



**Institute for Energy Economics
and Financial Analysis**

Private Equity in PJM: Growing Financial Risks

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Key Findings

The relatively stable and high capacity payments from the system operator that have enabled the buildout of so much privately owned fossil-fuel generation capacity in PJM have disappeared in the last three years.

Low capacity auction payments, coupled with the recent sharp runup in interest rates, have worsened the economic outlook for new PJM projects and made merchant projects more economically risky.

The fines from Winter Storm Elliott have pushed some existing plants into bankruptcy while forcing others to seek capital infusions from their private equity sponsors.

The 2010s saw a massive buildout of new capacity with relatively low risk, but the situation today is reversed, and it is a new, much riskier situation for private equity and private capital in the PJM market.

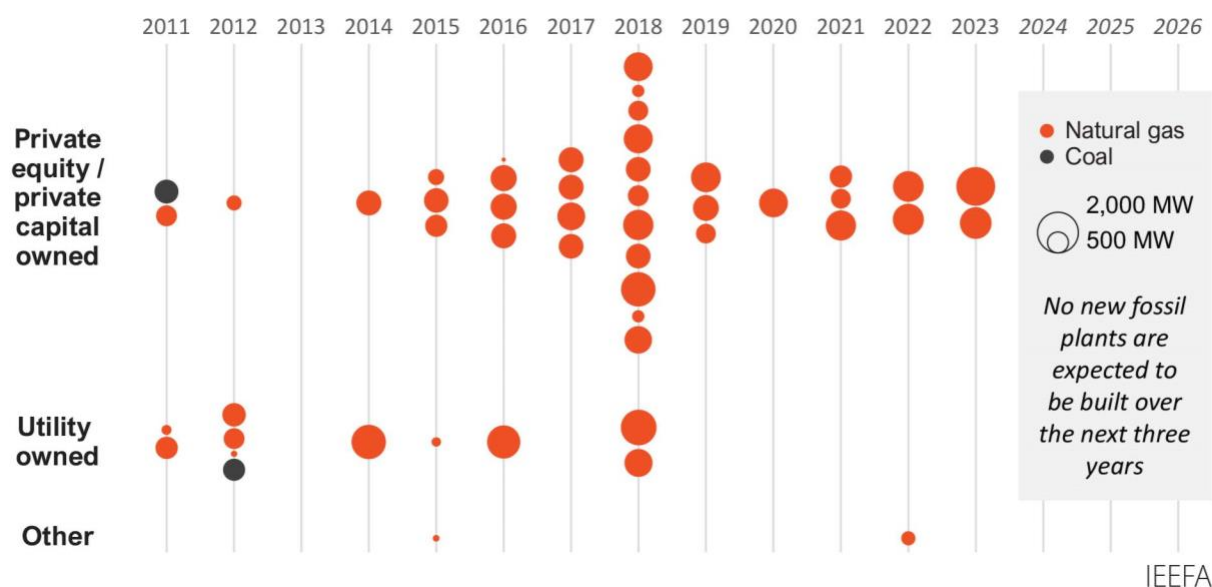


Executive Summary

Private capital, particularly difficult-to-track private equity (PE) investment, has reshaped the PJM power market in the past decade. PJM data shows that 35,515 megawatts (MW) of combined cycle gas capacity have been built in the 13-state regional system since 2011, reflecting the impact of the fracking revolution that brought plentiful, low-cost gas supplies to the market. PE and other private sources developed more than 80% of the total—28,815MW.

This gas-driven growth, coupled with significant PE investment in the region's coal-fired power plants, has transformed the ranks of PJM's largest generators. As recently as 2017, the five largest capacity owners were all regulated publicly traded companies: American Electric Power, Dominion Energy (the parent of Virginia Power), Exelon (the parent of Commonwealth Edison), FirstEnergy and NRG Energy. Today, three of the largest generators are private firms—ArcLight with 14,230MW of operating capacity, LS Power (10,803MW) and Talen (the former subsidiary of Blackstone that recently emerged from bankruptcy under new ownership), with 10,370MW.¹ Beyond these three majors, there are a host of private and PE firms that own from 1,000MW to 5,000MW of capacity. Together, private capital now owns roughly 60% of the fossil-fuel fired generation capacity in PJM.

Figure 1: Private Equity Fossil Fuel Capacity Has Soared in PJM Since 2011



¹ The data is correct as of Dec. 31, 2022. [State of the Market Report for PJM-2022](#). Monitoring Analytics. March 9, 2023. P. 314.

