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 and San Antonio, TX  
Project Year: 2012  
Funding Agency: TCEQ – Texas Emissions Reduction Plan, Clean Transportation Triangle

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.

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 percent fewer nitrogen oxide and particulate matter emissions than a diesel truck, 100 percent fewer sulfur oxide emissions, and 30 percent 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.

Additional advantages of LNG vehicle fuel include:

- Favorable economics over diesel and other transportation fuels;
- A 100 percent 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.