



A Catalyst for
GROWTH
& **PROGRESS**

Monthly Meeting March 2025

“Electrification & Energy in our Region”





A Catalyst for
GROWTH
& PROGRESS

Welcome

GHC Monthly Meeting
March 2025

BJ Goetz
GHC Chair



GHC Monthly Meeting March 2025

Please Welcome Today's Speaker

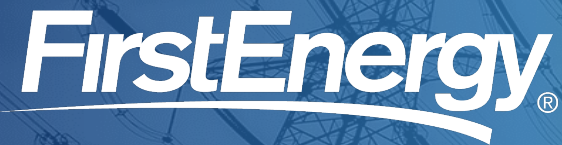
Potomac Edison / FirstEnergy

Senior Advisor for Government Affairs

Tim Troxell

PotomacEdison[™]
A FirstEnergy Company



The logo for FirstEnergy, featuring the company name in a bold, white, sans-serif font with a registered trademark symbol. A white swoosh underline is positioned beneath the text.

FirstEnergy®

Potomac Edison

A background image of high-voltage power lines and transmission towers stretching across a landscape. The image is overlaid with a green-to-blue gradient that transitions from left to right.

Focused on Our Future

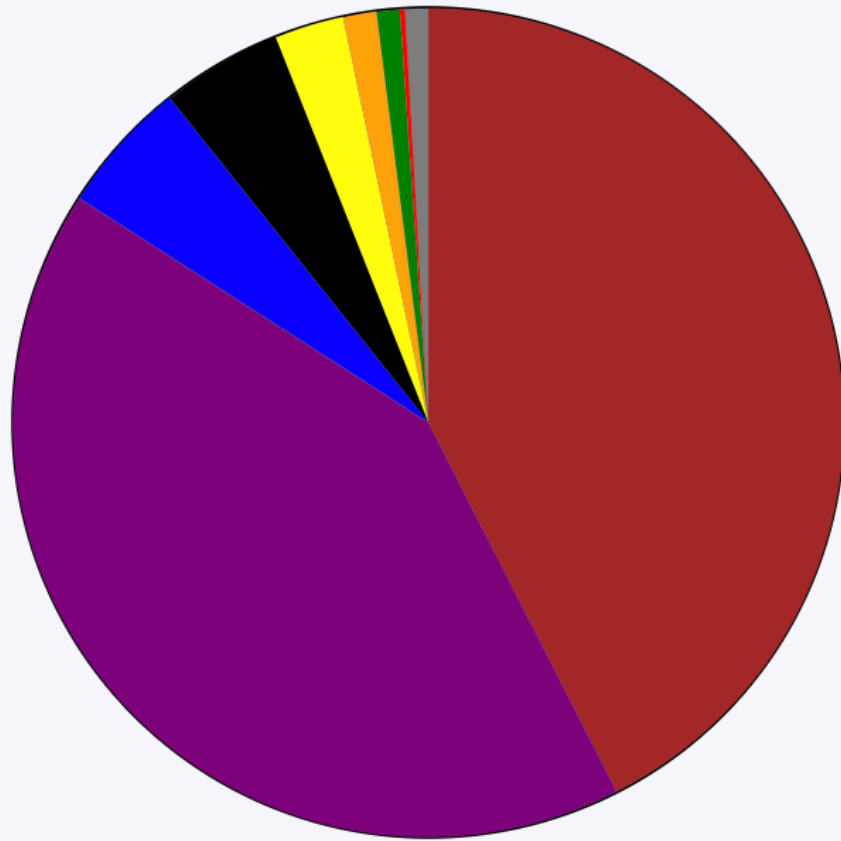
Electrification and Energy in our Region

Tim Troxell

Senior Advisor, Government Affairs

March 28, 2025

Where Does Maryland's Electric Come From?



