

LNG Transport Demonstration

The Alaska Railroad (ARRC) will demonstrate its ability to safely transport liquefied natural gas (LNG) in intermodal LNG ISO containers from southcentral to interior Alaska during a month-long operational performance project in early fall 2016.

Hitachi High-Tech AW Cryo, Inc. based in Vancouver, British Columbia, has loaned two LNG ISO containers to ARRC for the project. The cryogenic containers carry up to 26,586 liters (7,023 gallons) or 12,495kg (27,546 lbs.) of LNG at -160°C (-260°F). The two 40-foot containers comply with T75 regulatory standards that call for fortified tank walls and protective structures around the tank. They are manufactured by Hitachi, one of several T75-compliant ISO tank makers interested in Alaska's LNG market.

The containers arrived in Anchorage on September 11, 2016. After being cleaned, inspected and labeled, they will be used in training during the two weeks before the demonstration project starts on September 27. Train crews will become familiar with LNG characteristics and safe handling procedures. ARRC is also training railbelt first response agencies September 19-23, when dozens of firefighters, emergency medical teams, police and other responders have an opportunity to become familiar with the LNG ISO containers, along with other freight and passenger railcars. Alaska Railroad personnel from Safety, Environmental, Mechanical and Train Operations departments will explain LNG characteristics, hazards and response methods, as well as overall potential hazards and

challenges specific to the railroad industry, train operations and track infrastructure.

Containers will be trucked 70 miles to the Titan LNG facility near Port MacKenzie where they will be filled with Alaska LNG, before returning to the Anchorage rail yard to be loaded onto a railroad flatcar and hauled 350 miles north as part of ARRC's northbound overnight freight train to Fairbanks. Here, the ISO containers will be transported by flatbed truck the last 4.5 miles to the Fairbanks Natural Gas storage facility. Empty ISO containers will be re-loaded onto a railroad flatcar and added to the southbound freight train headed to Anchorage. The first scheduled twice-weekly test trip will occur on September 27. Demonstration trips will continue through October.

ARRC is the first railroad in the country to obtain permission to haul LNG by rail. In October 2015, the Federal Railroad Administration (FRA) approved ARRC's request to move LNG in an effort to eventually help meet Alaska's growing energy needs, particularly in Interior Alaska. Since then, ARRC has coordinated with FRA and other local, state and federal agencies to take the next steps in developing LNG as a potential line of business. While the demonstration is not an FRA requirement, ARRC must meet several operating conditions that are addressed while planning and preparing for the demonstration project. Results will be reviewed with FRA to ensure regulators are satisfied with ARRC's ability to safely move LNG. Questions? Contact Tim Sullivan at 907.265.2357.

