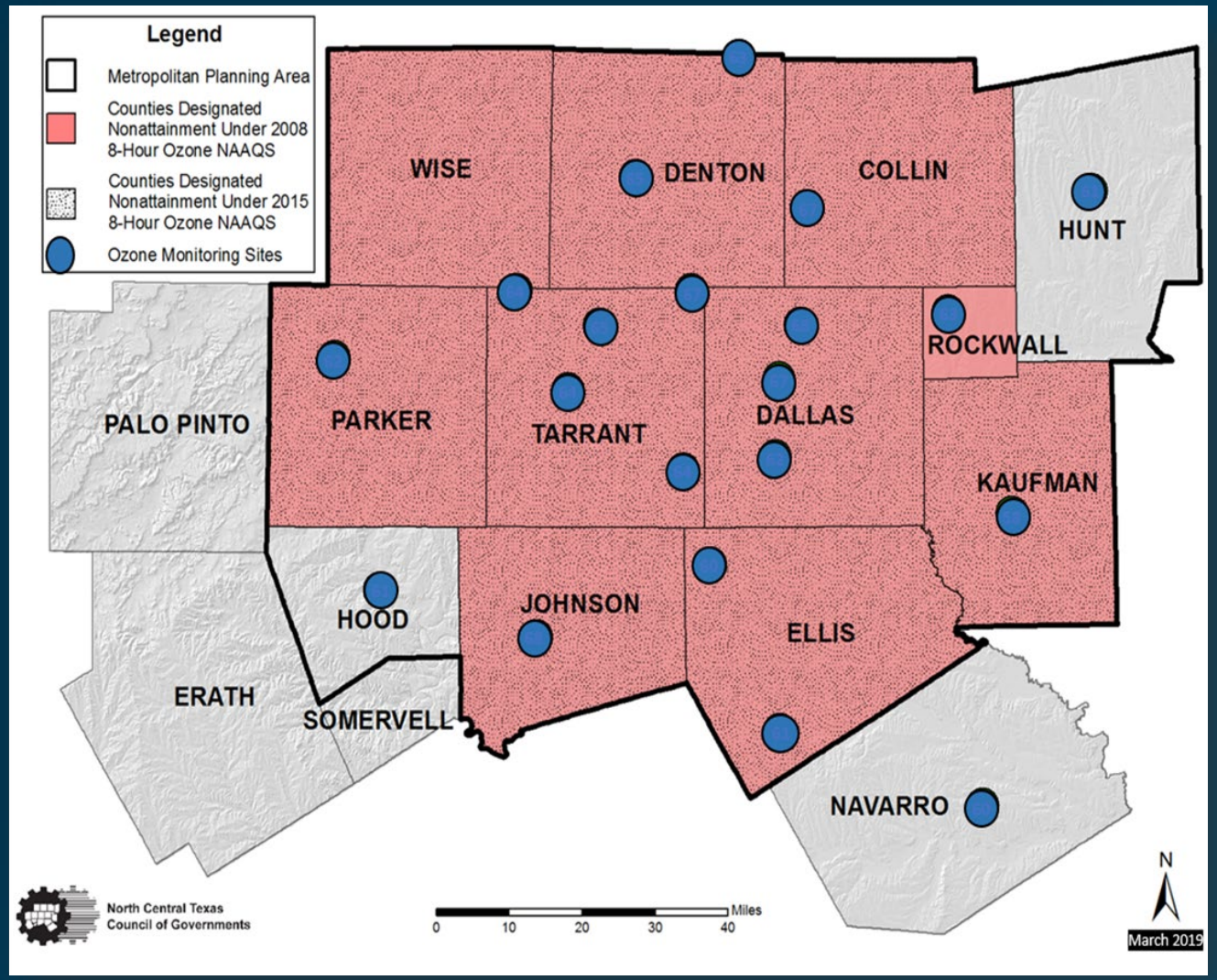
RNG Facility Tour at Skyline Landfill

Dallas-Fort Worth CLEAN CITIES

North Central Texas Council of Governments

February 22, 2022

Who We Are



North Central Texas Council of Governments

Regional Planning Agency

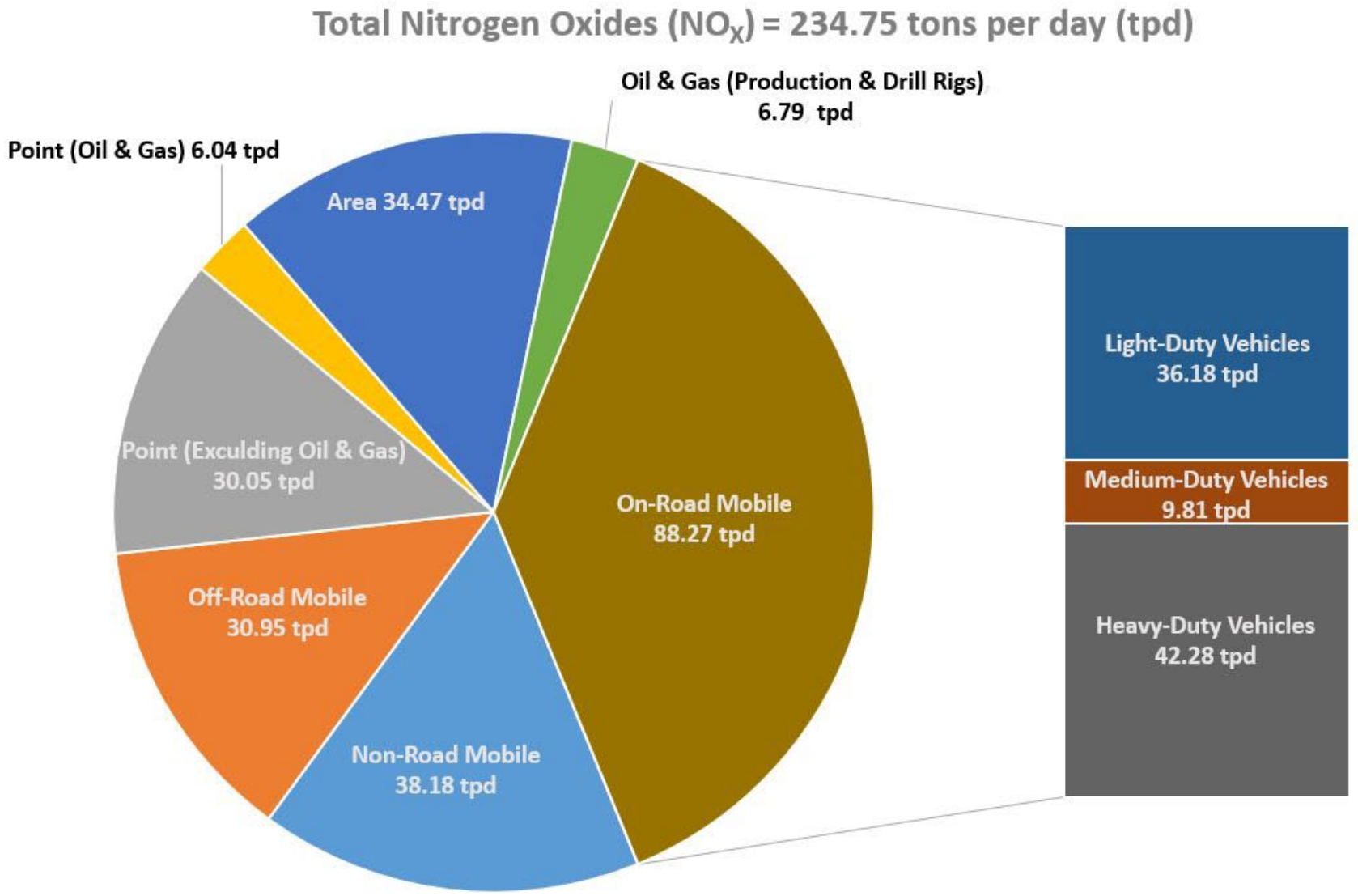
RTC Regional Transportation Council

Metropolitan Planning Organization (MPO)

Dallas-Fort Worth CLEAN CITIES

Local Clean Cities Coalition

Nitrogen Oxides Emissions Sources



Source: Dallas-Fort Worth Serious Classification Attainment Demonstration State Implementation Plan Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard, September, 2019

Compressed Natural Gas

- Mixture of Hydrocarbons, Predominantly Methane (CH4)
- Conventional Compressed Natural Gas (CNG)Extracted from Domestic Gas and Oil Wells
- Uses Existing Pipeline Distribution System

Benefits:

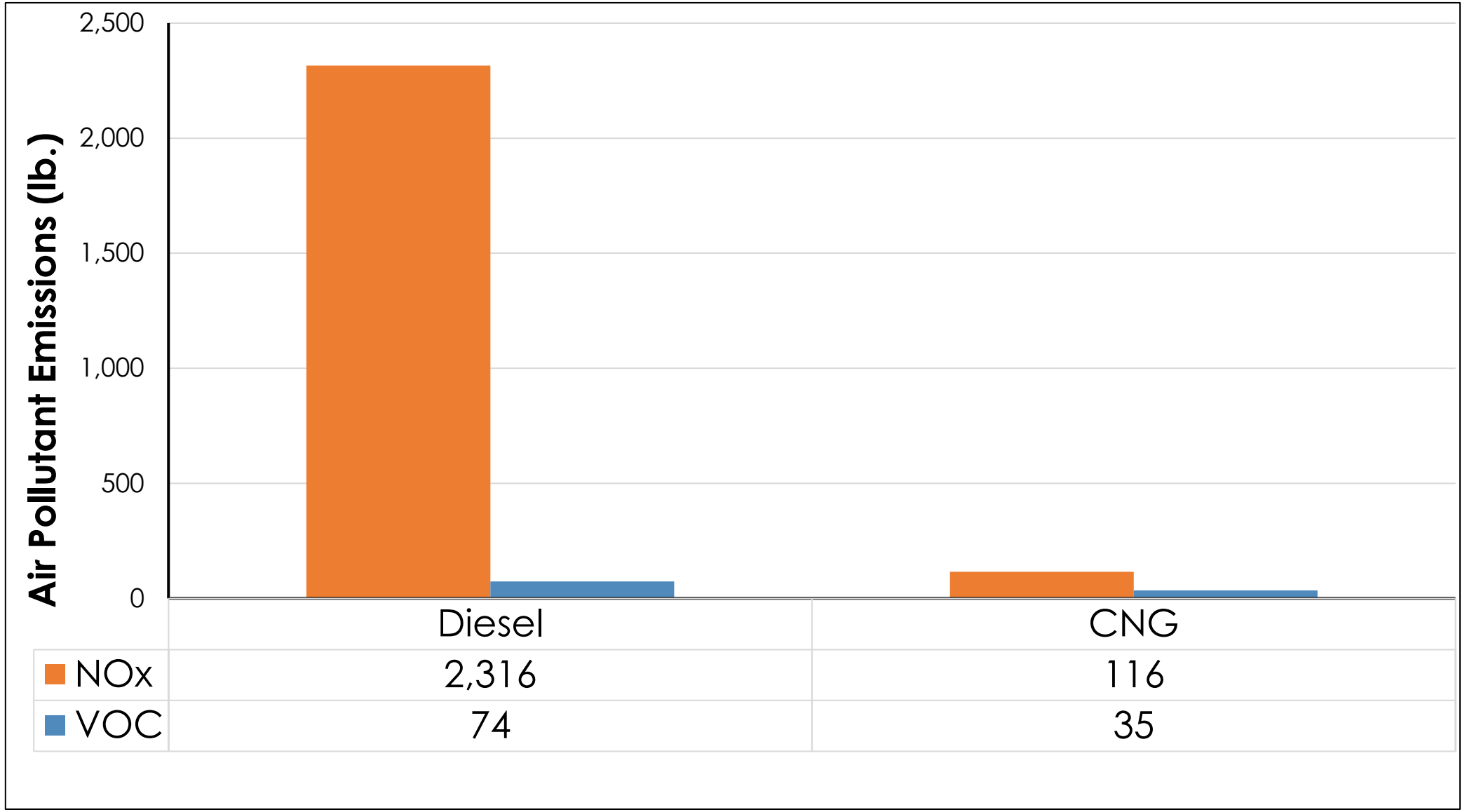
- Helps Air Quality
- Lower Vehicle Maintenance
- Affordable and Consistent Fuel Price
- Domestically Produced
- Similar Performance to Conventional Vehicles

Considerations:

- Reduced Driving Range
- Incremental Cost
- Infrastructure Availability

Photo Source: iStock #1080451964