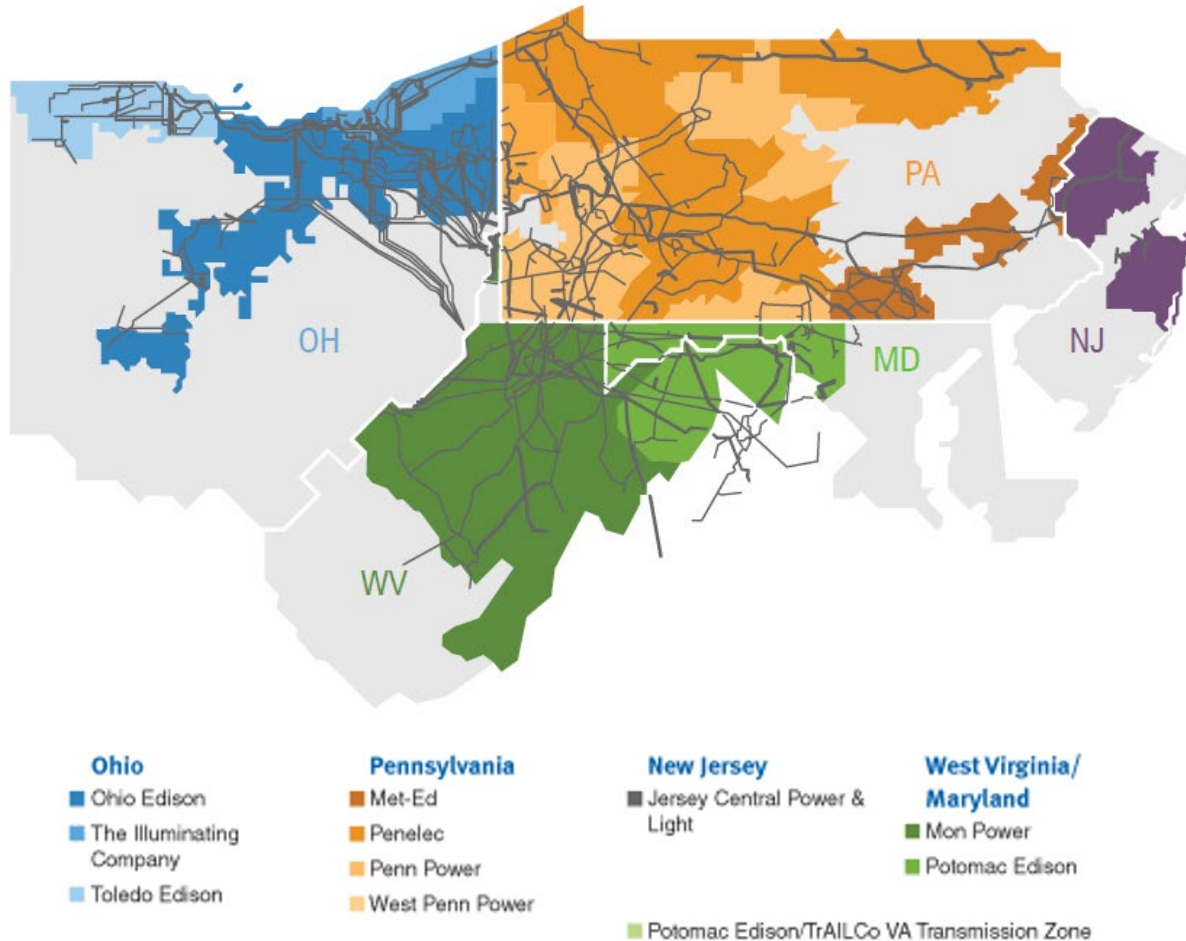
Sources of Maryland utility-scale electricity generation, full-year 2023:^[1]

- Natural gas (42.5%)
- Nuclear (41.6%)
- Hydroelectric (5.2%)
- Coal (4.7%)
- Solar (2.7%)
- Wind (1.3%)
- Biomass (0.9%)
- Petroleum (0.2%)
- Other (0.9%)

FirstEnergy At-A-Glance

\$26B INVESTMENT

ENERGIZE365



6M+

Total Customers

24k

Transmission Miles

275k

Distribution Miles

65k

Service Territory (mi²)