Ownership status is important. Utilities are overseen by state regulators who have a vested interest in keeping costs for ratepayers in check; private capital is largely free from that oversight. Utilities, as well as publicly traded independent power producers, are also required to file regular financial reports with the Securities and Exchange Commission; private capital, by and large, is not. These differences largely shield private firms from public pressure and regulatory and financial oversight.

In this three-part report, IEEFA examines the increasing risk environment in PJM, the nation's largest power market.

The first section takes a close look at the rising financial risks now facing PE and other private firms—risks that contrast sharply with the previous strong, steady growth of the 2010s. That decade-long growth spree was underpinned by relatively high and relatively stable capacity prices; those prices have collapsed, squeezing existing and new developers alike. The fallout from the Christmas storm that rolled across the eastern half of the country in 2022 (Winter Storm Elliott) has further undercut the finances of many market participants. First, PJM came out swinging regarding the unavailability of thousands of megawatts of fossil fuel capacity during the event, levying fines of almost \$2 billion for non-performance during the December storm. Second, the grid operator is now evaluating new market structures that could cut into future capacity payments for fossil fuel generators while boosting renewable payouts.

The second section will focus on the limited partners. These pension and retirement funds have poured money into the PE sector in the past decade, and have generally been well rewarded for their investments. But the changing regional power environment is likely to shift the outlook for outside investors by lowering annual returns, raising investment risks, or both. This second section will pay particular attention to the fallout from bankruptcy filings, in which funds and other private entities end up owning assets they may not want. For example, Nuveen/TIAA found itself in that situation following the 2020 bankruptcy restructuring of FirstEnergy Solutions, which became Energy Harbor.

The final section will examine the risks posed by PE's relative immunity from oversight and public pressure, a growing threat for the localities where the plants operate. PE firms push risks onto the communities. When their plants are no longer economic, PE generators can simply decide to close up shop and get out, leaving unprepared localities facing significant economic dislocations from job and tax losses. This exact scenario played out in the spring at the Homer City power plant in Pennsylvania as we will examine, but that community is not likely going to be the last unless local leaders begin planning now for the coming transition.

Similarly, PE's lack of public accountability creates the very real possibility that efforts to curb regional carbon dioxide emissions will become more difficult in the years ahead. The fossil fuel plants owned by PE firms and other private capital now account for more than 50% of the region's annual power-related carbon dioxide (CO₂) releases, and that percentage is likely to grow. But the sector's lack of transparency shields it from the types of public pressure that have helped convince publicly traded electric utilities to move, however haltingly, toward decarbonization efforts.

Financial Risks

The Capacity Payment Collapse

The decade-long construct that enabled the buildout of so much private equity and other privately owned generation capacity in PJM hinged on one key factor—relatively stable and high capacity payments from the system operator. These payments, essentially an insurance policy bought by the system operator to guarantee power is available to the market when needed, meant fossil fuel plant owners would get steady payouts regardless of whether they were generating power or not. This essential ingredient, which helped insulate generators against low market prices for power in the competitive market, has disappeared in the last three years.

From 2014 through the 2022 capacity auction, the clearing price in the region averaged \$115.33 per megawatt-day (MW-day),² making it relatively easy for developers to secure financing. Lenders were willing to back projects knowing that these annual capacity payments could be used to cover debt service needs. And that, coupled with the steady availability of fracked gas, set off a torrent of new construction: PJM data shows that more than 45,000MW of generation capacity, more than three-quarters gas-fired and most of that privately financed, were built from 2011-22.

But both existing plant owners and new project developers now face an entirely different financial outlook.

