

## FACT SHEET

# RETIRING DYNEGY-VISTRA'S COAL PLANTS: CHEAPER, CLEANER, AND RELIABLE ENERGY FOR ILLINOISANS

Illinoisans will continue to enjoy a secure and reliable energy supply even if Dynegy-Vistra shuts its coal plants in the state, according to a new study commissioned by NRDC and the Sierra Club. The study, entitled “Analysis of the Dynegy-Vistra Coal Fleet Future Viability in MISO Zone 4 (Southern Illinois),” also shows that retiring all of the Dynegy-Vistra coal fleet and transitioning to renewable resources would lower customer bills and significantly cut pollution. In a bid to guarantee more profit from its coal fleet, Dynegy-Vistra—a Texas-based energy company that owns eight coal plants in Southern and Central Illinois—wants to saddle Illinoisans with an estimated **\$400 million per-year** rate hike.<sup>1</sup> Despite the lack of evidence, the company justifies its move by claiming the state will suffer power outages if those coal plants close.

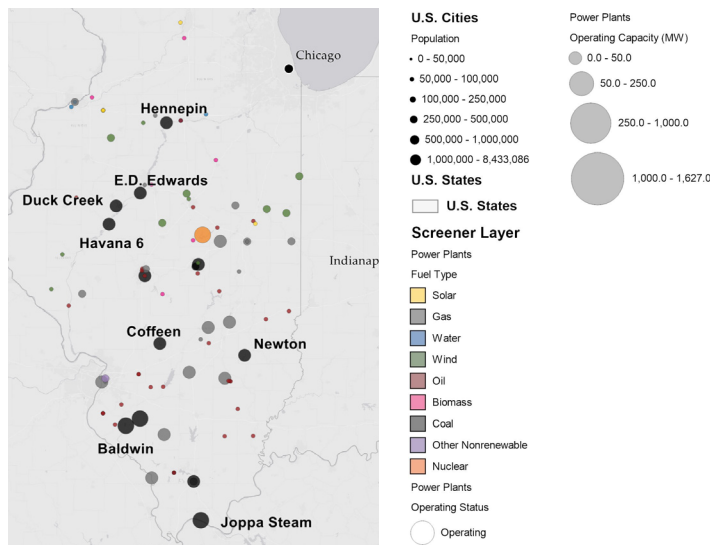
However, a new study commissioned by NRDC and the Sierra Club and conducted by Vibrant Clean Energy (VCE) confirms that southern and central Illinois’s energy supply will remain secure and reliable even with the closure of Dynegy-Vistra’s coal plants.<sup>2</sup> In addition, the VCE study shows that closing the plants would save Illinoisans up to up to \$14 billion between 2018 and 2030 and significantly reduce pollution. This is in part because the Dynegy-Vistra power plants are costlier to run and dirtier than other energy resources.

## WE DON'T NEED DYNEGY-VISTRA'S COAL FLEET TO KEEP THE LIGHTS ON

VCE analyzed the electricity, customer bill, and pollution impacts of closing Dynegy-Vistra’s eight Southern and Central Illinois power plants (Figure 1). The group examined two scenarios with different assumptions related to the costs of the Dynegy-Vistra plants to test out the veracity of the customer bill impact of any plant closures. Under both scenarios, **the VCE model retires all of the Dynegy-Vistra coal plants by 2025 because they are too costly compared with other resources.** Despite the retirements, the model shows that Southern and Central Illinois’s energy supply remains sufficient to keep the lights on. VCE also confirmed that Southern and Central Illinois’s energy supply would remain reliable even with the closure of all non-Dynegy-Vistra power plants in the region.

**Figure 1: Existing Power Plants in Central and Southern Illinois**

The eight Dynegy-Vistra coal plants that the company is trying to rescue are Hennepin, E.D. Edwards, Duck Creek, Havana 6, Coffeen, Newton, Baldwin, and Joppa Steam.