12k

Employees

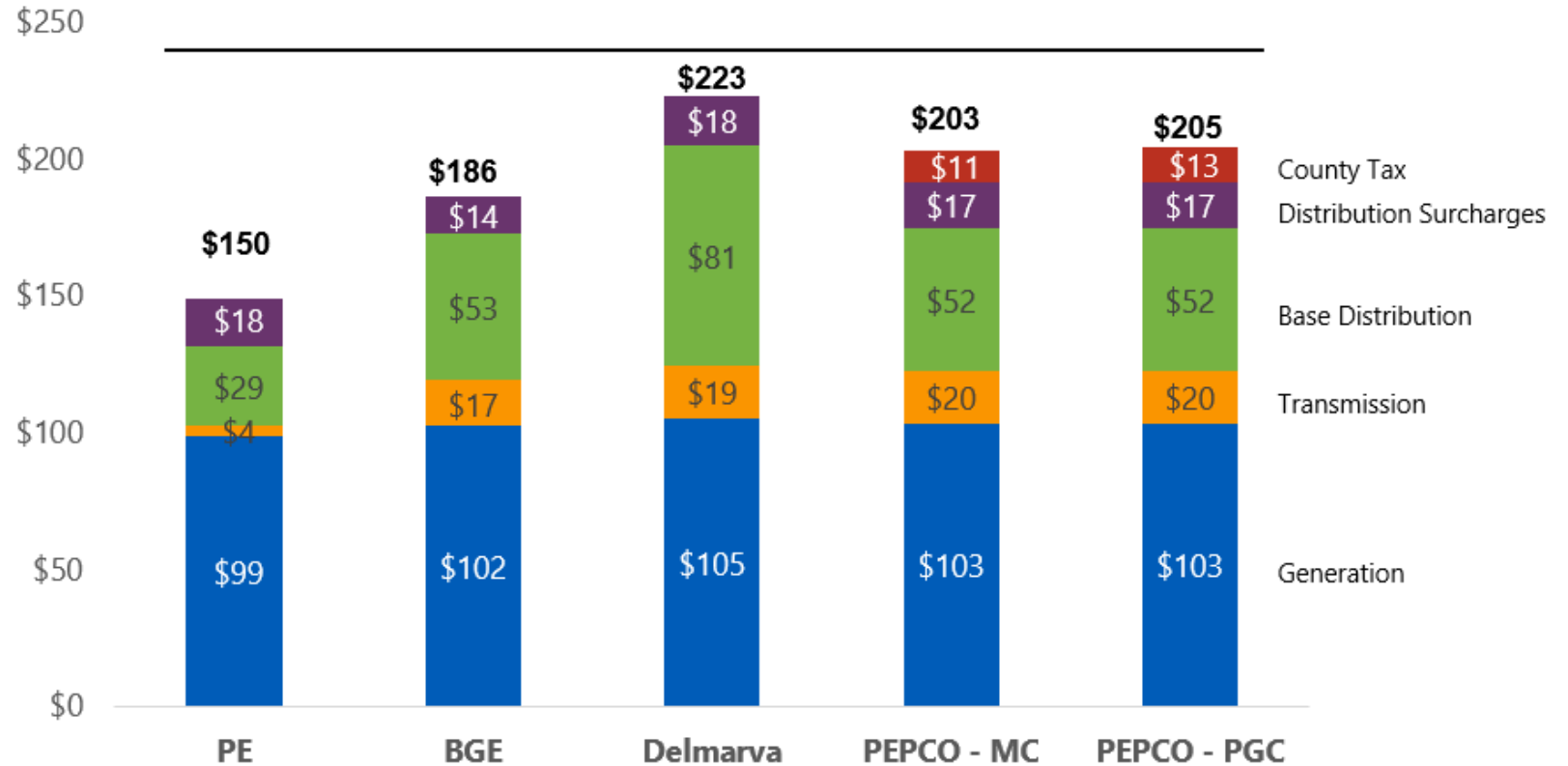
Potomac Edison - Maryland

- 400 employees serving 285,000 customers in 7 counties in Western Maryland
- Delivered 7.2 billion kilowatt hours
 - 47% residential
 - 30% commercial
 - 23% industrial and streetlight
- 11,000 miles of transmission and distribution lines
 - Significant investments in transmission and distribution projects designed to enhance service reliability
- Over the past decade, our economic development efforts have helped facilitate over 7,500 new jobs and \$3.1 billion in capital investments in Maryland