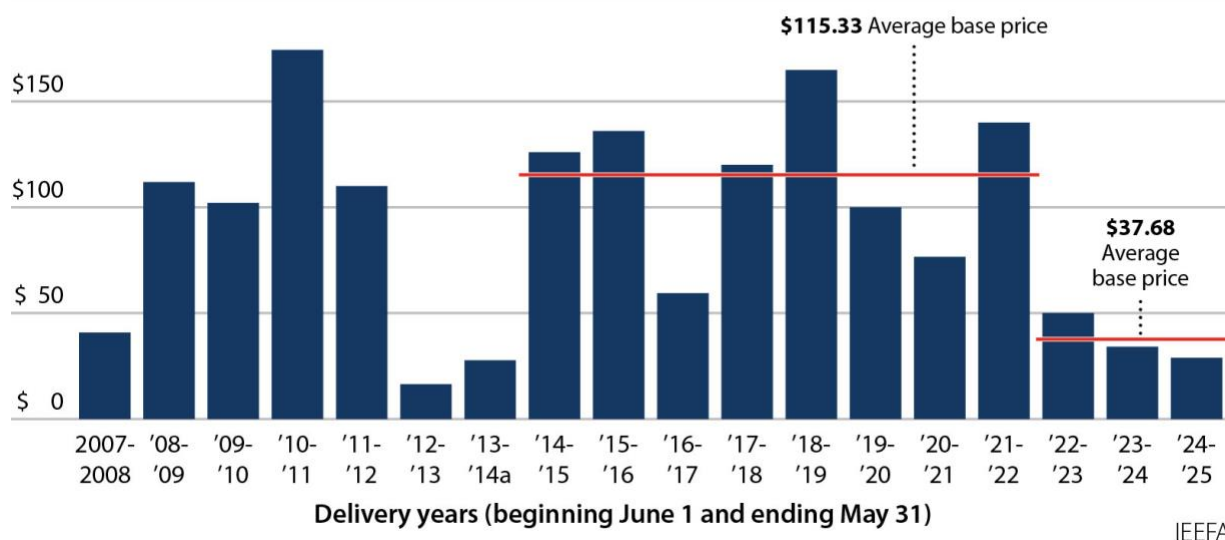
Capacity bids for the 2022-23 delivery year (PJM runs on a June 1-May 31 timeline) dropped to just \$50/MW-day and they have continued their downward trend since. In the last three auctions, capacity bids have averaged just \$37.68/MW-day. This has changed the economic outlook for new PJM projects. The prospect of lower capacity payments for developers is likely to prompt lenders to raise rates because of concerns about higher repayment risks. That, coupled with the recent sharp runup in interest rates, will boost debt service costs for developers, making merchant projects more economically risky. The impact of these changes is already showing up in canceled projects and financial distress among some generators.

² PJM has different regions that clear at different capacity auction prices. The prices used here are from what is known as the rest of PJM and encompasses the bulk of the system's geographical footprint. Other, smaller regions, often with transmission limitations, tend to trade at higher capacity clearing prices. The differences will be noted in the text, as necessary.

Figure 2: PJM Capacity Prices No Longer a Bonanza

The PJM capacity market base price is what the grid operator pays for commitments that generation resources will be ready and available to meet demand, and is determined through auctions.

\$200 base price per megawatt-day



Source: PJM.

When Bechtel canceled its plans to develop the 1,240MW Renovo combined cycle gas plant in Pennsylvania in April, it attributed the decision to concerns about securing the project's air permit. However, it is extremely likely that the recent decline in capacity payments and higher borrowing costs were also factors in the decision-making process.

Operating plants, particularly seldomly used peaking plants, have also been hit hard by the decline in capacity prices.

One of the first to fall was Heritage Power, which filed for bankruptcy protection on Jan. 24. In the company's filing, David Freysinger, the CEO of Heritage's then-parent company GenOn Holdings, highlighted the sharp decline in Heritage's capacity payments as a driving force behind the decision: "The debtors capacity revenues declined from \$112.9 million for the 2021/2022 year, which began June 2021, to a projected \$69.5 million for 2022/2023 and \$37.5 million for 2023/2024."³

Heritage, which owns 16 gas- and oil-fired units in Ohio, Pennsylvania and New Jersey with a total generation capacity of 2,350MW,⁴ was never going to be able to make up the lost revenue through additional energy sales. In 2022, the company's generating units only produced 1.8 million megawatt-hours (MWh) of electricity, representing a capacity factor of less than 9%. All told,

³ [Heritage Power bankruptcy filing](#). January 25, 2023. pp. 24-25.

⁴ *Ibid.* p. 6.

Freysinger said, Heritage earned just \$1.3 million in energy margin net of its hedges during the year—not even enough to cover its annual capital investments.

Prior to the bankruptcy, GenOn's two principal owners were Strategic Value Partners (SVP), which owned 58.2%, and funds managed by MacKay Shields, which owned 13.6%. SVP describes itself as "a global investment firm focused on distressed debt and private equity opportunities"; MacKay Shields is a wholly-owned subsidiary of New York Life Insurance Company.⁵

However, in an August filing with the Federal Energy Regulatory Commission (FERC), GenOn/Heritage said that under the terms of the pending bankruptcy reorganization plan the indicated owners (those expected to hold 10 percent or more of the equity of the new Heritage) would be: Funds affiliated with Avenue Capital Group, a New York-based PE firm; PGIM, a subsidiary of life insurance/investment firm Prudential Financial; Cross Ocean Partners, an investment firm headquartered in London; and J Aron, a commodities trading firm owned by The Goldman Sachs Group. Final ownership percentages will not be known until the reorganization plan is approved by the bankruptcy court, which is expected in October, and it is still possible that one or more of the current indicated owners will not end up owning more than 10 percent of the reorganized firm.⁶

While Heritage was the first, it may not be the last. The decline in the capacity market has raised concerns about several other existing projects, as highlighted in recent credit reports from Moody's Investors Service.

