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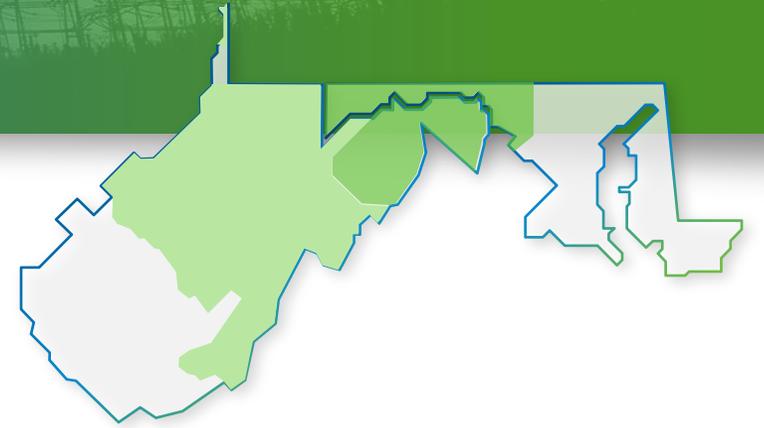
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Lighting the Way

# Power 101: A Deep Dive into WV's Energy System

Jefferson County Development Authority

February 5<sup>th</sup>, 2026

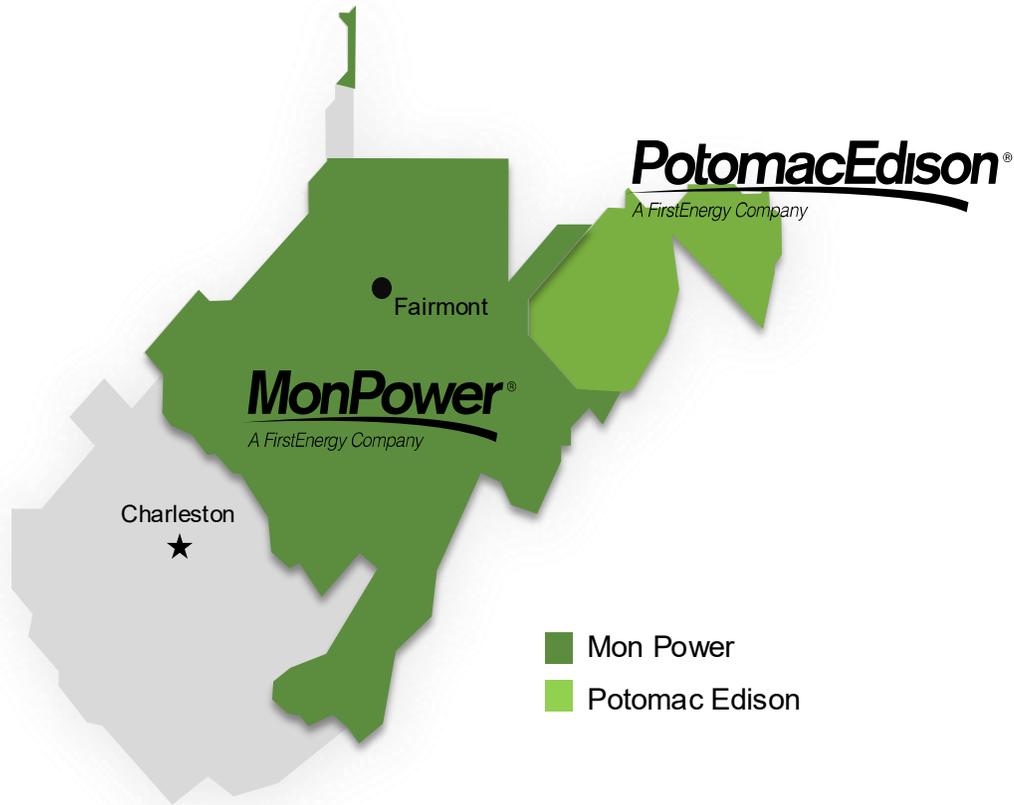


# Agenda

- About MonPower and Potomac Edison – WV
- Grid 101 – Transmission – Purpose, Planning
  - Energy System Overview – State vs. Federal Powers and Policy
  - Energy Market – RTO – How Does PJM Work? Capacity Auction
- Generation 101 – Generation Overview, Integrated Resource Plan, New Generation
- Rate Setting 101 – Rate setting and review process, rates overview
- Economic Development – Customer Relations – Partner With the State, Load Studies

