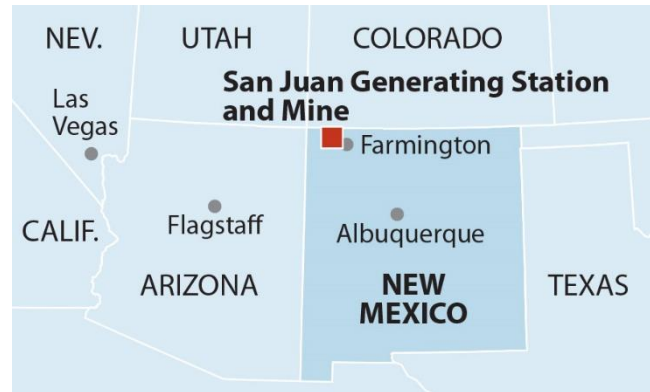


# Dwindling Odds of Success for Retrofit of New Mexico Coal Plant for Carbon Capture

*Barriers Include Recent Closure of Similar Project, Oppositional Market Forces, No Known Investors, No Customer Base, Nowhere to Sequester Emissions*

Prospects for success on a proposal to turn the coal-fired San Juan Generating Station into a carbon-capture project have faded, hurt by the recent mothballing of a similar project in Texas, oppositional market forces, no known investor interest, and political and industry realities that favor less complicated and more cost-effective forms of electricity generation.

The project continues nonetheless to be touted as a done deal by its promoter, a thinly capitalized startup called **Enchant Energy**, which was founded and is operated by a handful of individuals who are little known in New Mexico and funded largely by **U.S. Department of Energy** grants.



This brief summarizes several indicators showing how the San Juan plant is unlikely to ever become a going carbon-capture concern.

- **COAL-FIRED CARBON-CAPTURE PROJECTS DO NOT PENCIL OUT.** While proposals like Enchant's may work on paper, they lack real-world viability. The only operating coal carbon-capture project in the country, Petra Nova, was put on ice this spring after just three years of operations <sup>1</sup> (Before it was mothballed Petra Nova was often cited by carbon-capture proponents, including executives at Enchant, as a model project). However, coal carbon-capture projects, owing to their complexity and high operations and maintenance costs, have not been able to compete in the market and are unlikely to ever become economically feasible given the rise of far less costly forms of power generation.

<sup>1</sup> IEEFA. [Petra Nova Post-Mortem. Closure of Texas Carbon-Capture Plant Is a Warning Sign.](#) August 2020.

- **ENCHANT ENERGY HAS NO ACCESS TO TRANSMISSION AND NO MARKET TO SPEAK OF.** The company has no rights to any of the transmission that will open up once San Juan’s main owner, **Public Service Company of New Mexico** (PNM), exits the plant in 2022 (that access is largely spoken for by developers of renewable generation projects in the area, including PNM itself). Nor does it have a market for most of the power it says it would produce.
- **INVESTORS SEEM RIGHTFULLY WARY.** While the company asserts that the project is “attractive to investors,”<sup>2</sup> none are known to have come forward,<sup>3</sup> even after the company announced an equity-raising initiative this summer. The potential risks are high since investors would be fronting the money to construct the facility and would not be repaid until the capture plant began operation. Even assuming the plant comes online, it would take years of successful operation for backers to recover their investment.
- **ENCHANT’S DEVELOPMENT TIMELINE IS IMPROBABLE.** The company states that—*before the end of 2020*—it will have carbon dioxide off-take agreements in place and will have power purchase agreements (PPAs) signed for up to 500 megawatts of generation capacity.<sup>4</sup> However, aside from Farmington or Enchant itself, there is little likelihood any buyer will sign a PPA now with a firm price for delivery in the 2024-2026 timeframe for completion given the rapid price declines occurring in the wind, solar and battery storage sectors and the uncertainty regarding completion of the San Juan project. Similarly, any off-take agreement for the project’s CO<sub>2</sub> is likely to be so loaded with qualifying language given the long lead time before delivery—around, for example, the price of the CO<sub>2</sub> and the amount to be delivered—as to be almost meaningless.
- **THE COMPANY HAS ABRUPTLY CHANGED ELEMENTS OF ITS BUSINESS MODEL AND HAS NOT ACCOUNTED FOR HOW MUCH THOSE CHANGES WOULD COST OR HOW PRACTICAL THEY WOULD BE.** Enchant originally pitched<sup>5</sup> the retrofit as a carbon-capture project that would send CO<sub>2</sub> via pipeline some 400 miles away to the **Permian Basin** oil patch of southeast New Mexico and southwest Texas for use in enhanced oil recovery (EOR). That aspect of the project was questionable to begin with and this year’s oil price collapse has only underscored those doubts.<sup>6</sup> Since the oil price decline, Enchant has revised its plan, asserting that the carbon captured at San Juan could be sequestered underground somewhere as an alternative to EOR. However, it has not shown how or where the emissions would be sequestered—a question that would require extensive siting studies and

