

Moving product to market

From crude oil and natural gas to LNG, LPG and NGL, leading energy companies turn to Matrix for EPC of terminals and other critical infrastructure



It's been nearly 70 years since the U.S. has been a net energy exporter, but according to the U.S. Energy Department, just a few years from now, the country will once again claim this title. It is an extraordinary transformation resulting from softer domestic energy demands

Such was the case when Texas-based Energy Transfer decided to build the Dakota Access Pipeline and subsequently contracted Matrix Service to simultaneously engineer, procure and construct (EPC) the six crude oil-gathering terminals that would feed the pipeline.

needed to meet their needs.

"Our success depends on the success of our customers," said Matrix Service Co. President and CEO John R. Hewitt. "As such, we focus on what's needed to help them achieve their objectives and to respond to their increased speed-to-market scheduling."

With the Dakota Access Pipeline, Energy Transfer saw an opportunity to provide producers across the Bakken with a safer, more affordable and reliable way to move approximately 520,000 barrels per day of domestically produced crude oil to markets across the upper Midwest and along the Gulf. Doing so could encourage increased production and also positively impact domestic manufacturing and agriculture by reducing the need to import feedstock. It was a winning proposition. But, because of the fast-track schedule, it meant beginning work on the gathering terminals while some geotechnical engineering and design work was still in progress.

"Building all six gathering terminals at the same time was a huge undertaking that could not have been achieved without Matrix's expertise and the commitment of the many levels of management from

both organizations," said Energy Transfer Senior Director of Projects Clint Green.

Beyond the logistical complexity of the project and the inherent challenges that come with a project of this magnitude, over the course of its 12-month construction period, the project teams were also challenged by elements beyond their control. Among them were temperatures that ranged from triple-digit highs to subzero lows and tornadic winds.

"Even with the unexpected challenges, because of Matrix's commitment, skill and resources, we lost no time on schedule," said Green.

Celebrating success

This past June, Energy Transfer celebrated the first year of service for the Dakota Access Pipeline, which has safely and efficiently moved approximately 185 million barrels of oil at transportation rates that — according to Forbes energy contributor Justin Carlson's article, "Time to concede the Bakken bear call" — are nearly 50-percent less than rail.

"Matrix was a significant part of our success," said Green. "It's been great for

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— Chuck Frey, vice president of liquid engineering, Energy Transfer

and, more so, technological advances in the extraction of abundant oil and natural gas from unconventional resource plays in the Bakken, Marcellus, Eagle Ford and Barnett, as well as the Anadarko and Permian Basins. Yet, from extraction through export, becoming a net energy exporter takes vision and commitment from leading energy companies to build and operate the infrastructure needed to move product to market. It also requires the expertise of top-tier contractors like Matrix Service Co. and its subsidiaries to bring that infrastructure to life.

Identifying opportunities, developing solutions

"We pride ourselves on identifying and developing solutions for our customers and in being able to get to market quickly," said Energy Transfer Vice President of Liquid Engineering Chuck Frey. "That means partnering with contractors like Matrix who have both the resources and expertise to match the aggressive schedules we put in place."

Matrix, too, prides itself on providing solutions for its customers and supplying the in-house capabilities and resources



Matrix Service Inc. General Manager of EPC James Prette, left, and Energy Transfer Partners Vice President of Liquid Engineering Chuck Frey on-site at the Dakota Access Pipeline Johnson's Corner terminal.

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our investors, for the state of North Dakota and for our country's infrastructure. It's also been great for Bakken producers, who now have safe, effective transportation and are benefitting from improved spreads."

Expanding other North American energy infrastructure

While Energy Transfer's Dakota Access Pipeline moves oil to the upper Midwest and the Gulf, Keyera Corp., one of the largest independent midstream companies in Canada, is relying on Matrix to build its Wildhorse Terminal, a greenfield crude oil storage and blending terminal, which is the first major terminal to be built at Cushing since 2013. With 4.5 million bar-

neering expertise and construction services for marine loading upgrades to accommodate Very Large Crude Carriers (VLCCs).

With a focus on sustainability in Deer Park, Texas, a major international tank storage and terminal owner has contracted Matrix to provide EPC services for 10 new tanks and related balance of plant for its facility located along the Houston Ship Channel. This expansion will add approximately 873,000 barrels of capacity and related infrastructure to receive, store and export various products.

