
Indiana: Is Coal's Front Line Collapsing?

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Data Sources Used in This Publication

MISO
ICE
EIA

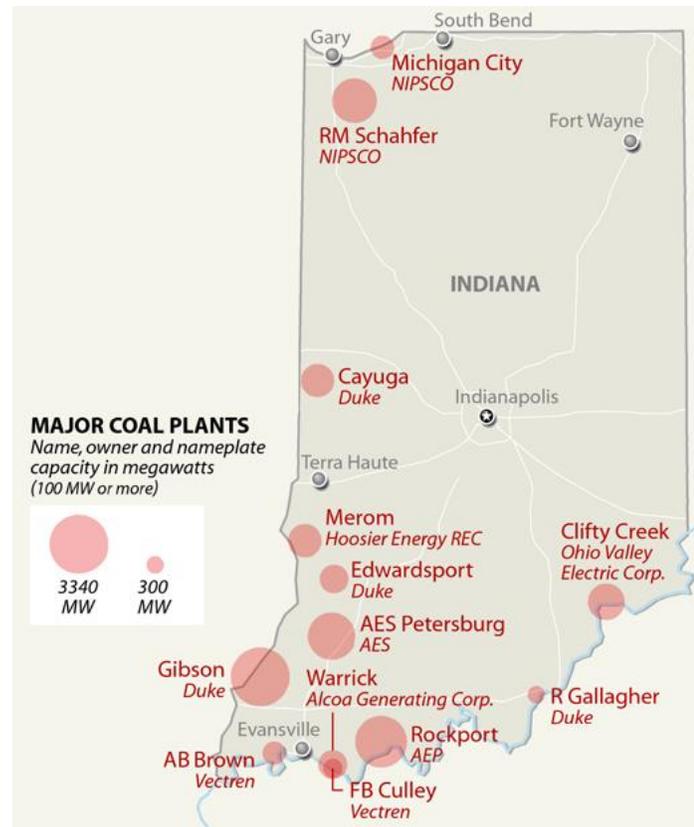
To discover more about the data sources used, [click here](#).

A Sign of the Times

Indiana is the second-biggest coal-generating state in the U.S. after Texas by a sizable margin. Yet, changes are in the cards for upcoming years with two utilities, Nipsco and Vectron, looking to shutter their coal plants. More surprising, and a sign of the times, is the late April rejection of a Vectron plan to replace its retiring coal plant with a natural gas facility, by the Indiana Utility Regulatory Commission. That decision reflects recent Nipsco filings showing the best cost alternative to maintaining coal operations with expensive environmental upgrades is no longer with natural gas generation as seen in the last decade but instead is now renewables due to their low-cost benchmarks in the last year. This note dives into the changing landscape of Indiana's coal fleet and implications for future Indiana hub prices.

