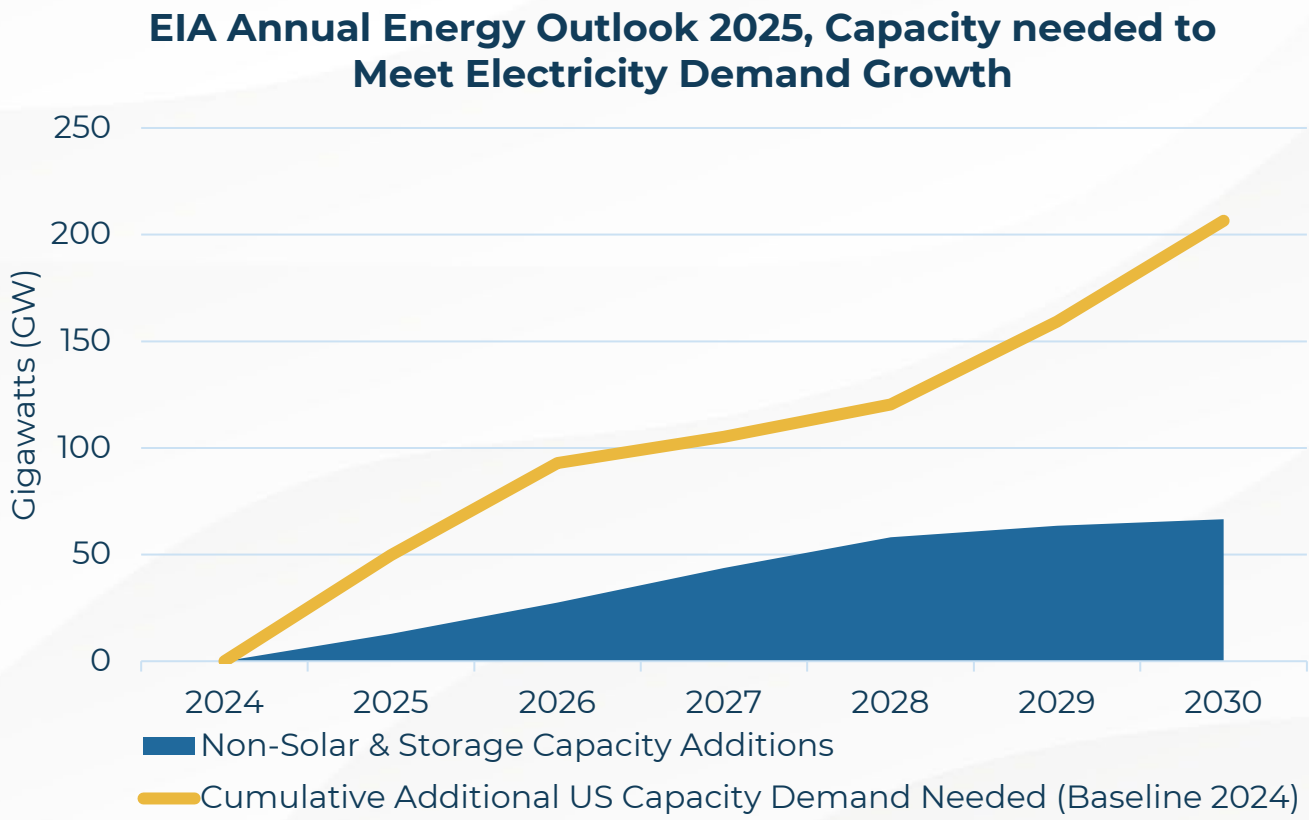
- Factory by factory analysis for factories that are operating, under construction or under development.
- Restrictions on materials, subcomponent, and component sourcing:
  - Applied to 45X directly threatens many factories
  - Applied to 48E indirectly threatens even those factories that are not dependent on restricted inputs because customers will not be able to source all necessary project components to enable tax credit financing and documentation risk will be unacceptably high.



* Doesn't include job losses at factories that serve multiple industries.

The U.S. needs 206.5 GW of additional energy capacity by 2030; **only with solar and storage can we meet demand**

- U.S. energy demand is growing rapidly. Over the next 5 years, U.S will need an additional 206.5 GW of additional capacity
- Solar and storage, with current policy conditions, is already in development and expected to make up 73% of capacity additions between 2025-2030.
- Current solar build out will allow the U.S. to meet and exceed its growing energy demand needs.
- Other forms of energy alone cannot meet U.S. demand. Solar and storage are necessary for the U.S. to prevent a devastating energy shortage and meet the rising energy demands of new homes, new businesses, and new datacenters.



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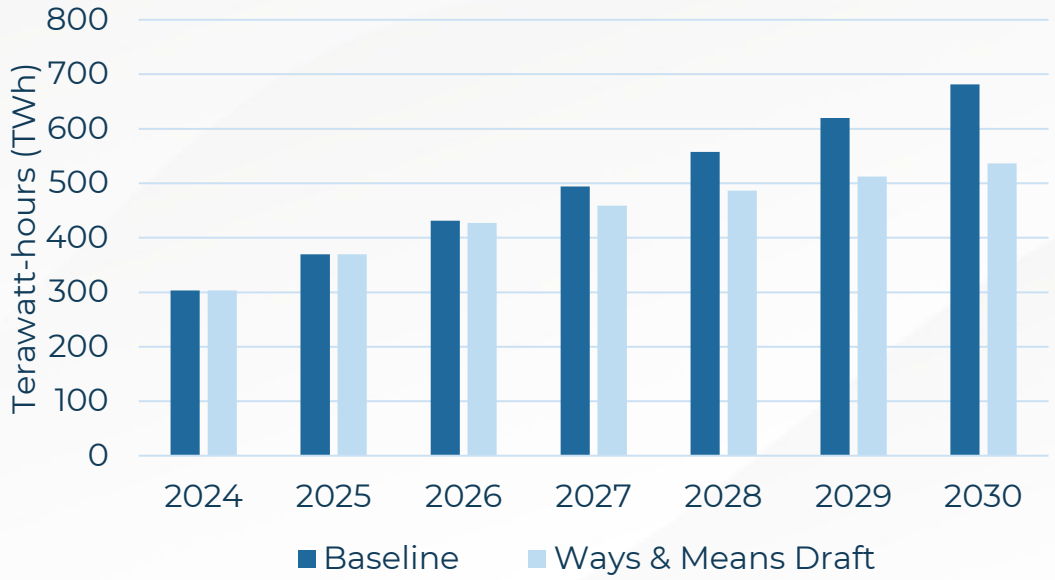
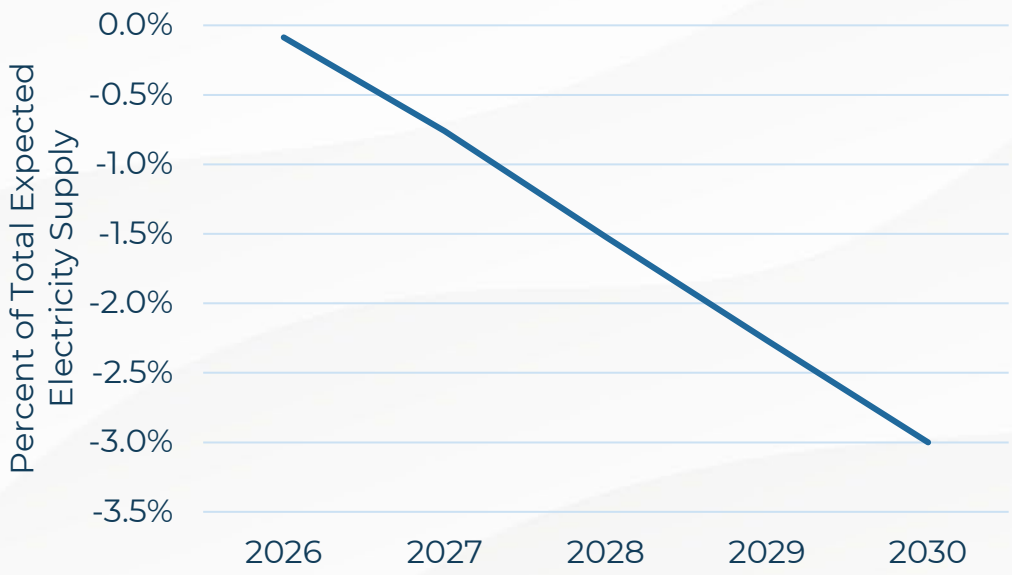
Derailing Solar Gives China the Edge in **Global AI Race**

- AI datacenters use massive amounts of energy, and no other technology is ready to step in. Solar is the way.
- The House Ways and Means proposal could cost 145,000,000 megawatt-hours of solar generation
  - 3% of expected U.S. electricity demand in 2030
  - More electricity than Pennsylvania used in 2023

Solar Electricity Generation



U.S. Electricity Supply at Risk



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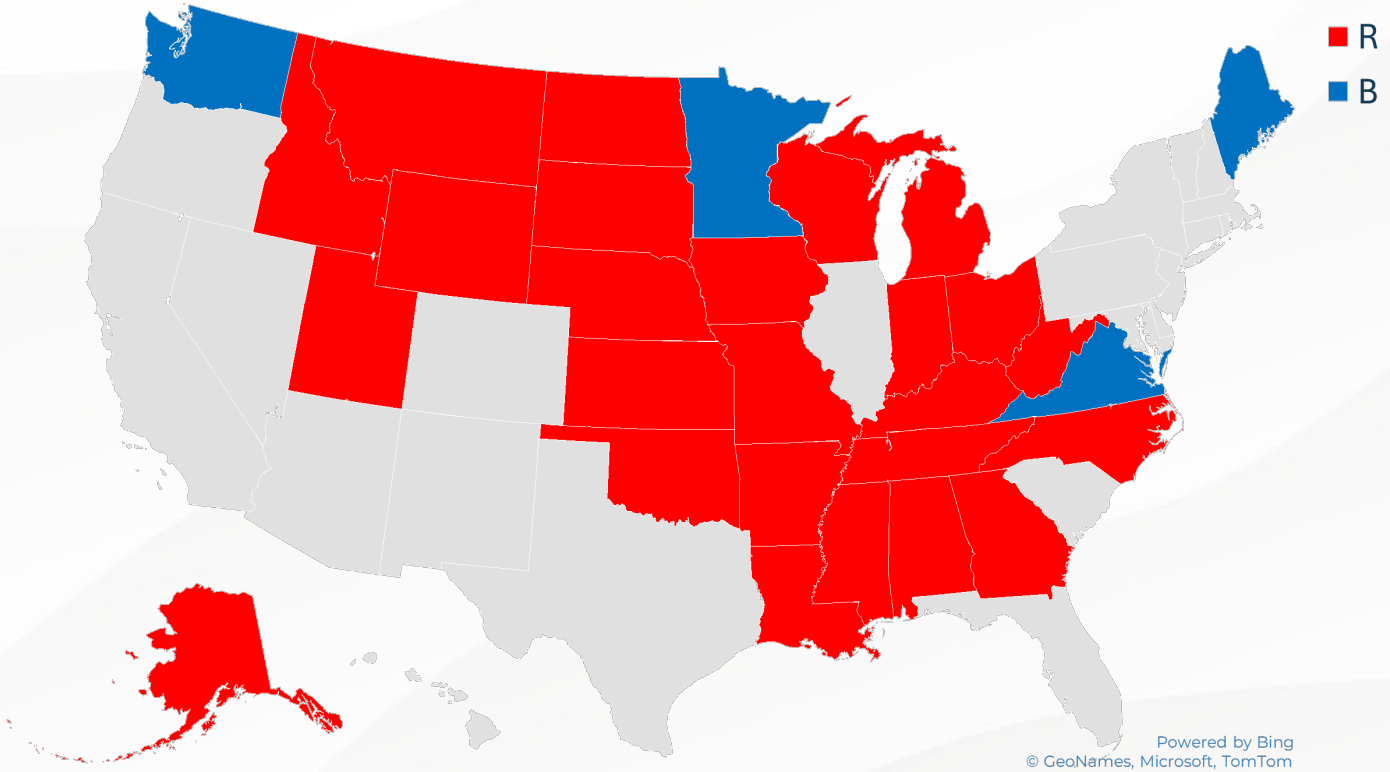
Eliminating 25D **Hurts Homeowners** in Red States

- The Section 25D residential ITC helps families take control of their energy bills, gain resilience and independence with solar and batteries.
- This is primarily used by middle-class homeowners who tend to buy domestic.