In July 2022, for example, Moody's downgraded the debt of Nautilus Power from B1, already a below-investment grade rating, to B3 and said the debt's outlook remained negative. According to Moody's, "Obligations rated B are considered speculative and are subject to high credit risk."⁷

Nautilus is controlled by The Carlyle Group and owns six power plants with a total capacity of 2,085MW. Three of the Nautilus units are in the PJM region—the 280MW Lakewood Energy plant, the 374MW Ocean Peaking Plant, and the 744MW Rock Springs facility. The other units are in ISO-New England, another region with capacity payments.

The three PJM plants are all located in the eastern region of PJM in an area known as the Eastern Mid-Atlantic Area Council (EMAAC); capacity prices there have been higher than PJM as a whole but have also declined significantly in the past three years. In 2021-22 the clearing price was \$165.73/MW-day, while in the latest auction (for 2024-25) the price was \$54.95/MW-day.

"The downgrade ... reflects our view that declining capacity revenues in both PJM Interconnection and ISO-New England will pressure debt service coverage ratios and heighten refinancing risk for

⁵ Triennial Market Power Analysis for Northeast Region of GenOn Energy Management, LLC, et al. under ER11-2508. PP. 3-4. Available for download at [FERC's eLibrary](#).

⁶ Heritage Power, LLC, on behalf of its public utility subsidiaries under EC23-117. Available for download at [FERC's e-library](#). PP. 16-29.

⁷ [Moody's Investors Service rating scale](#).

the project's term loan, which matures on 16 May 2024," wrote Gayle Podurgiel, a Moody's vice president. "The negative outlook reflects the project's challenges as it approaches its major debt maturity in less than two years, **considering its high reliance on capacity revenues to service this debt** [emphasis added]."⁸

In January, Moody's downgraded the debt of West Deptford Energy Holdings LLC from B2 to B3, voicing essentially the same concerns that it had with Nautilus. Like the Nautilus plants, West Deptford is located in the EMAAC area of PJM, which has seen capacity prices drop by more than \$100/MW-day in the past three years.

"The rating downgrade to B3," Moody's said, "reflects our view that financial metrics will continue to underperform as low PJM capacity auction prices weigh on future cash flows in combination with continued weak energy margin contributions...."

"Absent substantial market improvement, the project may struggle to generate sufficient cash flow to cover debt service in 2023 and 2024 under our current projections due to declining capacity prices, backwardated energy futures and \$3.1 million of major maintenance planned in 2023."⁹

West Deptford Energy owns the 780MW West Deptford combined cycle gas plant in southern New Jersey. The plant is ultimately owned by LS Power, a private equity firm, and several other investors including Marubeni, Sumitomo and the Kansai Electric Power Company.

Moody's also raised concerns about PJM's recent capacity prices in a March analysis of the impact for merchant power generators in the region: "The weak auction results are credit negative for merchant power generators because they will reduce high-certainty cash flow and because lower capacity prices coupled with recent energy margin compression could erode profitability."¹⁰

Future Auctions, New Queue Rules Raise Gas Risks

The uncertainty surrounding future capacity auction results will make it more difficult for new plants to move forward with planning, permitting and, particularly, financing. Selling a banker or other financier on a project with expectations of capacity prices above \$100/MW-day is undoubtedly easier than pushing the same project with prices below \$50/MW-day.

Earlier this year, FERC approved PJM's plan to push its scheduled capacity auction for the 2025-2026 delivery year until June 2024. Following that, PJM plans to hold auctions every six months, bringing it back to the preferred three-year-ahead schedule for the 2028-2029 delivery year.

⁸ Moody's downgrades Nautilus Power's rating to B3 from B1, maintains negative outlook. [Moody's Investors Service](#), July 12, 2022.

⁹ Moody's downgrades West Deptford Energy Holdings, LLC to B3 from B2; outlook remains negative. [Moody's Investors Service](#), January 13, 2023.

