



Case Study LNG #8

LNG Industrial
Regasification /
Vehicle Fueling

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Highlights:

Location — Florence, VT

Phase 1 (Fall 2013):

- Eight (8) 15,000 gallon LNG tanks; total storage volume of 120,000 gallons
- Ambient vaporization
- Final line pressure control and trim heating
- Odorization
- Complete system instrumentation and control package

Phase 2 (Fall 2014):

- Added 3,000 storage tank (filled from on-site storage) for vehicle fueling application
- Added pump skid and dispenser
- Updated controls integration to support added fueling application

Both Phases Included:

- Startup, commissioning and on-site training of system equipment

Application:

Dedicated LNG regasification system operating 24/7/365 for a Minerals Processing Facility. First LNG application in the state of Vermont. System installed and operational in the fall of 2013. A phase two project included adding a truck fueling station to the existing design to support fueling over a dozen mining trucks that support the movement of raw mineral materials from the quarries to the various processing areas in and around the site. A "plug and play" solution for phase two was incorporated into the initial design so that it could be installed with minimal downtime to the regasification portion of the system. Phase two was completed in the fall of 2014.

Project Background:

Chart provided a complete turnkey equipment solution to provide LNG as an alternate fuel for the customer's energy intense manufacturing processes. They were held hostage to using only No. 2 fuel oil and wanted to have another, greener, option that would save them money and provide them with fuel diversification. Other possible, greener, solutions like wind and solar were also evaluated but deemed impractical for the application the customer serves. Availability of LNG from various sources within reasonable distance from the site made the project feasible.

System Configuration:

Phase 1 (Regasification)

- Eight (8) 15,000 gallon storage tanks for a total storage volume of 120,000 gallons. Provides a week's worth of total storage in the event of supply disruption (e.g. inclement weather)
- Offloading skid: Allows for filling storage tanks while system is supplying gas to the plant
- Ambient vaporization
- Final line pressure regulation along with odorization of gas
- Complete controls integration of the LNG Regasification plant

Phase 2 (Truck Fueling)

- Added 3,000 gallon storage tank for vehicle fueling
- Added pump skid and dispenser for vehicle fueling
- RFID identification of each tractor during a fill
- Updated PLC controls

Significant Accomplishments:

- First LNG installation in state of Vermont
- First ever integration of truck fueling application into an existing regasification facility, making this a dual use site



Vehicle Fueling Dispenser



Dual Electric Trim Heaters



LNG Truck Offload