States Without Solar Leasing



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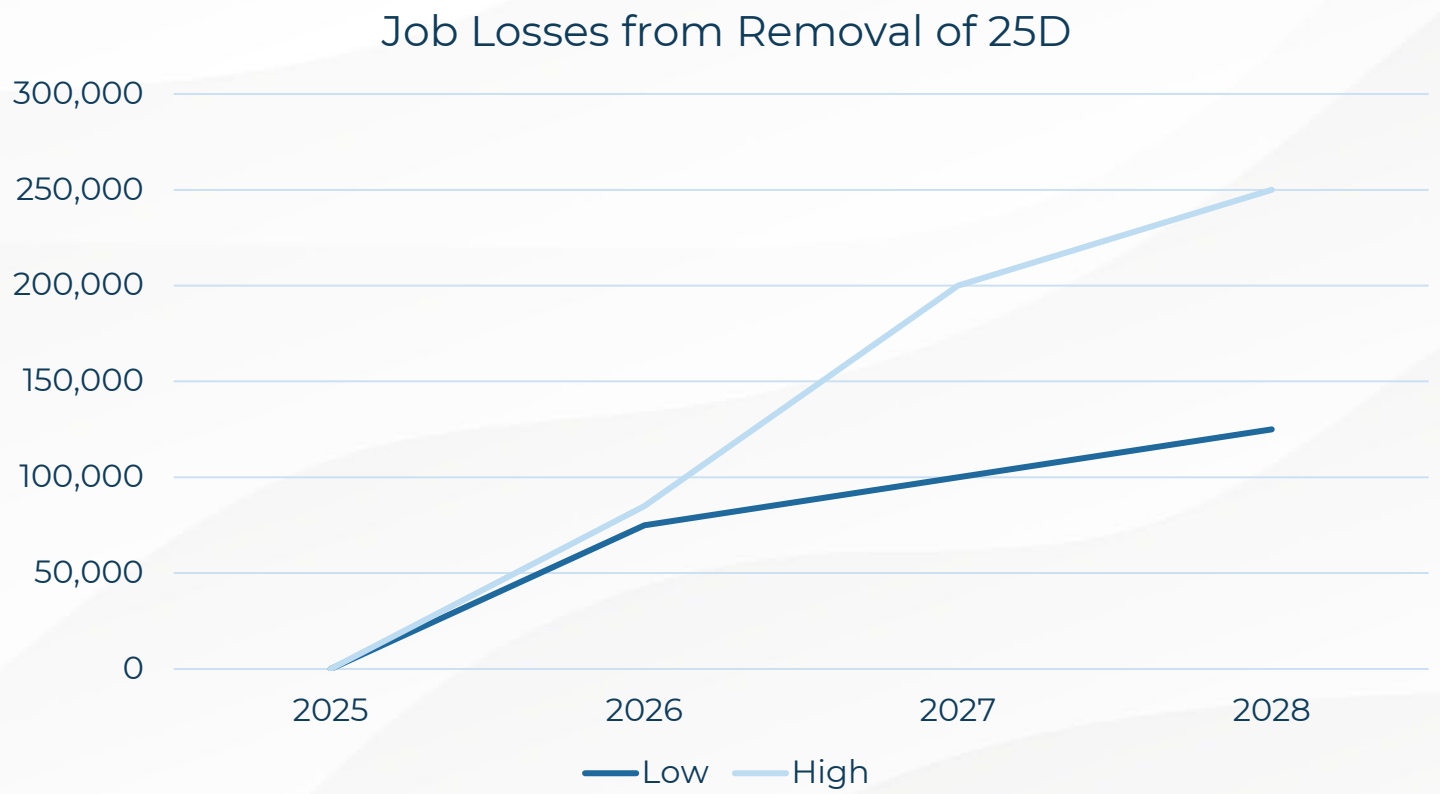
Removal of 25D alone will result in a minimum of 75,000 – 85,000 fewer jobs by 2026 and up to 250,000 by 2028

- Hitting the residential solar sector the hardest, removal of 25D will cause lose of jobs in sales, installation, operations and maintenance, and manufacturing due to decrease in solar installations
- Installations that use 25D tend to buy domestic panels and inverters.



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Methodology

Deployment Scenarios

- SEIA analyzed draft bill language and evaluated year-by-year impacts to each market segment based on timelines in the bill. These drive estimates of deployment, employment, investment, generation, and manufacturing volumes.

Manufacturing/Factory Impacts

- Based on deployment impact and component, subcomponent, and mineral restrictions in the bill, SEIA evaluated prospects for ability to construct a project eligible for tax credits using domestic components. SEIA then evaluated costs for each type of component to determine competitiveness and evaluated factory viability based on overall demand levels resulting from restrictions.

SEIA Solar Energy Industries Association®

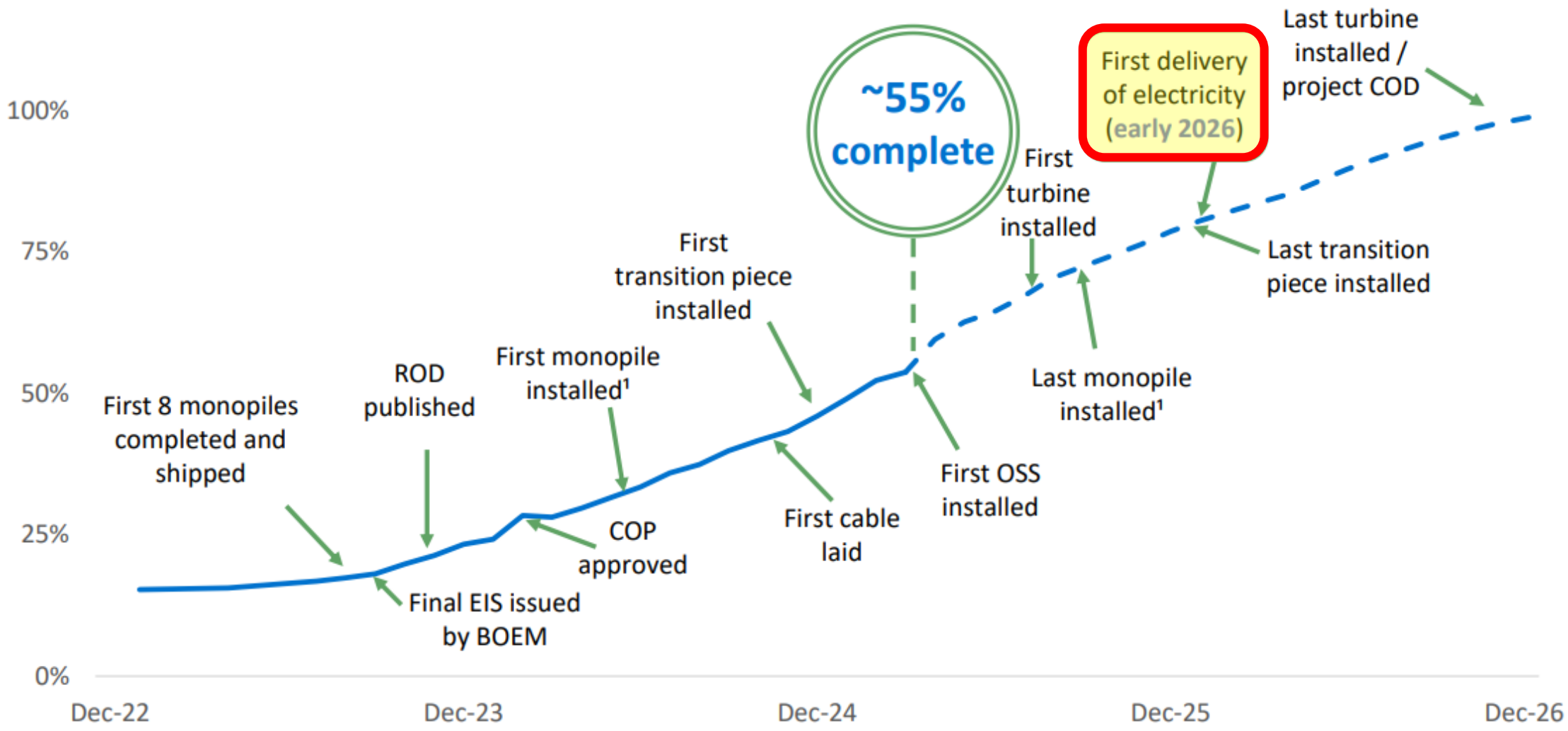
Commission on Electric Utility Regulation

May 22, 2025

Bill Murray
SVP—Corporate Affairs &
Communications, Dominion Energy

Dominion Energy®

Coastal Virginia Offshore Wind



Potential Tariff Implications

- Tariffs impact most materials/commodities/products, but the situation is fluid; significant uncertainty and actual/potential response under current tariff regime

- **Country-specific tariffs and other relevant measures**
  - Canada/Mexico: tariff on non-USMCA excepted goods; separate exception for certain energy products
  - Tariffs on most countries, including European Union and China (10% universal rate); some earlier tariffs have been paused or altered while new trade agreements are negotiated (such as China)
  - 25% tariff on imported steel/aluminum: stackable with Canada and Mexico only (with some exceptions to the stacking via auto parts Executive Order); other countries do NOT stack with steel and aluminum
  - Investigations list: copper, semiconductors, lumber, etc.; expect additional products to be added
  - Fees to be imposed on good imported via ships built in China

- **Coastal Virginia Offshore Wind** (as of the company's 5/01 earnings call): ~$4M impact through 3/31 (actual), ~$123M through 6/30 and ~$510M cumulatively (illustrative)
- **Natural Gas Projects**: dependent on SCC approval/issuance of CPCN and tariff requirements/rates at the time of component delivery; domestic turbine vendor
- **Substation Transformers**: near-term exposure mitigated by current inventory and advance procurement of long lead-time equipment

Other Federal Activity: LIHEAP Funding, FEMA Grants

- **EnergyShare: DEV-administered bill payment assistance/weatherization**
  - $13M annual budget ($130M, 10-year commitment enshrined in 2018 legislation)
  - 12,600 bill payment assistance recipients; 1,200 homes enhanced in 2023-2024

- **Low Income Home Energy Assistance Program (LIHEAP) funding**
  - Virginia's energy assistance programs primarily funded by LIHEAP block grant ($89.29M in federal fiscal year spanning Oct 2023-Sept 2024)
  - May 2: President Trump's proposed budget would eliminate LIHEAP funding; likely subject to debate as Congressional appropriations process unfolds
  - Previously appropriated LIHEAP funds, which had been frozen, are now released

- **Building Resilient Infrastructure and Communities (BRIC) grant program**
  - April 4: FEMA announced cancellation, including FY2020-2023 applications
  - More broadly, IRA- and IIJA-related Dept. of Energy grants are under review

Energy Conservation Program Marketing

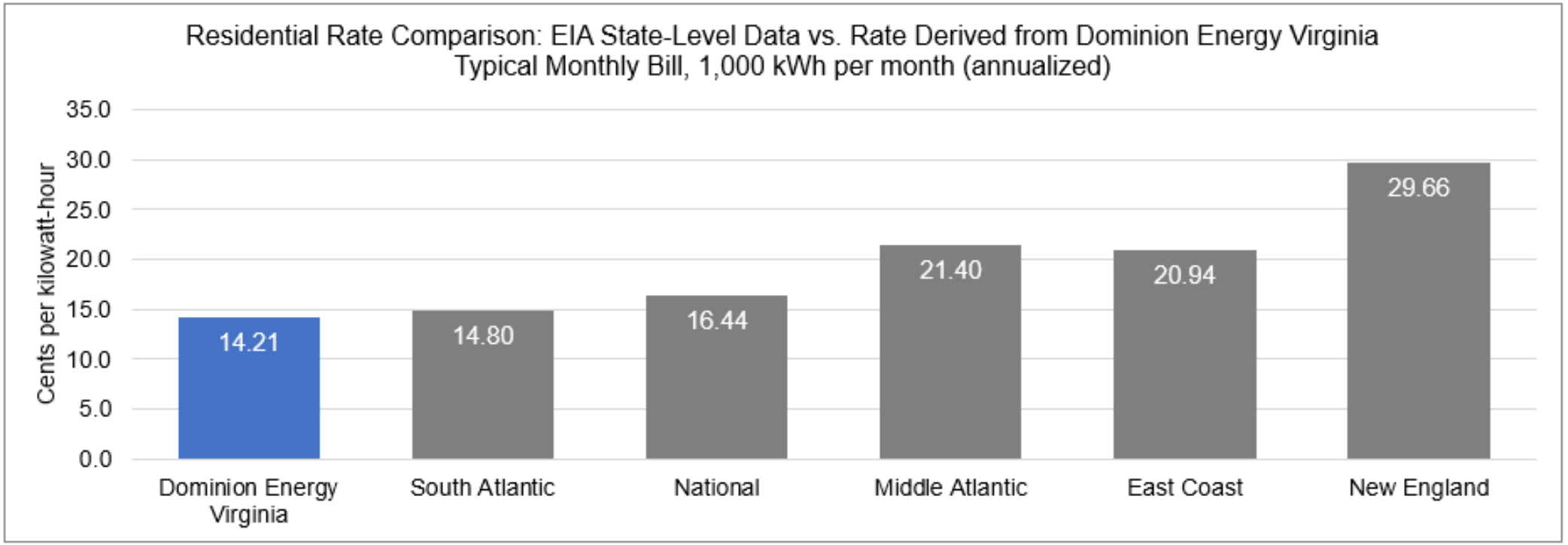
- SCC-approved, portfolio-level marketing funds for increasing awareness of DSM opportunities
- Company landing page, bill inserts, social media; marketing/advertising firm specializing in DSM; cross-promotion from implementation vendors

- **Awareness → active consideration → conversion** (program enrollment/adoption of measures)—all increasing
  - 33% increase in general awareness (per survey data)
  - 193% increase in email clicks; 138% increase in DomSavings.com page views
  - 25% increase in residential participation; 37% increase in non-residential participation in 2024 vs. 2023

Strategic Underground Program

- **Outcomes (as of year-end 2024)**
  - 7,300 neighborhood lines converted, totaling about 2,480 miles
  - 3,610 estimated outage events avoided annually
  - SAIDI reduction for customers in converted zones and downline to only 2.25 minutes (vs. pre-conversion SAIDI of 556 minutes)
  - 20-30% reduction in total length of restoration after major storms (>72-hour restoration)