¹⁰ Drop in capacity prices across most of PJM is credit negative for merchant generators. [Moody's Investors Service](#), March 3, 2023.

According to PJM, the auction delay was needed so it could complete the market reforms begun after the December winter storm and wrap up action on the non-performance fines arising out of that event. Both of these issues are discussed in more detail in subsequent sections of this report.

Finally, there is the PJM queue, which is essentially closed as the regional operator looks to revise its approval process and catch up with the massive project backlog that has accumulated in the last few years. This is problematic for new gas development proposals in two regards. First, it slows development efforts, pushing any commercialization dates well into the future while raising costs in the near term. Second, once the process is reopened the buildout is likely to be largely wind and solar projects, which comprise an overwhelming share of the proposals in the PJM development queue.

According to Ken Seiler, PJM's vice president for planning, the system operator has roughly 265,000MW of proposed capacity in its development queue, 95% of which is renewable energy. Of that total, PJM expects to clear 100,000MW of new capacity through the transmission study process by the end of 2025 enabling construction to begin; analysis of a second tranche of 100,000MW is expected to be completed by the end of 2026.¹¹

FERC also released a series of policy recommendations in Order 2023 designed to speed project development efforts nationwide. The impact of the July order remains to be seen, but there are a number of common-sense provisions included that should help weed out non-commercially viable projects from queues nationwide and speed the construction of new generation.

The rising risks for gas developers are highlighted, if unintentionally, in the Energy Information Administration's (EIA) monthly outlook for new plant capacity additions. The EIA data shows just one combined cycle gas plant planned in PJM in the next five years, the 579MW ESC Harrison County plant in West Virginia, which has been on the proposed list for years but has still not started the permitting process. Two other plants, the 1,825MW Guernsey plant in Ohio and the 1,250MW CPV Three Rivers facility in Illinois, began commercial operations earlier this year.

¹¹ PJM Inside Lines. [New Interconnection Process Aims To Ensure Reliability, Enable State Policies](#). June 30, 2023.

The Costs of Non-Performance

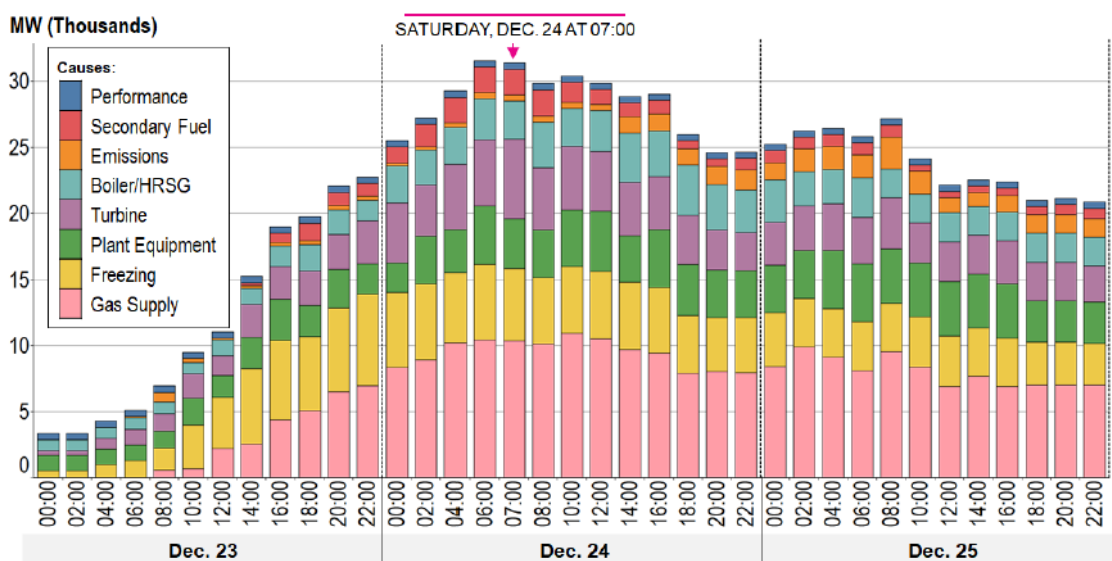
On top of the upheaval caused by the decline in capacity payments, there is the still-unfolding aftermath of the cold weather event (popularly dubbed Winter Storm Elliott), which rolled through PJM last December. At the height of the freeze, PJM generation outages climbed to 46,959MW, almost 25% of the region's total installed capacity.¹² The system's gas plants were hit hardest, with more than 33,404MW going offline unexpectedly during the storm—38.8% of the region's installed gas generation (and, more telling, 71.1% of the total forced outages at the peak).¹³

Figure 3: Winter Storm Elliott Forced Outages/Derates by Cause



Winter Storm Elliott
Event Analysis and Recommendation Report

Figure 31. Dec. 23, 24 and 25 Gas – Forced Outages/Derates by Cause



Note: Only even hours are shown for readability with the exception of Dec. 24, 2022, 07:00, which was the hour with the largest amount of forced outages and derates.