Lifetime Air Pollutants- CNG Refuse Truck



Source: AFLEET

Renewable Natural Gas

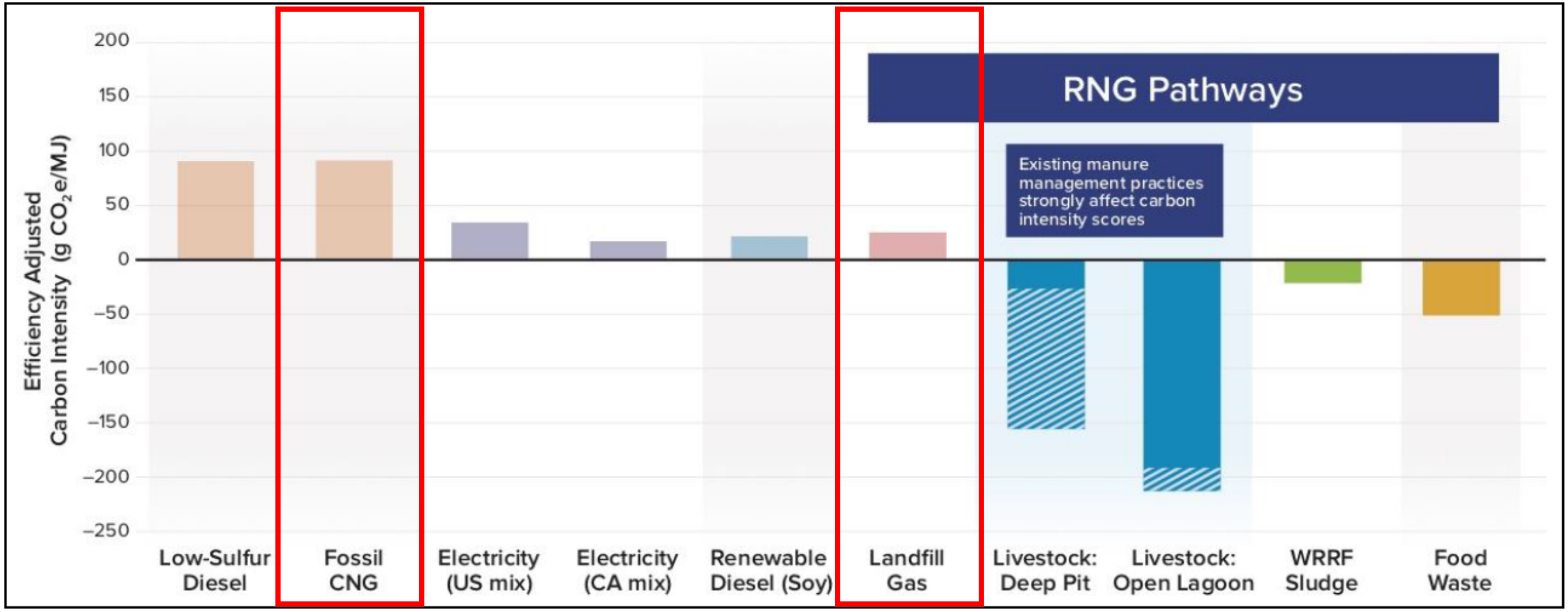
- Renewable Natural Gas (RNG) is Chemically Identical to Conventional Compressed Natural Gas
- Produced Domestically from Decomposing Organic Matter, Including Sewage, Animal By-Products, and Municipal Solid Waste

