

UPGRADES FOR LNG FACILITY CRITICAL FOR NEW YORK GAS CUSTOMERS

The National Grid Greenpoint liquefied natural gas (LNG) facility is an essential asset for the gas supply in downstate New York. Over time, one of the main components of the facility responsible for converting liquid into vapor required a replacement. National Grid needed a team with LNG experience to provide support services to see the project through.



CLOSE COORDINATION IMPROVES EFFICIENCY

The facility needed to remain in operation throughout the duration of the project. With communication, innovation and safety at the forefront, the plant has maintained operations 24/7.

PROJECT STATS

OWNER

National Grid

LOCATION

Brooklyn, New York

COMPLETION DATE

June 2020

50

ACRES FACILITY

290M

STANDARD CUBIC FEET
DAILY SEND OUT CAPACITY

After serving customers for more than 50 years, the National Grid Greenpoint liquefied natural gas (LNG) storage and production facility in Brooklyn needed upgrades. The LNG facility spans 50 acres with the vapor equivalent to 1.6 billion cubic feet storage capacity, and a send out capacity of 290 million standard cubic feet per day.

This facility is a critical asset for the overall gas supply portfolio in downstate New York, an area that uses lots of gas for energy due to high population and to many cold winter days and nights.

Facility upgrades include replacement of the antiquated LNG vaporizers. These vaporizers are responsible

for turning liquid back into vapor so that it can be sent to customers. LNG is pumped from the two on-site storage vessels and is delivered to the vaporizers during periods of high demand. In the Northeast, this happens during the cold months when user demand is very high, typically from November to April.

Upon purchasing the new vaporizers, National Grid, the owner and operating company for the facility, executed the work. On this project Burns & McDonnell has been providing LNG support.

This LNG support includes a hazard and operability (HAZOP) review, constructability reviews/conflict analysis for piping, equipment and





foundations, and overall technical reviews of the design.

The HAZOP review necessitated design changes to implement physical controls to reduce the likelihood of pressures or temperatures in the facility from getting outside of acceptable ranges. The reviews also included measures to address such potential pressure or temperature occurrences if they do arise.

For technical reviews of the design, 3D models for the new construction were created, analyzed and compared with the existing plant infrastructure. These comparisons were useful in identifying physical interferences that otherwise would have hindered safe equipment installation and operations. As a result of the pre-construction reviews, some project areas were redesigned or reworked for a more efficient work area, improving safety, and potentially saving time and money.

As work has proceeded, the facility continues to operate on a 24/7 basis. Close coordination and communication with the plant's operating personnel has been essential to keep operations running smoothly, with safety as the top priority. The project is expected to be complete in June 2020, and the LNG team will continue to provide construction support along with commissioning services as construction wraps up.



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