

# Soot to Solar

## *E.D. Edwards Power Station – Bartonville, IL*

The future is uncertain for the E.D. Edwards Power Station, a 58-year-old plant in Bartonville, Illinois just outside of Peoria, on the west bank of the Illinois River. The plant is owned by Dynegy-Vistra.

Residents have been asking for years for a transition plan, arguing that with coal's decline nationally it is only a matter of time until the aging plant closes. They point to the Wood River plant in East Alton as a cautionary tale of the issues that can arise when a plant closes suddenly without a transition plan; workers and the city's tax base can be left high and dry. One of the plant's three boilers was retired in 2016, but the plant still lacks up-to-date air pollution controls (Lyderson 2017). Coal plants across southern and central Illinois are struggling, with several retirements in the past several years. The then-owner of the Edwards plant, Dynegy Inc., announced in 2017 that its "downstate" fleet of coal-fired plants power plants were facing closure (Daniels 2017).

Dynegy was purchased by Texas energy behemoth Vistra in April 2018, and Dynegy-Vistra has pursued two strategies (both begun prior to the merger but ongoing) to maximize profits from Edwards and its other Illinois plants. Unfortunately, both strategies come with steep costs to residents and ratepayers, and neither is guaranteed to preserve jobs. When asked about the power plants in February 2018—before the company purchased Dynegy—Vistra's CEO said the company may be "shrinking the size of [its] generation," that is, closing power plants (Daniels 2018).

Dynegy's first strategy, which it has continued to pursue after the Vistra merger, was to request a bailout from the state legislature. The plants had been staying above water by selling "capacity"—essentially, being paid to be on call to provide power to the grid if needed. But when the value of capacity declined for several years, the company lobbied for a bill in the Illinois legislature that would increase the amount their plants get paid for capacity (for being on call). The bill, if passed, would cost consumers an estimated \$400 million per year (Barbeau 2017). Strong opposition to the bill from consumer groups, utilities, environmental advocates, and legislators has kept the bill from being called to a vote through the time of this writing. Second, Dynegy-Vistra is attempting to get permission to pollute more across its fleet of power plants as a group. Dynegy-Vistra is working closely with Governor Bruce Rauner

and Illinois Environmental Protection Agency director Alec Messina (whose previous job was as a registered lobbyist for a group representing Dynegy-Vistra and other fossil fuel companies) to attempt to weaken a state clean-air rule, the Illinois Multi-Pollutant Standard. The proposed changes would allow the company to run its dirtiest coal plants—which are also its cheapest to operate, because of their lack of pollution controls—more often.

But bailing out these plants offers no benefits for electricity reliability or to consumers. If all eight Dynegy-Vistra coal plants including Edwards were to retire, the lights would stay on in Illinois—despite dire claims by the company—and customers would have reliable electricity (NRDC 2018). Additionally, customers would save a cumulative total of more than \$8.2 billion on their electricity bills by 2030, and the climate and health benefits from the reduced pollution would be worth at least \$765 million per year (NRDC 2018).

If either of these measures passes— [weakening the Illinois Multi-Pollutant Standard] or [legislation to aid Dynegy's plants]—and Illinoisans are forced to cough up either their health or their money to keep Dynegy-Vistra's dirty coal fleet running, the Edwards plant might survive a while longer. But there is strong public opposition to both measures, and coal is losing market share quickly (Richardson et al. 2017).

It is feasible that in the next few years, the Edwards plant will join the Fisk, Crawford, and Wood River coal plants in retirement. The most immediate positive impact: closing the plant would prevent an estimated 288 premature deaths and 120 emergency room visits due to asthma between 2022 and 2030, according to the Clean Air Task Force (UCS 2018). The site itself also presents opportunities and challenges. The greatest challenge is the large amount of coal ash stored on the site, which will remain even if the plant is retired. Coal ash can be dangerous to public health if it leeches into the groundwater as it did in Semora, North Carolina (Richardson 2017), or if it spills, as it did in 2014 when 39,000 tons of ash fell into the Dan River in North Carolina (NRDAR 2014). The coal ash storage site at the Edwards plant is rated as having high hazard potential, and an engineer contracted by the plant's owner found that if the coal ash perimeter containment dike failed, it would "probably cause loss of human life" (Stantec 2016).

Members of the Peoria-based Central Illinois Health Community Alliance expressed concern about flooding and coal ash regardless of whether or not the plant retires. Addressing the coal ash issue, at the Edwards plant and elsewhere, is a key consideration in any just transition plan for the site.

Community members are relatively open to how the site is re-used once the plant is retired and have expressed interest in a solar farm. In addition to the grid infrastructure on site and its eligibility for brownfield incentives through Illinois's Future Energy Jobs Act, the Edwards site is fairly large, at more than 206 acres. Analysis by the Union of Concerned Scientists found that it could accommodate up to 41 megawatts of solar electricity generation, enough to power nearly 6,000 homes (SEIA n.d.).

A solar farm on the Edwards site could be paired with a small energy storage installation, taking up just 0.06 percent of the site for 10 megawatts of storage (Clemmer et al. 2018). The price of energy storage has declined significantly in recent years and continues to do so, and federal regulators recently approved its sale as electricity capacity (on-call power), which is beginning to compete in the market against coal and gas. When storage is paired with solar, the system can generate pollution-free power and store it, if needed, for use when the sun is not shining. Locating solar storage near Peoria could also substantially improve grid resilience, particularly valuable given Peoria's role as a major medical center for central Illinois.

For now, the Edwards Power Station lumbers along. But with coal increasingly uneconomical, unnecessary, and looking for bailouts, it is not too soon to start thinking about cleaning up coal ash, installing solar panels, and lowering Illinoisans' electricity bills.

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