

OIL DAILY®

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BPX Closes In on Electrifying All Permian Wells

BP's US shale subsidiary BPX is drawing near to powering all of its well sites in the prolific Permian Basin with electricity from the grid.

After hitting the milestone of 80% of Permian wells electrified in 2022, the company is aiming to get to 95% in 2023, BPX CEO David Lawler told reporters on Wednesday.

"What this does for us, is it allows us to have a very low-carbon footprint, and a very low-carbon-intensity barrel of crude oil that's produced," Lawler said.

Operators in the Permian are increasingly looking to electrify their facilities as a way to decarbonize, but the remoteness of the basin and many of its well sites poses a challenge. Pioneer Natural Resources CEO Scott Sheffield said last year that the electric grid in the Permian needs to grow to three to four times its current size to accommodate the E&Ps looking to go electric, and that operators will soon need to start investing in grid infrastructure themselves.

But BPX appears to have beaten them to the punch. Since acquiring its shale assets from BHP in 2018, the company has spent \$700 million-\$800 million on electrification, including the development of two substations in the Permian. Overall, the company plans to spend \$1.3 billion to electrify its Permian operations.

"This massive power infrastructure allows us to supply power to the drilling rigs that we use when we drill the wells," said Lawler. "The overhead power allows us to stimulate or frack the wells with electric frack spreads. We pump the wells with electric submersible pumps, we compress the gas with electric driven compressors. And we operate the controls of the system with compressed air from an electric source as well."

Grand Slam

The key components to BPX's electrification strategy in the Permian are centralized processing facilities, of which the first, Grand Slam, came on line in 2021. Wells receive electricity from the grid and flow to Grand Slam, essentially erasing the need for wellsite compressors, tanks and other equipment that might result in a higher emissions footprint.

New well sites are tied directly to Grand Slam; for older well sites that existed before the electrification program, BPX deploys project teams to connect the wellhead to the facility, then decommissions the now-unneeded equipment, according to Lawler. Decommissioning can take fewer than 30 days.

"Sometimes what you need to do is you have to decommission the site, and then you have to lay the connections over to the central processing facility, you then have to bring in the power," he said. "So what we try to do is bundle those projects together so we can do them very efficiently. But in general, it's a straightforward project. It does take a little bit of time, though, because there can be a fair amount of distance between one of those wells and the [facility]."

The \$350 million Grand Slam, which can process 30,000-35,000 barrels of oil per day, also runs off grid power.

"When you come out here, you don't hear any engines running. You don't see massive flare stacks, you don't really see anything, it's largely an emissions-free instrument-air facility," he said.

BPX plans to build three more centralized processing facilities over the next several years. The second, Bingo, is scheduled to come on line in June or July.

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What's Left?

While BPX may be ahead of the pack in terms of electrification in the Permian, it has more investments to make before electrifying the whole field. This year, it plans to run three electric rigs on its Permian acreage, but it also plans to run one or two that are not electrified. That's because they will be working in areas that are not yet set up to receive grid power.

BPX is already planning to build more substations to reach more remote areas, and the additional central processing facilities should also support electrification efforts in the coming years, Lawler said.

Elsewhere on the emissions front, BPX is making efforts to have its natural gas certified by a third party. Lawler said the company was "very close" to having 100% of its natural gas certified as low-emissions.

Lawler also told reporters the company had reached "near-zero" routine flaring at its Permian operations last month.

Caroline Evans, Houston