

Marcus Hook Industrial Complex



The impact of increased production of natural gas in Pennsylvania can be seen in the changing skyline of Marcus Hook. Thousands of workers have begun to reshape the former Sunoco oil refinery on the banks of the Delaware River. At Energy Transfer, we believe the Marcus Hook Industrial Complex can become the premier hub for natural gas liquids on the East Coast, made possible by the Mariner East 1 and Mariner East 2 and 2X pipelines safely delivering the energy that drives our nation and fuels our everyday lives.

Current Projects

As part of the Mariner East project, the Marcus Hook Industrial Complex will revitalize the former refinery into a world-class natural gas liquids (NGL) hub. To achieve this, our facility has built new processing units, including an ethane/propane splitter and ethane and propane chilling and refrigerated storage. Going back to 2013, we have built six tanks storing approximately 3 million barrels of propane, ethane and butane to support our Mariner East 1, Mariner East 2 and 2X pipeline systems, in addition to existing storage capacity of 2 million barrels in underground caverns. Energy Transfer has also built a fractionator at MHIC to process natural gas liquids that it will transport along Mariner East 2 and 2X from western Pennsylvania.

Improvements at the facility have required nearly 9 million man hours, involving more than 5,000 individual workers. Energy Transfer is proud to have

received the Zero Injury Safety Award in conjunction with Nooter Construction for construction and operations at MHIC.

The facility began receiving propane in January 2015, and it ships approximately 70,000 barrels a day of propane and ethane for distribution to local, regional and international markets. The facility commissioned a first-of-its-kind ethane truck-loading rack to complement its existing propane terminal that supplies propane for local and regional delivery.

Seasonally dependent, approximately 200 trucks per day pick up propane for delivery to markets in and around Pennsylvania.

The increased operations at MHIC with the completion of the Mariner East pipeline system will pay the state \$1.2 million to \$1.4 million in taxes each year and generate additional economic activity throughout the commonwealth. There are

other industries benefiting from the revitalization at MHIC, including maritime-related jobs such as ship agents, cargo surveyors, tug assists, ship chandlers and launch companies.

Natural Gas Liquids Hub in Eastern Pennsylvania

We believe the Marcus Hook Industrial Complex can become the hub for natural gas liquids on the East Coast. With the arrival of propane, ethane and butane via our pipelines, it opens Marcus Hook for a number of industrial processing facilities. We have potential customers nearby and are actively exploring a number of these possibilities. We have seen interest in these opportunities expand with the advance of our pipeline projects.

History of Marcus Hook

The Marcus Hook facility, formerly the Marcus Hook Refinery, was built in 1902 on an 82-acre plot purchased by Joseph Newton Pew's Sun Oil Co.

Initially dedicated exclusively to the processing of light sweet crude oil found in Texas, it became highly advanced in the field of petroleum production. In 1937 the first catalytic cracker went into operation, enabling the facility to process

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15,000 barrels of petroleum daily. The process of catalytic cracking allowed for the conversion of petroleum crude oils to gasoline and other products by breaking molecules of hydrocarbon liquids at high and moderate temperatures.

During World War II, Sun Oil Co. employees at Marcus Hook processed more jet fuel for the Allies than any other refinery. Nine times during 1942 and 1943, tankers of the Sun Oil fleet were struck by U-boat attacks, and four were sunk. Those encounters cost the lives of 141 Sun seamen, and in 1949 a statue was erected to honor those lives. It still stands today at the entrance of our facility. The attacks, while devastating, did not prevent the Sun fleet from shipping more than 41 million barrels of petroleum over 2.3 million miles of ocean during the war.

As an operating refinery at its height under Sunoco Inc., the refinery processed 175,000 barrels of crude oil per day. In perspective, that is equivalent to filling 252,000 cars with gasoline, 1,500 flights from Philadelphia International Airport with jet fuel or 300,000 homes with heating oil.

In 2004, the plant began producing the official fuel for NASCAR. The facility has a processing unit solely dedicated to manufacturing the Sunoco Green E15 fuel used by the NASCAR vehicles. Today, Sunoco is the official fuel not just for NASCAR but for INDYCAR, the National Hot Rod Association and more than 50 other racing sanctions, and it remains in Marcus Hook as a tenant to Sunoco Partners Marketing and Terminals, an Energy Transfer subsidiary, which now owns the facility.

The complex's location on the Delaware River provided Sunoco with port access, and tankers delivered 1 million barrels of light sweet crude oil from Newfoundland, the North Sea, West Africa, and South and Central America. The product was then transported through aboveground pipes to the various tanks for storage. From storage, it was boiled for separation into propane, jet fuel, kerosene and gasoline, plus distillates such as home heating oil, diesel and heavy oil such as ship bunker fuel.

The refinery was idled in 2011 and was acquired in 2012 by Sunoco Logistics, which recognized its value in the shale gas era. Sunoco Logistics merged with Energy Transfer Partners in April 2017, and the site is owned by Energy Transfer subsidiary Sunoco Partners Marketing and Terminals.

