

UPMC LIFE CHANGING MEDICINE

Employee Transit – Powered By Compressed Natural Gas



Bart Wyss
Sr. Director, Logistics,
Distribution & Transportation

Broc Johnson
Sr. Manager, Logistics
DOT / FMCSA

Operational Overview

- UPMC prides itself in exploring cutting edge HealthCare Technology while incorporating Green Initiatives wherever possible. Green initiatives allow UPMC to reduce its impact on the environment, not only to improve own operations, but t also improve community health and quality of life through more environmentally friendly practices
- Currently we operate 59 CNG shuttle buses as part of our Employee Transit operation in Pittsburgh, PA
- Our buses travel more than 565,652 miles annually and transport approximately 1,098,546 passengers each year



NGV Fleet Profile

- 59 total NGV's
 - Average age 4.54 years
 - Average mileage 56,274
 - 3 NGV's accumulate more than 100,000 miles



CSR - Reducing Our Carbon Footprint

- UPMC began operating NGV's in 2012
- Utilizing NGV's has allowed us to decrease diesel fuel usage by more than 891,226 gallons since inception
- That reduction in diesel fuel usage has allowed us to eliminate more than 7,902 metric tons of CO2 from the atmosphere



PA Alternative Fuel Incentive Grants

- Partnering with the PA DEP we were able to replace older diesel vehicles with cleaner NGV's as part of our Compressed Natural Gas Migration Project
 - Phase 1
 - 20 Dedicated CNG Shuttle Buses
 - \$500,000 in grant funding awarded
 - Phase 2
 - 21 Dedicated CNG Shuttle Buses
 - \$249,984 in grant funding awarded
 - Phase 3
 - 6 Dedicated CNG Shuttle Buses
 - \$61,925 in grant funding awarded
 - Phase 4
 - 6 Dedicated CNG Shuttle Buses
 - \$61,950 in grant funding awarded



Fleet Maintenance Facility Modifications

- Developed and implemented an NGV service repair safety plan
- Utilized our existing ventilation system to create necessary air changes
- Installed fixed methane detection and a motoring system that provides an appropriate automated response in the event that designated LEL's are detected in the facility



Preventive Maintenance and Repair of Our NGV's

Nearly all NGV repairs and preventive maintenance are completed in house. Examples are listed below.

- Fuel system inspections
- Repair and replacement of fuel system components
- Engine replacements and diagnostic concerns
- Vehicle computer replacement and reprogramming

Essential NGV Preventive Maintenance that we complete as part of our established PM schedules.

- Oil changes
- Air filter changes
- Fuel filter housing drains and filter replacements
- Spark plug and coil pack replacements
- Fuel system inspections



Driver and Rider Feedback

- New clean shuttle
- Less engine noise compared to diesel
- No exhaust fumes entering or surrounding the shuttle



Mechanic Feedback

- Engine bay cleanliness
- Easier to respond to a vehicle that has run out of fuel
- Enjoy learning and working on the different fuel delivery system
- Has helped to create a sense of pride with our mechanics



Management Feedback

- Budget friendly fueling
- Reduced maintenance cost
- Reduced shuttle downtime
- Easier to maintain vehicle exterior presentation



THANK YOU

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