Source: GADS as of March 1, 2023. Wind and solar unit outages are not included in the data.

Source: PJM.

The outages were caused by a host of interrelated problems, as the graphic above illustrates, but they raise one overriding question for the system: Is the existing carrot-and-stick approach—annual capacity payments to generators to participate and be available when called upon and penalties for non-performance—reliable? A follow-on question is whether the increase in PE and private capital

¹² PJM. [Winter Storm Elliott Event Analysis and Recommendation Report](#). July 17, 2023. p. 49.

¹³ *Ibid.*

ownership contributed to the poor performance of the region's fossil fuel generation during the December event.

In the wake of the storm, PJM levied \$1.8 billion in penalties for non-performance. The system has not released a complete list of the penalized companies, but it is clear that PE firms were among the hardest hit, as filings at FERC demonstrate.

At this date, it is not certain if the affected entities will be required to pay their fines in full; many of the companies have challenged PJM's actions at FERC and the commission established a settlement process in June to try and resolve the issues without lengthy litigation. Nonetheless, the issue is clearly having a financial impact across the region.

PJM Fines Carlyle Unit for Poor Performance

Carlyle's Nautilus unit, already in financial trouble following Moody's credit downgrade, suffered another blow in the storm's aftermath when PJM fined it for non-performance at its three regional plants. The fine forced Carlyle to inject \$88 million into the unit, \$58 million in equity and \$30 million in capital to enable it to cover the PJM levy.¹⁴

But that is only part of Carlyle's PJM problems. Another one of its units, Lincoln Power, filed for bankruptcy March 31 after being fined \$39 million for power performance problems at its two units in Illinois—the 500MW Elgin facility and the 402MW Rocky Road unit.

As with other projects in PJM, Lincoln Power said in its bankruptcy filing that it has been “experiencing a liquidity crunch caused by the fact that clearing prices from recent capacity auctions held by PJM have decreased significantly and are currently operating at ten-year lows.”¹⁵

Coupled with the fines resulting from Winter Storm Elliott, which the company said are “a multiple of the Lincoln power plants' annual revenues,”¹⁶ bankruptcy became the only tenable option. “As a result of these factors, the debtors' debt load is simply no longer workable.”¹⁷

While not explicitly stated, the bankruptcy filing was likely an attempt to avoid paying the PJM fines, a tactic used frequently by private equity to skirt clean up obligations and reduce retirement and health benefits for companies owned in the coal sector. However, PJM made it clear in repeated filings that it would fight any effort by Carlyle/Lincoln to not pay the storm-related fines. This ultimately prompted Carlyle/Lincoln to propose a settlement to pay the fines through the bankruptcy process.

“Absent the settlement,” the companies wrote, “there would be a substantial risk that PJM would attempt to impose the penalties ... or an equivalent monetary charge on a potential purchaser of the

¹⁴ Moody's revises Nautilus Power, LLC's outlook to stable from negative; assigns B3 to superpriority extended credit facilities. [Moody's Investors Service](#), April 20, 2023.

¹⁵ [Lincoln Power bankruptcy filing](#), March 31, 2023, p. 18

¹⁶ *Ibid.* p. 19.

¹⁷ *Ibid.* p. 23.

debtors' assets by requiring that the penalties or equivalent monetary charge be paid, or by requiring that the purchaser provide other extraordinary credit enhancements, before the purchaser can be eligible for PJM membership."¹⁸

In a July 7 filing at FERC, Lincoln Power said the winning bidder for its bankrupt assets was Middle River Power VI and Middle River Power VII. The two entities are owned by Middle River Power, which in turn is a subsidiary of PE firm Avenue Capital. The winning bid for the two power plants was \$26.2 million.

PJM Proposes \$100 Million Fine for ArcLight's Parkway Unit

In late 2022, Parkway Generation made a \$175 million distribution to ArcLight, its private equity owner. Parkway funded the distribution by adding \$75 million to its \$1 billion term loan and using existing cash. At the time, Moody's said the transaction was credit neutral, given the company's strong performance year to date.¹⁹

But that was before Winter Storm Elliott.