# FirstEnergy in West Virginia

## Overview and Footprint



**~556,000** West Virginia customers

**15,700** square miles of service territory

**40** West Virginia counties

**32,000** Dx & Tx circuit miles

**1,900+** West Virginia employees

**\$72MM** State and local taxes paid

**\$500MM** Coal and reagents annual spend

**11 (~6,600MW)** Data centers under study

**\$1.4B** WV investment 2022-24

**\$3B** WV investment planned 2025-29

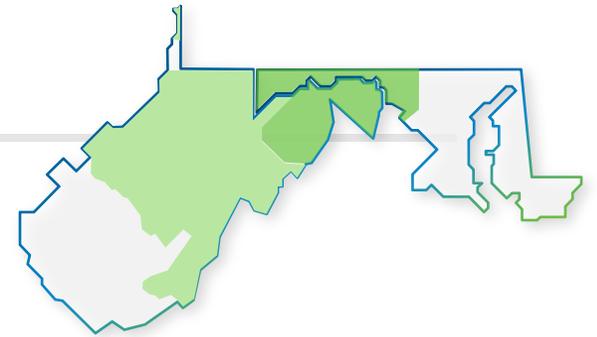
*Providing safe, reliable, and cost-effective electricity to West Virginia*

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Grid 101



# Federal vs. State Roles in Energy Regulation

## Federal Oversight

Agencies: Federal Energy Regulatory Commission (FERC)

- Oversees interstate transmission
- Regulates wholesale electricity markets
- Ensures regional grid reliability

## State Oversight (West Virginia Public Service Commission)

- Regulates retail electricity rates
- Oversees local reliability
- Approves siting of generation and transmission facilities



**State Authority:** WV retains control over generation and retail rates



**Federal Role:** Ensures regional coordination and market efficiency



**WV's Advantage:** Integrated regulatory model provides more control than deregulated states

# Transmission and Distribution

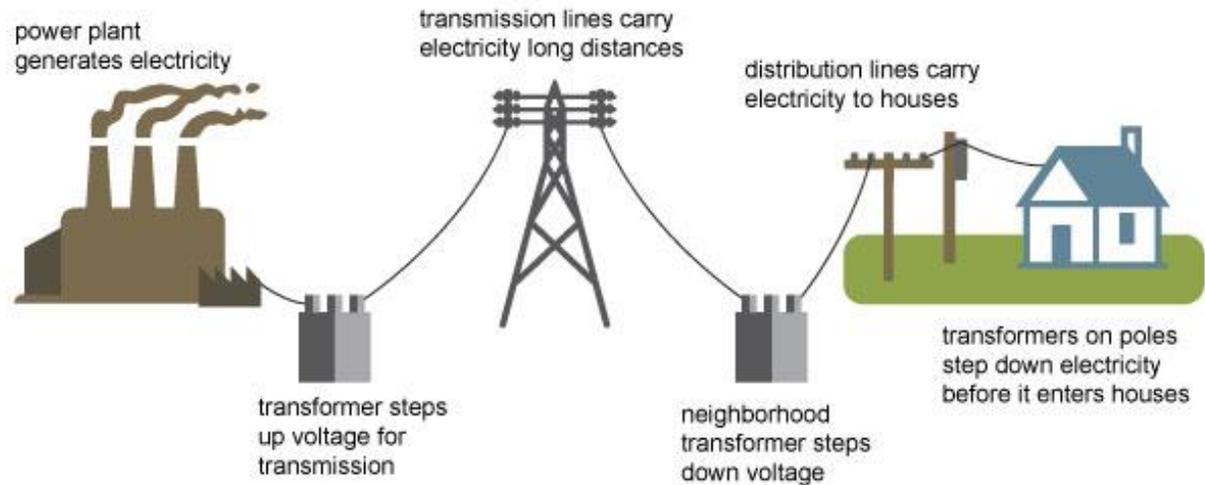
## Transmission Lines:

- Carry high-voltage electricity over long distances
- Typically supported by large steel towers
- Voltage levels range from 69kV to 765kV

## Distribution Lines:

- Deliver electricity to homes and businesses
- Supported by wooden poles in neighborhoods
- Voltage levels range from 4kV to 34.5kV

## Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)

# How Does PJM Work?

- PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and Washington D.C.
- PJM's primary goal is to ensure the safety, reliability, and security of the bulk electric power system.
  - Market rules (energy, capacity, ancillary services)
  - Transmission planning and open access tariffs
  - Reliability standards and operational independence
- FERC oversees PJM's market and transmission operations.
- Mon Power & Potomac Edison Joined PJM in 2002.
  - Participate in PJM's markets but **do not earn profit** from market sales—revenues are passed back to WV customers via the **ENEC** mechanism.



## PJM Does:

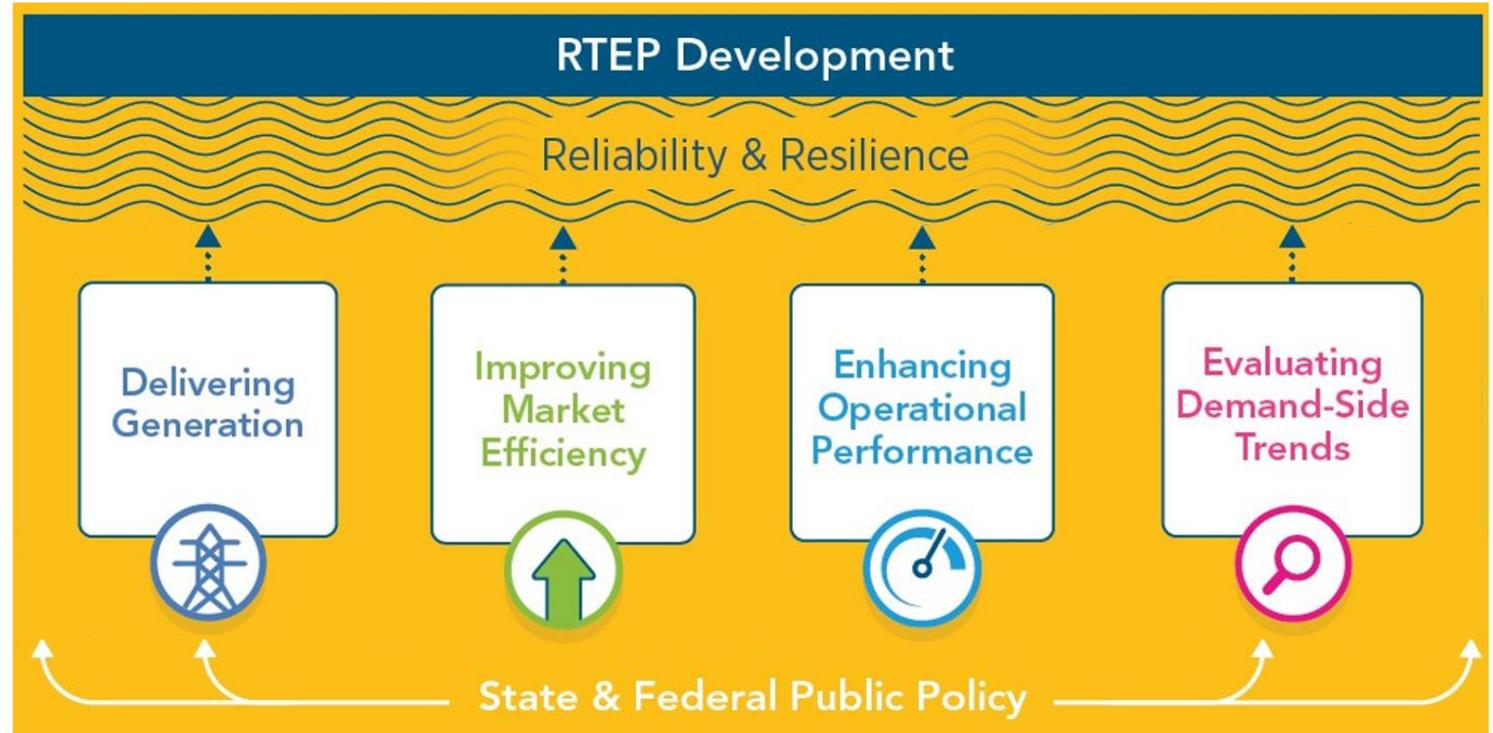
- Direct operation of the transmission system
- Remain profit-neutral - nonprofit limited liability company.
- Maintain independence from PJM members
- Coordinate maintenance of grid facilities

