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Manhattan Beer Distributors - Example Best Practice

Manhattan Beer Distributors, headquartered in the Bronx, New York operates a fleet of more than 500 trucks, vans, sedans, and forklifts. The company initiated a CNG vehicle program in 2001 with a pilot fleet of 15 trucks and one station. It now has 45 CNG trucks and three CNG stations. The driving force for the project was Manhattan Beer's desire to prove the viability of dedicated CNG engines in a private delivery fleet application and **reduce the pollution** in the South Bronx community, in which it is headquartered.



Manhattan Beer compressed natural gas beverage delivery truck in environmental wrap

Manhattan Beer also believes that the **environmental benefits to employees** are an important factor that cannot be ignored. The reduction of diesel emissions from the trucks, which are loaded and unloaded inside the warehouse, is a quality-of-life issue for their workers that the company believed it could improve. It realized the hidden costs associated with the environment in which workers operate. In addition, according to Mike McCarthy, Manhattan Beer's Vice-President, "It's just the right thing to do." The scope of Manhattan Beer's CNG vehicle program includes the following:

- Phase 1: Bronx
 - First CNG truck delivered (12/2001)
 - First private fast-fill station opened (4/2002)
 - 15 vehicles converted to CNG (5/2002)
- Phase 2: Brooklyn
 - An additional 15 trucks converted to CNG plus a second private fast-fill CNG station opened
- Phase 3: Wyandanch (2006)
 - An additional 15 trucks converted to CNG and a third private fast-fill CNG station opened



John Deere compressed natural gas engine used to re-power Manhattan Beer delivery trucks

Manhattan Beer re-powered International Harvester 4700 Series Trucks with dedicated CNG John Deere 6068 HFN, a 6.8 liter engine that delivers 225 horsepower and 640 foot-pounds torque (no longer available). The fuel system includes 4 Lincoln Composite fuel cylinders mounted inside the body of the truck for a total capacity of 42 diesel gallon equivalents (DGEs) at 3,600 pounds per square inch. Manhattan Beer has found that the CNG vehicles start up effortlessly in cold weather conditions, require less warm up time, and are much less noisy compared to diesel engines. In addition, Manhattan Beer's fuel costs are about 40% less than diesel, oil change intervals are only needed every 25,000 miles, and spark plug changes are only needed every 50,000 miles. Project funding to offset some of the

incremental cost of the repowers and the CNG fueling stations in Brooklyn and the Bronx were awarded by the New York State Energy Research and Development Authority through the New York City Private Fleet Alternative Fuel Vehicles Program, which awards federal Congestion Mitigation Air Quality (CMAQ) funds through a partnership with the New York City Department of Transportation. Project funding to offset some of the incremental cost of the repowers and the CNG fueling station in Wyandanch were awarded by the Greater Long Island Clean Cities Coalition through their CMAQ grants in cooperation with NYSERDA. It was estimated that 30 CNG beer delivery trucks would displace roughly 108,000 gallons of petroleum per year. Manhattan Beer has a goal of eventually having 100% of its fleet powered with CNG, but the company is not comfortable doing so until there is a backup fueling option (capable public station nearby or agreement with another private CNG station in the vicinity) that can be used to maintain vehicle operations if the Manhattan Beer CNG station is out of service.



Compressed natural gas tanks installed on Manhattan beer trucks

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Manhattan Beer compressed natural gas fast-fill fueling infrastructure