By Frank Salisbury, Market Manager of Municipalities at Environ

The PJM Capacity Challenge
Implications for Pennsylvania Boroughs and Municipalities

Introduction

The recent announcement by PJM Interconnection, the transmission grid operator in Pennsylvania as well as the Mid-Atlantic and parts of the Midwest[1], of a significant increase in capacity costs has sent shockwaves through both the energy and industrial markets. This dramatic rise, from $28.92/MW-day to $269.92/MW-day, is a direct result of power plant retirements, difficulties connecting new sources of power to the grid, and increased electricity demand within the region. As this new pricing structure takes effect in June 2025, commercial customers across the PJM region, including municipalities, could face 10+% increases in their total annual electricity costs.

Understanding the PJM Capacity Auction

The PJM capacity auction is a mechanism designed to ensure that the region has sufficient electricity supply to reliably meet peak concurrent electricity demand. Through PJM's annual Base Residual Auction, the RTO seeks to procure sufficient generation resources to prevent power outages. However, as with any commodity market, when the available supply falls short of increasing demand, the cost of capacity naturally rises.

The PJM capacity auction continues to play a crucial role in ensuring the reliability and stability of the electric power grid. As the energy landscape evolves, large energy users need to understand and be ready to adapt to address the challenges associated with capacity planning and market design.

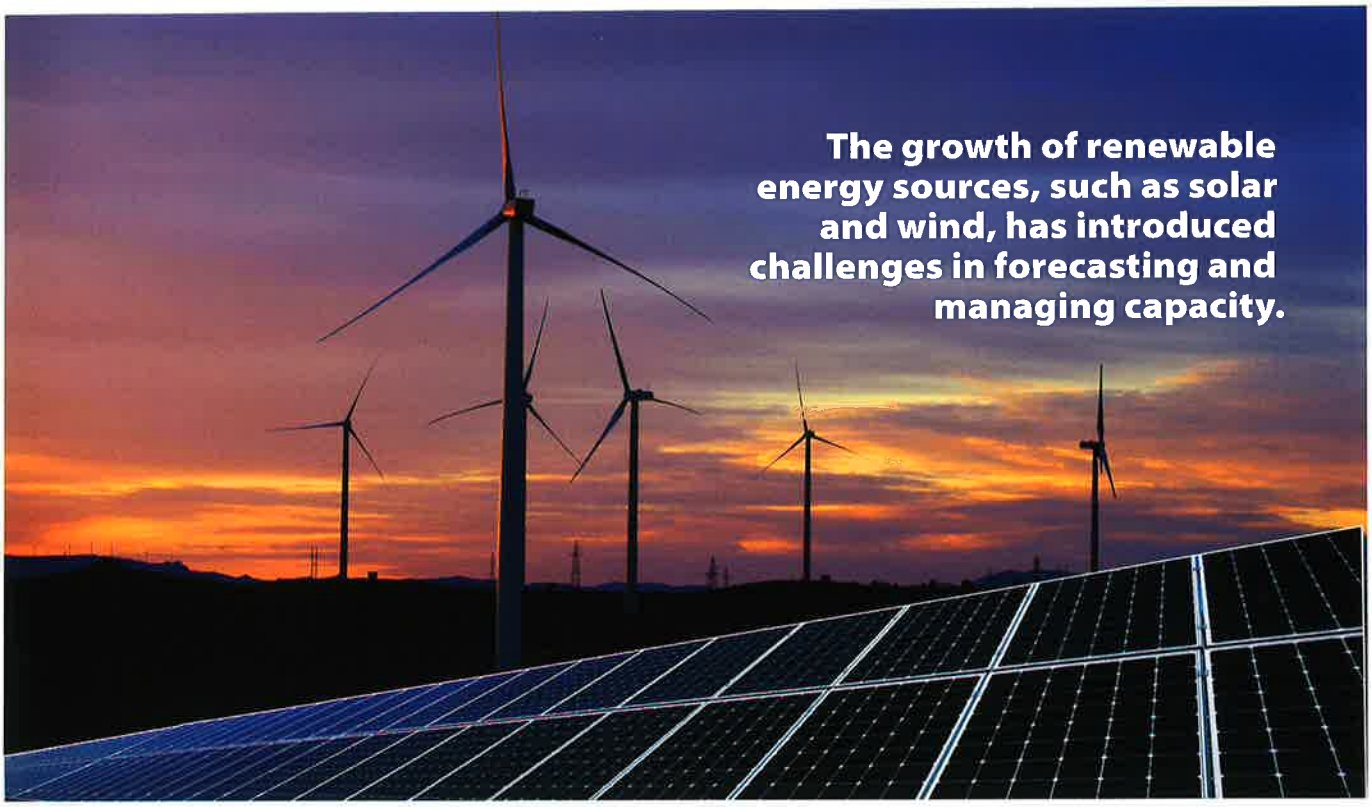
Recent Trends and Challenges

In recent years, the PJM region has faced several challenges, including:

- **Retirement of Older Power Plants:** The retirement of aging coal and nuclear power plants has created a need for new capacity.
- **Increasing Intermittency:** The growth of renewable energy sources, such as solar and wind, has introduced challenges in forecasting and managing capacity.
- **Increased Demand:** large-scale data centers and industrial manufacturers returning to the US are driving energy demand higher.

