

Natural-gas Vehicles at USF Reddaway Reduce Emissions, Costs, and Accidents

USF Reddaway is an industry leader in “Less Than Truckload” (LTL) freight trucking. The company’s Clackamas, Oregon distribution center runs 24 hours a day, 365 days a year, with a truck entering the lot about every three to five minutes. That’s several hundred trips and thousands of tons of freight daily. Handling this work load has become more efficient, more economical, and safer through the use of clean-burning alternative fuels.

Jerry Bouyear, Director of Maintenance at USF Reddaway, has more than 30 years’ experience running and maintaining trucking operations. When Jerry was faced with the challenge of reducing vehicle emissions at the site, saving time for refueling and reducing operation costs, he decided to have the company’s forklifts converted to use compressed natural gas (CNG).

USF Reddaway initially converted 17 forklifts and 10 yard spotters to use CNG. For refueling they installed a couple of gas compressors and a cascade (multi-tank, multi-pressure) storage system. The initial conversions worked out so well that the company purchased seven more CNG yard spotters and a dedicated CNG Ford pickup. At this writing, the system and vehicles have been in service for a year and Jerry says things are going “excellent.”

Doug Dunford of NW Natural provided USF Reddaway the technical and financial expertise to ensure a smooth transition to CNG. With more than 30 years in the natural-gas supply industry, Doug knows the technology, suppliers, service needs and incentives to help companies like USF Reddaway complete an ambitious project like this.

USF Reddaway’s investment in the project totalled \$320,000, and according to Jerry, the cost savings for fuel and refueling labor were close to \$130,000 the first year. Recently the company added more CNG forklifts and yard spotters, and Jerry estimates that the annual savings will reach \$250,000.

Since the project uses alternative fuels and reduces emissions, it qualified for Oregon’s 35 percent Business Energy Tax Credit. NW Natural helped USF Reddaway claim the



Natural-gas yard spotter at USF Reddaway.

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credit by providing them a “pass-through” of 28.87 percent of the eligible project cost in cash. NW Natural is claiming the 35 percent credit over five years (10 percent for two years and 5 percent for three years) against its Oregon taxes. After the tax incentive, the simple payback to USF Reddaway is about two years.

The conversions have allowed USF Reddaway to do more than just meet its emissions goals and save money. “Although our dock is well ventilated,” Jerry says, “employee safety is a big concern to us and we wanted to be proactive.” The conversions allowed them to install speed controls on the forklifts and yard spotters, resulting in not only increased fuel economy but also reduced accidents and tire wear.

Another benefit of CNG is that because compression increases energy density, fuel tanks can be smaller. At standard temperatures and pressures, a cubic foot of natural gas contains about 1,000 British thermal units (Btu). At a pressure of 600 pounds per square inch, the same cubic foot contains about 100,000 Btu. This concentrated energy greatly reduces refueling frequency.

In addition, Doug says, “Natural gas can be safer than most fuels when facilities are designed correctly.” Natural gas is lighter than air, so it dissipates quickly. Other fuels that are heavier than air tend to pool on the ground.

USF Reddaway’s experience shows that alternative fuels can improve air quality, reduce operating costs, and enhance employee safety. With the right services and incentives, investment risk is minimized. For more information about how this alternative fuel might work in your Oregon fleet or facility, contact:

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Compressor station housing at USF Reddaway.

