

Clean Fuel Profile: Natural Gas

Please note that this information is for reference only to provide general information and rough cost estimates associated with converting a fleet's operations to natural gas. Fleets are encouraged to contact suppliers directly for exact costs related to their specific operations. Information on specific suppliers is included for reference only and is not an endorsement by the Regional Planning Commission or the Southeast Louisiana Clean Fuel Partnership for specific fuel/vehicle/conversion supplier. Fleets are encouraged to research suppliers before entering into a contract with them, performing the same due diligence they would for any other contract.

Cost of Propane as a Transportation Fuel

Fuel	National Average	Gulf States Average
Compressed Natural Gas (CNG) at Private Stations (per GGE)	\$1.86	\$1.88
Gasoline (per gallon)	\$1.91	\$1.64
Diesel (per gallon)	\$2.61	\$2.27

Based on the US Dept. of Energy's April 2020 Alternative Fuel Price Report: https://afdc.energy.gov/files/u/publication/alternative fuel price report april 2020.pdf

Notes:

- 1 Gasoline Gallon Equivalent (GGE) = 5.66 pounds of CNG
- Prices may vary with a fueling contract.
- USDOE's Vehicle Cost Calculator allows fleets to compare the cost of owning and operating various vehicles over a vehicle lifetime: www.afdc.energy.gov/calc.

Available Financial Assistance & Incentives

Contact Courtney Young, Southeast Louisiana Clean Fuel Partnership Coordinator, for additional information on these opportunities: (504) 483-8519 / slcfp@norpc.org

- Louisiana Alternative Fuel Vehicles (AFVs) and Fueling Infrastructure Tax Credit
 - Louisiana offers an income tax credit of:
 - → 50% of the cost of converting a vehicle to operate on an alternative fuel
 - → 50% of the incremental cost of purchasing an AFV; or 10% of vehicle cost up to \$2.500
 - → 50% of the cost of alternative fueling equipment
 - Only AFVs registered in Louisiana are eligible
 - Credit applies to Louisiana taxable income
 - Louisiana Administrative Code Title 61 Section 1913 Last amended April 2020

■ EPA Clean Diesel Program:

- Only for Diesel vehicles
- Available annually through both an annual National Competition (<u>www.epa.gov/cleandiesel/grantfund.htm</u>) and through the State: Louisiana Dept. of Environmental Quality (<u>www.deg.louisiana.gov/page/dera-funding-opportunities</u>)
- State Contact: Vivian Aucoin: (225) 219-3482 / Vivian.aucoin@la.gov
- Grant & Match amount varies depending on the project



Vehicle & Conversion Information (Estimated Costs, Timeline, Technical Assistance)

Conversion systems must be **certified by EPA** as compliant with emissions standards. Certifications are specific to vehicle make, model and year. EPA maintains a list of certified alternative fuel conversion systems on their website: www.epa.gov/otag/consumer/fuels/altfuels/altfuels.htm#4.

Additional information on natural gas vehicles and conversions is located on the US Dept. of Energy's Alternative Fuel Data Center:

<u>www.afdc.energy.gov/vehicles/natural_gas_availability.html</u> and on the Natural Gas Vehicles for America's website: <u>www.ngvamerica.org/vehicles/vehicle-availability</u>.

For additional information regarding vehicle conversions and regulations, please see the US Dept. of Energy's Alternative Fuel and Advanced Vehicle Data Center (AFDC) Vehicle Conversions page: www.afdc.energy.gov/vehicles/conversions.html.

Company: Phoenix Energy Corp, LLC (www.phoenixenergycorp.net)

Contact: Jeremy Talbot: (205) 914-9843 / jtalbot@phoenixenergycorp.net

- Phoenix Energy sells and installs conversion kits.
- Time to set up appointment: They can provide a quote over the phone in minutes.
- Time to convert vehicle: 1 to 2 weeks depending on the vehicle and storage options.
- Training: They offer service training for technicians who service the fleet and dealer/installer programs are available.
- Technical Assistance after Conversion: Any and all assistance needed is provided.
- Average Cost of Conversions: \$9,000 to \$10,500 including system and installation.
- Warranty: 2 year / 24,000 mile parts and labor warranty.
- Conversion center location:
 - Pell City, Alabama
 - They can also do conversions at fleet's facility if properly equipped and participating in their installer program.

