

Combined Heat & Power

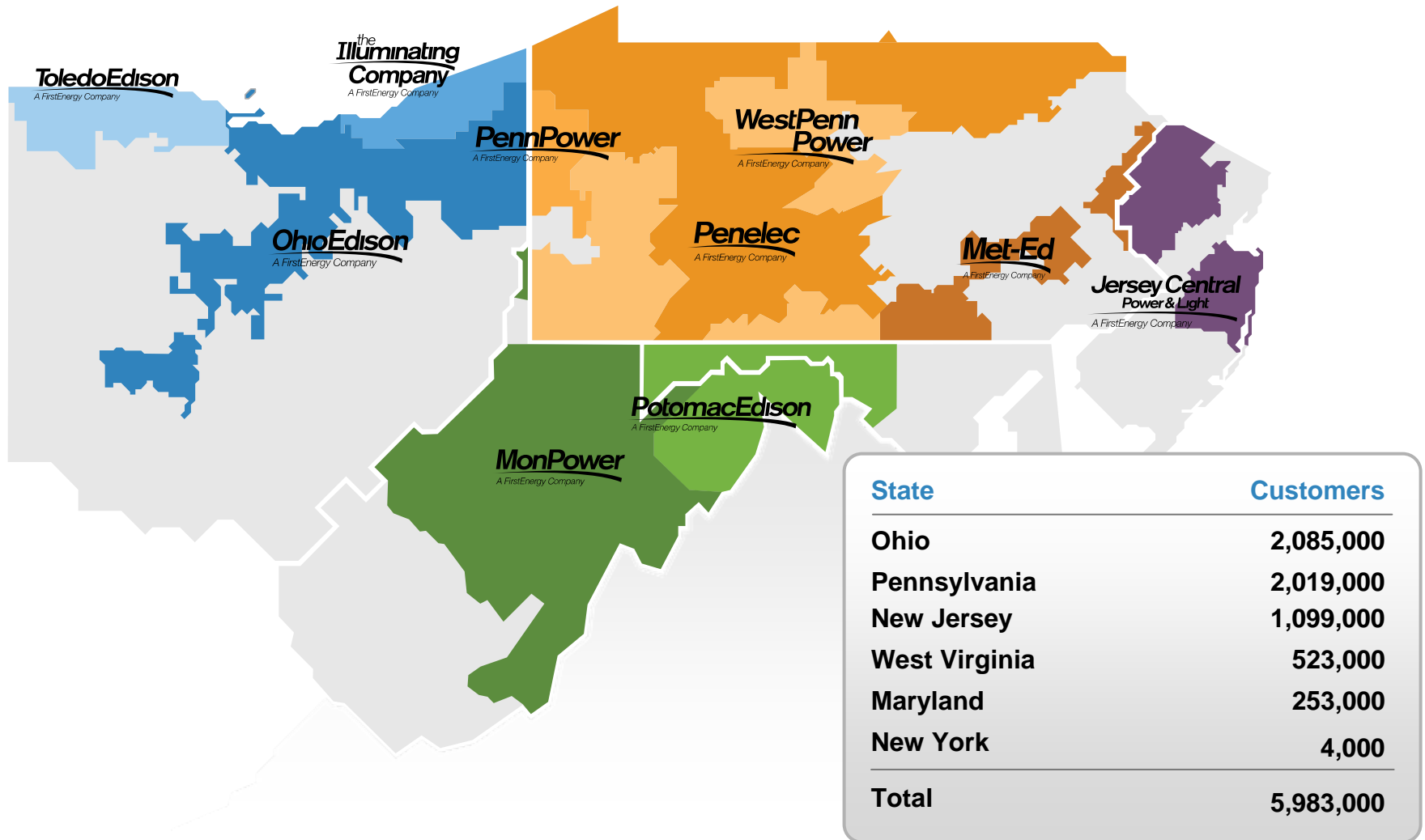
Presented to:
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Presented by:
Charles Fullem
Director, Rates & Regulatory Affairs - Pennsylvania

Outline

- **FirstEnergy Utilities**
- **Policy considerations relating to promotion of CHP – in a wholesale and retail competitive generation market**
- **A look at Rate & Tariff alternatives**
 - Net Metering Tariffs
 - Partial Service Tariffs
 - Separate Resource and Requirements Tariffs
- **Concluding Remarks**

FirstEnergy Regulated Utilities



Policy considerations relating to promotion of CHP

- **Regulatory policy that follows cost causation principles leads to economic outcomes**
- **Access to market based pricing reduces potential for cross-subsidies**
- **In states with Retail Competition and unbundled rates – it is unlikely that cost of service based rates will be an economic barrier to CHP development**
- **Promotion of CHP would come at expense of central station natural gas plants. (no fuel switching)**

A Look at Rate & Tariff alternatives - Net Metering Tariffs

- **EDC offsets sales with purchases during the month, and in months purchases exceed sales – often carry a bank to offset future sales.**
- **Customer receives full retail value for each kWh offsetting all transmission, generation, and distribution energy charges.**
- **Once a customer-generator produces excess generation monthly, additional kWh are purchased at retail rate or banked until the close of the year.**
- **In Pa, at the end of the year the customer is credited the company's current Generation rate for the banked kWh.**

A Look at Rate & Tariff alternatives - Partial Service Tariffs

■ **Distribution Costs**

- Voltage Based Standby or Back-up Charge
 - Cost Based on traditional Cost of Service
- Supplemental Service Charge
- Maintenance Charge

■ **Non Market Based (NMB) Transmission Related Costs**

- Generally follow same pricing as Generation, some States it might follow Distribution where NMB Transmission is a non-bypassable charge.

■ **Generation & Market Based Transmission Costs**

- Customer can Shop for Service – Back-up, Supplemental, Maintenance
- Utility Service – Various approaches
 1. Market Based Hourly Service based on LMP plus kWh based charges for capacity, and other services
 2. Market Based price per kWh equal to same price as available to other POLR/Default Service Customers based on Class
 3. Reservation charges giving rights to specified daily purchase options – available to PS customers only at administratively determined rates.

A Look at Rate & Tariff alternatives - Separate Resource and Requirements Tariffs

- Separately Meter all Generation:
 - Bid Generation into the PJM Capacity market, bid energy into the energy market and ancillary service market where appropriate.
 - Generator paid all funds received from PJM for output at market based prices less administrative charges.
- Bill all load based on load meter (or totalized load plus real time generator output) based on standard tariffs
 - Customer would pay for distribution system based on standard applicable tariff.
 - Customer would purchase requirements to meet load from utility or alternative supplier.

Concluding Remarks