The Shape of Indiana Coal

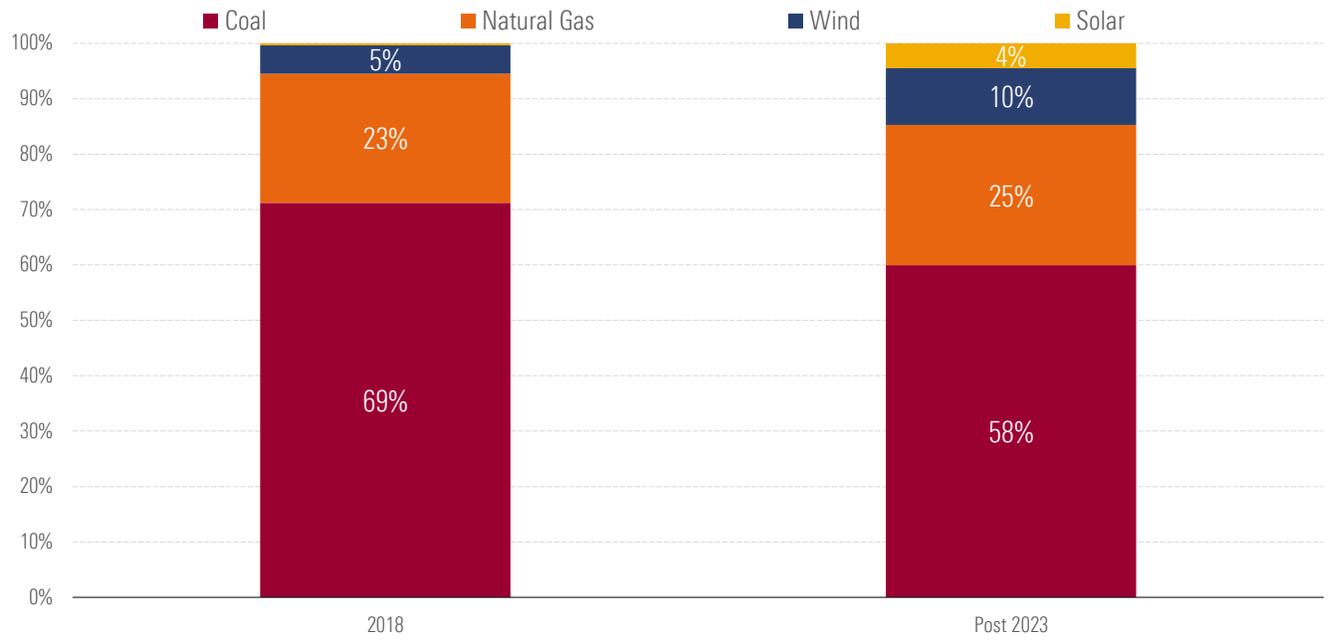
Around 70% of Indiana's power generation capacity comes from coal. It is second only to Texas in nameplate capacity at 16,976 megawatts currently. That is 3,125 MW over the next biggest state, Illinois. In 2001, Ohio and Indiana were remarkably similar and grew coal generation until around 2008. After that, it is a tale of two states. While Ohio peaked in coal generation per year at 136,826 thousand megawatt-hours in 2005, the state has since reduced its coal generation by 57% to 58,794 thousand MWh in 2018. On the other hand, Indiana, which is a little farther from Marcellus but still close enough to take advantage has held much steadier in maintaining its coal fleet. Indiana peaked in 2006 at 123,645 thousand MWh but has only reduced generation by 37% to 77,501 thousand MWh in 2018. Coal is still a dominant part of the power generation fleet (Exhibit 1).

Exhibit 1 Indiana Major Coal Plants

Source: EIA, Inside Climate News, Morningstar.

Planned Retirements

Like its neighbors, the 17 plants that make up Indiana's coal fleet are now expecting more retirements in coming years. Total coal capacity was around 16,900 MW at the end of 2018, with 3,804 MW of nameplate capacity retired since 2006. For comparison, Ohio has retired 9,623 MW of capacity since 2006. In Indiana, NipSCO's Bailly coal plant retired in December removing 600 MW from the 16,900 MW coal stack. The remaining current plants Michigan City and R.M. Schahfer are set to retire by at least 2023 and equal 540 and 1,940 MW of nameplate capacity, respectively. That leaves 13,700 MW in the stack. Vectren is also getting rid of its coal capacity with A.B. Brown, a very inefficient heat rate, and a unit of F.B. Culley slated to retire in 2023. All told, after 2023, only 12,750 MW of nameplate capacity will remain after 3,418 MW of retirements. Based on the generation share of the retiring plants in 2018, that would still leave Indiana in second place for coal generation nationally, but only just above the third state, West Virginia, at around 62,778,863 MWh annually compared with about 77,500,000 MWh in 2018. Exhibit 2 shows the shape of Indiana generation in 2018 and the expectation after 2023 by fuel type when we add back already planned new natural gas capacity as well as solar and wind expected to replace the retired coal.

Exhibit 2 Indiana Fuel Mix

Source: EIA, Morningstar.

Renewables Not Natural Gas

The signal event for a state that has long avoided change is not just that its utilities are starting to remove their coal generation but that it is no longer following the coal-to-gas trend of the last decade. Instead, they are replacing coal with renewables based on NipSCO's finding that renewables are the low-cost option instead of natural gas. This analysis played a big part in IURC rejecting Vectren's plan to build a natural gas plant to replace its announced coal retirements. The IURC also had concerns about a lone stranded natural gas asset given growing supply/demand imbalance and further declining renewable cost trends. Current renewable generation in the state sees nearly 5% coming from wind. There is another 350 MW of wind planned to come online between 2019-20.