Company: Campbell-Parnell (www.usealtfuels.com)

Contact: Tom Campbell: (623) 581-8335 / tom@usealtfuels.com

- Campbell-Parnell sells and installs conversion kits.
- Time to set up appointment: CNG tanks take 10 to 12 weeks from order.
- Time to convert vehicle: 8 to 16 hours depending on number of tanks used.
- Training: They offer service training for technicians who service the fleet and dealer/installer programs are available.
- Technical Assistance after Conversion: They offer support and repair parts as long as the customer uses their product.
- Average Cost of Conversions: \$10,000 to \$25,000 depending on vehicle, size of engine and the number of tanks.
- Warranty: They offer 12 months parts warranty on retro-fits and 36 months / 50,000 miles of warranty on new vehicles (less than 10,000 miles).
 - They can also do conversions at fleet's facility if properly equipped and participating in their installer program.



Company: Nat G CNG Solutions (www.Nat-G.com)

Contact: Balu Balagopal: (281) 954-4600 / balu.balagopal@nat-g.com

- Nat G CNG Solutions sells and installs conversion kits.
- Time to set up appointment: They take small projects (less than 10 vehicles) within 2 weeks but larger projects can take more time.
- Time to convert vehicle: 2 4 days at one of their facilities.
- Training: They offer service training for technicians who service the fleet and dealer/installer programs are available.
- Technical Assistance after Conversion: The Nat G technical support line is available for any customer, even after the warranty expires.
- Average Cost of Conversions: \$8,500 \$18,500 depending on the vehicle and the cylinder package.
- Warranty: 3 years / 36,000 miles installation warranty along with the system manufacturers warranty, most of which are also 3 years / 36,000 miles (8yrs / 80,000 miles on emissions components)
- Conversion center locations:
 - Houston and San Antonio.
 - Opening new facilities in Baton Rouge and Little Rock soon.
 - Nat G coordinates vehicle transportation to and from their conversion centers.
 - They can also do conversions at fleet's facility if properly equipped and participating in their installer program.

Company: Altech-Eco Corporation (www.transecoenergy.com)

Contact: Michael Ostapovich: (828) 654-8300 / michaelo@altecheco.com

- Altech-Eco sells and installs conversion kits.
- Time to set up appointment: 3-4 weeks once order is placed.
- Time to convert vehicle: 2 4 hours with two technicians.
- Training: They offer service training for technicians who service the fleet and dealer/installer programs are available.
- Technical Assistance after Conversion: 24/7 technical support line is available
- Average Cost of Conversions: \$5,925-\$8,350 if installed at their conversion center
- Warranty: 3 years / 36,000 miles installation warranty along with the system manufacturers warranty, most of which are also 3 years / 36k miles (8yrs/80,000 miles on emissions components)
- Conversion center location:
 - Arden, North Carolina
 - They can also do conversions at fleet's facility if properly equipped and participating in their installer program.



Fueling Infrastructure

Prior to installing a natural gas fueling station which will be supplied via natural gas lines, the Southeast Louisiana Clean Fuel Partnership recommends contacting your local natural gas provider to ensure that the lines in your area are adequate for your projected use.

Atmos Energy Distribution Contact: Leslie Miller: (337) 268-4410 / lesliemiller@atmosenergy.com

The US Dept. of Energy's Alternative Fuel Data Center includes information on **natural gas fueling infrastructure**: www.afdc.energy.gov/fuels/natural gas infrastructure.html.

The **Station Locator** notes the location of public and private natural gas stations: www.afdc.energy.gov/fuels/natural_gas_locations.html

The following natural gas companies offer fueling infrastructure for fleets within Southeast Louisiana Clean Fuel Partnership's region:

Company: TruStar Energy (www.trustarenergy.com)

Contact: Craig Kerkman: (303) 335-5009 / ckerkman@Trustarenergy.com

- 1) Cost of Fueling Infrastructure:
 - a. Cost of fueling equipment (tank, dispenser) can be integrated into fueling contract, depending on who owns model.
 - b. TruStar Energy will pay for site prep (e.g. electrical, crash posts, and cement pad), depending on who owns the site.
 - c. TruStar Energy will pay for permitting and all other installation costs.
- 2) Fuel Management: System can be set up to interface with the fleet's fuel management system.