Residential Rate Comparison

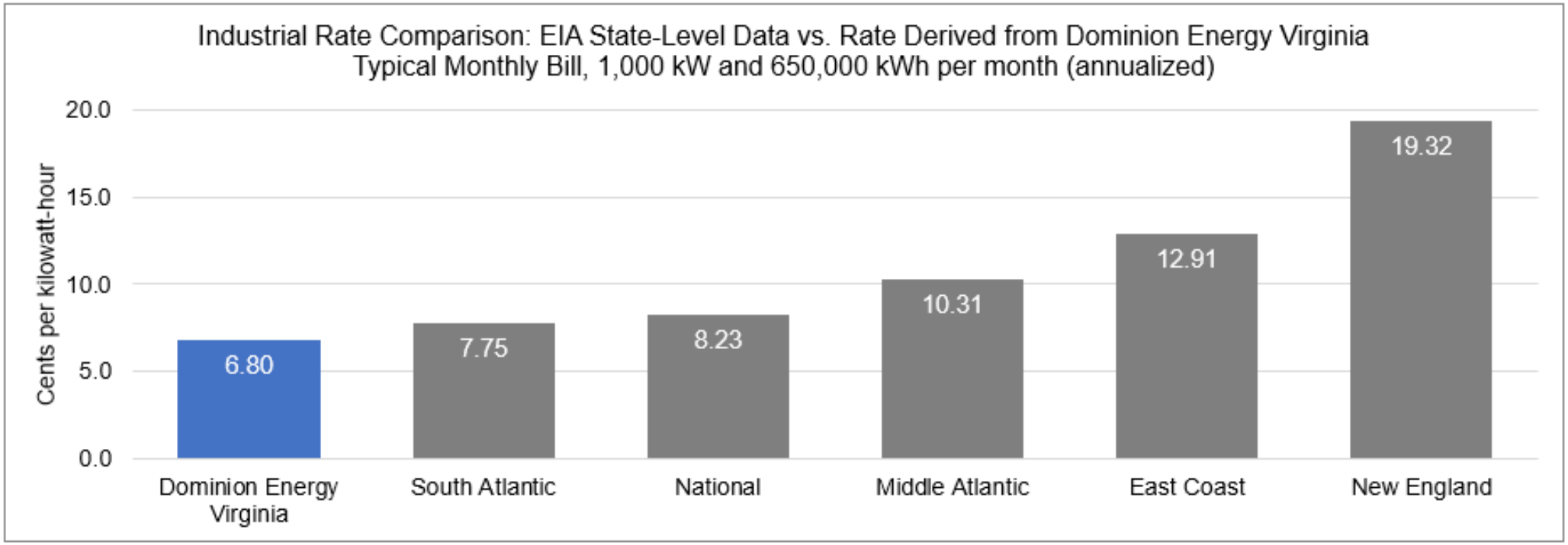


South Atlantic: DE, DC, FL, GA, MD, NC, SC, VA, WV.
Middle Atlantic: NJ, NY, PA.
East Coast Average: CT, ME, MA, NH, RI, NJ, NY, PA, DE, DC, FL, GA, MD, NC, SC, VA.
New England: CT, ME, MA, NH, RI, VT.

DEV Source: Company rates department; derived from typical bills as of May 1, 2025 (annualized) for residential customers (1,000 kilowatt-hours of usage per month).

Benchmarks Source: U.S. Energy Information Administration, Table 5.6.A Average Price of Electricity to Ultimate Customers by End-Use Sector; data released April 24, 2025, reflecting February 2025 rates.

Industrial Rate Comparison



South Atlantic: DE, DC, FL, GA, MD, NC, SC, VA, WV.
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East Coast Average: CT, ME, MA, NH, RI, NJ, NY, PA, DE, DC, FL, GA, MD, NC, SC, VA.
New England: CT, ME, MA, NH, RI, VT.

DEV Source: Company rates department; derived from typical bills as of May 1, 2025 (annualized) for large industrial customers (1,000-kilowatt demand and 650,000 kilowatt-hours of usage per month).

Benchmarks Source: U.S. Energy Information Administration, Table 5.6.A Average Price of Electricity to Ultimate Customers by End-Use Sector; data released April 24, 2025, reflecting February 2025 rates.

VIRGINIA ENERGY SENSE

An overview of the State Corporation Commission's *Value Your Power* campaign.

OVERVIEW

Virginia Energy Sense (VES) is the Commonwealth's official energy efficiency education initiative, operating under the guidance of the SCC. Established in 2009, VES aims to educate Virginians about their electricity use and the steps they can take to conserve energy and save money on their utility bills.

VIRGINIA STATE CODE

VES supports the objectives outlined in the Virginia Energy Plan, as mandated by the Code of Virginia § 56-592, consumer education and marketing practices which directs the Commission to develop and implement an electric energy consumer education program designed to provide information to retail customers regarding energy conservation, energy efficiency, demand-side management, demand response, and renewable energy.

VES CAMPAIGN SUMMARY: OCTOBER 2024–APRIL 2025

Traditional Advertising

- Broadcast/Cable TV
- Streaming
- Radio
- Out of Home (Billboards)
  - Richmond
  - Hampton Roads
  - Roanoke

Earned Media

- Winter Savings Tips (Nov. 2024)
  - WWBT - TV interview
- Winter Weather Efficiency (Jan. 2025)
  - WVEC - TV interview
  - WLNI - Radio interview
  - WFIR - Radio interview
  - WZRV - Radio interview
  - WFVA - Radio interview
  - WRAR - Radio interview
  - WINA - Radio interview
- Consumer Survey Insights (May 2025)
  - WRIC - Written article

Digital Advertising

- VirginiaEnergySense.org
  - 108,000+ page views
  - Top pages visited:
    - Seasonal Energy-Saving Tips
    - At-Home Energy Tips
    - Incentives & Rebates
  - Campaign-specific microsite launched winter 2025 - ValueYourPower.org
- Digital Ads Campaign
  - 37.1+ million total impressions
  - 153,000+ total clicks
  - Top-performing placements
    - Facebook/Instagram
    - Google display
    - Search Engine Marketing
    - YouTube shorts
- E-Newsletter
  - 1,356 subscribers
  - Overall open rate: 66.3%
  - Audience segments:
    - General
    - Renters
    - Homeowners
    - Property managers

Organic Social Media

- Facebook
  - 4,300+ total followers
  - 7,000+ post engagements
  - Top audience locations: Richmond, Virginia Beach, Roanoke, Norfolk
- Instagram
  - 160+ total followers
  - 300+ total interactions
- LinkedIn
  - 500+ total impressions

Outreach Initatives

- Williamsburg Farmer's Market
- Clarendon Day - Arlington
- On the Square Farmer's Market - Richmond
- VA Green Travel Conference - Williamsburg
- Strawberry Faire - Ashland

VALUE YOUR POWER
VIRGINIA ENERGY SENSE

ASSOCIATION OF ENERGY CONSERVATION PROFESSIONALS

VIRGINIA'S WEATHERIZATION NETWORK

Reducing energy burdens of low-income and disadvantaged communities in Virginia

WHO WE ARE

- 14 non-profit organizations
  - 10 community action agencies
  - 3 housing non-profits
  - 1 area agency on aging
- ~20 private weatherization contractors
- ~150 private trade contractors

KEY PARTNERS

- Virginia Department of Housing & Community Development
- Virginia Community Action Partnership
- Virginia Energy Efficiency Council
- Virginia Poverty Law Center
- Energy Efficiency for All - Virginia

OUR MISSION

- Alleviate energy burdens of Virginia's most vulnerable populations
- Improve the health and safety, comfort, affordability, and resiliency of homes and communities through a suite of weatherization and weatherization-adjacent services

FUNDING OVERVIEW

Federal Formula WAP [2]	$ 4,682,374
Federal IIJA WAP [3]	$ 10,389,189
Federal LIHEAP [4]	$ 13,692,966
State Resources [5]	$ 18,900,642
Utility Programs [6]	$ 17,718,482
Private Funders [7]	TBD

OUR SERVICES

- Emergency home & accessibility repairs
- Crisis heating & cooling services
- Weatherization-readiness home repairs
- Weatherization services
- Solar installations [1]

HOW YOU CAN SUPPORT

- Request Governor's office inquire about Virginia's formula WAP if substantial delays (14 days) past July 1 start date
- Support funding increases in utility-sponsored income-qualifying weatherization programs to offset potential losses in federal resources

[1] Dominion Energy Virginia's Income & Age Qualifying Solar program ended December 2024
[2] Formula funded Weatherization Assistance Program (WAP) from U.S. Department of Energy for PY25
[3] Infrastructure Investment & Jobs Act WAP amount reflects remaining balance of the first 50-percent tranche of funds as of April 2025
[4] Low-Income Home Energy Assistance Program (LIHEAP) transfer funds to WAP for PY25
[5] Virginia DHCD's Weatherization Deferral Repair amount reflects PY24-26 remaining balance as of April 2025
[6] Approximate aggregated amount available to Virginia's WAP network through multiple utilities for CY25
[7] Private funders include past funders like Microsoft and a potential commitment from Google for up to $1M in CY25

Contact Us:
www.aecpes.org
chase@greenbound.org

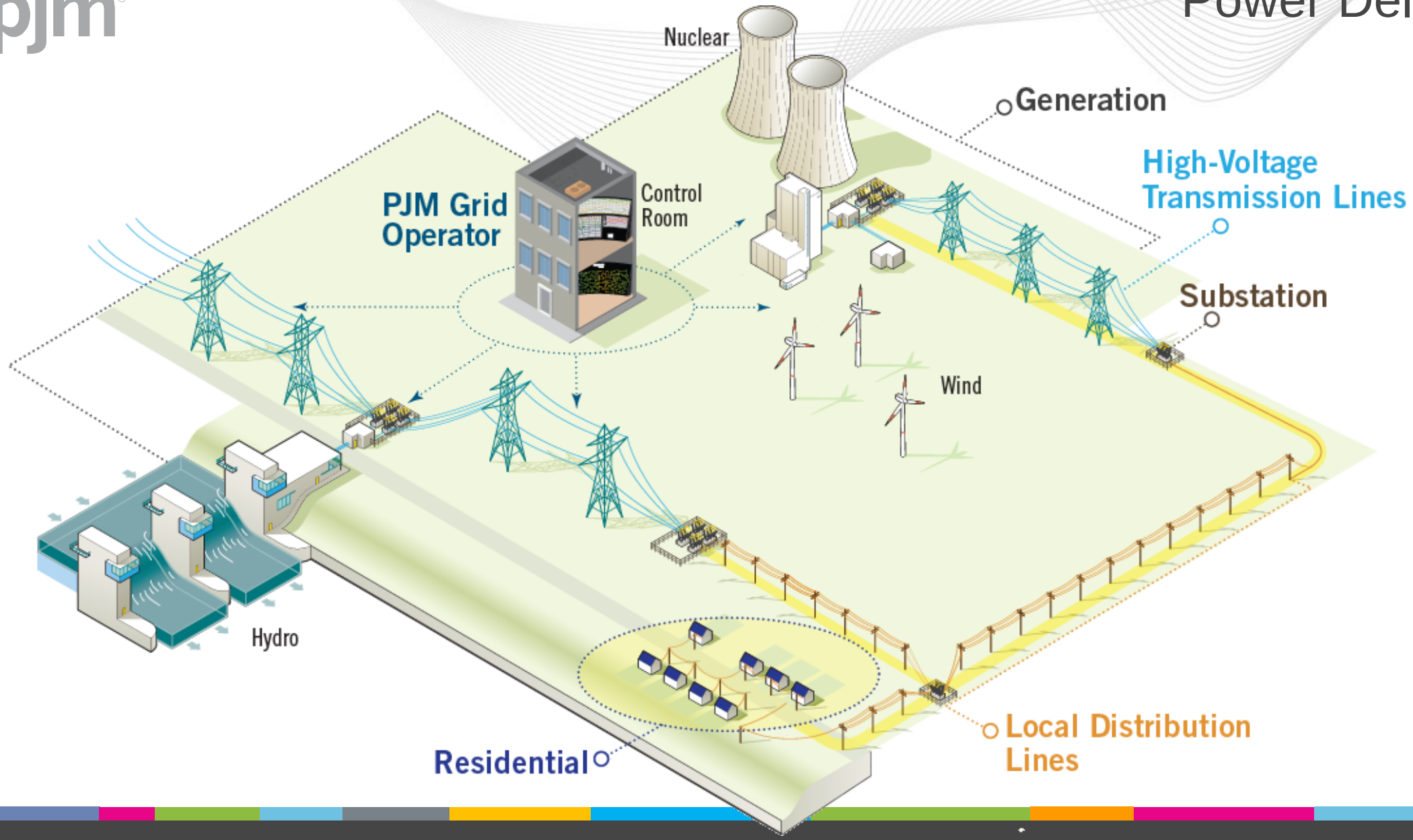
PJM: Introduction · Resource Adequacy · New Demand Projections