## PJM Does *NOT*:

- Own any transmission or generation assets
- Function as a publicly traded company
- Perform maintenance on generators or transmission systems
- Serve or direct any end-use customers

# Transmission – What is it and why does it need upgraded?

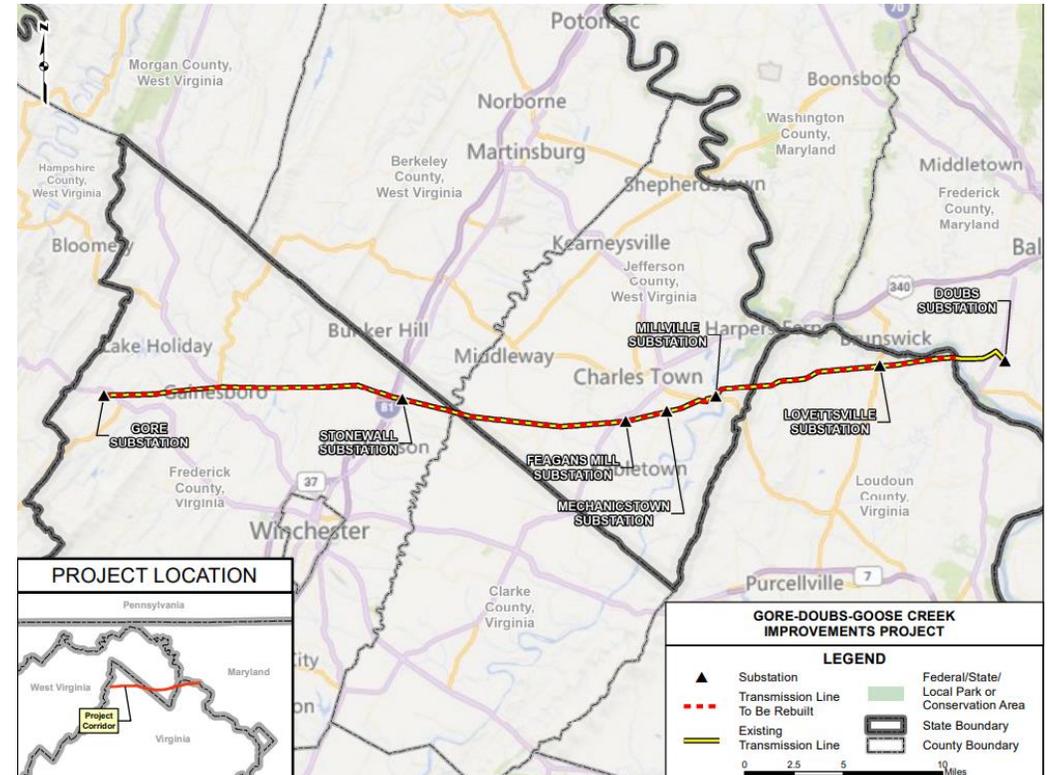
- PJM conducts regional transmission planning through its "Regional Transmission Expansion Plan" (RTEP) process
  - Maintain regional reliability
  - Integrate new generation
- The RTEP process is updated at least annually with stakeholder input.
- FERC oversees PJM's RTEP process by approving the planning framework, cost allocation methodologies, and market rules under which PJM operates. FERC does not approve individual projects but ensures that PJM's process is transparent, inclusive, and compliant with federal regulations—particularly FERC Order 1000, which mandates open access, stakeholder engagement, and fair competition.
- Once PJM staff evaluates proposals, the independent PJM Board of Managers formally approves selected projects, which then become binding on transmission owners within the region.
- The WV PSC approves siting.