Implications for PJM's Capacity Auction

1. **Ensuring Grid Reliability:** The primary goal of the capacity auction is to guarantee that there is sufficient capacity available to meet demand, preventing blackouts and brownouts. By ensuring adequate supply, the auction contributes to the overall stability and resilience of the power grid.
2. **Market-Based Pricing:** The auction mechanism promotes a competitive capacity market, leading to more efficient allocation of resources. By setting prices based on supply and demand, the auction helps to maintain a balance between the cost of capacity and its value to consumers.
3. **Incentivizing New Investments:** The capacity auction can incentivize investments in new power plants, energy storage facilities, and demand-re-



The growth of renewable energy sources, such as solar and wind, has introduced challenges in forecasting and managing capacity.

sponse programs. By providing a predictable revenue stream, the auction can make these investments more attractive to developers. In other words, the higher capacity prices the region will experience in 2025-2026 send a market signal to developers that will lead to greater investment in capacity resources. This investment will serve to bring future capacity prices back down.

4. **Addressing Capacity Shortages:** If the auction reveals a capacity shortage across the region or in certain geographies, it can trigger actions to address the shortfall, such as accelerating the development of new resources or implementing load management measures.
5. **Impact on Energy Prices:** The capacity price can influence wholesale electricity prices, particularly during peak demand periods. A high-capacity price may lead to higher wholesale energy prices, which can ultimately impact retail electricity rates.

Impact on Pennsylvania Boroughs and Municipalities

The implications of the PJM capacity auction for Pennsylvania boroughs and municipalities are significant, as they can directly impact the cost of electricity for residents and businesses within these jurisdictions. Here are some key implications:

- **Increased Electricity Costs:** The PJM capacity auction determines the price of electricity capacity, which is the amount of power available to meet demand. Since the auction resulted in higher capacity prices, this will lead to increased electricity costs. Utilities often pass through the cost of capacity to their customers, meaning that residents and businesses will ultimately bear the burden of higher prices.
- **Economic Impacts:** Increased electricity costs can negatively impact businesses, especially those that are energy intensive. This can lead to higher operating costs and reduced competitiveness.

Strategies to Mitigate the Impact

While the PJM capacity price increase presents significant challenges, there are strategies that boroughs and municipalities can implement to mitigate its impact:

- **Energy efficiency:** Investing in energy-efficient equipment and practices can help reduce electricity consumption and lower overall energy costs.

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- **Peak load reduction:** By reducing electricity consumption during peak summer hours, customers can mitigate the impact of high-capacity rates. This can be achieved through measures such as scheduling non-critical operations outside of peak times or participating in demand response programs. If you have not explored demand response (programs that pay you to reduce load at peak times), or if the economics did not make sense before, now may be the time to revisit these programs.
- **Renewable energy:** Exploring renewable energy options, such as on-site solar panels, can help customers reduce their reliance on the grid and hedge against future price increases.
- **Long-term contracts:** Entering long-term contracts with energy suppliers can provide some stability and potentially lock in lower rates.

Conclusion

The PJM capacity price increases that go into effect in June 2025 will present significant challenges for PSAB members. However, by implementing effective energy procurement and energy management strategies, boroughs and municipalities can mitigate the impact and ensure their long-term viability. By investing in energy efficiency, peak load reduction, renewable energy, and energy supply contract optimization, customers can position themselves to weather the storm and emerge stronger.

At Environ Energy we are committed to ensuring customers have the knowledge and the means to avoid unnecessary costs and reduce uncertainties with their energy budget. For information on lowering capacity costs for facilities in the PJM territory, or other regions connect with an Environ Market Advisor today. B

[1] PJM is a Regional Transmission Organization (RTO) responsible for managing and operating the wholesale power grid that covers Pennsylvania, New Jersey, Maryland and parts of Delaware, Illinois, Indiana, Kentucky, Maryland, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Washington, D.C.

ABOUT THE AUTHOR

Frank Salisbury serves as Market Manager of Municipalities, at Environ, utilizing his extensive industry knowledge to enhance the company's offerings. A true veteran of energy, Frank Salisbury has spent his entire career working in various facets of the energy industry. Frank began his career with Algonquin Gas Pipeline constantly innovating processes in Gas Control, Transportation, and Exchange, and eventually ended up in marketing where he dealt directly with LDCs. He then continued to work in natural gas marketing and trading with Coastal Gas Marketing, ultimately moving into various sales manager roles with retail suppliers Sprague Energy, and Hess Corporation. With a Bachelor of Science in Business and a Minor in Economics from Western Connecticut State University, Frank brings a blend of academic learning and practical experience to his leadership role. Contact him at fsalisbury@environenergy.com, or by phone at (401)533.6750.

ABOUT ENVIRON ENERGY

APPI Energy, now operating under the Environ Energy name, has been delighted to support PSAB members since 2011. Throughout this period, Environ has gained a deep understanding of the distinct energy challenges facing PSAB members, along with identifying energy solutions that most effectively align. PSAB has endorsed Environ to provide data-driven, holistic energy management services and custom solutions for our members.

Environ Energy has been at the forefront of energy management and sustainability solutions for decades, guiding clients toward advancement in energy-efficient buildings, clean energy buying, energy resilience, and regulatory compliance. With a portfolio of over $1B in energy contracts and over $100M in client savings, Environ delivers energy management services to some of the largest institutions and government agencies across industries including healthcare, manufacturing, data centers, food and beverage, hospitality, real estate, finance, and more.

To learn more about Environ Energy, please visit their website at www.environenergy.com or contact them today at PSAB@environenergy.com.