Parkway owns eight gas-fired power plants in New Jersey and Maryland with a total capacity of 4,800MW. ArcLight bought the plants in Parkway from New Jersey utility PSEG in 2021. They did not perform up to expectations during the winter storm, particularly the Keys Energy Center (761MW) and Sewaren (538MW), two new combined cycle units that both entered commercial service in 2018.

Those performance issues resulted in fines of roughly \$100 million according to the company, and prompted Moody's to put Parkway's debt under review for a potential downgrade.²⁰

In addition to the PJM fines, Moody's noted that power prices have declined significantly in the past year, which will cut into the company's revenue for energy sales, and capacity prices in the EMAAC region have fallen sharply.

"As a result," the ratings agency wrote, "we expect Parkway's credit metrics in 2023 and 2024 to be significantly lower than our original base case. Our expectation of weak financial performance has also increased refinancing risk at Parkway...."²¹

Whether Parkway will be required to pay the full amount of the performance fines from Elliott is uncertain, but it is clear from PJM's response to the company's FERC filing contesting the fines that the system operator is not interested in a compromise.

¹⁸ [Lincoln Power settlement filing](#). May 3, 2023. p. 5.

¹⁹ [Parkway Generation LLC](#). Moody's Investors Service. Nov. 15, 2022.

²⁰ Moody's places Parkway Generation's ratings on review for downgrade. [Moody's Investors Service](#). March 17, 2023.

²¹ *Ibid.*

“Keys has been a committed capacity resource since [PJM deleted the date as confidential, but the plant began commercial operation in July 2018], and has been well paid by PJM ... for all those years to support PJM ... resource adequacy at the times of greatest need. But when the PJM region encountered its most acute resource adequacy challenge since the inception of the Capacity Performance construct, Keys was not available at the height of Winter Storm Elliott. And Keys was unavailable because it made the economic choice not to procure fuel and to shut down on the morning of December 23, despite PJM’s express request to stay online and run.”²²

The arguments raised by Parkway to defend its decisions at the Keys plant have been used in similar fashion by a group of regional generators who contend that PJM system operators were to blame for the outages and warned that the penalties could push a number of plants into retirement, potentially threatening system reliability in the years ahead as scheduled coal plant retirements take place. The group, which says its members control approximately 27,000MW of PJM capacity, also said the penalties, by pushing generation owners into default, could prompt many of them to walk away from the regional market. “These premature departures from the market threaten to leave PJM without an adequate amount of generation capacity for the remainder of the year and for coming years,” the group concluded.²³

Other generators, those that over-performed and stand to reap bonus payments as a result, have taken the opposite tack and have urged FERC to uphold PJM’s penalties.

While the outcome of the FERC-backed settlement process is uncertain at this point, it is unlikely that those discussions will lead to the complete erasure of the PJM fines. Reductions may be negotiated, but they almost certainly will not be cancelled outright. The upshot is additional financial pressure for many of the region’s PE-backed fossil fuel plants.

New Capacity Rules Pose Risks for PE Plants

Yet another looming risk for PJM’s PE-backed generators is the likelihood of changes in the existing capacity market, particularly regarding winter ratings for gas plants. The current PJM market is structured to meet summer peaks, and operates as if both combined cycle gas plants and combustion turbines are available essentially 100% of the time. The December storm clearly showed that this 100% availability assumption is not accurate in the winter and PJM is now pushing forward with a fast-track process to revise the region’s capacity market. It is planning to submit its proposed market changes to FERC in October.

Although the final structure of these reforms remains uncertain, a PJM proposal released in July (see Figure 4 below) gives a good indication of the direction the effort is heading. First, system operators are pushing to implement a two-season market, with capacity bidding for both the summer and

²² Answer of PJM Interconnection LLC, Docket No. EL23-60-000. May 26, 2023. p. 2.

²³ Group of PJM Generators Complaint

winter. Second, they are proposing to sharply lower the capacity credit for gas plants in the winter, a change that would have major financial implications for the region's PE and private capital operators.