Potomac Edison Rates
– 25% Below
State Peers

**Total Residential Bills assuming 1,000 kWh consumption
January 1, 2025**



Load Growth in PJM

Demand vs. Supply

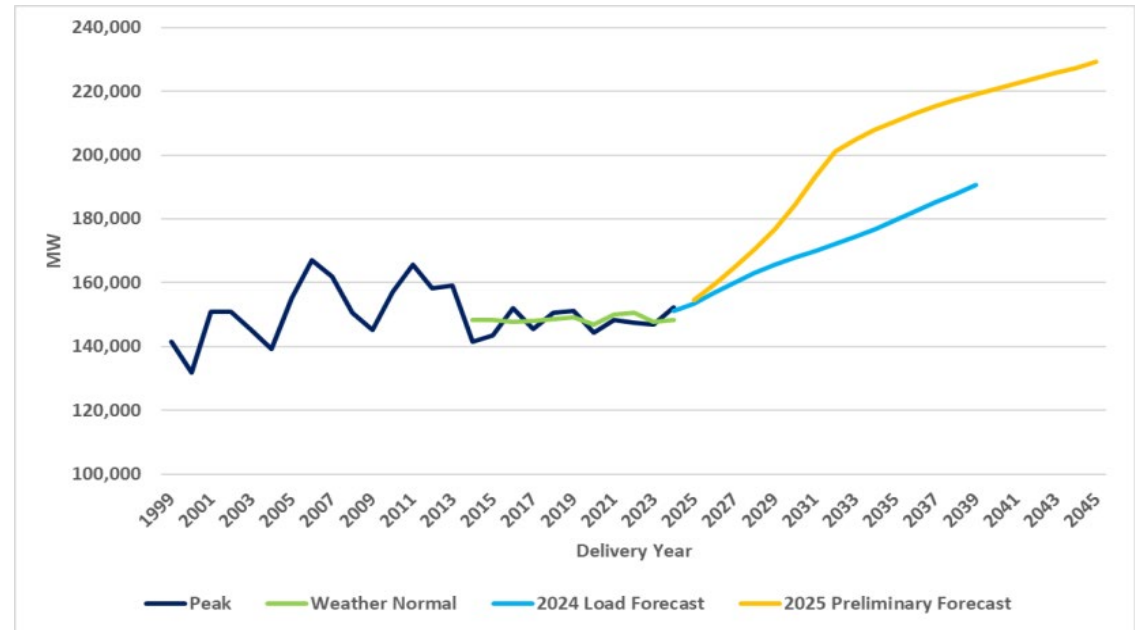
- Electricity demand is rising rapidly due to electrification and energy-intensive data centers.
- Energy supply is shrinking due to the retirement of 40 GW (21%) of dispatchable generation by 2030.
- Policy pressures continue to prevent investment in new dispatchable generation despite record high capacity-market prices in 2025/26.

PJM's 2025 Load Forecast

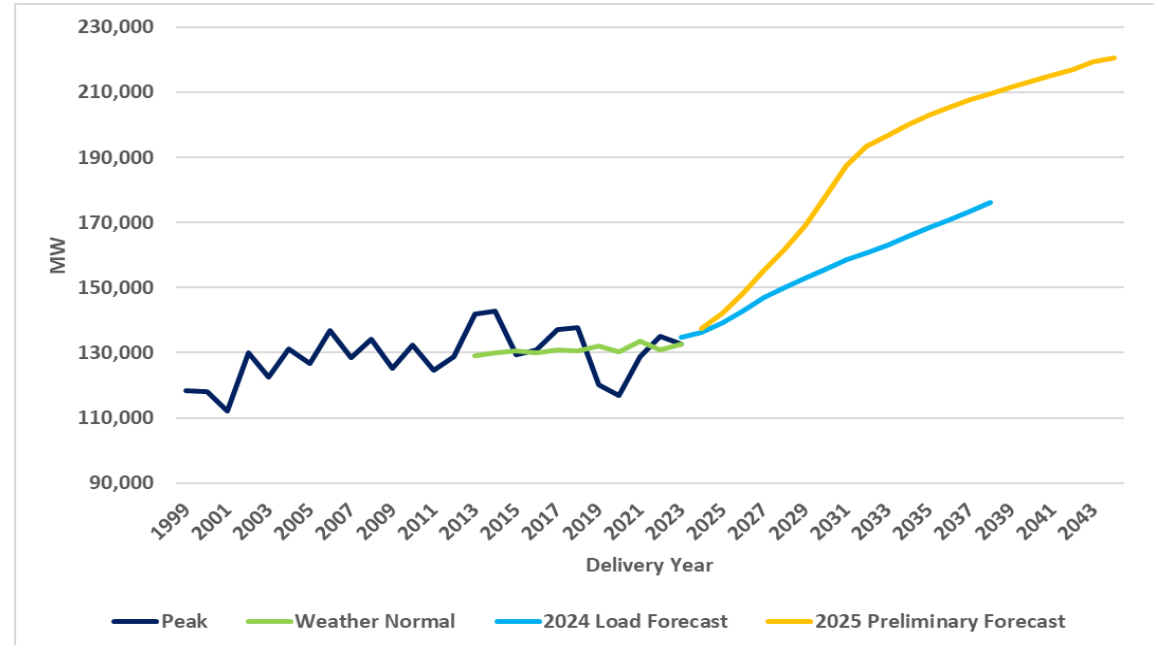
- Summer Peak
 - 10-year increase of 25.6 GW
 - 15-year increase of 39.5 GW
 - 2.0% 15/20 year annualized growth rate
- Winter Peak
 - 10-year increase of 28.4 GW
 - 15-year increase of 41.5 GW
 - 3.2% 15/20 year annualized growth rate

Demand growth is rapidly outpacing generation supply. The current construct is inadequate; costs are increasing and reliability is threatened.

