

### Stringent Capacity Market Performance Requirements Assure System Reliability

Capacity markets procure the most economic resources to ensure that future demand will be met. PJM's capacity market design not only assures that demand will be met three-years out but also that procured resources will be available where and when needed during system emergency conditions.

### Key Elements of PJM's Capacity Market

- Procurement of capacity three years before it is needed through a competitive auction,
- Locational pricing that accounts for transmission limits and differing capacity needs across the system,
- A variable resource requirement – a downward sloping demand curve – to better align price with the appropriate levels of capacity ensuring efficiency,
- Capacity Performance requirements incent resources to take appropriate steps to ensure they are available when needed the most.

PJM allows entities to submit Fixed Resource Requirement plans for the entirety of their load responsibility in a given zone in order meet capacity obligations. In the alternative, PJM's capacity market is flexible, allowing entities responsible for serving customers to self-supply or enter into bilateral contracts. In these cases, while load and resources remain part of the auction, entities are not exposed to capacity market prices. Key elements of PJM's capacity market include:

### Capacity Performance Standards

System reliability is paramount to our economy and quality of life. However, the ability to keep the grid reliable amid the dynamics of the economy presents challenges. The rapid and unprecedented shift from coal to natural gas-fired generation has driven electricity prices sharply lower and consequently affected investment in plant maintenance, upgrades and modernization. Additionally, the Polar Vortex in the winter of 2014 revealed that stronger incentives are needed to encourage investment in better generation performance. Although generator performance improved in the winter of 2015 compared to the year before, Capacity Performance incentives will ensure that the improvements are sustained over time.

Capacity Performance requires generators to commit to delivering electricity whenever PJM determines they are needed to meet power system emergencies. As a “pay-for-performance” requirement, generators may receive higher capacity payments in exchange for modernizing equipment, firming up fuel supplies and/or adapting to use an alternative fuel. Capacity Performance works like an insurance policy: for a relatively small cost, consumers have greater protection from power interruptions and price spikes – especially when extreme weather challenges the grid.

#### Did You Know?

- Capacity represents the need to have adequate generating resources to meet demand in the future at all times.
- Capacity Performance requires generators to meet their commitments to deliver electricity whenever PJM determines they are needed.
- By providing price signals to encourage investment, RPM helps ensure that the region's consumers continue to receive reliable supplies of electricity at a reasonable cost.

# View Point – Capacity Markets

Enabling PJM to obtain sufficient resources to reliably meet the needs of electric consumers

## Transition to Capacity Performance Requirements

In the 2015 Base Residual Auction, 80 percent of capacity resources committed for June 1, 2018 to May 31, 2019 were required to meet Capacity Performance requirements. Over a two-year transition, the amount of Capacity Performance will increase until 2020 when it is expected to be the only capacity product in PJM. PJM transition auctions will provide a transition for capacity resources committing to the higher performance requirements for the 2016/2017, 2017/2018, 2018/19, and 2019/20 delivery years.

2016-17 Transition Auction	2017-18 Transition Auction	2018-19 Base Auction
Obtained the targeted amount of CP (~95,000 MW)	Obtained the targeted amount of CP (~112,000 MW)	Obtained more than the targeted 80% of CP (~140,600 MW)
Competitive clearing price (below the established cap)	Competitive clearing price (below the established cap)	Clearing prices rose as expected (Competitive result)

## What's Next

The capacity market auction is driven by the need to ensure adequate resources are installed – satisfying the demand for electricity at every location in the region, now and in the future. By providing price signals to encourage capacity investment, the capacity market ensures consumers continue to receive reliable supplies of electricity at a reasonable cost. PJM will continue to work with stakeholders as needed on operational concerns, fuel diversity, cost allocation, demand response and other matters to continually improve its capacity market.