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How AI's impact is reaching into areas that might surprise you

From the Field
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Key Insights

- Artificial intelligence's growth has increased energy demand, boosting the credit quality of independent power producers.
- Most independent power producers can hedge their exposure to fluctuating power prices for the next three to five years.
- Short-term weather and long-term regulation risks could influence the credit quality and ratings of independent power producers.

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Many people are familiar with the potential of artificial intelligence (AI) to enhance productivity across a range of industries and sectors. Although the secondary impacts of the rise of AI are sometimes less understood, they have significant implications. One is the need to service the growing AI infrastructure and meet the energy demands it's generating. This in turn has significant implications for the credit quality of corporate bonds issued by companies that supply this energy and infrastructure.

Using ChatGPT for an internet search uses about 2.9 watt hours (Wh) of electricity, far more than the 0.3 Wh required for a traditional Google search, according to the International Energy Agency. Recognizing this ongoing surge in power demand related to artificial intelligence, investors have eagerly bid up shares of many utilities and independent power producers (IPPs). But looking under the hood at the financials of these companies, the boom in AI-related power demand is improving the credit quality of IPPs, in particular, and could even boost some into the investment-grade credit universe.

Regulation impacts utilities and IPPs differently

Utilities buy power from the electrical grid—or generate power themselves—and sell it to their customers, which can be businesses or residences. Utilities are regulated, typically by state agencies, so the prices they charge their customers and their profit margins are constrained by their regulator. Most regulated utilities

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have investment-grade credit ratings. Because utilities typically issue a meaningful volume of debt, they are motivated to maintain investment-grade ratings to keep the cost of that debt low.

IPPs, on the other hand, generate electricity through a range of sources—including nuclear, renewables, and fossil fuels—and sell it to the operator of the electrical grid. Some IPPs have their own customers, in which case they direct the generated power to those customers and sell anything left over into the grid. IPPs are not regulated, so higher demand for power can translate directly to higher prices, more revenue, and wider margins. They generally have high yield credit ratings because of their volatile earnings and as a result of private equity firms' activity—that tends to involve adding leverage—in the industry.

U.S. electrical grids are regional. Each regional grid has a set of rules for interconnection that a new supplier must adhere to before it can connect to the grid. Because of lighter government regulation in Texas, it is generally easiest for IPPs to connect with the Electric Reliability Council of Texas (ERCOT) grid. Tighter regulations in the mid-Atlantic make the region's PJM grid the most difficult. As a result, most IPPs focus their operations on Texas and the Midwest.

Hedging strategies and financial health of IPPs

Most IPPs can hedge their exposure to fluctuating power prices for the next three to five years by selling electricity forward contracts to essentially "lock in" their power sales at a particular price. This makes their future earnings quite predictable relative to industries that cannot hedge their product prices, but IPPs are still subject to some pricing risk and earnings variability.

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Growth in free cash flow (revenue minus operating expenses and capital expenditures) is essential in credit quality improvement. Demand-driven electricity price increases are driving free cash flow growth for IPPs. Decreasing or fluctuating power supply also boosts IPP pricing control as fossil fuels are phased out and the major forms of renewable energy—wind and solar—only produce electricity when it's windy or sunny. While equity investors tend to focus on earnings, growth in earnings before interest, taxes, depreciation, and amortization (EBITDA) also matters for credit quality. IPPs are well positioned for EBITDA growth.

Long- and short-term weather-related risks

Despite our outlook for healthy free cash flow and EBITDA growth in the IPP industry, we are also monitoring meaningful risks that could derail its credit quality improvement. One longer-term risk is that government regulators could mandate that new electricity supply come online from various sources, potentially in response to extreme weather events that result in power blackouts.

For example, in recent years, parts of Texas have experienced both flooding and severe winter weather that overtaxed the power grid's supply, driving some state lawmakers to discuss mandatory supply increases. Meaningful new power supply would tip the supply and demand balance back in favor of supply, pushing prices down for IPPs.

There is another, shorter-term weather-related risk: The timing of individual weather events and the scheduled delivery of power in a forward contract (selling forwards requires the seller to physically deliver electricity to the buyer at contract expiration) could coincide. This would force the IPPs that sold the forwards to purchase power at ultra-high market prices to deliver at expiration. This low-probability, high-impact scenario is a potential drawback of hedging with forward contracts.

Capitalizing on IPP credit improvement

Some IPPs have stated that they want to have investment-grade credit ratings by 2025. We think that most publicly owned IPPs will improve their financial situation sufficiently to follow through on this commitment. Some privately owned IPPs are likely to instead use their newfound fundamental strength to return cash to shareholders. We have moved to take advantage of this multiyear credit improvement theme and the relatively attractive yields available on the industry's bonds.

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