Benefits:

- Reduces Odor and Runoff
- Converts Waste to a Valuable Product
- Creates Jobs
- Federal Incentives for RNG Producers
  - Alternative Fuel Excise Tax Credit
  - Renewable Identification Numbers (RINs)
- **Any CNG Vehicle or Infrastructure can Use RNG**
- **Lower Green House Gas (GHG) than CNG**
- **Can be Carbon- Neutral or Carbon-Negative**

Photo Source: National Renewable Energy Laboratory
Image Gallery #06331

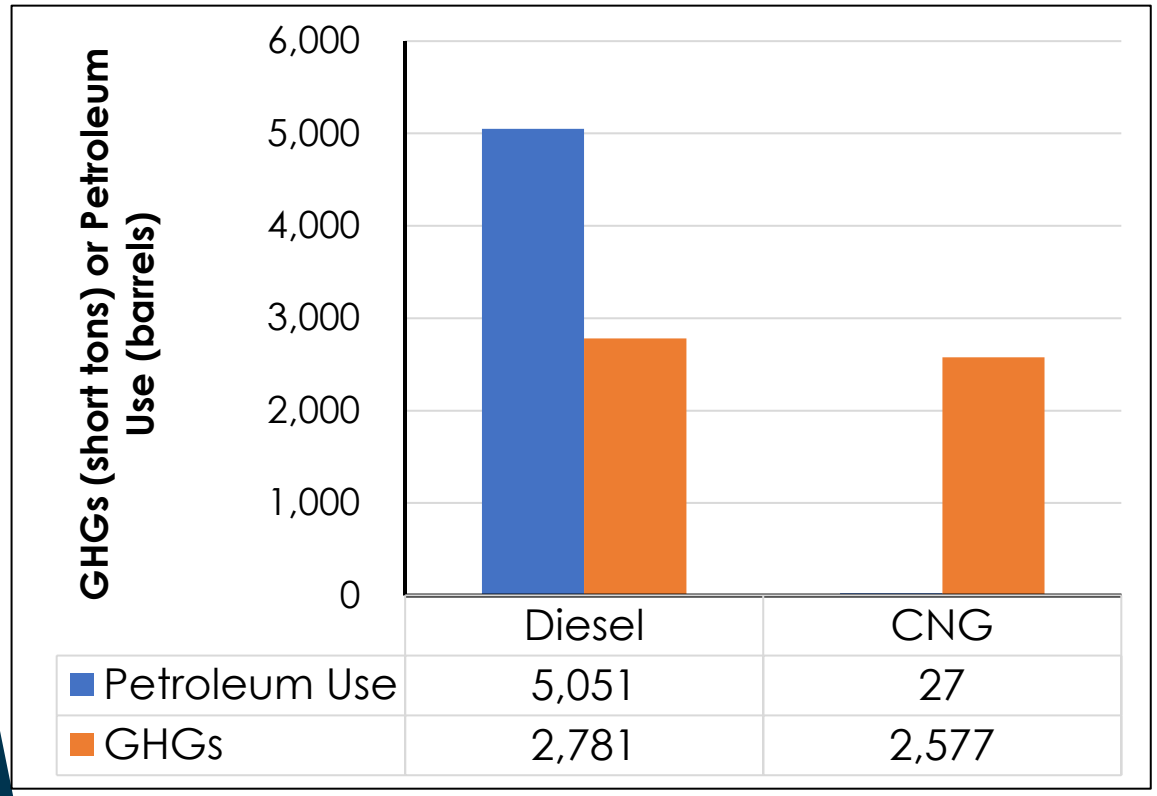
RNG Pathways



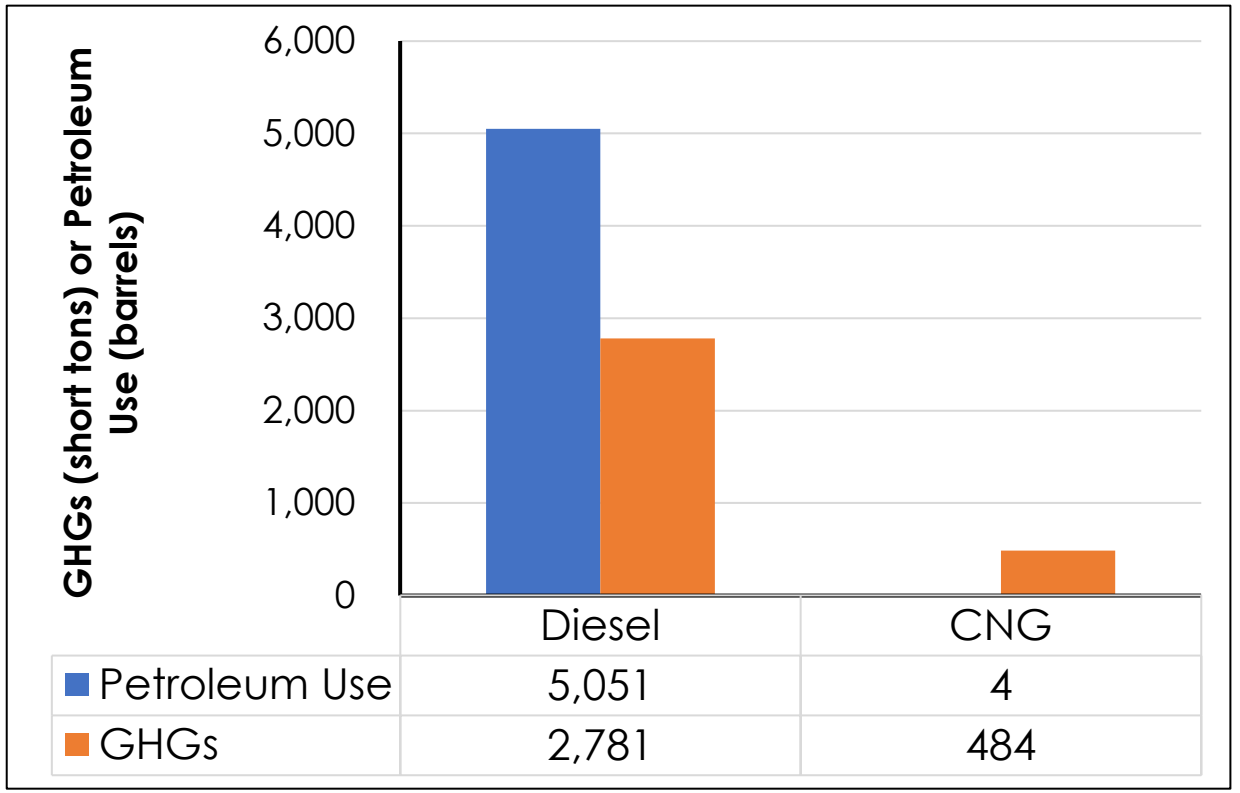
Source: [Argonne National Laboratory's Renewable Natural Gas (RNG) for Transportation Frequently Asked Questions]

Lifetime Wells-to-Wheels Petroleum Use and GHGs- CNG Refuse Truck

CNG Refuse Truck Utilizing Fossil CNG



CNG Refuse Truck Utilizing Landfill Gas CNG



Source: AFLEET

DFW Clean Cities Impacts – Results from 2020 Survey

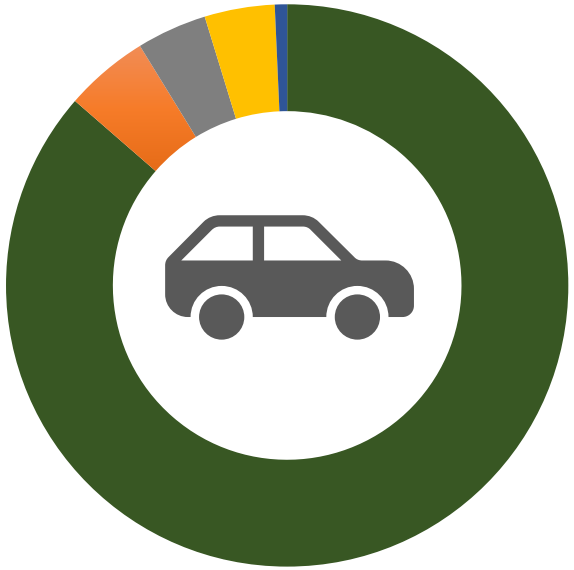
55 Fleets Reporting

10,165 Alternative Fuel Vehicles and Equipment

*Impacts Over Calendar Year 2020

dfwcleancities.org/annualreport

~23.95 Million Gasoline Gallon Equivalent Reduced*



~367 Tons Ozone-Forming Nitrogen Oxides Reduced*

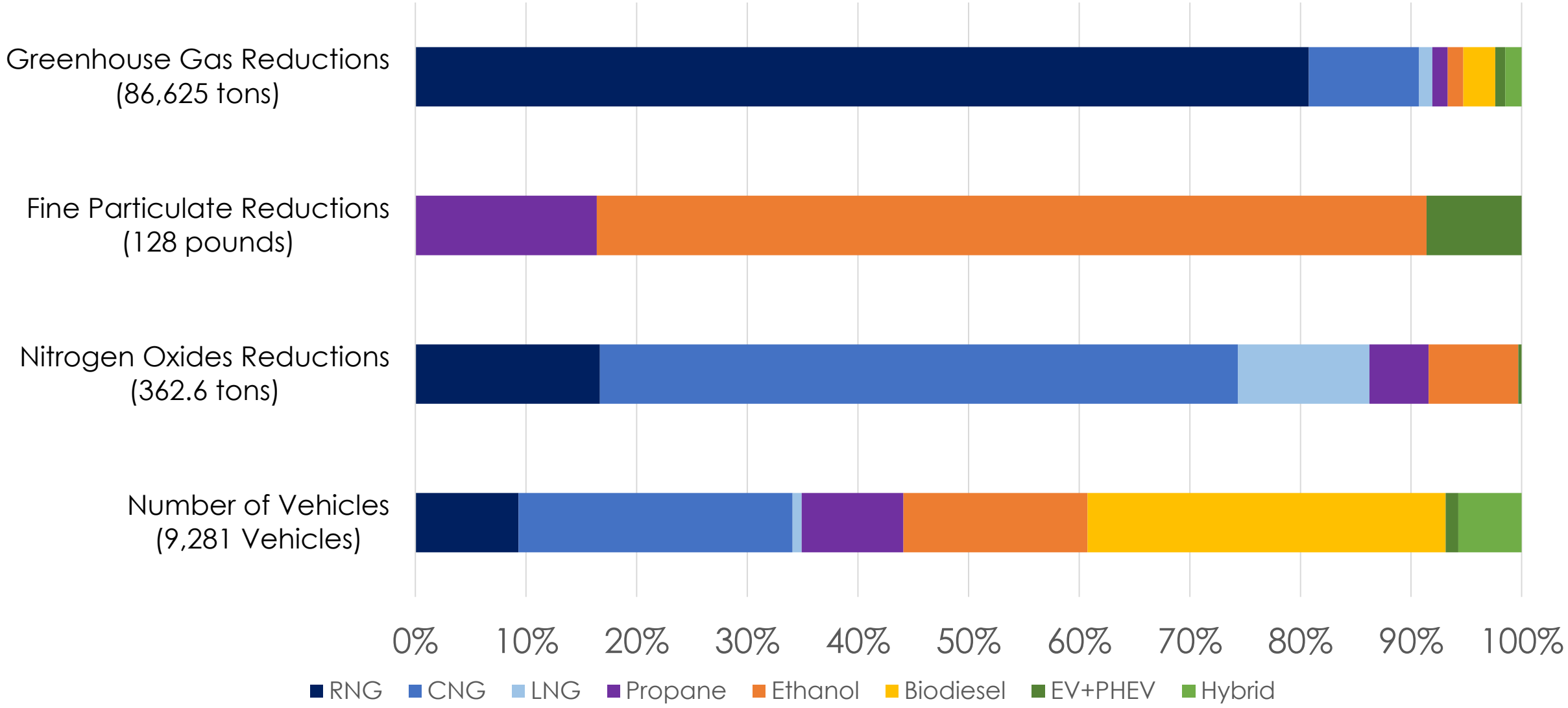
~1 Ton/Day

125,058 Tons Greenhouse Gas Emissions Reduced*

Equivalent to Eliminating

Tanker Trucks of Gasoline

Impact of Various Fuel Types



RNG- Renewable Natural Gas; CNG- Compressed Natural Gas; LNG- Liquified Natural Gas; LPG- Liquified Propane Gas; EV- Electric Vehicle; PHEV-Plug-In Hybrid Electric Vehicle