Virginia General Assembly
Commission On Electric Utility Regulation

Asim Z. Haque
Sr. Vice President, Governmental & Member Services

May 22, 2025

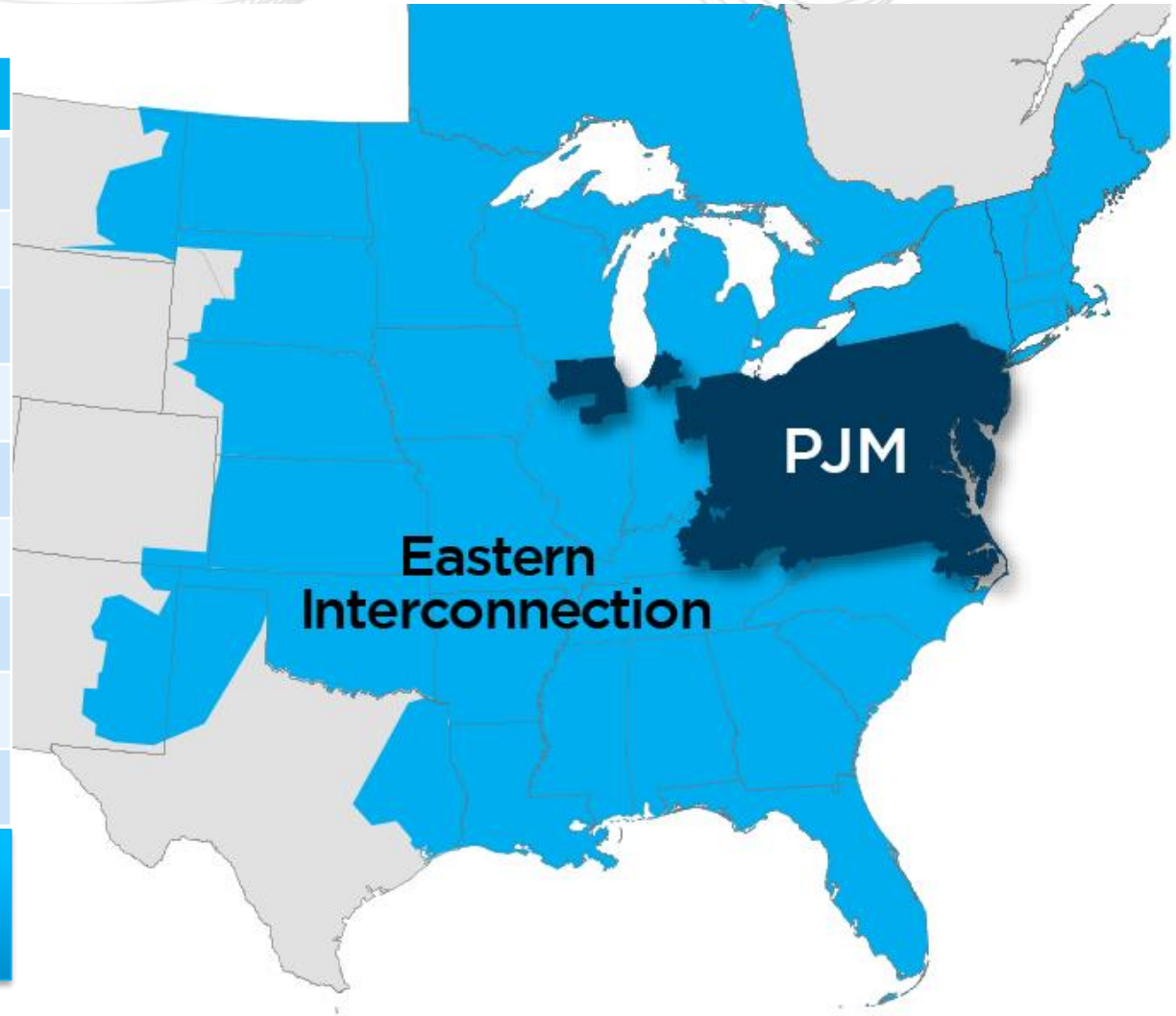
Power Delivery



PJM as Part of the Eastern Interconnection

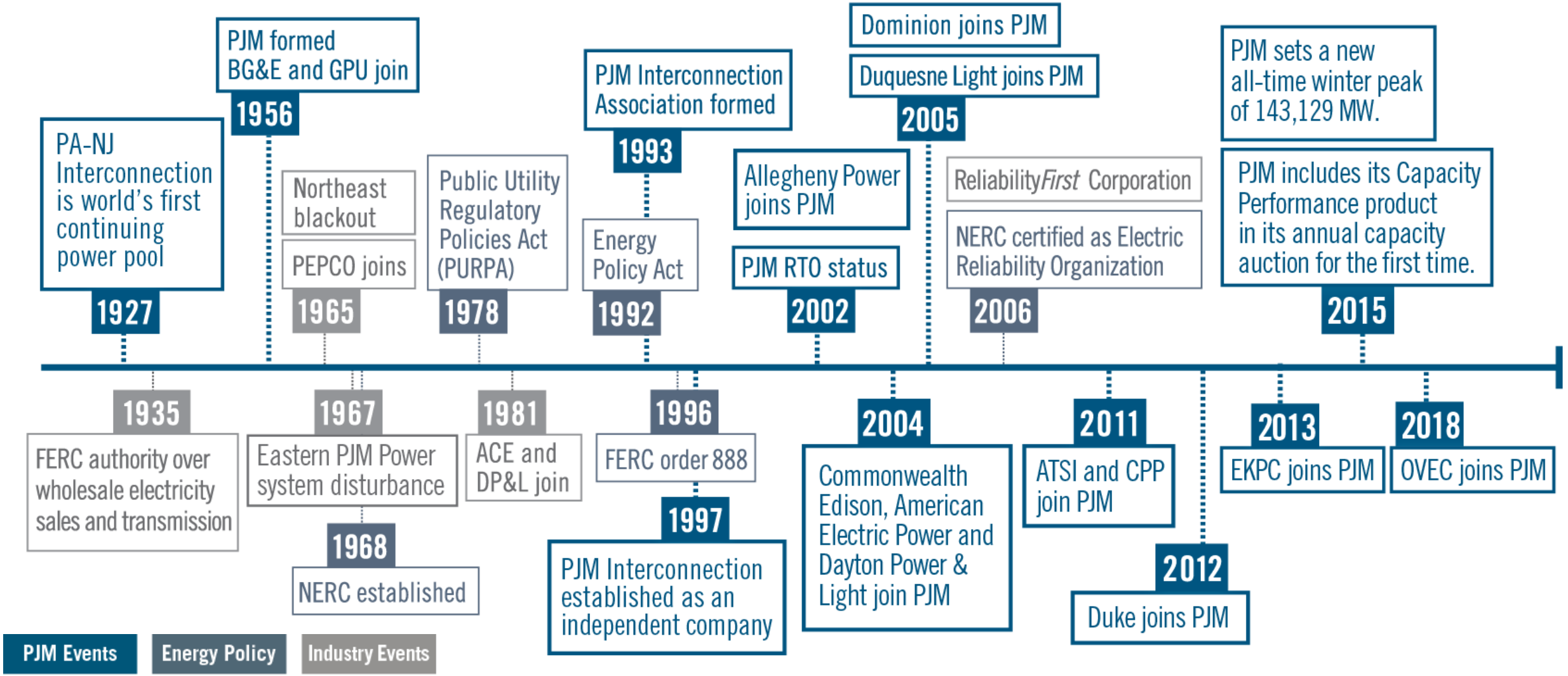
Key Statistics	
Member companies	1,110
Millions of people served	67+
Peak load in megawatts	165,563
Megawatts of generating capacity	182,036
Miles of transmission lines (BES)	88,333
Gigawatt hours of annual energy	800,004
Generation sources	1,486
Square miles of territory	369,054
States served	13 + DC

- 27% of generation in Eastern Interconnection
- 24% of load in Eastern Interconnection



As of 2/2025

The History of PJM



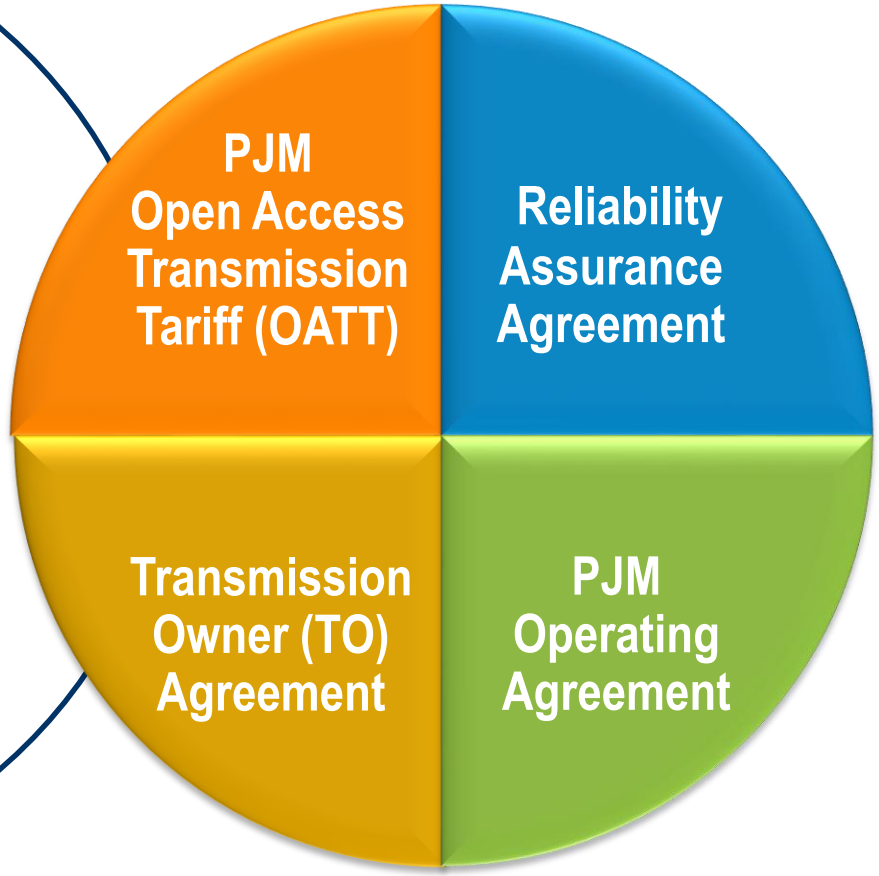
How Is PJM Different from Other Utility Companies?

PJM Does:

- Direct operation of the transmission system
- Remain profit-neutral
- Maintain independence from PJM members
- Coordinate maintenance of grid facilities

PJM Does *NOT:*

- Own any transmission or generation assets
- Function as a publicly traded company with shareholders and concerns around “earnings”
- Perform maintenance on generators or transmission systems (e.g., repair power lines)
- Serve or direct any end-use customers (retail)