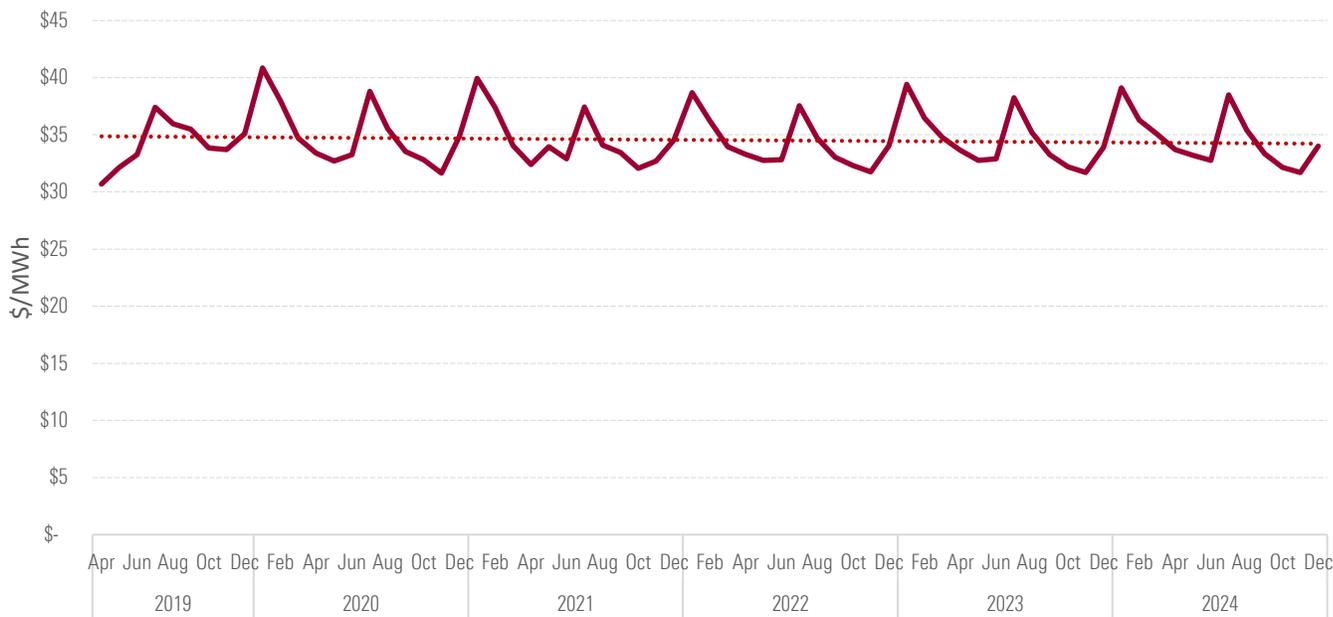
Coal Desperation

To give an idea of how dire things look for the future of coal, Indiana's current coal lobbying effort shows just how far the economics have come since it can't even get support from historically favorable allies. State representatives have recently rebuffed multiple attempts to freeze Indiana's generation fleet among other attempts to retain its coal plants in some fashion. Former Environmental Protection Agency chief Scott Pruitt was even hired as a lobbyist in the state to thwart the renewables onslaught. His failure to make a difference despite coming from a Trump administration that has vowed to save coal shows the writing is clearly on the wall. If even this coal-heavy state with a strong coal lobby can't get the legislature or IURC to save coal or even to justify another form of fossil fuel in the form of a cleaner, in terms of CO₂, natural gas plant, a signal shift has clearly taken place. Renewable economics have become undeniable over continuing coal operations.

Indy Hub Backwardation

With flat to shrinking demand for years, Indiana has experienced a falling price pattern. The forward curve at Indiana Hub shows a continuing slight backwardation over the coming years (Exhibit 3). We expect this trend to continue and likely increase as Nipsco and Vectren solidify their replacement plans for retiring coal. However, sizable coal and natural gas supply with their underlying heat rates in the state and surrounding region will keep spark and dark spread margins stable to declining through 2024. The slightly over \$30/MWh price tag today is likely to shift to the upper \$20 range assuming the current planned retirements and replacements occur —with added natural gas and wind providing the additional edge to keep spreads on the cheaper side of \$30.

Exhibit 3 MISO Indiana Hub Futures Curve



Source: ICE, Morningstar

Front Line

Indiana is on the front line of coal versus environmental forces in the U.S. at present. Due to low-cost renewable economics, the facts point toward the state finally taking a sizable swipe at its polluting coal fleet in favor of cleaner generation from wind. A decadelong assumption of coal-to-gas switching may also be at a transition point. As regulators and utilities no longer look at switching from coal to natural gas as an interim solution before figuring out how to integrate renewables. With even slow-moving Indiana, which has largely dug its heels in to resist changing its coal fleet, unable to deny the value of, if not clean air, then at least the consumer cost savings solar and wind will bring its state's ratepayers, the writing is surely on the wall for coal. ■■

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