Source: S&P Global Market Intelligence

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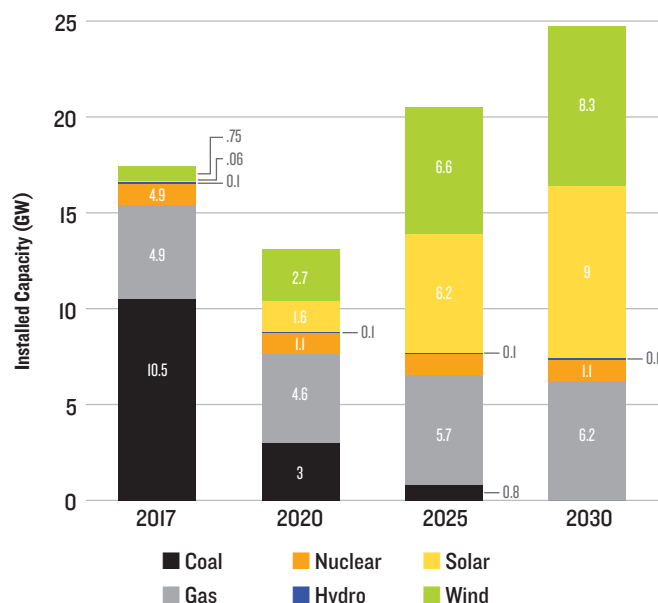
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This conclusion is primarily based on two key factors. First, Southern and Central Illinois currently has over 50 percent more electricity-generating capacity than is

**Figure 2: Installed Capacity in Southern Illinois**

Results are for the first of two scenarios evaluated. The second shows similar results. Data source: "Analysis of the Dynegy-Vistra Coal Fleet Future Viability in MISO Zone 4 (Southern Illinois)"



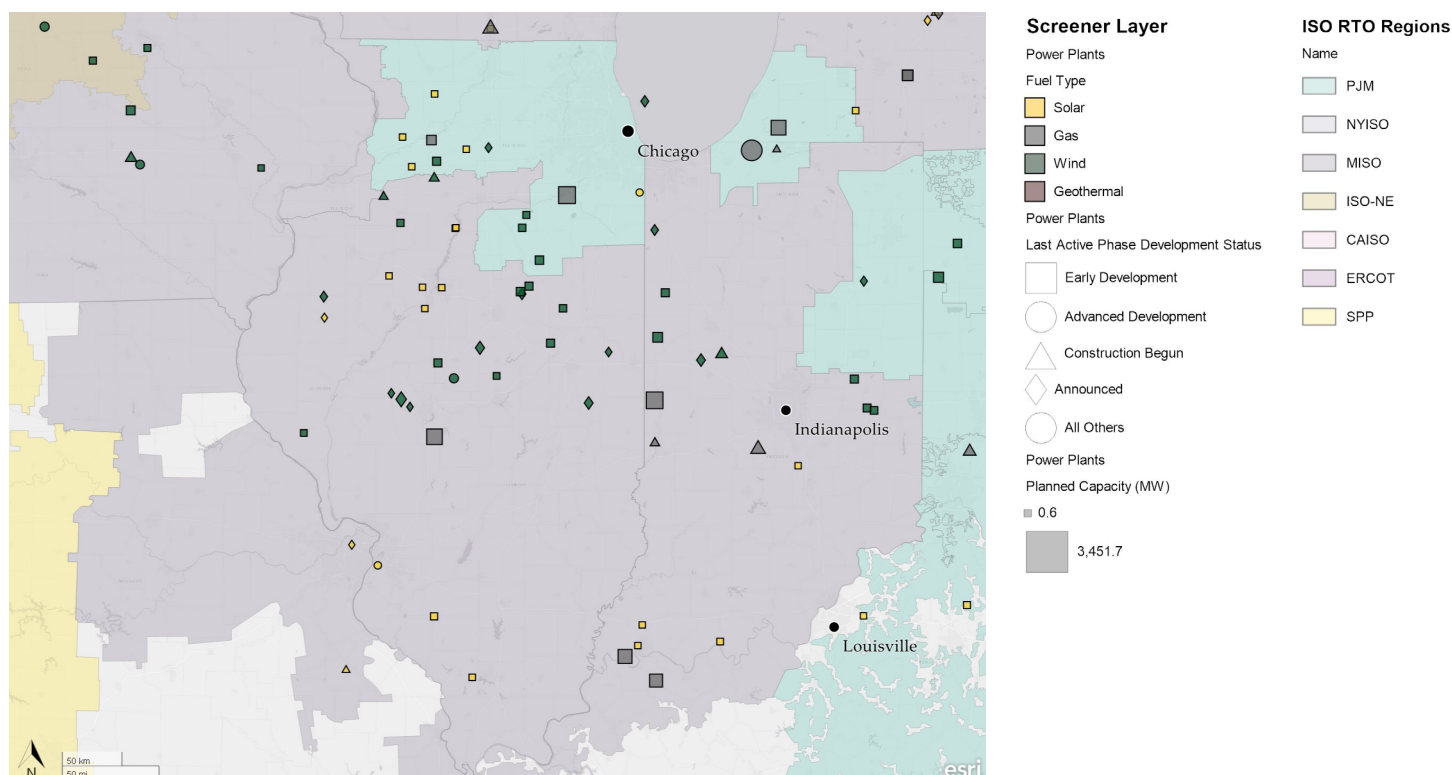
needed to keep the lights on, and a surplus is expected to continue at least until the late 2020s.<sup>3,4</sup> And second, the Illinois Future Energy Jobs Act (FEJA) plays a major role in ensuring that the state keeps adequate electricity supply even if the Dynegy- Vistra plants closed. In fact, FEJA will drive significant growth of wind and solar deployment by 2021 and beyond, keep electricity demand flat until at least 2030 (which reduces the need for generating capacity), and keep Illinois' nuclear fleet online until at least 2027. These factors are at the core of Illinois' ability to easily replace the Dynegy-Vistra plants.<sup>5,6</sup>

