Case Study
LNG #26

Peakshaver/Backup to Pipeline Supply

Highlights:

- 46 MW facility
- Modular, decentralized solution according to Distributed Energy Resources (DER) model
- Provides peak power during times of high energy demand and supplements renewable energy generation

Location: Shakopee, MN, USA

Scope of Project:

- Engineering and manufacturing of site storage and piping for plant to operate on LNG for 22 hours at full capacity

Application:

46MW facility provides the community with reliable energy source from clean-burning natural gas during peak demand and to supplement renewable sources. The energy park also contributes to overall power supply for other municipalities in the alliance.

Project Background:

Chart storage and piping systems needed to be integrated with multiple natural gas -fired reciprocating engines to provide reliable power for the city as well as other members of a power alliance. The project had a one-year window for the entire facility. System needed to be on site and operational within that time frame to support the electrical production using five 9.3 MW engines.

System Configuration:

On site storage, consisting of a single 90,000 US gal 'net' capacity tank, vaporizing system for 500 Nm3 minimum flow capacity, interconnecting vacuum jacketed piping and mechanical installation of equipment system.

- 11,500 Nm^3 maximum flow
- 6 bar(g) at point of use
- Waste heat produced by the generators supports the vaporizing of LNG

Significant Accomplishments:

- Repeatable solution that can be applied to other DER networks
- Chart scope engineered, manufactured and installed and operational within 12 months in full support of overall project timeline
- Chart system facilitates plant start-up in minutes