PJM – Primary Focus

RELIABILITY

Reliability Through Extreme Conditions

Home › Markets › PJM, Members Preserve Reliability Through Arctic Outbreak

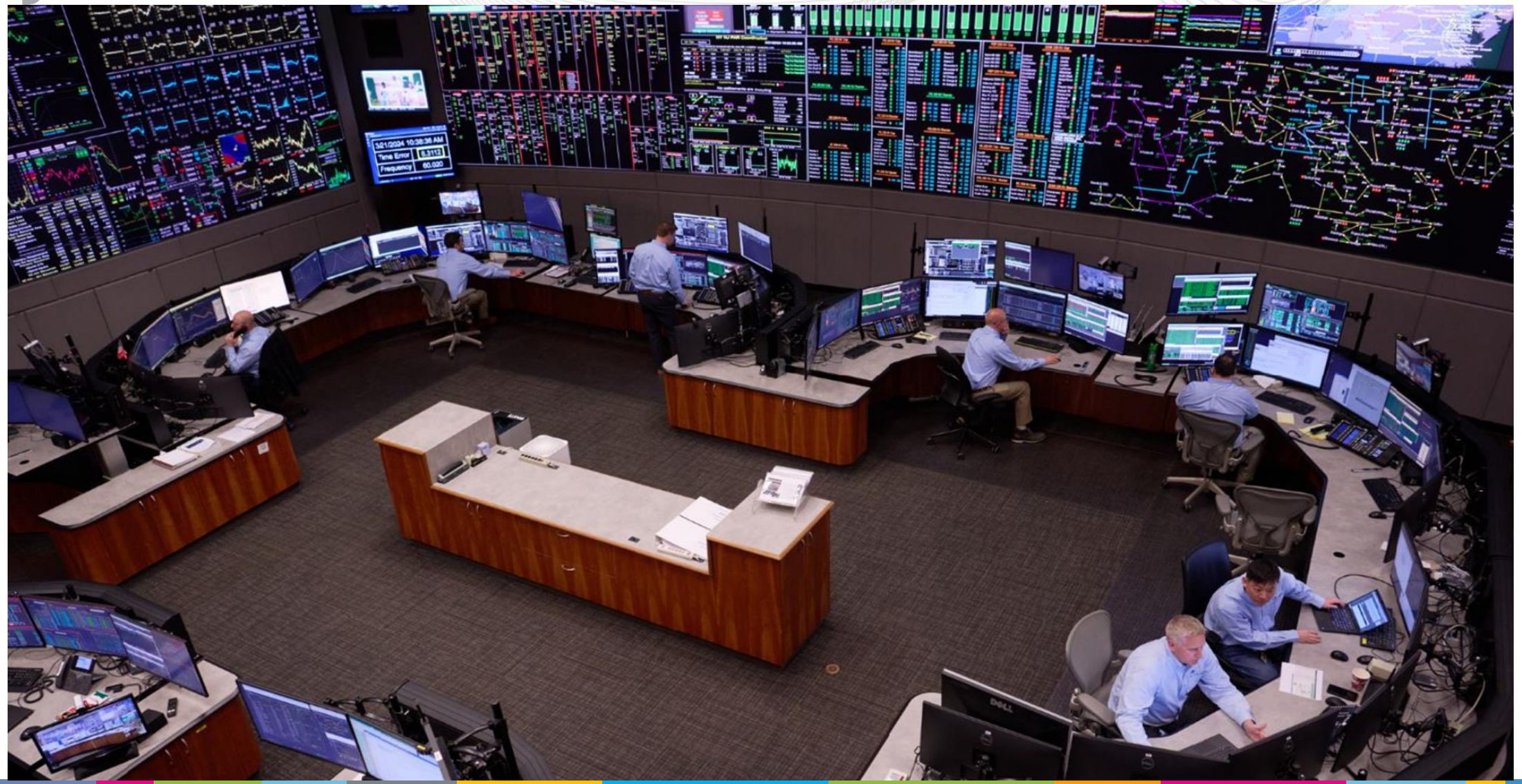
Markets | News | Operations

PJM, Members Preserve Reliability Through Arctic Outbreak

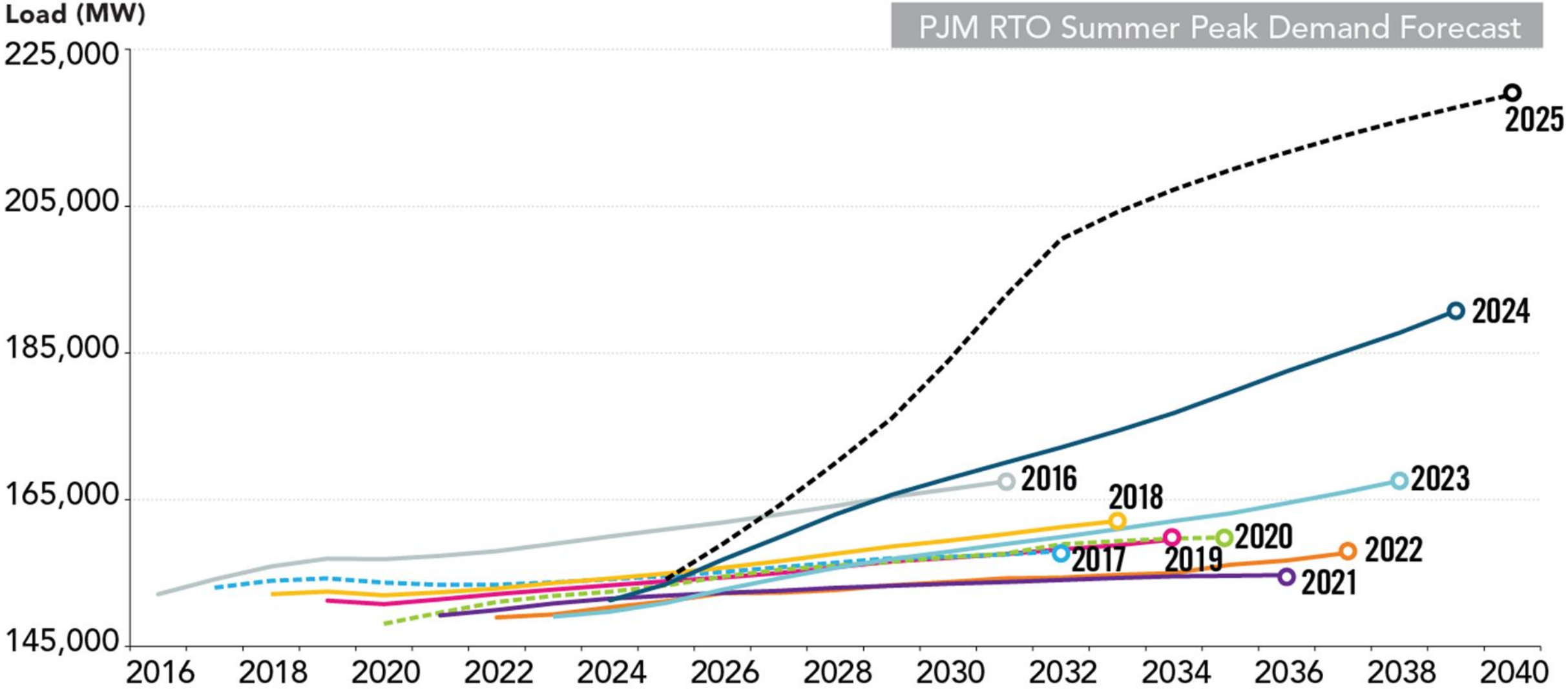
Load Forecasting, Communications, Generator/Transmission Performance Were Strengths

February 7, 2025 4

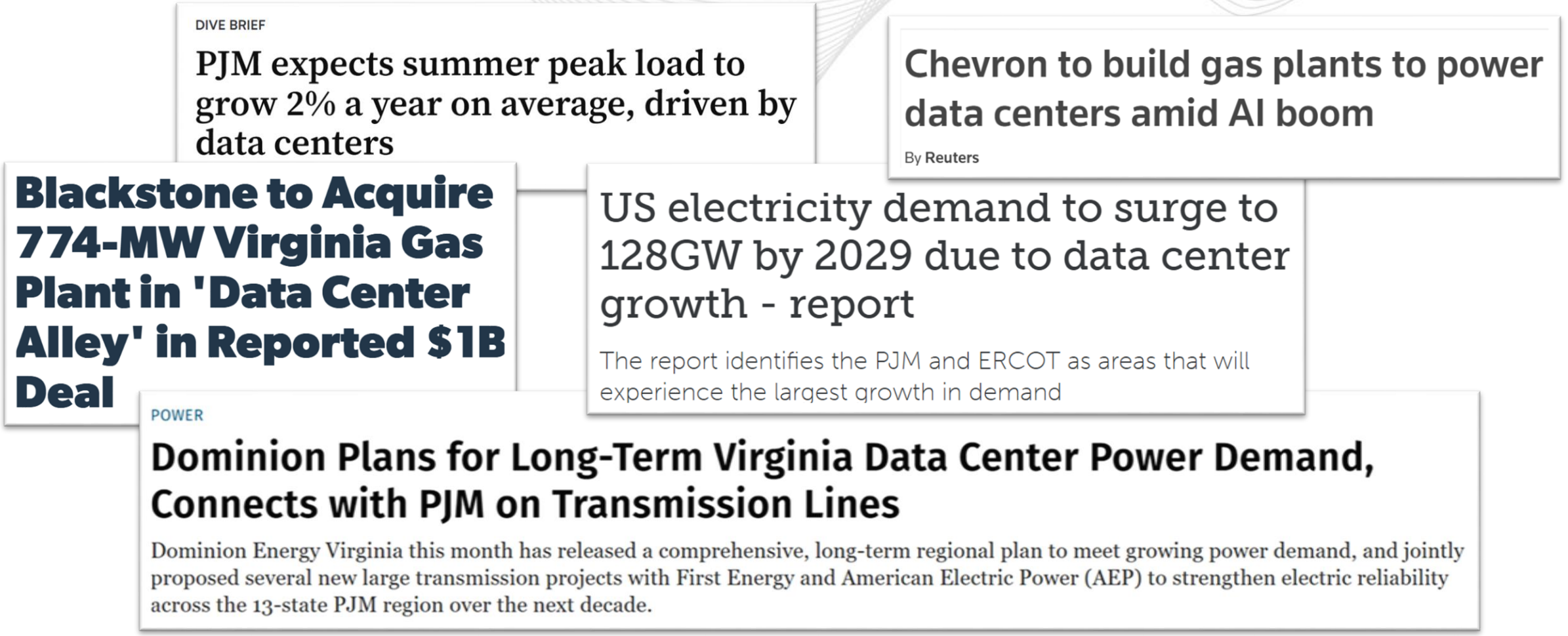
PJM on Thursday reviewed the extensive actions taken by the grid operator and its members to successfully maintain reliability through the record-breaking, extended cold temperatures that swept through the region through the Martin Luther King Jr. holiday period.



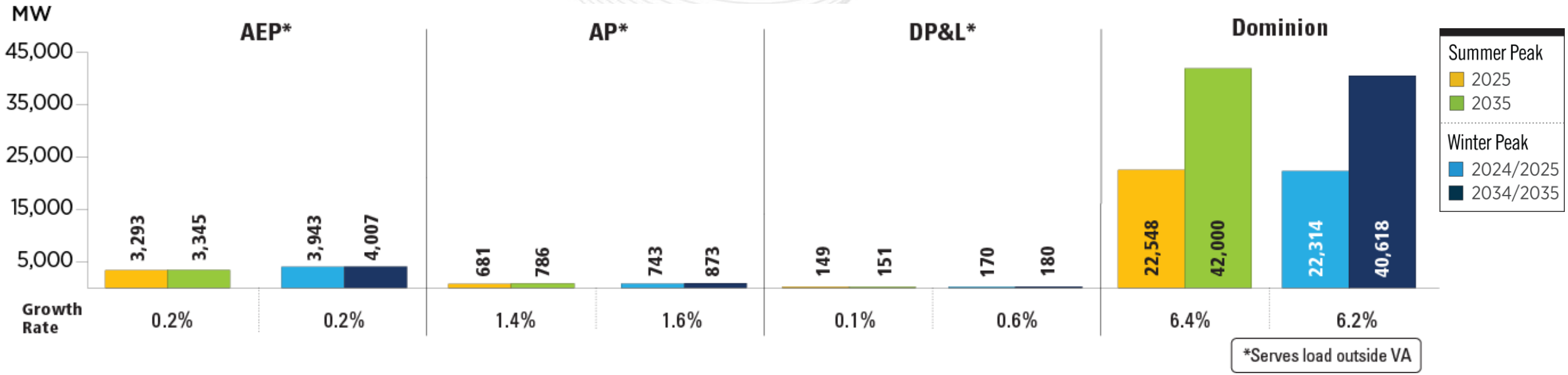
Electricity Demand Growth



Data Center Proliferation



VA – 2025 Load Forecast Report



The summer and winter peak megawatt values reflect the estimated amount of forecast load to be served by each transmission owner in the noted state/district. Estimated amounts were calculated based on the average share of each transmission owner's real-time summer and winter peak load in those areas over the past five years.

PJM RTO Summer Peak

2025	2035
154,144 MW	209,923 MW

Growth Rate 3.1%

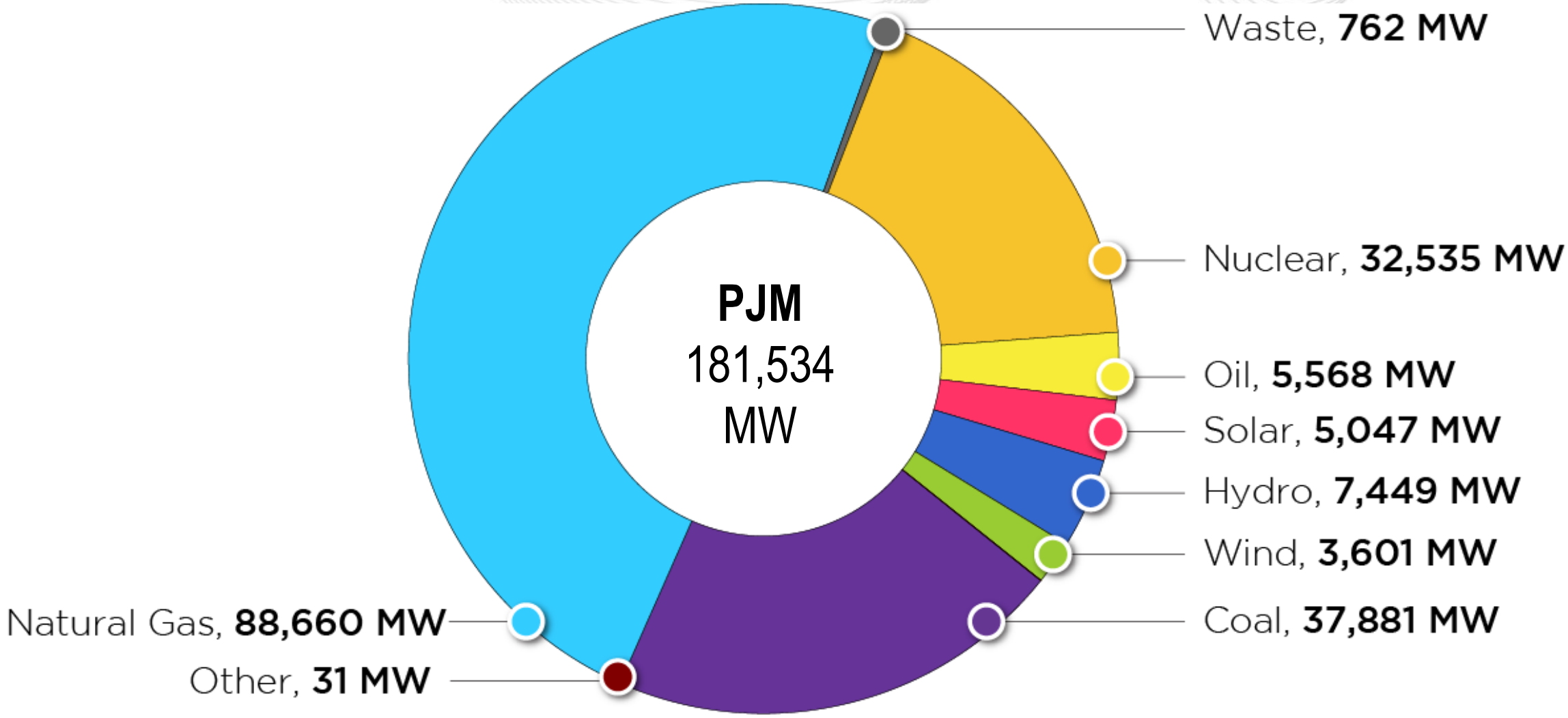
PJM RTO Winter Peak

2024/2025	2034/2035
136,127 MW	198,175 MW

Growth Rate 3.8%

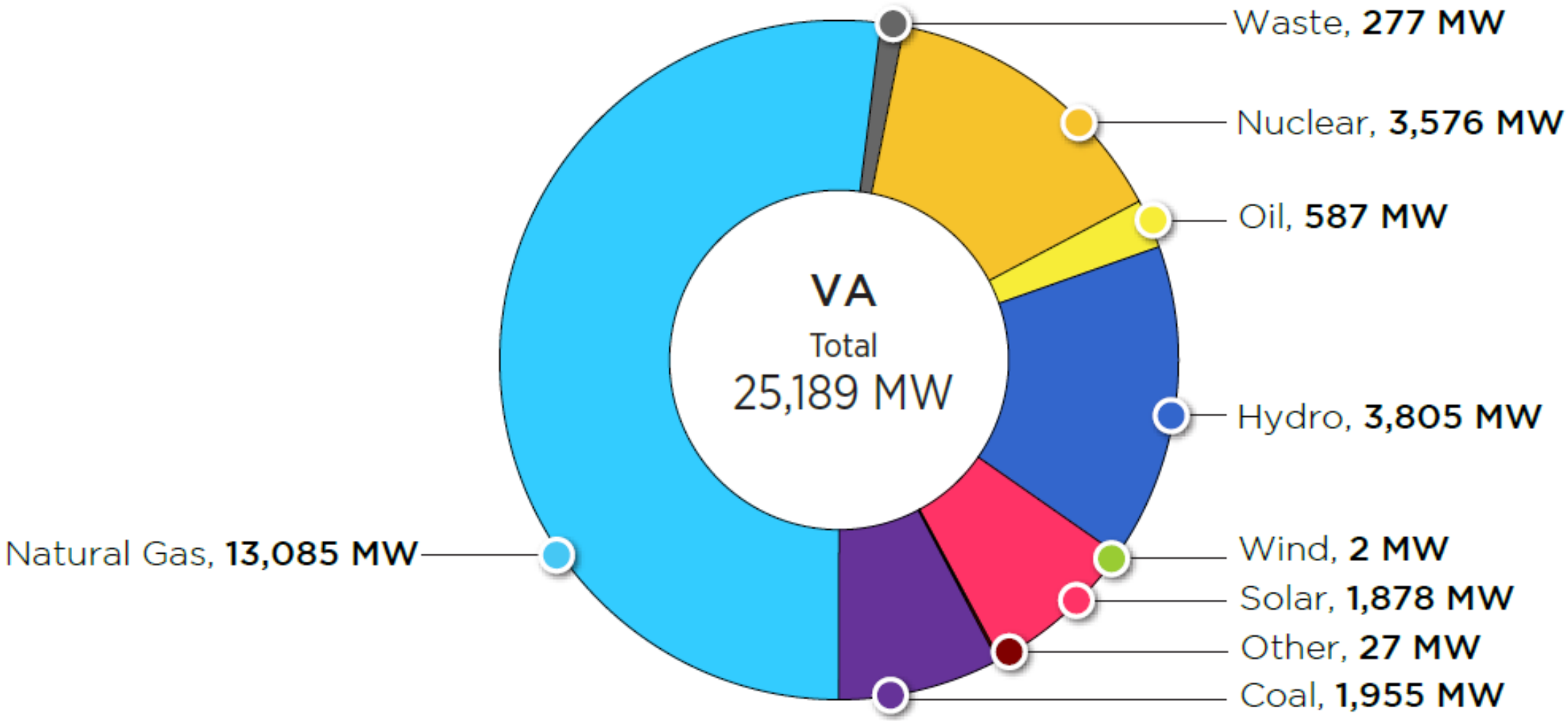
PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2024)



