# **Dominion Energy Virginia**



Committed to serving the people of the Commonwealth by safely providing reliable, affordable, and increasingly clean energy. 16,000 2.8M Customer accounts (5M+ **Employees and** Years of EnergyShare people, businesses, etc.) contractors in Virginia customer assistance 67,400 20,500+ Distribution and Transmission Service Territory Transmission Service Territory Megawatts of power Miles of power lines (transmission+distribution) generation resources

## **Electric Utility Operational Segments**

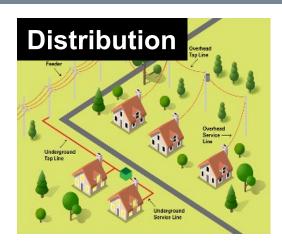




- Solar, wind, conventional hydro, biomass, nuclear, natural gas, coal, oil, etc.
- Purchased power from the wholesale (PJM) market
- Balance generation and load (customer demand)



- Transmission lines distribute electricity at higher voltages
- Regional transmission network operated by PJM Interconnection
- Inter-state transmission also subject to federal regulation



- Distribution grid substations "step-down" to lower voltage
- Distribution main lines serve the majority of customers
- Neighborhood "tap lines" connect to individual enduse customers

The State Corporation Commission's regulatory oversight covers all segments

Powering Your Every Day.<sup>™</sup>

## The Flow of Power: Visualization





# A Megawatt is Not a Megawatt



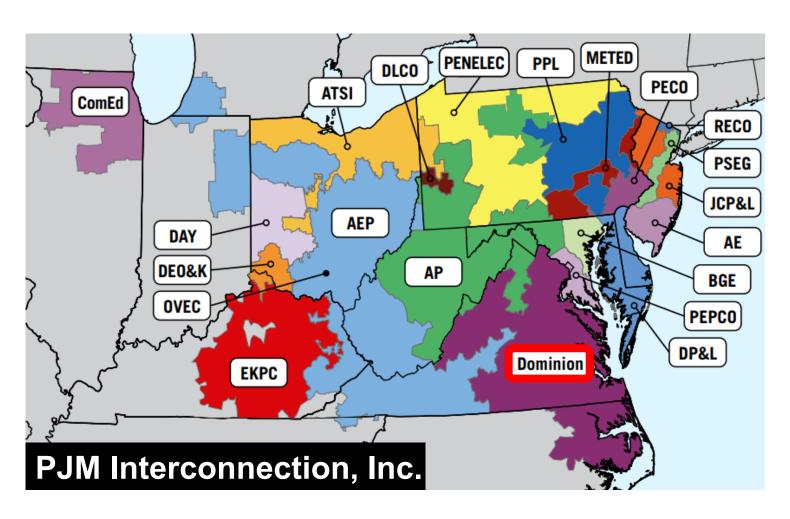
Generation Type	Average Capacity Factor*	Carbon-free?	Fuel-free?	Dispatchable?
Solar Photovoltaic	~28%	YES	YES	NO
Offshore Wind	~42%**	YES	YES	NO
Biomass	~83%	Carbon-neutral (per EPA)	NO	YES
Natural Gas Combined-Cycle	~87%	NO (~1/2 carbon of coal)		YES
Nuclear	~90%	YES	NO	YES

<sup>\*</sup>U.S. Energy Information Administration estimate for new resources entering service in 2027 (<u>Table 1b</u>).

<sup>\*\*</sup>Reflects expectations for the commercial-scale Coastal Virginia Offshore Wind project's net capacity factor (Case No. PUR-2021-00142).

# Our Place in the Regional Grid





- PJM is one of several "regional transmission organizations" (RTOs)
- Coordinates movement of electricity at the wholesale level in all or parts of 13 states
- Operates electricity and capacity markets to assure reliable service and resource adequacy
- Manages a queue of new power generation resources seeking to interconnect to the electric grid
- Produces customer demand forecasts within each of its constituent transmission "zones"

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## Review: Integrated Resource Planning

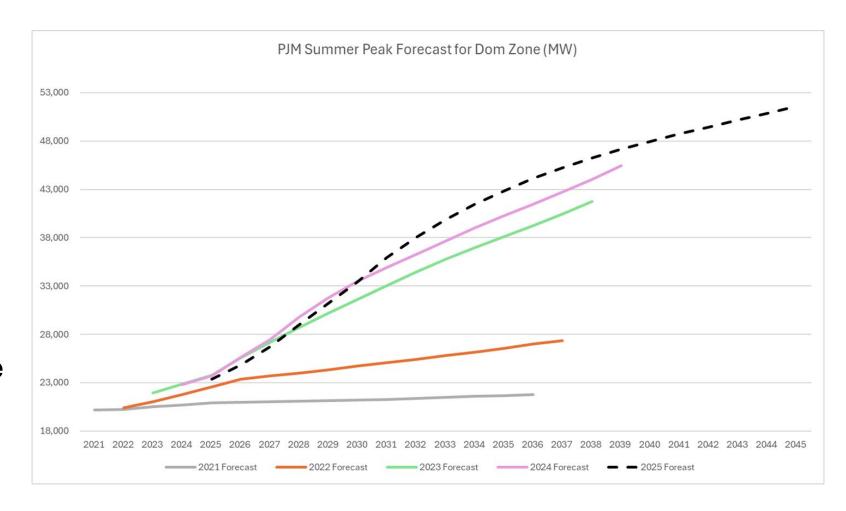


### An IRP is:

- An outline of possible strategies for meeting customers' future needs
- A "snapshot in time" based on present-day information

### An IRP is NOT:

- A definitive near-term build plan for utility infrastructure
- A request for approval of specific projects or cost recovery



## 2024 IRP Baseline vs. "Retirement Case"



(Capacity in Megawatts)	Through 2039 (2024 IRP)	Through 2039 (2025 Update)	Through 2045 (2025 Update)
Solar	12,210	11,414	17,534
Wind	3,460	3,460	3,460
Storage	4,100	2,000	2,000
Natural Gas	5,934	8,510	8,510
Nuclear	1,340	0	1,944
Total	27,044	25,384	33,448

Retirement Case
19,754
3,460
9,075
3,814
12,244*
48,347

<sup>\*</sup>Includes almost 4,500 MW of traditional, large-scale nuclear (four additional units).

# The State-Level Regulatory Model



### **Virginia's Regulatory Compact**

#### **CUSTOMER BENEFITS**

- Access to public and economic necessity
- Just and reasonable rates
- Ability to participate in the ratemaking process

### **UTILITY BENEFITS**

- Designated service territory
- Recovery of legitimate costs
- Fair return on investment

#### **UTILITY RESPONSIBILITIES**

- Obligation to serve all customer demand
- Expenditures must be prudent
- Rate changes must be justified/approved

### **Regulated Model**

- Vertical integration: utility owns assets across the generation-transmission-distribution value chain
- In exchange: obligation to serve; oversight by the State Corporation Commission (SCC)
- Utility serves as default service provider; conducts long-range planning
- Utility bears responsibility for decisions made with its public service commitment in mind

## **Deregulated / "Competitive" Model**

- Non-utility providers/third parties have no obligation to serve
- Competitive providers act according to pure financial interest in response to price signals