# Gore-Doubs-Goose Creek Improvements Project

## Overview

- Potomac Edison has been awarded a project by regional transmission organization PJM Interconnection to upgrade its transmission lines in Virginia and West Virginia. The project will primarily utilize existing transmission rights of way, minimizing environmental and community impacts.
- Potomac Edison will upgrade approximately 44 miles of an existing 138 kV transmission line to create a double circuit line with 500 kV wires and 138 kV wires. The 138 kV line will be connected to the Feagans Mill, Mechanicstown and Millville Substations with new conductor that will increase capacity.
- Current engineering plan is to utilize a vertical configuration within existing right-of-way for the vast majority of structures.
- The work will utilize an existing right of way that traverses east through Frederick County, Virginia (17.9 miles), Clarke County, Virginia (0.2 miles), Jefferson County, West Virginia (15.4 miles), and Loudoun County, Virginia (10.5 miles).
- Potomac Edison will also build two new 138-kV lines between the Stonewall Substation in Clear Brook, Virginia, and the proposed Woodside Substation nearby.
- The project will continue east to the Doubs Substation in Frederick County, Maryland, and then south through Montgomery County, Maryland, toward Dominion Energy's Goose Creek Substation in Virginia.



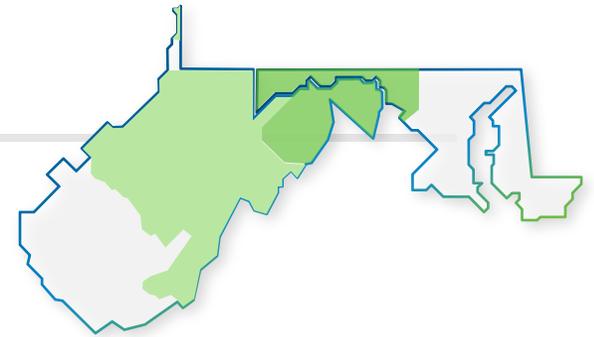
**Enhance transmission system reliability, accommodate growing demand for electricity by residential and commercial customers, and facilitate the connection of new generation sources**