PJM Summer Load Forecast – 2024 vs. 2025



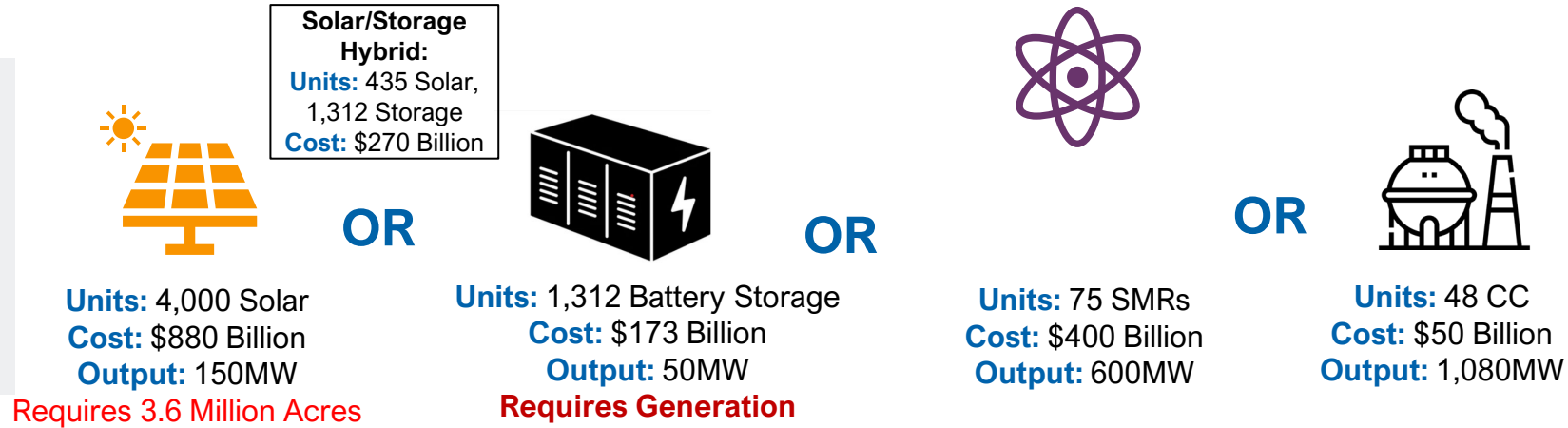
PJM Winter Load Forecast – 2024 vs. 2025



Action Is Needed

The potential gap is bigger than what can realistically be built on time by relying on PJM price signals

Let's assume a ~50 GW gap by 2030. How much would need to be built by resource type to address the gap?



Can this much supply be reasonably built in this time frame?

PJM shortfall forecasted in the next few years – even if you build right now, there still could be shortfalls



Higher likelihood of outages during peak periods*

It takes multiple years to build generation – at least 5 for a new gas plant:

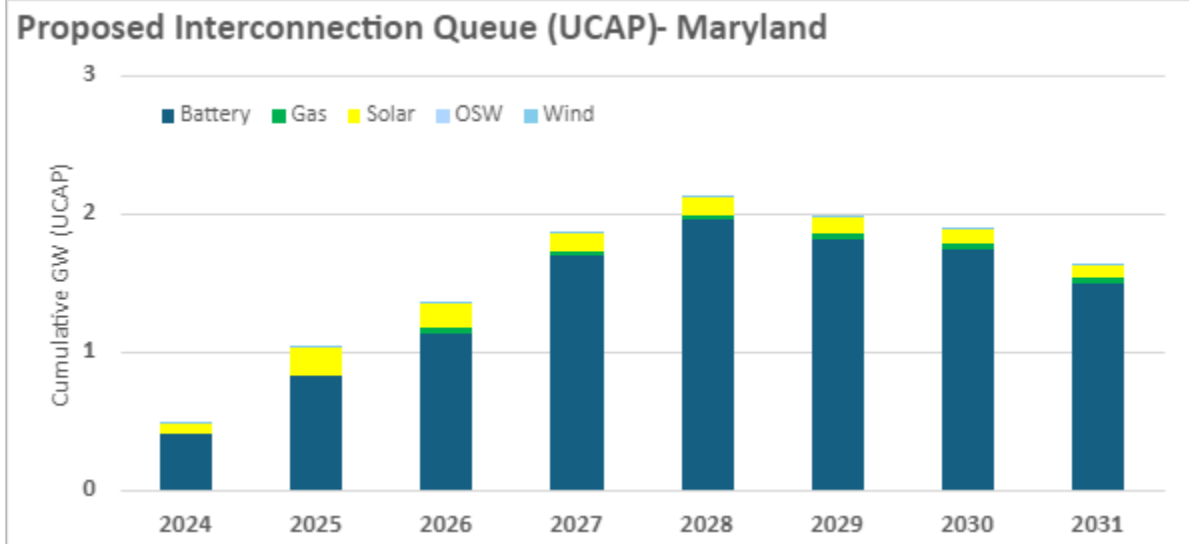
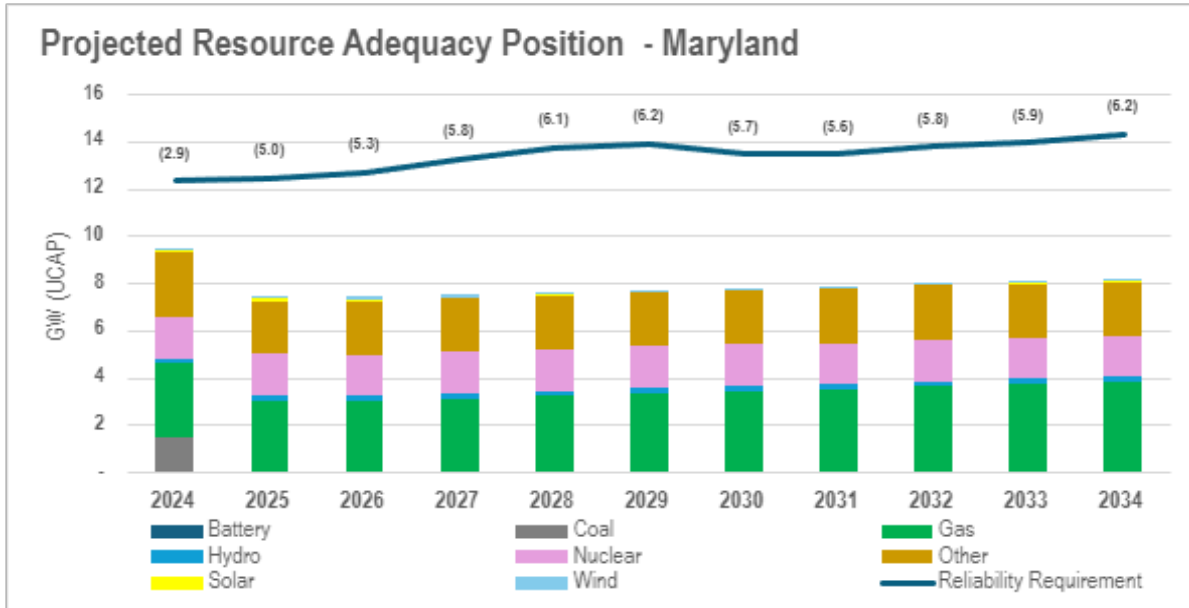


If dispatchable, on-demand generation construction started today, the earliest the electrons would be available is 2029.

*While PJM is forecasting a capacity shortfall, additional outages may occur depending on weather, generator performance, load growth, timing of new generation build, etc.

**Construction times vary depending on supply chain constraints, permitting lifecycle – most recent natural gas generator in Ohio, Guernsey Power Station took 7 years to come online 2016-2023

Maryland Resource Adequacy Status



- Maryland is a net importer of power and unless generation is added will rely on other states to supply their capacity needs
- Maryland is reliant on the PJM market to incent capacity build - which may or not happen - but price signal will be reflected in increased cost to customers
- 92% of queue for MD is intermittent battery
- 5% of queue for MD is wind & solar
- 2% of queue for MD is new reliable, dispatchable on-demand generation

What is best for MD and Customers?



- Reliability – including resiliency and energy security
- Affordability
- Growth



The current PJM market design is not equipped to solve today's capacity challenges

- Markets may not address the capacity gap in time.
- Most capacity in the PJM queue is intermittent renewable generation.
- State support is needed to build dispatchable, on-demand power generation to ensure resource adequacy, affordability, and reliability for all Maryland customers.



Immediate investment in dispatchable generation is required to ensure:

- Stable, reliable energy supply
- Ability to smooth cost over time to maintain affordability for customers
- Resource adequacy to meet growing demands and economic development



Opportunity for MD

- Maryland can lead by attracting data centers and manufacturing investments.
- Maryland State policy to support a portfolio approach to assist in closing the resource adequacy gap.
- A state procurement approach for dispatchable on-demand generation will lead to increased energy security for Marylanders.
- Maximization of energy import capability through transmission investment ensures a reliable grid while minimizing investment.

