Dallas-Fort Worth Clean Cities (DFWCC)

Who We Are
• North Central Texas Council of Governments (NCTCOG)
• Metropolitan Planning Organization (MPO) for DFW Region
• Dallas-Fort Worth Clean Cities Coalition (DFWCC)

DFWCC - Advance Economic, Environmental, and Energy Security
• Reduce Petroleum Consumption – “Reduce, Replace, Eliminate”
• Partner with Public and Private Fleets
• Structure
  Fleet & Commercial Strategies
  Consumer Initiatives
  Local Government Policies / Community Readiness

Fleet Support - Enable More Efficient, Greener Fleets
• Match Vehicles & Equipment to Funding
• Train on Tools and Resources
• Plan for Fleet Transition – Detailed Recommendations
Today’s Topics

Tools & Resources

- Funding Information
- Find Vehicles and Refueling Stations
- Estimate Simple Payback

Grants – Local Support for Grants

- Step 1: Vehicle Data Provided by Fleet
- Step 2: Grant Options Provided by DFWCC
- Step 3: Decide on Grant and Apply

DFWCC Can Assist! cleancities@nctcog.org
Resources - Funding

NCTCOG Funding List – All Available Funding
nctcog.org/aqfunding

TCEQ TERP Funding – All TERP Programs
terpgrants.org

TX Volkswagen Environmental Mitigation Program (TxVEMP)
texasvwwfund.org

Fuel Economy Website – Light-Duty Vehicle Information
fueleconomy.gov
Resources – NCTCOG Funding Webpage

nctcog.org/aqfunding

Funding and Resources

Funding

Funding for projects that address air quality, such as clean vehicle projects, are available from a number of federal, state, local, and non-profit entities.

- Funding for Consumer Vehicle Purchases
- Funding for Fleet Vehicle Projects
- Funding for Other Air Quality Improvement Strategies

Hot Topics

- Volkswagen Settlement
**Resources – NCTCOG - nctcog.org/aqfunding**

**High-Level View of All Funding**

**Links to Grant Programs**

<table>
<thead>
<tr>
<th>Program/Incentive</th>
<th>Eligible Activities</th>
<th>Funding Amount</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Clean Community Grant</td>
<td>Grants for new purchases of propane- or electric-powered school buses</td>
<td>$2,500 – $5,000 per Purchase, Minimum Three (3)</td>
<td>One Application Annually</td>
</tr>
<tr>
<td>Fuel Cell Motor Vehicle Tax Credit</td>
<td>Light- medium- and heavy-duty vehicles, and buildings</td>
<td>Up to $10,000</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>IC Bus Grant Program</td>
<td>Grants for new purchases of propane-powered IC buses</td>
<td>$3,500 per Purchase</td>
<td>Until all funds are awarded</td>
</tr>
<tr>
<td>Plug-In Electric Drive Vehicle Credit</td>
<td>EV passenger vehicles, light-duty trucks, and electric two and three wheeled vehicles</td>
<td>$2,500 - $7,500 per new passenger vehicle and light-duty truck or LTO purchased</td>
<td>Photos out based on manufacturer market sales</td>
</tr>
<tr>
<td>Support and Rant Yard Areas Emissions Reduction (SRY) Program</td>
<td>On-road Vehicles, Non-road Yard Trucks, or Other Heavy Handling Equipment</td>
<td>Up to 80% of the Cost to Replace, or Repower Eligible Vehicles or Equipment</td>
<td>February 12, 2021 by 3 PM, CT</td>
</tr>
<tr>
<td>Texas Light-Duty Motor Vehicle Purchase or Lease Incentive Program</td>
<td>Light-duty PHEV, Hydrogen, CNG, or LPG vehicles purchased in Texas</td>
<td>Up to $2,500 for Electric or Hydrogen, up to $3,000 for CNG or LPG</td>
<td>Post-date first served until January 17, 2021 or until all funds are awarded</td>
</tr>
<tr>
<td>Texas Natural Gas Vehicle Grant Program</td>
<td>Natural gas or propane vehicle engine</td>
<td>Up to 50% of the Incremental Cost</td>
<td>First Come First Served until February 26, 2021 or all funds are awarded</td>
</tr>
<tr>
<td>Texas Volkswagen Environmental Mitigation Program</td>
<td>Buses, Garbage, Ash and Salt, Storm, Chipper, and Grapple Trucks</td>
<td>Determined by Maximum Grant Amount Tables</td>
<td>First Come First Served until October 8, 2020 or all funds awarded</td>
</tr>
</tbody>
</table>

**Funding for New Vehicle Purchases**

**Funding for Diesel Vehicle Replacements**

**Funding for Non-Vehicle Air Quality Improvement Projects**
Resources - TxEEMP – Currently Available Funding

<table>
<thead>
<tr>
<th>Refuse Vehicles</th>
<th>Local Freight and Port Drayage Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must Be Configured To Collect And Transport Municipal Solid Waste; Includes Garbage Trucks, Roll-off Trucks, Dump Trucks, Sweeper Trucks, Chipper Trucks, and Grapple Trucks</td>
<td>Must Be Used To Deliver Cargo and Freight</td>
</tr>
<tr>
<td>Grants Awarded on First-Come, First-Served Basis</td>
<td>Grants Awarded on First-Come, First-Served Basis</td>
</tr>
<tr>
<td>Application Deadline: October 8, 2020</td>
<td>Application Deadline: January 27, 2021</td>
</tr>
<tr>
<td>DFW Area Funds Remaining: ~$4.7 M*</td>
<td>DFW Area Funds Remaining: ~$2.7 M*</td>
</tr>
</tbody>
</table>

Government-Owned Vehicles: Up to 80%

*Based on Publicly Posted Information as of 7/29/2020
Zero Emission Vehicle (ZEV) Supply Equipment Grants

**Eligible Applicants:** Governments, Individuals, