

Union Pacific and Liquefied Natural Gas (LNG)



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Union Pacific is evaluating liquefied natural gas (LNG) as a potential locomotive fuel source as part of its commitment to running safe, efficient and environmentally friendly operations. Through testing and analysis, Union Pacific will determine whether LNG as a locomotive fuel is reliable and economical.

SAFETY FIRST

Union Pacific is an industry leader in exploring new technologies to enhance safe, efficient rail operations, and we are also dedicated to improving the sustainability of rail transportation and reducing the impact of our operations on the environment. A Union Pacific representative chairs the Association of American Railroads' team currently preparing LNG fuel tender standards, which include safety and interoperability requirements for the nation's rail network. In addition, Union Pacific has a long-standing, first-responder training program for personnel serving in the communities where Union Pacific operates. All employees involved in the LNG test program receive education on LNG. Local emergency response agencies are/will be instructed on the proper response procedures for LNG locomotives and tender care and will have the opportunity to examine this equipment.

OTHER CONSIDERATIONS

While there may be some advantages to using LNG as a locomotive fuel, much research, testing and analysis are required before major changes could be implemented:

- Safe, reliable and cost-effective locomotive engines that could be fueled by LNG have not yet been developed;
- Regulatory and safety requirements across the industry are not yet established;
- Adjustments to railroad operations, including interchanges with connecting railroads would be required, meaning Union Pacific could not convert its fleet without the ability to interchange with other railroads;
- Substantial investments would be required to convert fueling facilities and other related infrastructure.
- Locomotive engine performance, including fuel efficiency and emissions, has not been thoroughly evaluated; and
- Prices and availability of natural gas can be unpredictable.

NEXT STEPS

Union Pacific is planning to test LNG as a fuel source for locomotives. As the routes for the testing are planned, Union Pacific officials will meet with community leaders and first responders in all the areas where testing may take place to discuss all applicable safety precautions.