<sup>2</sup> Cindy A. Crane, CEO, Enchant Energy. [United States Energy Association Virtual CCUS Roadshow](#), Page 4. Aug. 19, 2020.

<sup>3</sup> Power Finance and Risk. [Enchant tests investor appetite with CCS equity raise](#). Aug. 27, 2020.

<sup>4</sup> Cindy A. Crane, CEO, Enchant Energy. [United States Energy Association Virtual CCUS Roadshow](#). Aug. 19, 2020.

<sup>5</sup> Enchant Energy. [Carbon Capture Retrofit of San Juan Generating Station Presentation to United States Energy Association](#). June 27, 2019.

<sup>6</sup> IEEFA. [IEEFA U.S.: Enchant Energy’s carbon-capture project is falling apart](#). March 20, 2020.

permitting at considerable cost and that would involve a process that could take years to complete.

- **THE STATE AND THE UTILITY INDUSTRY HAVE MOVED ON.** Key to Enchant’s proposal is the assumption that the owners of the plant—**PNM, Tucson Electric, the City of Farmington, Los Alamos County, and the Utah Associated Municipal Power Systems**—will agree to turn it over to Enchant in a proposed sole partnership with Farmington. No such agreement is in place and the odds of one being completed are questionable.<sup>7</sup> A five-part ownership transfer agreement, as **Public Regulation Commission of New Mexico** noted this year, remains a “matter of negotiation”<sup>8</sup> between the many parties, most of whom have no interest in the project and have stated a preference for building out utility-scale renewables instead, partly because of market forces/customer preferences and partly because of state power-generation policy enacted in 2019.<sup>9</sup> A key complication in any ownership transfer agreement would have to do with how to apportion plant-cleanup liabilities and whether Enchant and Farmington could shoulder such liabilities alone, as Enchant has promised, or whether former owners would be dragged ultimately into a cleanup-liability fray.

## Conclusion

IEEFA believes Enchant Energy’s proposal to retrofit the San Juan Generating Station is unlikely to succeed. Potential investors would do well to exercise caution. The risks are high, the rewards highly uncertain. Far more sensible investment opportunities will emerge if the owners and New Mexico regulators and politicians work together to close the plant in 2022 as planned and replace the power with clean, low-cost renewable energy and storage located in the same region, thus helping ease the economic effects of transition while benefitting from the area’s existing transmission infrastructure.

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<sup>7</sup> IEEFA. [Regulators see trouble with Enchant Energy’s carbon-capture project](#). April 2, 2020.

<sup>8</sup> New Mexico PRC. [Final Order on Request for Issuance of a Financing Order, Case No. 19-00018-UT](#). April 1, 2020.

<sup>9</sup> New Mexico. [Energy Transition Act, Final Version](#). March 22, 2019.

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The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. [www.ieefa.org](http://www.ieefa.org)

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