Company: Clean Energy (www.cleanenergyfuels.com)

Contact: Charlie Alshuler: (949) 437-1302 / calshuler@cleanenergyfuels.com

- 1) Cost of Fueling Infrastructure:
 - a. Cost of fueling equipment (tank, dispenser) can be integrated into fueling contract.
 - b. Clean Energy willing to pay for site prep (e.g. electrical, crash posts, and cement pad).
 - c. Clean Energy willing to pay for permitting and all other installation costs.
 - d. Can also set up a maintenance and operations contract if requested.
- 2) Fuel Management: System can be set up to interface with the fleet's fuel management system.

Company: Trillium CNG (www.trilliumcng.com)

Contact: William Zobel: (760) 590-3420 / wzobel@trilliumusa.com

- 1) Cost of Fueling Infrastructure:
 - a. Cost of fueling equipment (tank, dispenser) can be integrated into fueling contract.
 - b. Trillium CNG willing to pay for site prep (e.g. electrical, crash posts, and cement pad).
 - c. Trillium CNG will pay for permitting and all other installation costs.
- 2) Fuel Management: System can be set up to interface with the fleet's fuel management system.



Fleets Currently using Natural Gas

Case Studies on fleets currently using natural gas can be found on the US Dept. of Energy's Alternative Fuel Data Center: www.afdc.energy.gov/case (select "Natural Gas" under Fuel/Technology). The Case Studies can also be searched by application (e.g., law enforcement). The Clean Fuel Partnership can connect you to the Clean Cities coordinators involved in these case studies to learn more from their experiences.



Local Natural Gas Fleets

Waste Connections

- Vehicle Type: Refuse Truck

- Vehicles Converted: 34

Annual GGE Reduced: 218,285 galAnnual Emissions Reduced: 184 tons

Waste Pro

Vehicle Type: Refuse Truck

- Vehicles Converted: 5

- Annual GGE Reduced: 13,284 gal

Annual Emissions Reduced: 11 tons

Metro Service Group

- Vehicle Type: Refuse Truck

- Vehicles Converted: 59

- Annual GGE Reduced: 440,906 gal

- Annual Emissions Reduced: 371 tons

Doctor Pipe

Vehicle Type: Van

- Vehicles Converted: 11

- Annual GGE Reduced: 19,171 gal

Annual Emissions Reduced: 25 tons

UPS

Vehicle Type: Delivery Truck

- Vehicles Converted: 134

- Annual GGE Reduced: 785,236 gal

- Annual Emissions Reduced: 661 tons

Other Fleets utilizing Natural Gas:

- Atlanta Airport Converts Shuttles to CNG: www.afdc.energy.gov/case/1202
 Contact: Don Francis, Georgia Clean Cities: don@cleancitiesgeorgia.org / (404) 906-0656
- Pennsylvania School Buses Run on Natural Gas: www.afdc.energy.gov/case/1343
 Contact: Tony Bandiero, Eastern Pennsylvania Alliance for Clean Transportation: tbandiero@ep-act.org / (215) 990-8200



Information for Law Enforcement Fleets

Vehicles powered by Natural Gas utilized by U.S. Law Enforcement Fleets include:



Chevrolet Tahoe



Chevrolet Impala



Ford Crown Victoria



Honda Civic

Case Studies of Law Enforcement Fleets operating on Natural Gas:

- Louisiana City to Add 35 CNG Converted Police Cars (Bossier City):
 www.government-fleet.com/119662/louisiana-city-to-convert-35-police-cars-to-cng
 Contact: Bossier City Police Department: oarr@bossiercity.org / (318) 741-8441
- CNG Powers Law Enforcement in Arkansas (Little Rock): <u>www.afdc.energy.gov/case/1208</u> Contact: Patti Springs, Arkansas Clean Cities: <u>springs@adeq.state.ar.us</u> / (501) 682-8065
- Flowood Police Patrolling with CNG-Fueled Vehicle (Mississippi): www.ngvsolutions.com/new/36-flowood-police-patrolling-with-cng-fueled-vehicle

Additional Resources

Alternative Fuels Data Center: www.afdc.energy.gov/fuels/natural_gas.html

America's Natural Gas Alliance (ANGA): www.anga.us
American Gas Association - Natural Gas: www.aga.org
Natural Gas Vehicles for America: www.ngvamerica.org