2020 Annual Survey - Fleets Utilizing CNG and RNG

CNG

Campbell Kings – 3 Box Trucks

City of Arlington – 6 Cars

City of Dallas – 579 Refuse Trucks

City of Denton – 10 Refuse Trucks

City of Irving – 4 Refuse Trucks

Dallas County – 7 Pickups/SUV/Vans

Greenpath Logistics – 31 Trucks

Texas Department of Transportation - 26 Pickup/SUV/Vans

Trinity Metro – 194 Transit Buses

UPS – 572 Trucks

CNG and RNG

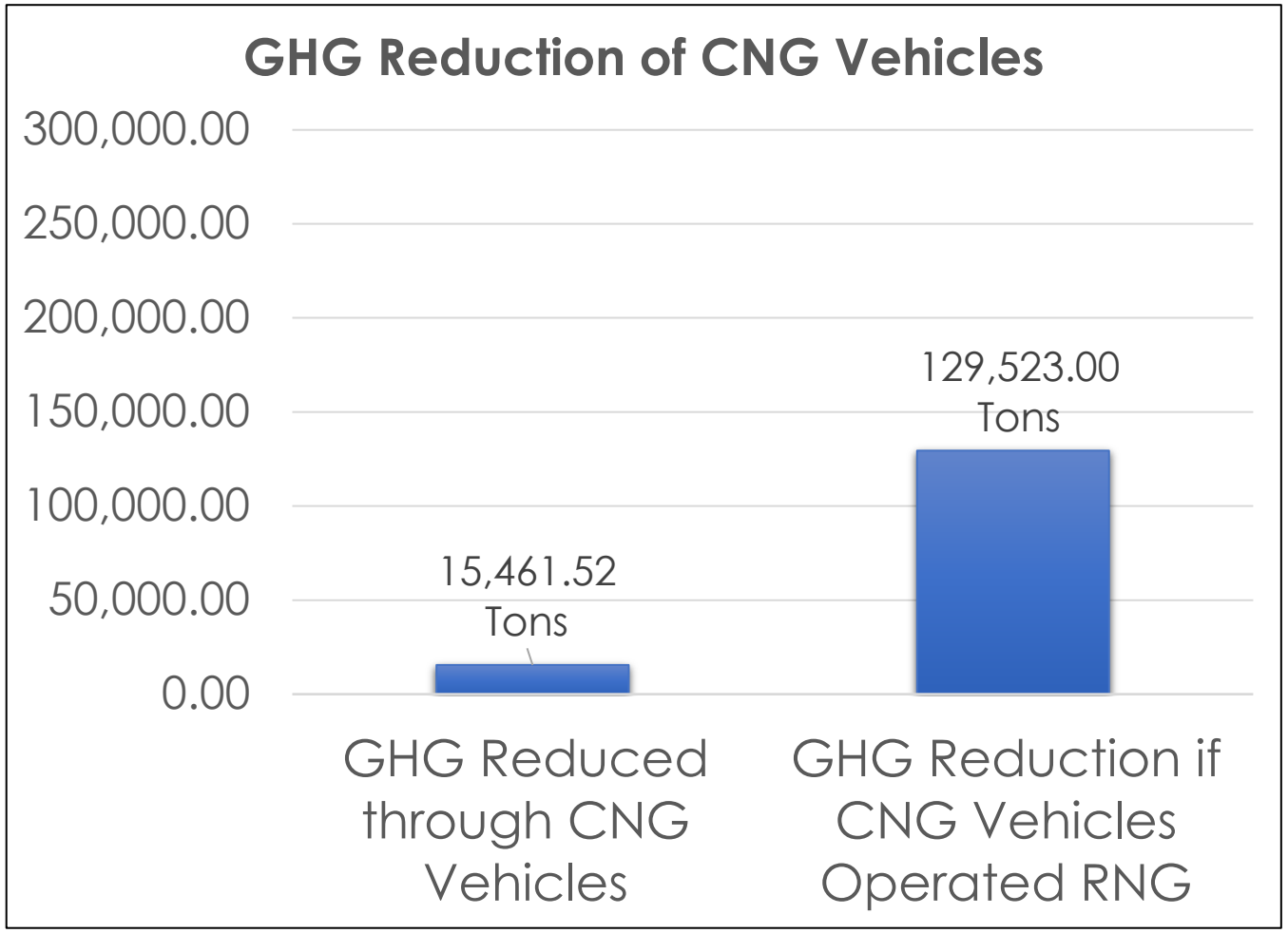
Dallas Area Rapid Transit – 674 Transit Buses

Dallas-Fort Worth International Airport - 192 Total Vehicles

Total – 12 Fleets Operating 2283 CNG Vehicles

DFW International Airport has been using RNG since 2016 with the intention to further reduce their carbon footprint.
Read about their success at:
https://www.dfwcleancities.org/successstories

What-If RNG was Utilized



In 2020, fleets in the DFW Region had a total GHG reduction of **125,058 tons.**

If all CNG vehicles utilized RNG, total coalition GHG reduction would increase to **239,120 tons.**

Clean Cities Annual Survey – Due March 11

Inform Future Events, Convey Needs

Trainings and Webinars

Resources

Funding

Provide Opportunity for Recognition

Gold, Silver, Bronze Awards

Shining Stars

Fleet Challenge

Meet Regional Goals Set by DOE

27,787,339 Gasoline Gallon Equivalent Reduced
(16% Increase Relative to 2020)

150,070 Greenhouse Gas Reduced
(20% Increase Relative to 2020)

Document Impact to Justice 40 Communities

Start the Survey: dfwcleancities.org/annualreport

North Central Texas Organic Waste to Fuel Feasibility Study

- Funded through grant from the Environmental Protection Agency
- Regional Study Goals:
  - Advance regional efforts to divert food waste, and other organics, from landfills to preserve landfill capacity
  - Increase regional renewable energy opportunities
  - Evaluate the potential to reduce fleet emissions
  - Identify pilot projects and partnerships to advance those projects

DFW Try And Drive Alternative Program

Connects fleets and consumers with providers who have extended loaner programs for clean vehicle and advanced technologies. Examples of technologies include:

- Electric Vehicles
- Telematics
- Compressed Natural Gas Refueling Stations

To see current directory of technologies available to borrow, go to https://www.nctcog.org/dfwtrydrive

Additional technologies will be added to the directory. If you would like to be listed as a provider, please contact cleancities@nctcog.org.

