

PJM

GPAEE Meeting
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PJM

- PJM (Pennsylvania-New Jersey-Maryland Interconnection) is the RTO (Regional Transmission Organization) that manages the generation and transmission of energy in thirteen states and the District of Columbia.
- PJM provides long term planning of energy, capacity and reliability.
- They operate Capacity and Energy auctions with a goal to deliver the lowest cost energy reliably.
- They organize ancillary services that ensure minute to minute reliability and stabilization of the grid.

Components of Electricity Prices

- Capacity (kW) – Peak Load Contribution (PLC)
- Energy (kWh)
- Transmission
- Distribution (local utility)
- Ancillary services that ensure minute to minute reliability and stabilization of grid

Energy

- For the energy auctions, in PJM, the last bid (highest) needed to meet Energy (kWh) needs at a given hour determines the cost to all customers and the price paid to the generators.
- In PJM, natural gas generation is typically the last resource in, so people say that “natural gas costs drive the market”.
- Natural gas prices are at historic lows.
- Drilling companies are consolidating, bringing more discipline and response to price and drilling costs
- Increasing liquified natural gas exports
- Remaining shale gas deposits are more expensive to recover
- Tariffs on Canada, Mexico and other countries will raise gas prices

Capacity Auction

- Energy prices on the Capacity auctions greatly increasing in the last auction from \$28.92 to 269.92 per MWday in PJM RTO (\$466.35 in BGE and \$444.26 Dominion)
- PA Governor and PJM agree to lower Capacity cap from \$500/MWday to \$325 in future auctions.

How Did We Get Here?

- Retirement of large baseload electric power plants due to age and required environmental upgrades.
- Backlog in PJM application queue to increase new Capacity. Many of the applications are small and speculative, increasing the reliability challenge.
- PJM capacity markets going from 3 years forward to one year forward due to many reasons.
- After flat growth for 20 years, large increases in generating capacity projected to meet needs of massive new data centers to meet computing needs of data mining (bitcoin and similar companies) and AI (Artificial Intelligence).
- Retirement of large baseload electric power plants due to age and required environmental upgrades.

Other Capacity Issues

- Recent PJM solutions to a backlog in the application queue to streamline new Capacity.
 - Fast Track
 - RMR
 - Utilize existing grid capabilities
- The Energy Efficiency Program ending soon in the Capacity Market, partially due to alleged manipulation, under performance and non-performance by certain bad actors.
- Demand Response Program modifications to deal with under performance and non-performance by alleged bad actors.

Contact Information

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