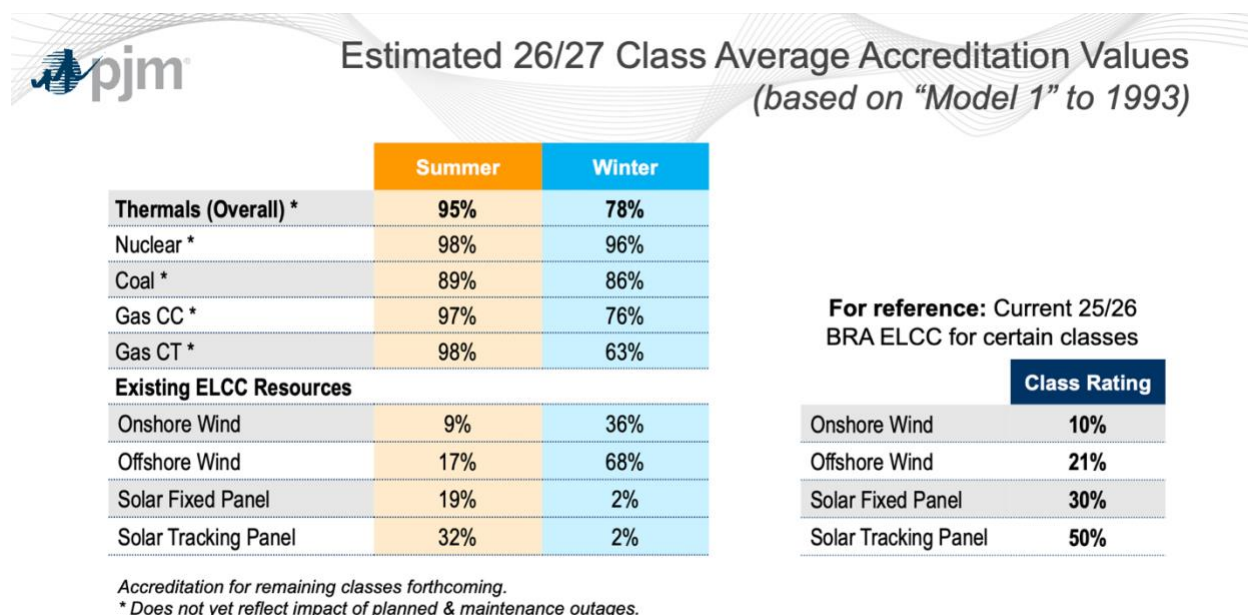
For illustrative purposes, let's return to Heritage Power, which underscored the importance of declining capacity revenues in its decision to file for bankruptcy, noting that they were "the principal source of revenues for its operations."²⁴

In its bankruptcy filing, the company said its projected capacity revenues for the current PJM delivery year (June 2023-May 2024) were expected to total \$37.5 million. If PJM moves forward with its split season bidding and lowered capacity accreditation levels for gas plants as outlined below, those revenues would fall even further, dropping by anywhere from \$4.5-7 million. If \$37.5 million was too low for Heritage, what would \$30 million in capacity revenues be?

But it is not just Heritage that is at risk. Any downward pressure on winter capacity revenues will heighten the financial problems facing PE and privately owned generators across the region.

While not part of this analysis, the PJM proposal also would significantly raise the winter capacity credit for both on- and offshore wind, another change that could raise financial risks for the region's gas-fired power plants.

Figure 4: PJM Capacity Accreditation Proposal



Source: PJM.

²⁴ Heritage Power bankruptcy filing. Op. Cit. p. 24.

Conclusion

There has been a massive shift in the last several years in the risk environment for PE and private-capital-owned gas plants in PJM. The 2010s saw a massive buildout of new capacity with relatively low risk. The situation today is reversed. The buildout has essentially ended, and the risks are accumulating quickly.

First, the high capacity prices that dominated the 2010s have evaporated, with the last three region-wide auction prices averaging less than \$40/MW-day, well below the \$115/MW-day average in the eight years prior. That constitutes a major risk for existing plant owners and new projects alike, forcing operating projects to make do with less while requiring new developers to convince lenders that their plans are still worth the risk.

The fines from last December's winter storm have simply exacerbated these developments, pushing some existing plants into bankruptcy while forcing others to seek capital infusions from their PE sponsors. On the sidelines, bankers considering a project now know full well that non-performance will be costly, potentially prompting them to raise their financing costs for new gas-fired projects.

Finally, queue reforms look likely, meaning many new renewable energy and battery storage projects should finally enter commercial operation in PJM. This will add yet more risk for existing and proposed gas plants, forcing them to deal both with lower revenues, particularly in the winter with lower capacity accreditation levels and higher wind values, and the likelihood that the addition of new renewable projects will constrain energy prices.

It is a new, much riskier situation for PE and private capital in PJM.

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About the Author

Dennis Wamsted

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