The study's findings are consistent with current state and regional trends and confirm the rich diversity of Illinois' energy resources:

- There are many wind and solar projects already in operation or under development (Figure 3).
- Natural gas will remain a competitive energy resource for the next decade.
- A robust transmission network connects Illinoisans with electricity throughout the Midwest.
- Southern and Central Illinois is one of the most well-connected areas in the region (Figure 4).
- Energy efficiency will continue to help lower costs and reduce the need for additional energy.

**Figure 3: Planned Power Plants in Illinois**

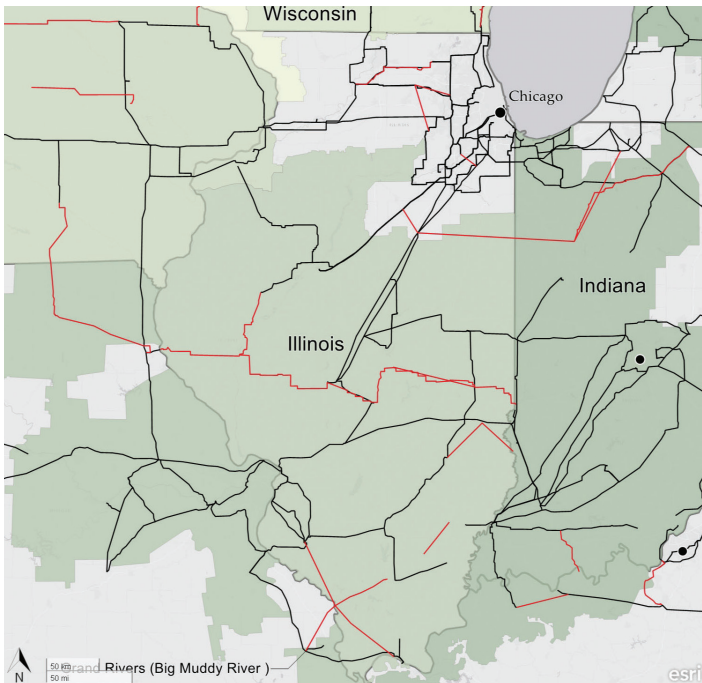
Colors indicate the different technology types: green for wind; yellow for solar; and gray for gas. Southern and Central Illinois are shaded with gray; the Commonwealth Edison zone is shaded with blue.



Source: S&P Global Market Intelligence

**Figure 4: Existing and Planned Transmission in Illinois**

The black lines indicate existing transmission; the red lines indicate planned transmission set to come online by 2020.



Source: S&P Global Market Intelligence

The VCE study results described below—including the reduction in electricity prices and air pollution—are based on the projected retirement of *all* the coal plants in Southern and Central Illinois, not just the Dynegy-Vistra plants. However, given that the Dynegy-Vistra plants supply more than half of the electricity demand in Southern and Central Illinois, the closure of the Dynegy-Vistra fleet plays a primary role in driving these results.