CNG and RNG Funding Opportunities

North Texas Clean Diesel Projects 2021– NOW OPEN; Deadline is April 15, 2022

Funds: On-Road and non-road diesel vehicle replacements; 45% if replacement is electric, 35% if certified CARB Low-NOx, 25% for others

Texas Emissions Reduction Program (TERP) – Programs Begin Opening Spring 2022

Funds: Various programs funding purchase, lease, or replacement of vehicles and equipment

Light-Duty Motor Vehicle Purchase or Lease Incentive Program (LDPLIP)– NOW OPEN; Deadline is January 17, 2023
Funds: $2,500 rebate for electric vehicle; $5,000 rebate for CNG and LPG vehicles

Texas Clean Fleet Program - **Expected to Open Spring 2022**
Funds: Replacement of diesel vehicles with alternative fuel and hybrid vehicles

Alternative Fueling Facilities Program (AFFP) – Expected to Open Summer 2022
Funds: 50% of the total eligible costs with a maximum grant amount of $600,000 for construction or expansion of alternative fueling infrastructure, with funding for projects open to the public being prioritized

Bipartisan Infrastructure Law Competitive Infrastructure Grants – Programs Begin Opening in Spring 2022
Funds: Various programs funding infrastructure for local governments. Go here for a full list of grants

Competitive Grants for Electric and Alternative Fueling Stations – Expected Summer 2022
Funds: Publicly accessible electric and alternative fueling infrastructure along alternative fuel corridors and in communities

For a full list of available funding opportunities visit www.nctcog.org/aqfunding

Resources

AFDC Alternative Fueling Station Locator

AFDC Vehicle Search

AFDC Natural Gas Webpage

AFDC Renewable Natural Gas Production Webpage

AFLEET Tool

Argonne National Laboratory Renewable Natural Gas for Transportation

DFWCC Try and Drive Alternative

Natural Gas Vehicle America

NCTCOG AQ Funding

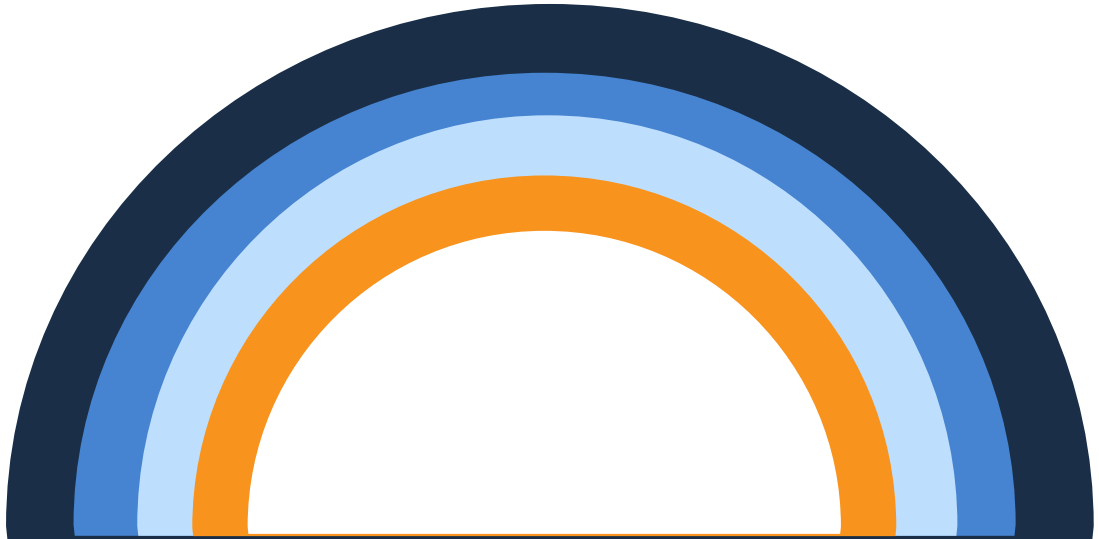
Contacts

Savana Nance
Air Quality Planner II
snance@nctcog.org

Soria Adibi
Senior Air Quality Planner
sadibi@nctcog.org

Amy Hodges
Principal Air Quality Planner
ahodges@nctcog.org

Dallas-Fort Worth
CLEAN CITIES



North Central Texas
Council of Governments