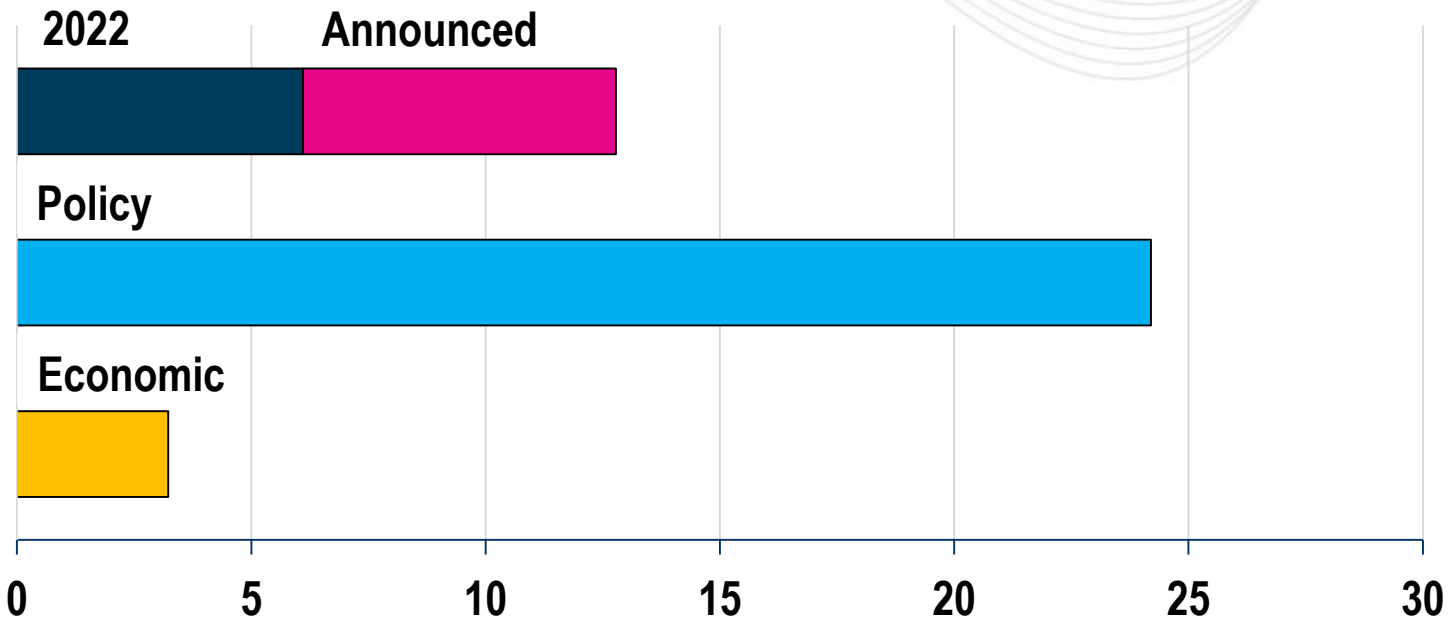
Virginia – Existing Installed Capacity (MW) by Fuel Type

(as of Dec. 31, 2024)

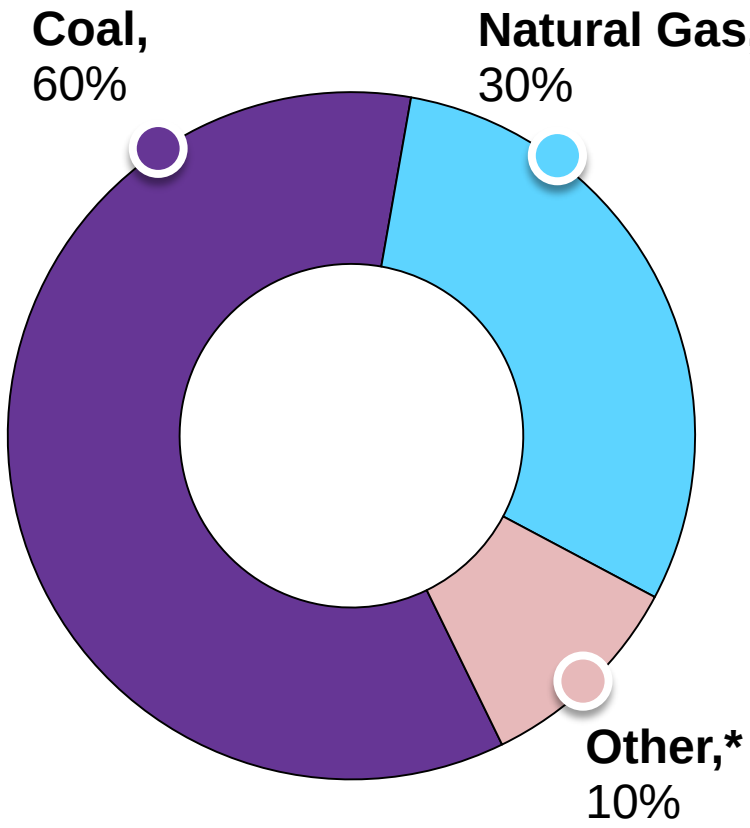


Forecasted Retirements (2022–2030)

Total Forecasted Retirement Capacity (GW)



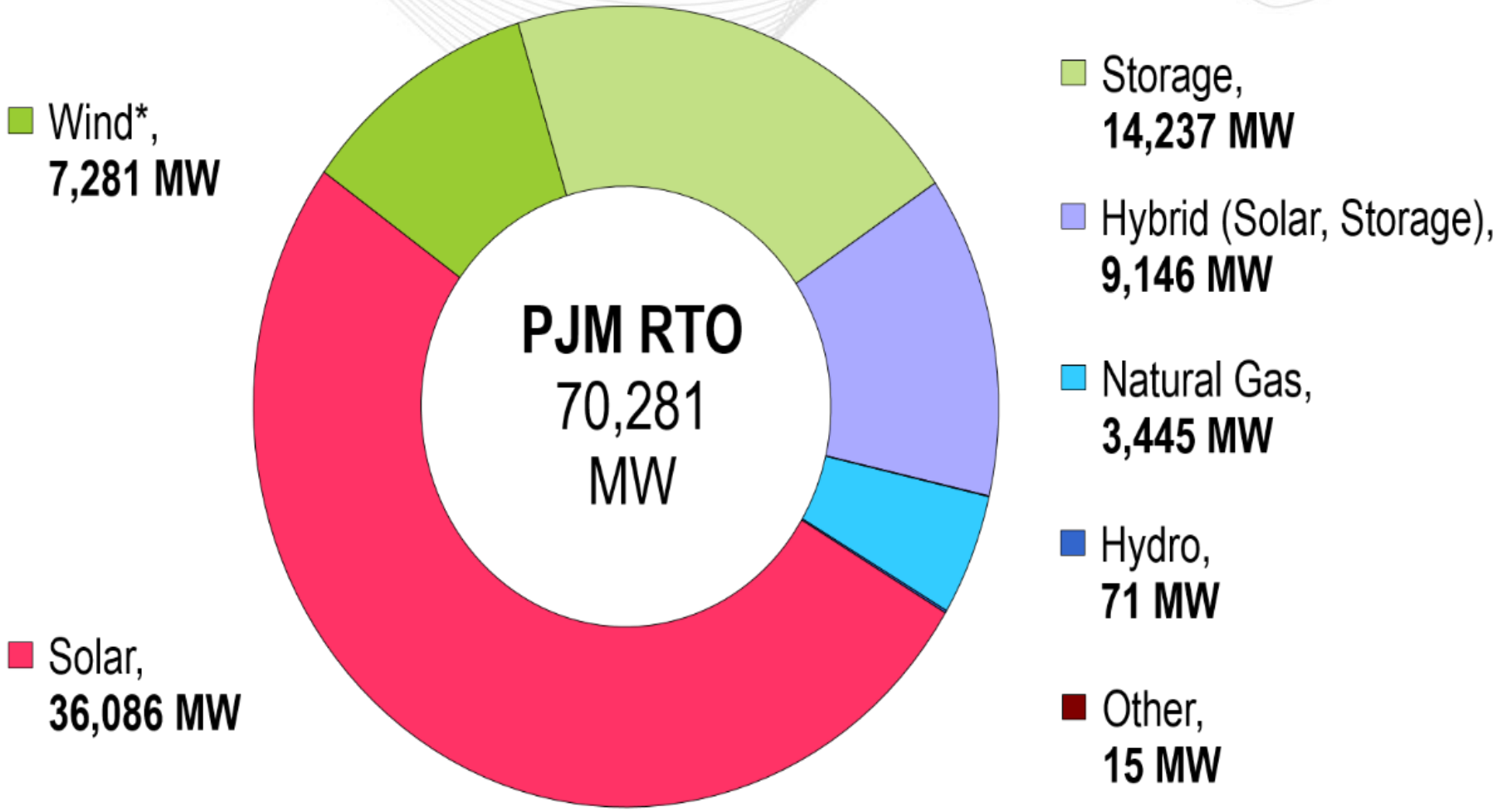
This **40 GW** represents
21% of PJM's current
192 GW of installed generation



*Other includes diesel, etc.

PJM Queued Capacity (Nameplate) by Fuel Type

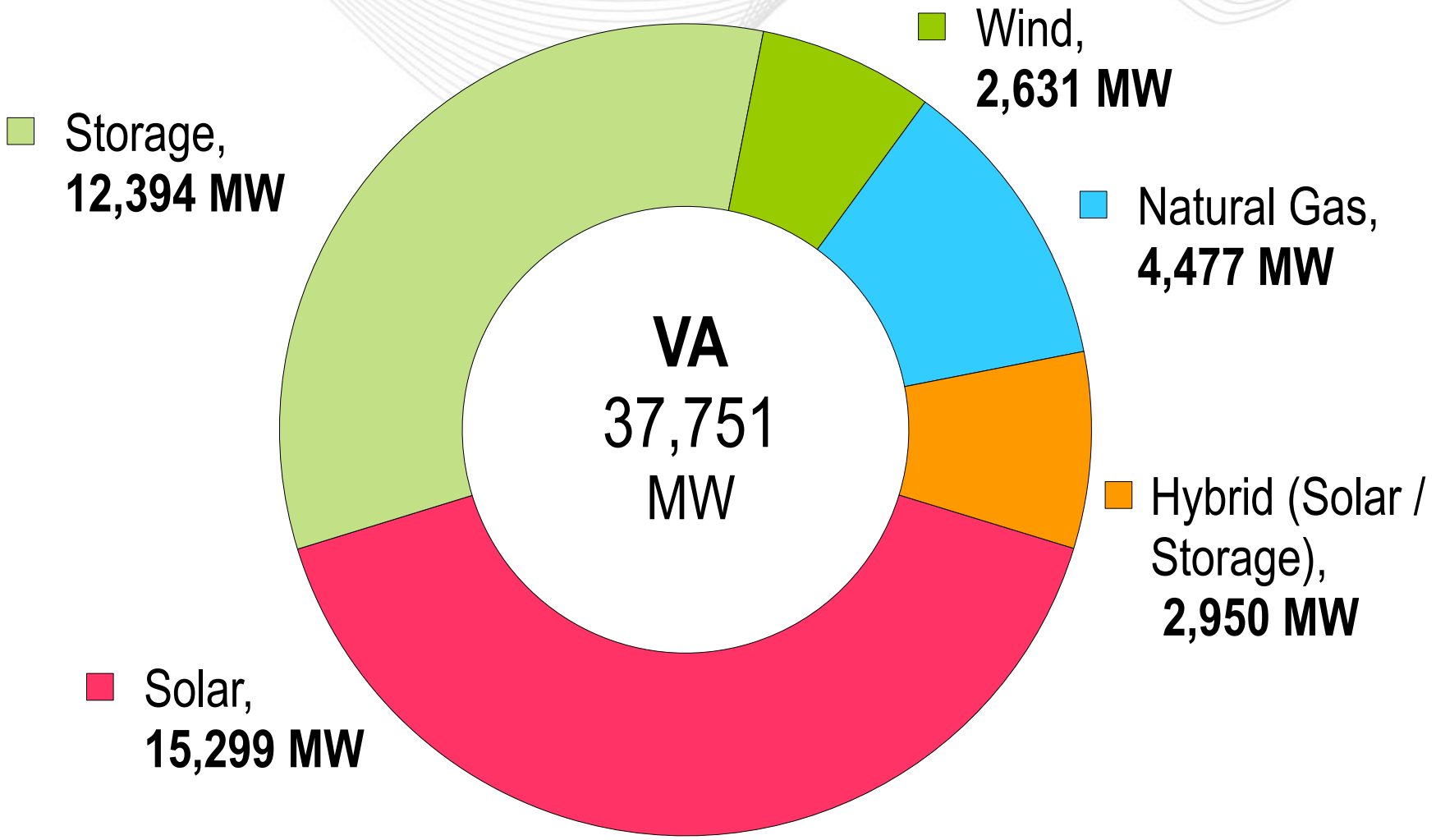
("Active" in the PJM Queue as of Mar. 11, 2025)