We must advocate on customers' behalf

Miscellaneous Topics

– **Transmission Line Projects:**

– **Maryland Piedmont Reliability Project (PSEG) –**

- 500 kV Transmission Line - Estimated completion if approved: 2027/28

– **Valley Link (FE, Dominion, AEP)**

- About 260 miles of 765-kilovolt (kV) transmission line and two substations between Putnam County, West Virginia, and Frederick County, Maryland.
- Early stages of design – No timeline yet for completion

– **Legislation (80+ Energy-related Bills):**

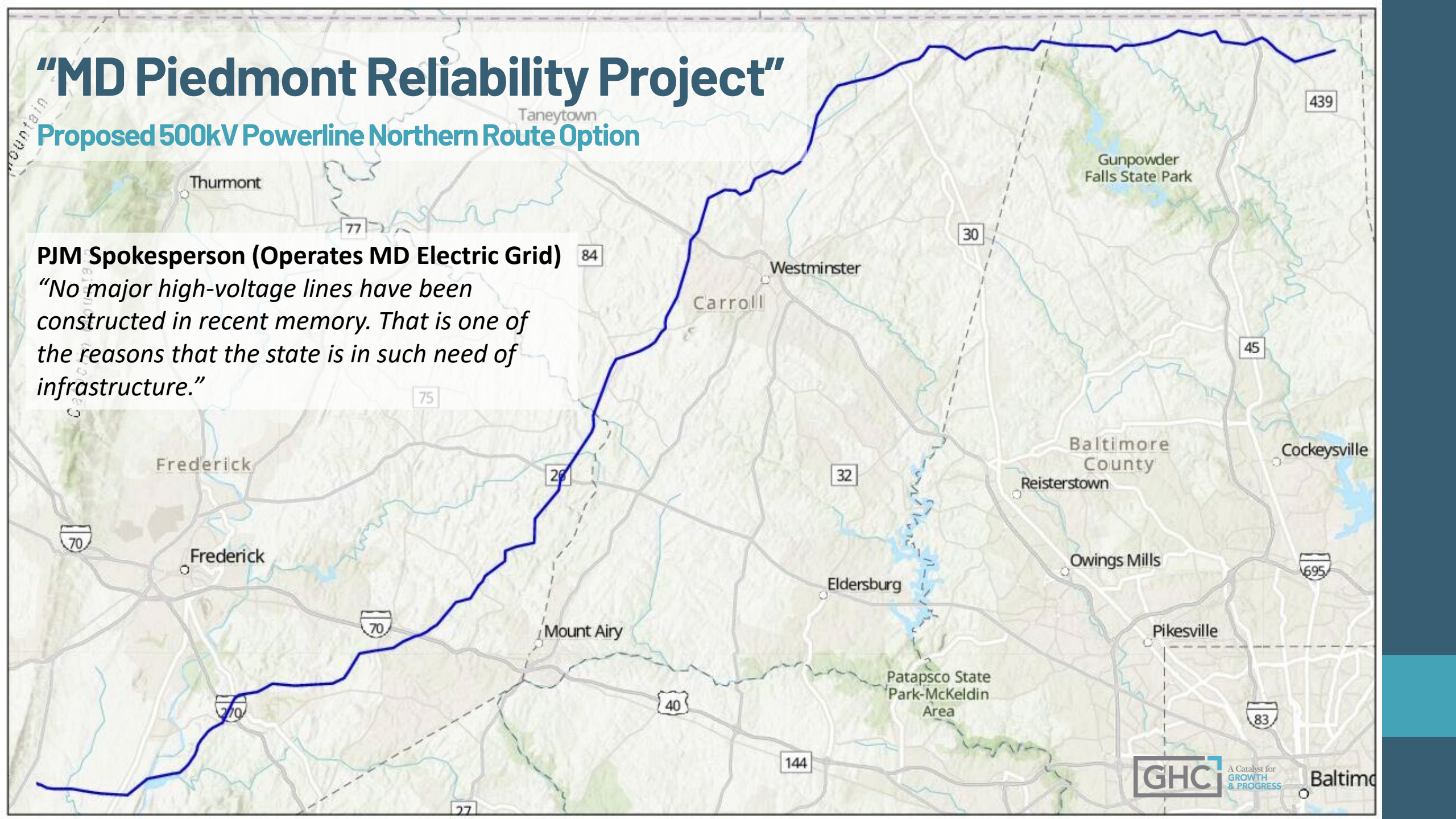
- Dispatchable Generation (Nuclear; Natural Gas; Solar/Battery Storage)
- Transmission (Eminent Domain; Grid Enhancing Technologies)
- Data Centers
- Building Electrification

"MD Piedmont Reliability Project"

Proposed 500kV Powerline Northern Route Option

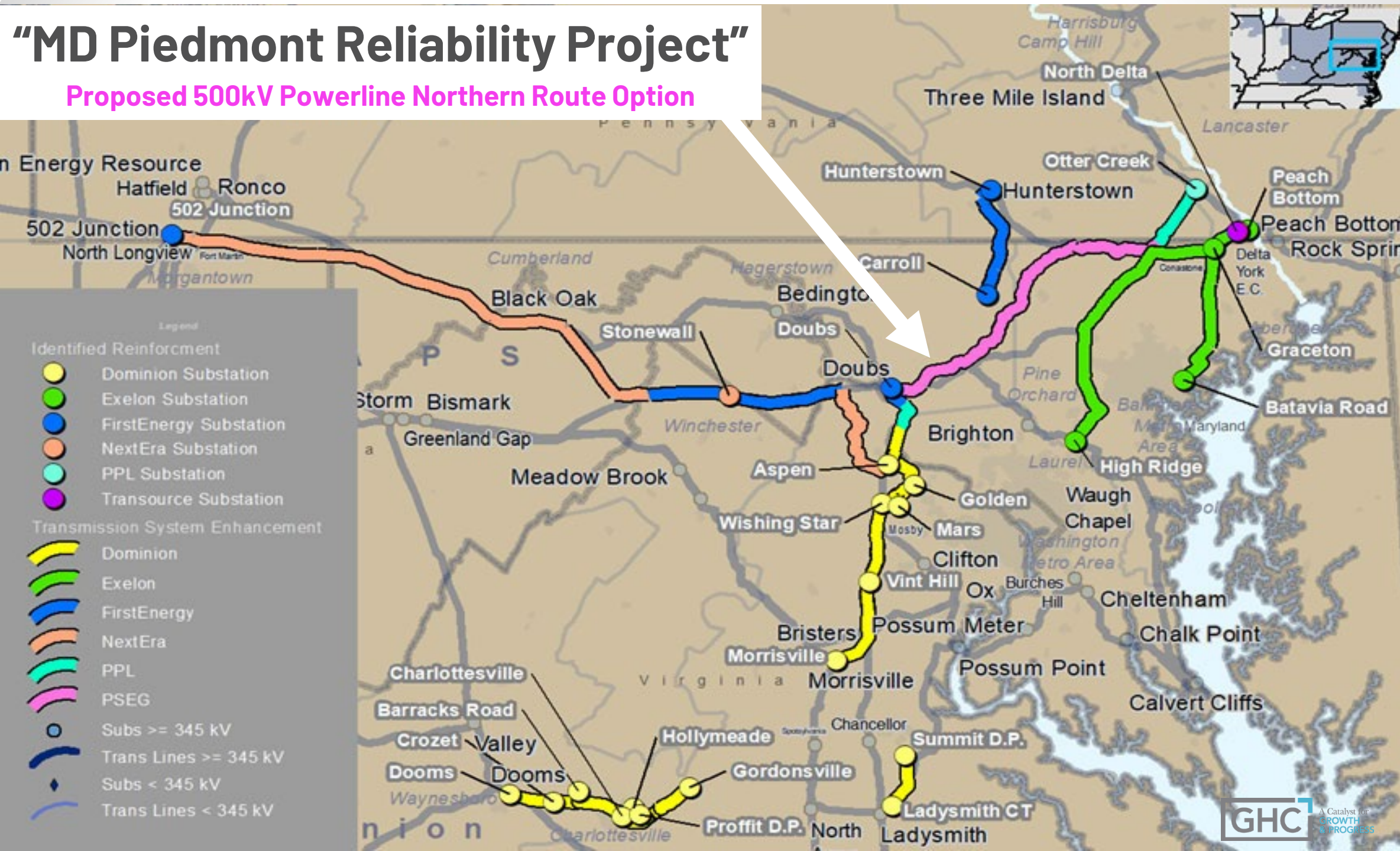
PJM Spokesperson (Operates MD Electric Grid)

"No major high-voltage lines have been constructed in recent memory. That is one of the reasons that the state is in such need of infrastructure."



"MD Piedmont Reliability Project"

Proposed 500kV Powerline Northern Route Option



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Lighting the Way

Thank You

QA

Adjourned

HAPPY
EASTER

