

Refiners put faith in US shale oil's longevity

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By Chris Tomlinson Houston Chronicle

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From the Dakota plains down to the South Texas scrub and over to the Permian Basin, refiners are making multi-decade bets that shale drillers can keep the oil flowing to feed new facilities that will be cleaner and safer than ever.

U.S. oil companies are pumping more than 9.1 million barrels a day. With the price for a barrel of West Texas Intermediate floating between \$45 and \$55 a barrel, analysts predict they could add another million barrels a day in 2018.

Directional drilling and hydraulic fracturing of shale rock help the U.S. compete with Saudi Arabia and Russia for the title of world's largest energy producer. We even export light sweet crude and liquefied natural gas to Latin America and Europe.

That fact often confounds readers who wonder why the U.S. still imports heavy sour crude from Venezuela, Canada and the Middle East. The answer is that refineries are designed for a blend of crudes and can't run only on light sweet.

Truth be told, refiners didn't reconfigure their equipment because they didn't know how long the U.S. boom would last. When OPEC allowed prices to drop from more than \$105 a barrel to less than \$30, refiners felt vindicated because conventional wisdom said you can't drill a horizontal well and fracture it for less than \$85 a barrel. But conventional wisdom was wrong.

As soon as prices inched above \$50, oil companies announced they had learned how to make money at that price. They've doubled from last year the number of rigs operating in the most lucrative oil basins. Refiners are taking notice, recognizing that shale oil and gas are here to stay and finally are investing in new facilities.

"The industry has focused on large coastal facilities with large, complex refineries that can handle just about everything that shows up in a tanker," said Bill Prentice, CEO of Meridian Energy, which plans to begin construction on a \$850 million greenfield refinery in North Dakota this summer. "Now there's no need for all of that complexity and heavy crude ... Now, we have an opportunity to build a new kind of refinery that operates on the best crude in the world."

Meridian's new refinery will process 60,000 barrels a day and supply gasoline, diesel and low-sulfur oil to the Midwest market. But the company is far from alone.

Raven Petroleum, headquartered in Houston, says it will start work on a \$500 million refinery in South Texas' Eagle Ford Shale region later this year. Austin-based MMEX Resources Corp. plans to raise \$450 million to build a 50,000-barrel-a-day refinery in Pecos County.

Overcoming local opposition, though, can be tough.

"When people heard we were putting a refinery in, people started to freak out because everyone knows what a refinery looks like,"

Prentice said about his project in the Bakken Shale play. “But this isn’t going to be your granddad’s refinery. It’s going to be something completely different.”

Meridian wants to prove that a refinery doesn’t need to operate in some industrial ghetto or wasteland. Light sweet crude doesn’t have the sulfur, particulates or viscosity that require a lot of distilling, which means fewer pollutants are released in the refining process. That can mean a lighter footprint.

Two Houston companies, engineering firm Vepica USA and fabrication firm Basic Equipment, engineered and built Meridian’s Davis Refinery to be the industry’s most environmentally sustainable facility, Prentice said. The company has applied for nothing more than a Minor Synthetic Source permit, which puts it on the same environmental level as a dry cleaner. If successful, it would be a first in the business.

“And we’ve made changes to the design in the last few weeks that would further reduce emissions by another 15 percent,” he said.

Under better circumstances, we wouldn’t need to build refineries and petrochemical plants, and instead would concentrate on developing cleaner forms of energy and reducing greenhouse gas emissions. Unfortunately, we’re not there yet, either technologically or financially.

Until then, we’ll need to burn fossil fuels, but we should burn them as efficiently and cleanly as possible. Using cleaner light sweet crude and natural gas in the United States is an essential step.

Projects like Meridian’s Davis Refinery prove that the fossil fuel industry can do better. More importantly, though, it proves that residents can rightfully demand that refineries adopt the best technology.

That's a small price to pay for taking full advantage of our nation's energy riches.