*Includes offshore wind

Virginia Queued Capacity (Nameplate) by Fuel Type

(Includes projects under study and with interconnection agreements of May 7, 2025)

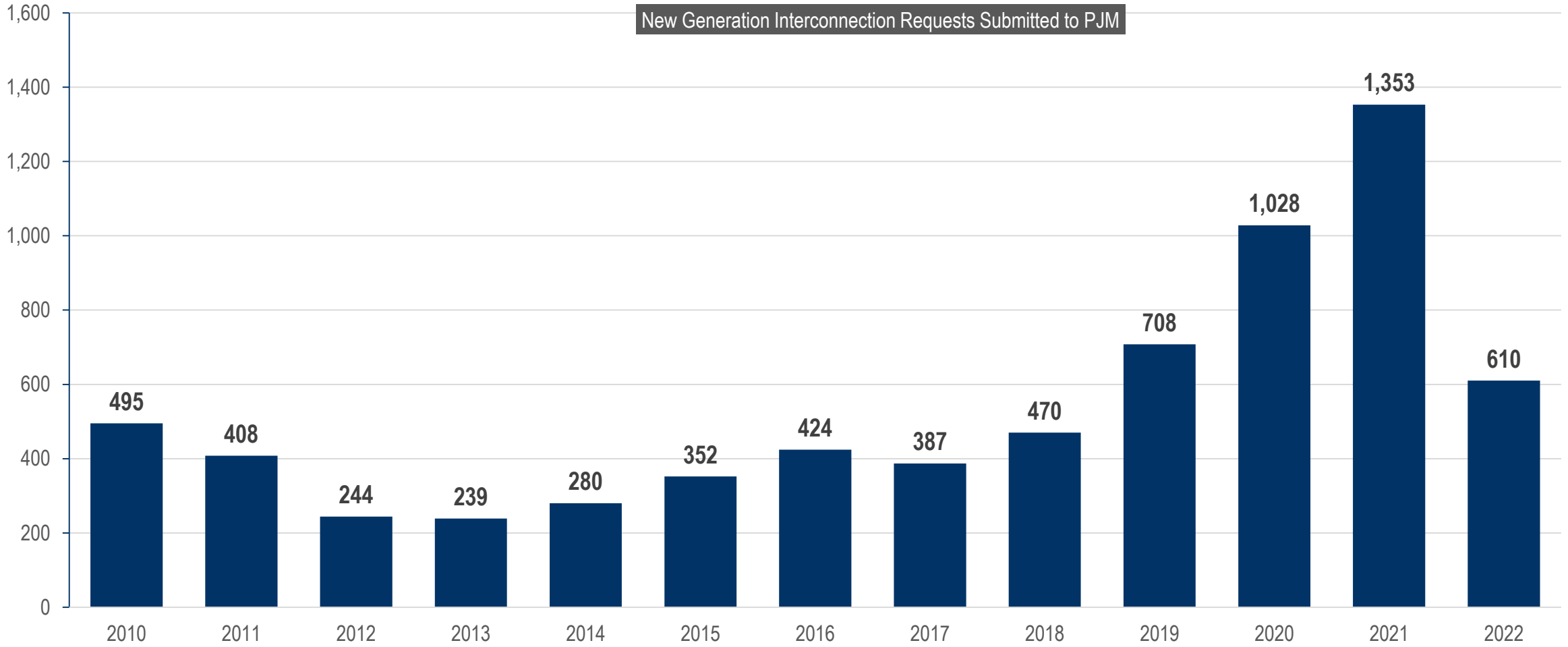


*Wind includes both onshore and offshore wind

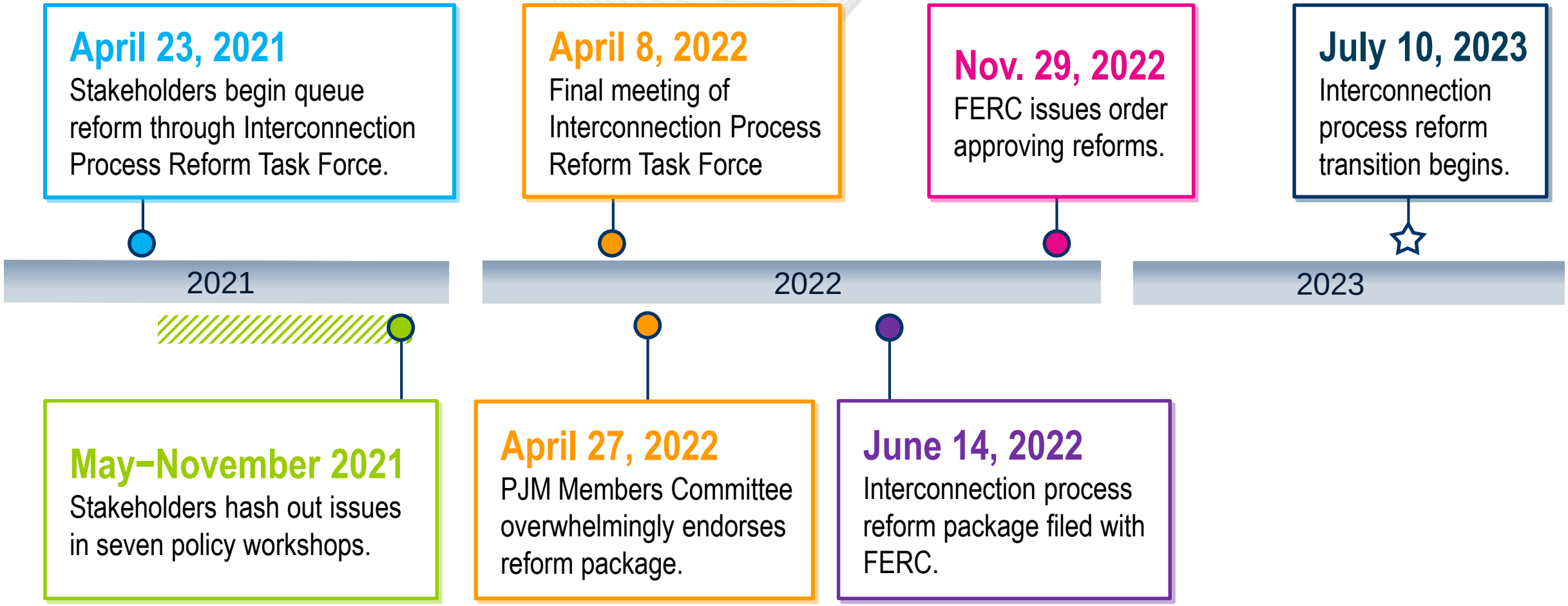
ELCC – Capability of Generator Classes

	2025/2026 BRA ELCC Class Ratings
Onshore Wind	35%
Offshore Wind	60%
Fixed-Tilt Solar	9%
Tracking Solar	14%
Landfill Intermittent	54%
Hydro Intermittent	37%
4-hr Storage	59%
6-hr Storage	67%
8-hr Storage	68%
10-hr Storage	78%
Demand Resource	76%
Nuclear	95%
Coal	84%
Gas Combined Cycle	79%
Gas Combustion Turbine	62%
Gas Combustion Turbine Dual Fuel	79%
Diesel Utility	92%
Steam	75%

Interconnection Queue Projects By Year



Implemented Interconnection Reforms

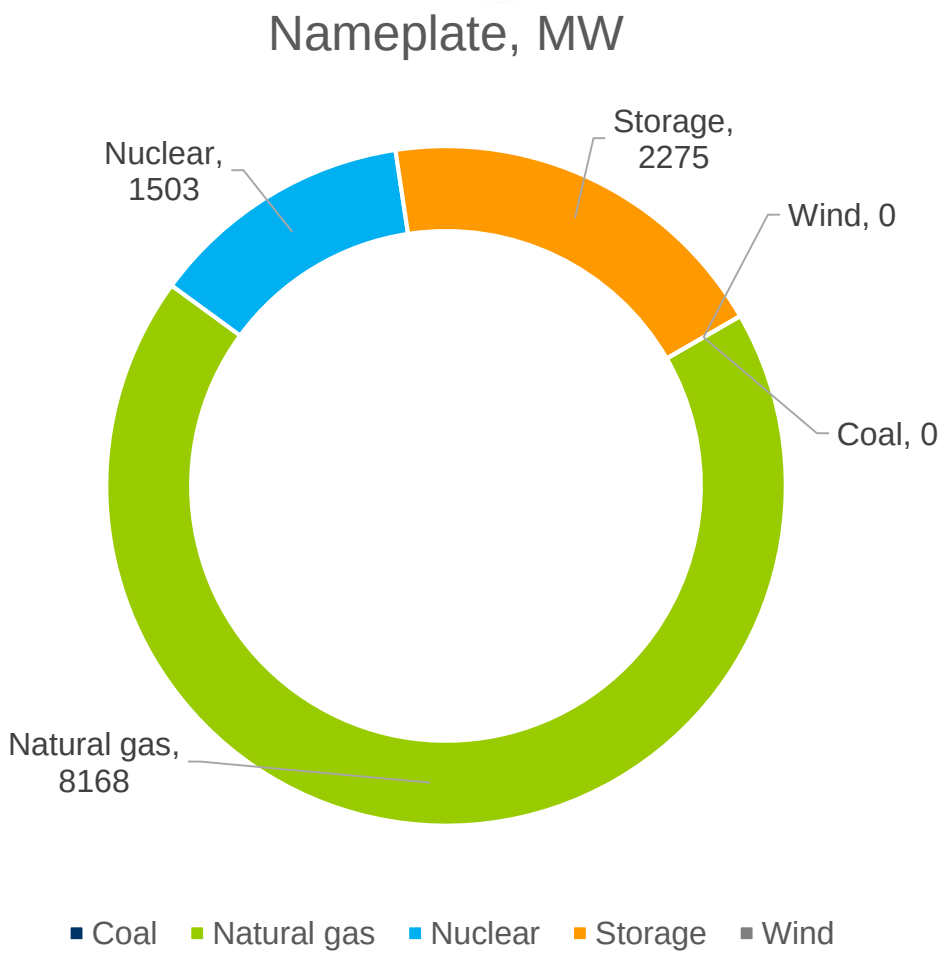


PJM Efforts to Expedite Supply

CIR Transfer	**Target:** New generation resources swapping-in for a deactivating generator that then don't need to go through queue **Potential Outcome**: Permanent modifications to the process
Reliability Resource Initiative	**Target:** Queue opened for new shovel-ready resources that can come online quickly and contribute to reliability **Potential Outcome:** One-time expansion of the eligibility criteria for Transition Cycle #2 beyond active requests received prior to September 2021
Surplus Interconnection Service	**Target:** Making it easier to add more generation to an existing site for generators that are not able to operate continually 24/7/365 (e.g. adding storage to renewable site) **Potential Outcome:** Permanent modification to Surplus Interconnection Service criteria

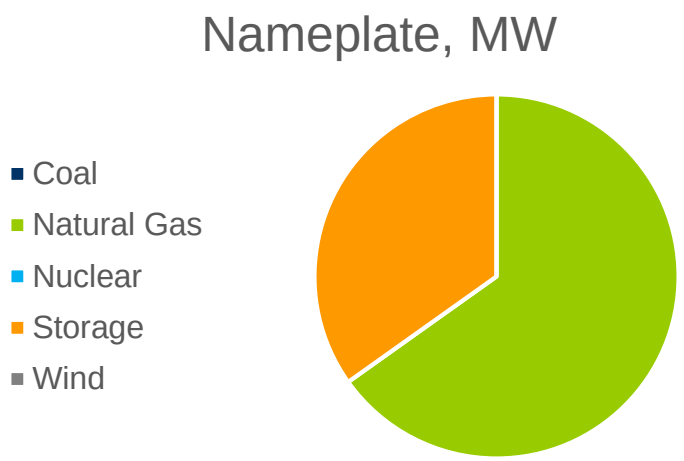
RRI - All Projects by State

	Number	Nameplate	CIR
Delaware			
Illinois	4	398	313
Indiana			
Kentucky	1	786	759
Maryland	2	554	548
Michigan			
North Carolina			
New Jersey	5	550	607
Ohio	9	3,363	3,242
Pennsylvania	7	1,201	1,293
Tennessee			
Virginia	22	5,095	5,309
West Virginia	1	0	14
Total	**51**	**11,945**	**12,085**



Virginia

Fuel	Number	Nameplate	CIR
Coal			
Natural Gas	18	3,320	3,534
Nuclear			
Storage	4	1,775	1,775
Wind			
Total	**22**	**5,095**	**5,309**