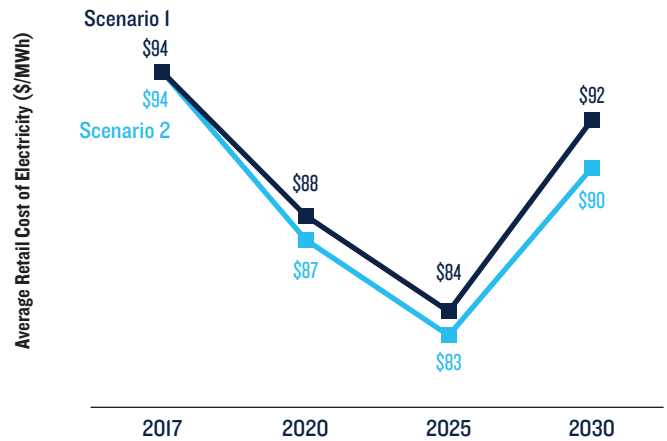
## CLEANER POWER WILL SAVE ILLINOISANS UP TO \$14 BILLION

Replacing Dynegy-Vistra's coal plants in Southern and Central Illinois with wind and solar power will lower the cost of electricity for the state's consumers relative to what they paid in 2017. If these plants are retired, Illinoisans will pay less for their electricity than they paid in 2017 at least through 2030 and save between **\$12.5 and \$14 billion** from 2018 to 2030 (Figure 5).

Why will retiring these coal plants save money for Illinoisans? First, the Dynegy-Vistra fleet is aging—the average plant is more than 53 years old—and the plants are becoming increasingly inefficient and costly to maintain. In contrast, the costs to build wind and solar projects are plummeting.<sup>7</sup> Additionally, renewable energy sources do not require fuel, which is the largest single expense for coal and

**Figure 5: Estimated Price of Electricity in Illinois**

Prices account for inflation and are expressed in 2016 dollars.



Data source: Analysis of the Dynegy-Vistra Coal Fleet Future Viability in MISO Zone 4 (Southern Illinois)

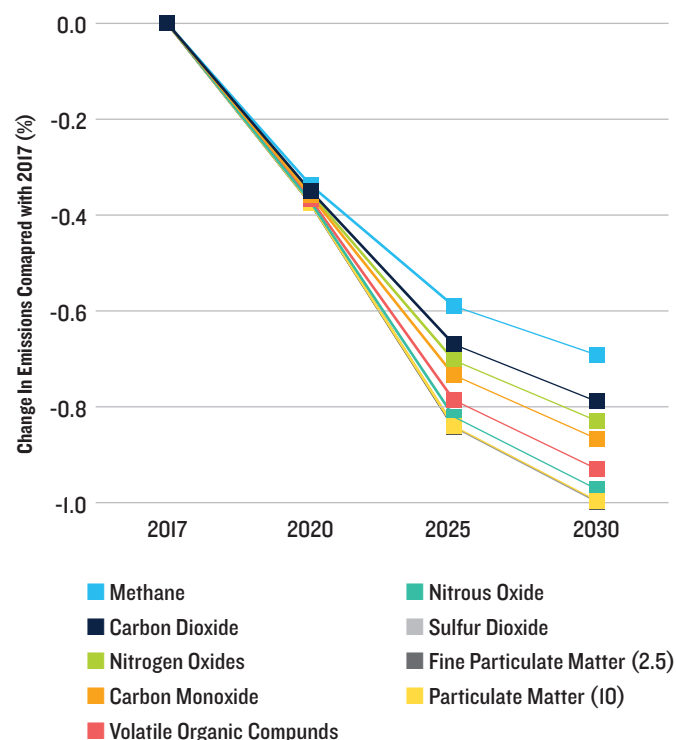
gas plants. Over time, the savings on fuel and maintenance will more than offset the costs to build the new wind and solar projects, which translates into lower electricity prices for Illinoisans.

VCE's findings are consistent with recent trends in the Midwest, where wind energy has become so cost effective that it is now cheaper to build a new wind project than to keep operating an existing coal plant.<sup>8</sup> For example, the Empire District utility company in Missouri estimates that replacing its one remaining coal plant with new wind projects would save its customers a total of \$300 million over two decades, or \$10 a month per customer.<sup>9</sup>

## RETIRING DYNEGY-VISTRA'S COAL PLANTS WILL REDUCE POLLUTION AND IMPROVE PUBLIC HEALTH

The VCE study also shows that phasing out coal will significantly reduce emissions of particulate matter (otherwise known as soot) and other harmful pollutants like nitrogen oxides and sulfur dioxide. These pollutants can cause and worsen asthma, cancer, and heart and lung disease. Closing the coal plants in Southern and Central Illinois would eliminate the majority of particulate matter pollution from the power sector in Illinois by 2030 and reduce the emission of nitrogen oxides and sulfur dioxide by 80 to 90 percent, respectively, by 2030 compared with 2017 (Figure 6).

