

CASE STUDY / PHILLIPS 66 FREEPORT TERMINAL

A POWERFUL PARTNERSHIP BRINGS LIQUEFIED PETROLEUM TO THE WORLD

Across the world, there's a growing demand for U.S.-supplied liquefied petroleum gas (LPG). This steady rise in need prompted Phillips 66 to build a new LPG export terminal at its facility in Freeport, Texas.



ACCELERATED PROJECT DELIVERY CAPTURES A GROWING MARKET

Phillips 66 took on an aggressive project timeline to create a new exporting facility, including the biggest propane storage tank to be built in the United States in the last 25 years.

CHALLENGE

LPG is gaining market share as a source of energy around the world, in part because of its robust production, domestic availability and environmental benefits compared to coal. As the use of this energy source continues to grow, so does its demand, creating the driver for Phillips 66 to expand its storage and ship-loading capacity for LPG, butane and propane exports.

In order to meet export goals and market demands, the company needed to build a new liquefied petroleum gas export terminal at its facility in Freeport, Texas. The new facility would allow the company to export propane and butane to Europe, South America and Asia.

The timing of the project meant that the work would need to be completed within a short period, giving Phillips 66 the ability to quickly and fully capitalize on the growing market. Furthermore, the desired location for the new facility was on existing Phillips 66's property — an area surrounded by wetlands, requiring completion of environmental permits to preserve the wetlands.

SOLUTION

Phillips 66 turned to BMZ Export Terminal Partners (BMZ), a joint venture between Burns & McDonnell and Zachry Industrial Inc., to provide engineering, procurement and construction services. The team designed and constructed three new natural gasoline storage tanks, as well as the necessary coalescer, pumps and meters to load the product directly to ship. A liquid propane storage tank, with necessary filter, coalescer, compressors and meters, as well as three new loading docks, were built.

RESULTS

At the height of the project, some 2,000 team members were on-site working toward one common goal, allowing our team to draw from many facets of our experience. Front-end planning to project completion took place over the course of four years, including just more than two years for construction.

The export terminal, which began operations in late 2016, has expanded Phillips 66's exporting capacity to simultaneously load two ships with refrigerated propane and butane at a combined rate of 36,000 barrels per hour, giving the company one more way to tap into a growing market.

PROJECT STATS

CLIENT
Phillips 66

LOCATION
Freeport, Texas

0.18

TOTAL RECORDABLE INCIDENT RATE

8M

WORKING HOURS

**MORE THAN
700K**

ENGINEERING HOURS

40

MILES OF PIPING