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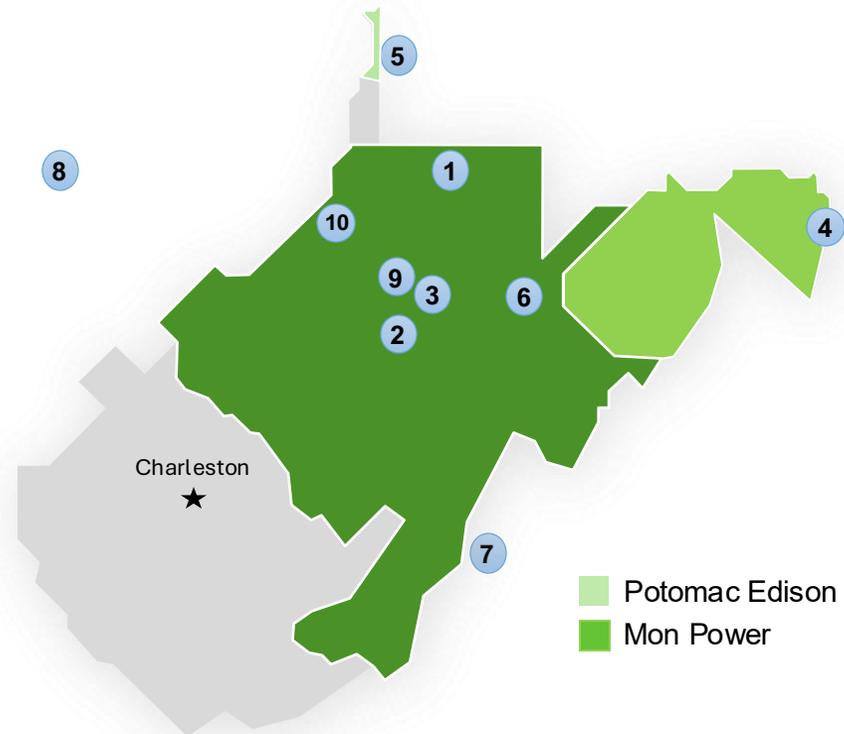
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## Generation 101



# FirstEnergy in West Virginia

## Generation Overview



## Generation owned or controlled by MP

	Ownership	Rating (MW)*	County	
<b>Coal</b>				
1	Fort Martin 1	100%	552	Monongalia
	Fort Martin 2	100%	546	Monongalia
	Harrison 1	100%	662	Harrison
2	Harrison 2	100%	661	Harrison
	Harrison 3	100%	661	Harrison
<b>Solar</b>				
	Fort Martin	100%	18.9	Monongalia
3	Rivesville	100%	5.5	Marion
4	Marlowe	100%	5.75	Berkeley
5	Wylie Ridge	100%	<i>Planned</i>	Hancock
6	Davis	100%	<i>Planned</i>	Tucker
<b>Other</b>				
7	Bath County	16.25%	488	Virginia
8	OVEC	0.49%	11	Indiana, Ohio
<b>PURPA</b>		<b>Contract Length</b>		
9	Grant Town	5/28/2036	80	
10	Hannibal Hydro	6/1/2034	31	
<b>Total Max. Capacity (MW)</b>		<b>3722</b>		

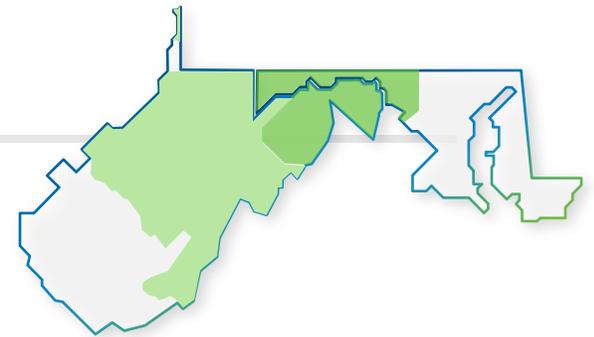
\*Note: Chart above shows nameplate capacity

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## Rate Setting 101



# Utility Rate Setting Process



## 1. Filing the Rate Case

- Utility submits formal request to the PSC for a rate change.
- Includes:
  - Testimony from utility representatives
  - Financial documentation
  - Justification for proposed rates and investments

## 2. Suspension & Legal Notice

- PSC suspends proposed rates pending review
- Utility publishes legal notices to inform the public

## 3. Procedural Schedule

- PSC sets timeline for:
  - Discovery
  - Public comment hearings
  - Evidentiary hearings

## 4. Audit & Review

- PSC staff (accountants, engineers) audit utility data:
  - Analyze cost recovery
  - Assess project viability