**Figure 6: Change in Emissions of Harmful Air Pollutants From Electricity Generation in Illinois**



Data source: Analysis of the Dynegy-Vistra Coal Fleet Future Viability in MISO Zone 4 (Southern Illinois)”

## ILLINOIS HAS A SECURE ENERGY FUTURE EVEN WITHOUT THE DYNEGY-VISTRA PLANTS

The VCE study confirms that the Dynegy-Vistra coal fleet is not needed to keep the lights on; there is plenty of power to meet Illinois’s current and future electricity needs. In particular:

- Illinois can easily and reliably replace the Dynegy-Vistra fleet. Regardless of what happens to the plants, Southern and Central Illinois will continue to have more than sufficient energy supply to keep the lights on. This is in large part thanks to FEJA—a legislation that has passed and is already being implemented.
- The Dynegy-Vistra plants are too costly compared with other resources and can be replaced with a cheaper mix of gas, wind, and solar resources.
- Illinoisans will pay lower electricity bills and breathe cleaner air if the Dynegy-Vistra coal plants are replaced with cleaner resources.

Illinois does not need Dynegy-Vistra’s dirty—and dangerous—power plants, and is already on track to a cleaner electricity sector. Instead, Illinoisans would benefit from a competitive energy market that enables the state to stay on this clean energy track and in which power companies shift away from expensive coal generation and invest in more economical and cleaner energy resources.

### ENDNOTES

- 1 Christie Hicks, “Illinois Has Plenty of Power, Says New Report. So, Why Bail Out Dynegy’s Coal Plants?” Environmental Defense Fund, March 2018, <http://blogs.edf.org/energyexchange/2018/03/05/illinois-has-plenty-of-power-says-new-report-so-why-bail-out-dynegy-coal-plants/>.
- 2 NRDC and the Sierra Club retained VCE because of its experience in analyzing power sector trends in this region. Among its clients is the regional grid operator Midcontinent Independent System Operator (MISO), which hired VCE to study the changing energy mix in the MISO region.
- 3 Illinois Commerce Commission, “ICC MISO Zone 4 White Paper” November 2017, <https://www.icc.illinois.gov/Electricity/workshops/MISOZone4.aspx>.
- 4 Midcontinent Independent System Operator, “2017 OMS MISO Survey Results”, June 2017, [https://www.eenews.net/assets/2017/06/16/document\\_ew\\_02.pdf](https://www.eenews.net/assets/2017/06/16/document_ew_02.pdf).
- 5 Toba Pearlman, “Renewables Win at the Illinois Commerce Commission,” Natural Resources Defense Council, April 9, 2018, <https://www.nrdc.org/experts/toba-pearlman/renewables-win-illinois-commerce-commission>. Robert Walton, “Illinois Regulators Adopt Ambitious Renewables Plan,” Utility Dive, April 2018, <https://www.utilitydive.com/news/illinois-regulators-adopt-ambitious-renewables-plan/520728/>.
- 6 Nick Magrisso, “Future Energy Jobs Bill: A Path for Illinois to a Bright Clean Energy Economy”, Natural Resources Defense Council, December 2016, <https://www.nrdc.org/experts/nick-magrisso/future-energy-jobs-bill-path-illinois-bright-clean-energy-economy>.
- 7 Lazard, “Levelized Cost of Energy Analysis,” November 2017, <https://www.lazard.com/perspective/levelized-cost-of-energy-2017/>. Joe Romm, “New Study Reaches a Stunning Conclusion About the Cost of Solar and Wind Energy,” Think Progress, November 2017, <https://thinkprogress.org/solar-wind-keep-getting-cheaper-33c38350fb95/>. Betsy Lillian, “As Wind, Solar and Battery Costs Plummet, So Does the Economic Case for Fossil Fuels,” North American Wind Power, March 29, 2018, <https://nawindpower.com/as-wind-and-solar-costs-plummet-so-does-the-economic-case-for-fossil-fuels>.
- 8 Avery Thompson, “Building a New Wind Farm Costs Less Than Running an Old Coal Plant,” *Popular Mechanics*, November 2017, <https://www.popularmechanics.com/science/energy/a13820450/wind-farm-cheaper-than-coal/>.
- 9 Robert Walton, “Empire District to Shift From Coal Generation to Wind in New Plan,” Utility Dive, November 2017, <https://www.utilitydive.com/news/empire-district-to-shift-from-coal-generation-to-wind-in-new-plan/509988/>.