Queue	County	Fuel	Type	Nameplate	CIR
AH1-676	Orange	Nat gas	New	1,295	1,295
AH1-677	Greensville	Nat gas	Uprate	0	67
AH1-678	Brunswick	Nat gas	Uprate	0	34
AH1-679	Hanover	Nat gas	Uprate	20	20
AH1-681	Fluvanna	Nat gas	Uprate	0	27
AH1-682	Caroline	Nat gas	Uprate	0	21
AH1-683	Caroline	Nat gas	Uprate	0	25
AH1-684	Fauquier	Nat gas	Uprate	0	23
AH1-685	Fauquier	Nat gas	Uprate	0	26
AH1-687	Buckingham	Nat gas	Uprate	0	51
AH1-691	Caroline	Nat gas	Uprate	0	26
AH1-692	Caroline	Nat gas	Uprate	0	26
AH1-693	Fauquier	Nat gas	Uprate	0	20
AH1-694	Caroline	Nat gas	Uprate	0	18

Continued on next page

Virginia

Fuel	Number	Nameplate	CIR
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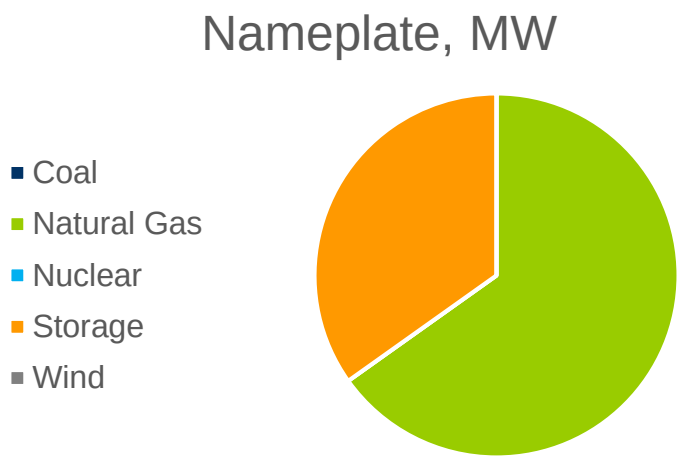
Wind			
Total	**22**	**5,095**	**5,309**

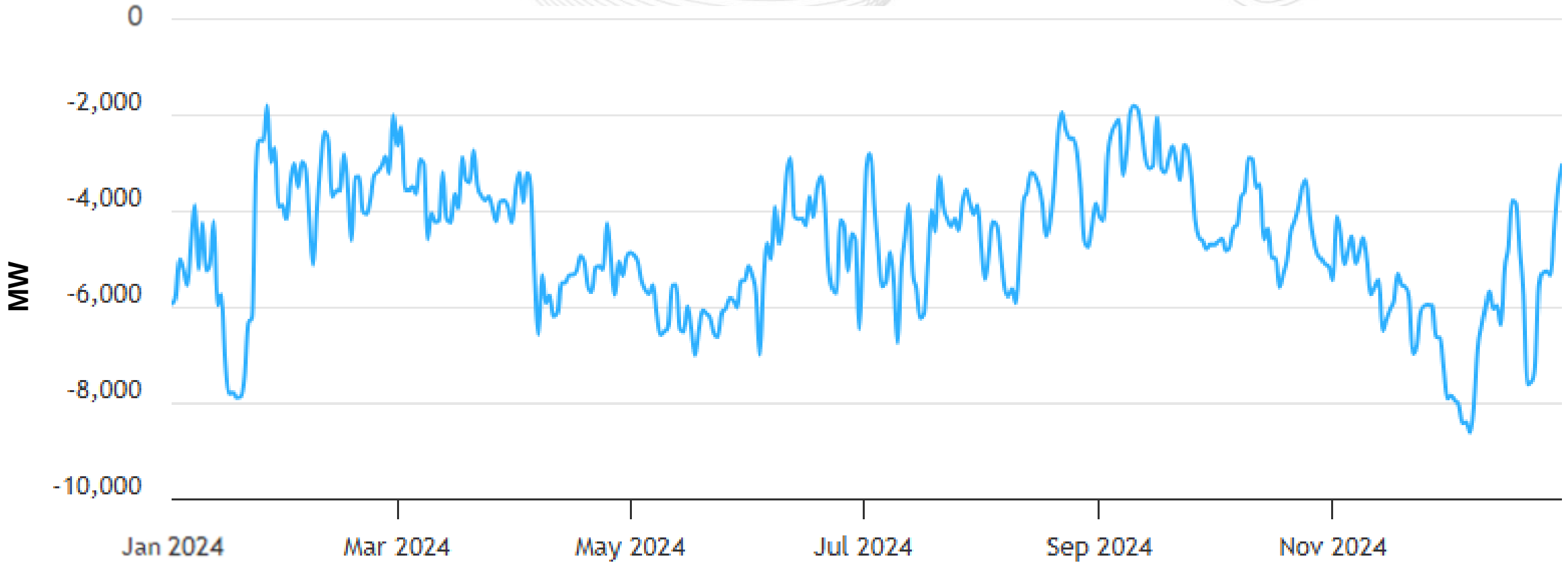
Queue	County	Fuel	Type	Nameplate	CIR
AH1-696	Prince William	Nat gas	Uprate	0	94
AH1-712	Fluvanna	Nat gas	New	776	611
AH1-716	James City	Storage	New	650	650
AH1-717	Surry	Nat gas	New	453	438
AH1-723	Fluvanna	Nat gas	New	776	712
AH1-726	James City	Storage	New	600	600
AH1-727	Loudon	Storage	New	425	425
AH1-729	Loudon	Storage	New	100	100



From prior page

Virginia – Net Energy Import/Export Trend

(Jan. 2024 – Dec. 2024)



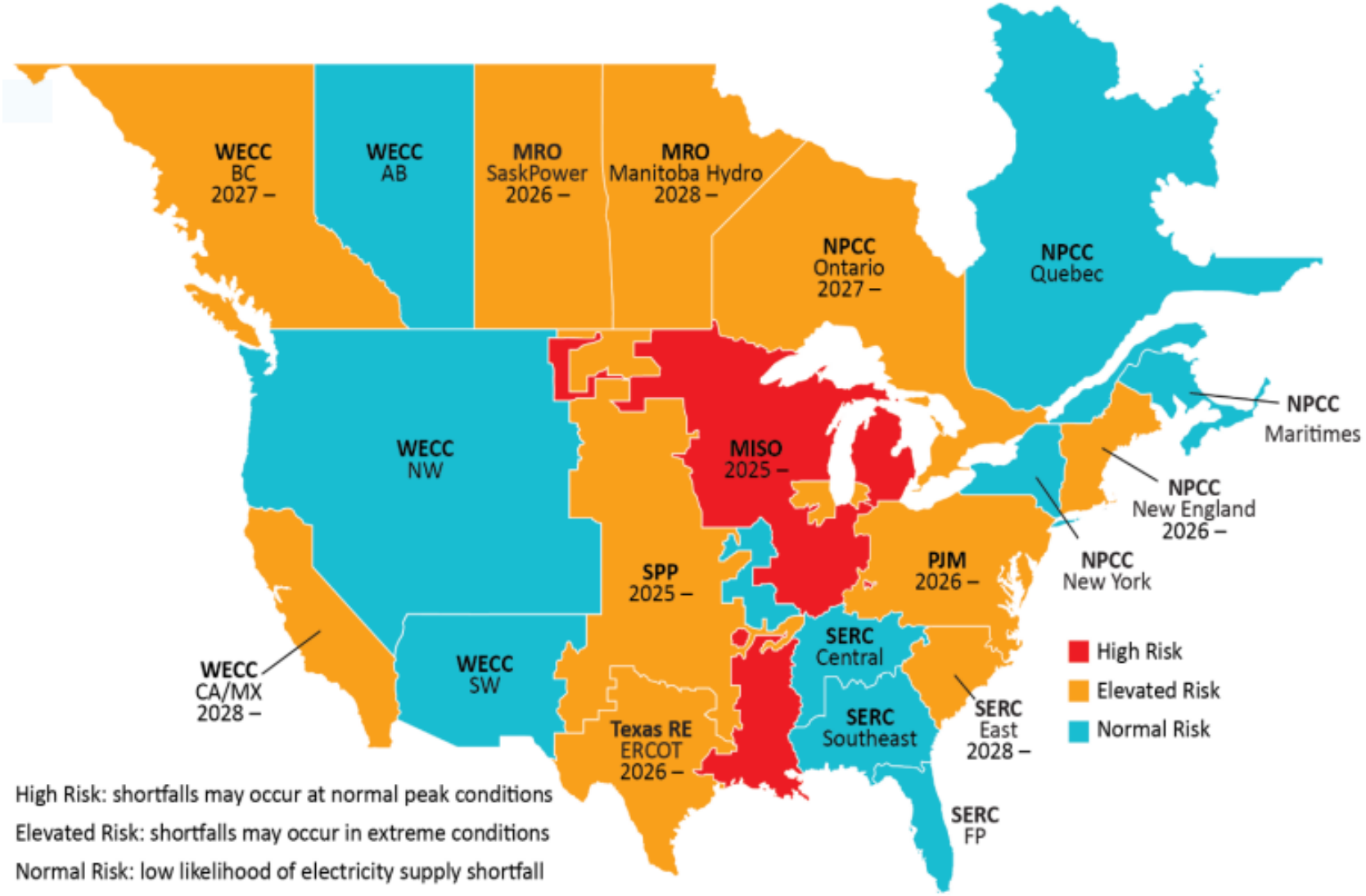
This chart reflects the portion of Virginia that PJM operates. Positive values represent exports and negative values represent imports.

Note – A significant amount of generation from units owned by Virginia jurisdictional utilities and included in regulated rates charged to Virginia customers are physically located outside of Virginia. They are categorized as imports in the chart.

NERC: Summer Reliability Assessment

raphic: NERC

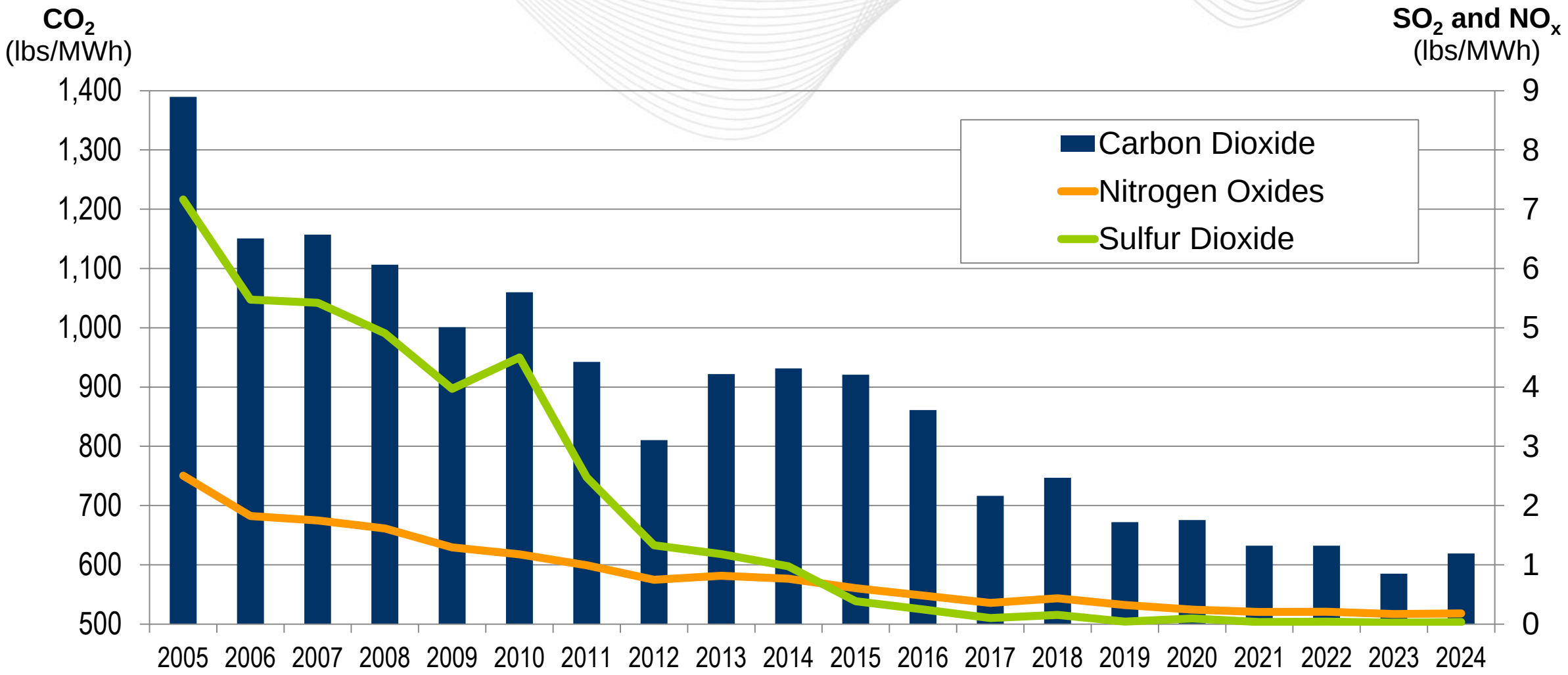
NERC: Long-Term Reliability Assessment



Graphic: NERC

Virginia – Average Emissions (lbs/MWh)

(Feb. 2025)



Policy Takeaways

- **States should avoid policies intended to push *existing generation resources* off of the system until an adequate quantity of replacement generation is online and has been shown to be operating**
- **States should help to bring *new generation resources* onto the system as soon as possible**
- **States should address state and local challenges in the siting/permitting of all electricity infrastructure including *transmission infrastructure***
- **Assist in facilitating *demand response* efforts for data centers and other large demand users**
- **Consider consumer *cost increases* as a natural byproduct of policies that exacerbate the supply/demand imbalance.**