- Review revenue projections

## 5. Intervenor Participation

- Consumer Advocate Division and other stakeholders (e.g., industrial customers, advocacy groups) may:
  - Submit discovery requests
  - Provide expert testimony
  - Propose alternative rates

## 6. Public Involvement

- Parties may negotiate a settlement
- PSC reviews if settlement is fair and reasonable

## 7. Evidentiary Hearing

- Formal hearing with cross-examination and official record of evidence

## 8. Final Decision

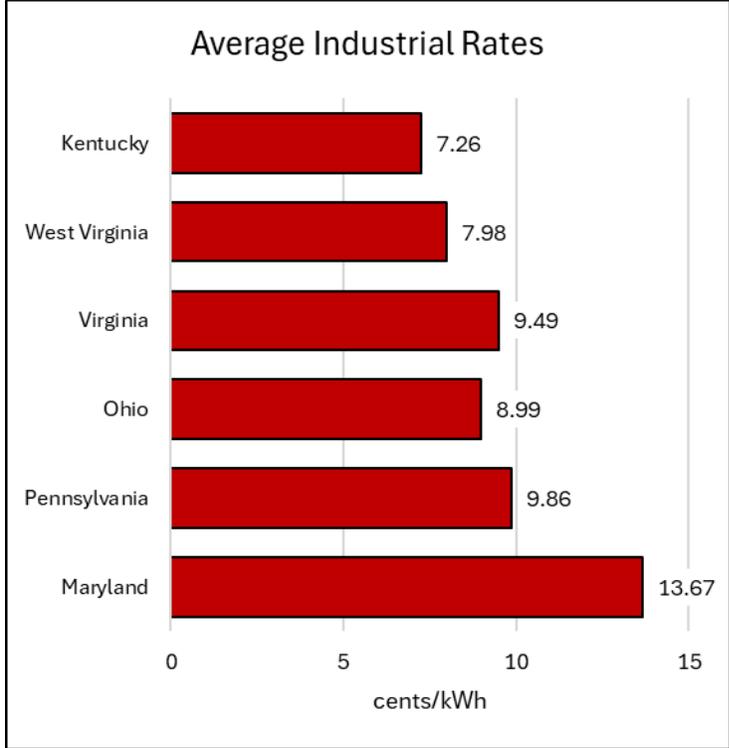
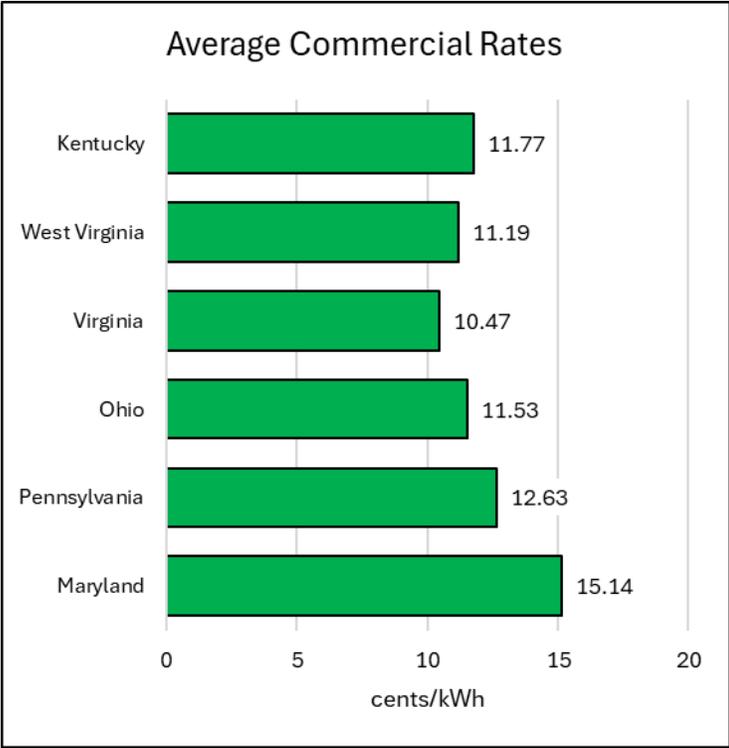
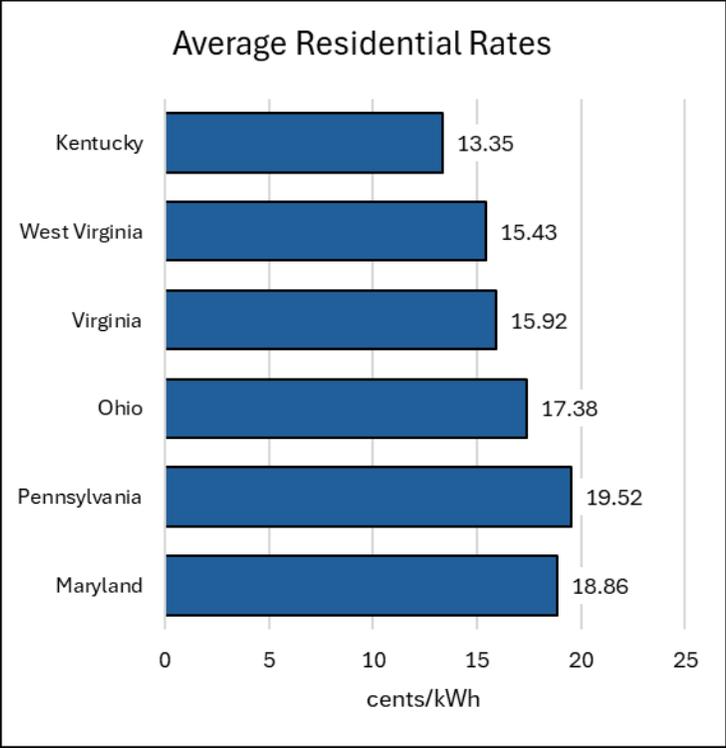
- PSC reviews all testimonies, public input and (if applicable) settlement
- Issues a Final Order

