Clean Transportation Triangle

UPS Liquefied Natural Gas Fueling Stations

Key Project Information

Equipment: Liquefied Natural Gas Fueling Stations
Project: Refueling Infrastructure
Number of Stations: Two
Locations: Houston & San Antonio, TX
Project Year: 2012
Funding Agency: TCEQ- Texas Emissions Reduction Plan, Clean Transportation Triangle Program

The Clean Transportation Triangle program was established by the Texas Commission on Environmental Quality (TCEQ) in 2011 to create natural gas fueling stations along interstate highways between the Houston, San Antonio, and Dallas/Fort Worth areas. The program's goal is to build the foundation for a self-sustaining market for natural gas vehicles in Texas. The new stations will ensure that natural gas vehicles have access to fuel throughout Texas.

United Parcel Services (UPS) was awarded a grant by the Clean Transportation Triangle Program to help fund the building of two liquefied natural gas (LNG) fueling stations. There will be one station built in Houston, Texas and one built in San Antonio, Texas. LNG is one of several alternative fuels that UPS has incorporated into its fleets over the last several years. Natural gas is abundant and is composed primarily of methane (more than 90%) and other hydrocarbon gases, such as ethane, propane, butane, and pentane. LNG vehicle fuel provides an excellent means to reduce emissions of nitrogen oxides (NOx), particulate matter (PM), sulfur oxides (SOx), and greenhouse gas (GHG) emissions. A typical LNG truck will have 90% fewer nitrogen oxide and particulate matter emissions than a diesel truck, 100% fewer sulfur oxide emissions, and 30% fewer greenhouse gas emissions. Due to the clean-burning nature of natural gas, LNG powered heavy-duty vehicles can achieve low emission rates without excessive and expensive emission control equipment as is required for diesel engines.

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Additional advantages of LNG vehicle fuel include:

- Favorable economics over diesel and other transportation fuels;
- A 100% displacement of petroleum fuels using an abundant, domestic and low carbon fuel; and,
- The ability to produce renewable fuels from landfill gas, waste water, dairies, and other sources.