N.M. plans for material-world application of natural resources

Escalante H_2 Power is taking steps to convert the Escalante Generating Station from a coal-fired to a hydrogen-fired plant. If the project is a success, it would create up to 270 MW of clean power, and more than 500 temporary jobs during construction as well as at least 60 permanent positions once it's in operation. More than 100 people lost their jobs when the plant closed in Aug. 2020.

After the Escalante plant closed, Brooks Energy Company and Newport Gas, LLC, formed Escalante H_2 Power intending to make Escalante the first plant to be successfully converted from coal-burning to hydrogen-fueled.

A year later in Aug. 2021, Tallgrass Energy acquired a 75 percent membership in eH_2power from Brooks Energy Company. Although Tallgrass is now the majority member of eH
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power, the original goal to convert the plant to blue hydrogen power, remains unchanged.

Blue hydrogen power relies on decarbonized natural gas. The natural gas is reformed into hydrogen and CO_2, then the CO_2 is stored, or sequestered underground. Since the CO_2 is sequestered and hydrogen is a clean-burning fuel, power produced by the plant would result in

very low emissions. Eventually, the plant could be converted to green hydrogen production, which would utilize renewable resources. At the moment it's blue hydrogen conversion that is eH $_2$po
wer's focus right now.

Dwayne Phillips, the managing member of eH_2power and vice president of hydrogen at Tallgrass Energy, said that while there is plenty of research and planning still to be done, the good condition of the Escalante plant is a positive for the operation, since there are no repairs or complications associated with the project.

"The biggest piece with this project is making sure that we do the conversion correctly, Phillips said. "We have to make certain modifications to the coal-burning section of the boiler.

"In doing that, we're being very meticulous in the modeling and the engineering behind that to make sure that all of the steps that should be taken are taken and evaluated in a very detailed perspective," he said.

eH_2power aims for the plant to begin operation in 2025, about three years from the start of construction. Tallgrass Energy Corporate Communications Manager Scott Prestidge, explained why this timeline is realistic.

"There is a lot of work that goes into this project on the front end," he said. "There's a lot of analysis and planning, and it's going to take time.

"This isn't something that you can just flip the switch on," he said. "You have to make sure you take all the right steps, do all the right things, and conduct that due diligence,"

In addition to the conversion itself, decisions are still being made about details such as where to store the sequestered CO_2. Phillips estimated that the teams have another 6 to 7 months of evaluation and planning, looking at pieces like the economics, scope, timing, and schedule of the project. The final decision to begin the construction and modifications will take place after this stage ends. Phillips is optimistic that eH $_2$power will complete the

project successfully.

“Our confidence level within eH_2power improves every day,” Phillips said. “As we understand things more, whether it’s the modeling or the data sets that tell us about the condition of the asset, we’re encouraged.

“There’s a high likelihood today [for the project’s completion],” he said. “That likelihood improves with every step of the process that we’re going through.”

If the conversion of the plant is a success, the plant will not only create new jobs but also help establish New Mexico as a leader in clean hydrogen energy.

“We believe [the Escalante plant] will be one of the cleanest producing power plants not only in New Mexico, but in North America,” Phillips said.

By Rachel Pfeiffer
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