Near JAXPORT in Jacksonville, Florida, Matrix has been integral to the construction of LNG infrastructure for alternative fuel and export to other markets. Most recently, the company com-



Energy Transfer Partners Red Bluff 200-million-standard-cubic-foot-per-day gas processing facility near Orla, Texas, where Matrix PDM performed balance of plant engineering, design, procurement and project management.

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— *Clint Green, senior director of projects, Energy Transfer*



Kinder Morgan flagship northeast terminal in New York Harbor, where Matrix PDM provided engineering and project management for upgrades and expansion of barge and ship loading and unloading facilities.

rels of storage capacity, the terminal will provide Keyera's customers with access to the majority of crude oil streams flowing in and out of Cushing on several major pipeline networks.

"Across our suite of services, Matrix has experienced a significant uptick in activity and project awards on improving market conditions that have beleaguered the industry for the last few years," said Hewitt. "In the energy space, our engineering, construction and product teams are at work on crude oil storage terminals like Wildhorse; natural gas processing facilities; NGL, LNG and LPG terminals; and at loading/offloading facilities. Our refinery turnaround and plant services teams are also working a significant backlog of projects."

Along the Texas Gulf Coast, where energy companies are making widespread investments, Matrix is working with a large independent oil company to expand its crude oil storage terminal and loading capabilities. Matrix has also provided engi-

pleted the EPC of a 2-million-gallon LNG tank for the JAX LNG bunkering facility, a new LNG liquefaction and storage facility located at Dames Point. JAX LNG, the long-term LNG supplier for the world's first dual-fuel container ships, is also North America's first small-scale coastal LNG facility and has marine distribution capabilities to provide container ships with direct access to LNG fuel, eliminating the need for truck-to-ship bunkering.

Inland from JAXPORT, Matrix provided EPC services for the 1-million-gallon LNG tank at Eagle LNG's Maxville facility, which was constructed to provide Crowley Maritime with fuel for its LNG-powered ships. The facility's LNG production capacity will also allow Eagle LNG to market to other domestic consumers and export to markets in the Caribbean Basin.

Finally, some 200 miles southwest of Jacksonville, near Port Tampa Bay, Florida, Matrix teams are nearing completion of an LPG terminal and railcar unloading facility that will feed an existing NGL terminal and allow the customer, which previously relied on imported LPG, to service its customers across Florida with domestically sourced energy.

Expanding expertise and geographic reach

"Ensuring we have the bench strength and resources our customers need requires that we also continually make strategic investments in our own company and infrastructure," said Hewitt. "We do so through transfer of core competencies to new markets, making strategic acquisitions, and attracting and retaining employees with proven skills and proficiency."

For example, through acquisition, Matrix has gained significant additional expertise in natural gas processing balance of plant engineering, design and procurement services that integrate cryogenic recovery, amine treating, condensate stabilization and dehydration gas processing facilities, as well as compressor stations, slug catchers, and truck loading and unloading. It is this know-how that has been leveraged on multiple major projects over the past five years in both domestic and international locations.

Most recently, Matrix has provided engineering, procurement, senior project management and engineering controls for Energy Transfer's Revolution plant, a natural gas processing facility that supports its operations in the Marcellus and Upper Devonian production areas of western Pennsylvania. Matrix is also providing these same services to bring Energy Transfer's Arrowhead facilities to life, supporting its midstream operations in the Permian Basin.

Beyond the U.S., in partnership with Grupo Desarrollo Infraestructura S.A. de C.V. (GDI), Matrix is being tapped for engineering, procurement, fabrication and construction oversight for 12 tanks at the new Infraestructura Energetica Nova S.A.B. de C.V. (BMV: IENOV) liquid fuels marine terminal in Veracruz, Mexico.

The Veracruz terminal is part of Mexico's emerging \$10 billion liquids market and, when complete, will have a nominal capacity of 2.1 million barrels of gasoline, diesel, jet fuel and methyl tert-butyl ether (MTBE) to supply the central region of Mexico.

With no end in sight to North America's energy abundance and the U.S. position of net energy exporter most certainly assured, Matrix is well positioned to provide the resources and expertise its customers need to fast-track their projects.

"Ultimately, it's not just the work we do, but the end result that matters," said Hewitt. "Because of the vision and commitment our customers have for building the infrastructure needed to move product to market, and our commitment to bringing that infrastructure to life, together we support manufacturing, agriculture and other services that help improve quality of life in North America and in countries around the world."

For more information about Matrix Service Co., visit www.matrixservicecompany.com or call (866) 367-6879. ●



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