## 9. Implementation - If approved, utility files a new tariff

# Utility Rates



## Electricity Rates Comparison by State\*



\*Data as of the most recent date available (July 2025) from the U.S. Energy Information Administration (EIA), Table 5.6.A.

# Utility Rates

## MonPower/Potomac Edison

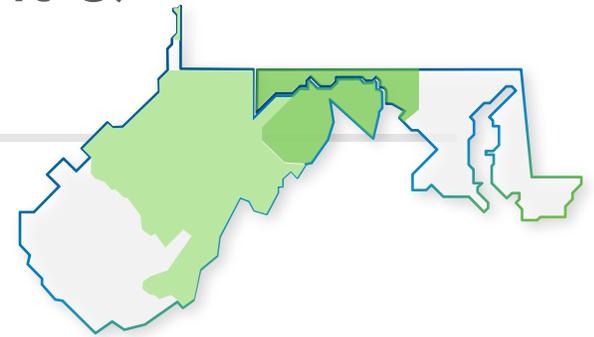


- **Mon Power/Potomac Edison January 15<sup>th</sup>, 2026, rate for an average residential customer:**  
13.809¢ per kWh

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## Economic Development & Customer Relations



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# Large Power Process for FirstEnergy Wires

Streamlined customer experience  
Actionable Information

Leads & Inquiries



Managed or National Account

**CLS:** Identification of thermal and voltage violations triggered by adding a proposed load to the electric grid, impacted grid infrastructure, and impacted neighboring utilities if applicable

**DLS:** Engineering solutions to resolve thermal and voltage violations, solutions to extend the electric grid to the site, full construction scope of work, estimated cost of construction, and more.

**Construction:** Final design and engineering, procurement, project management coordination, construction & commissioning of electric infrastructure.

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Thank You

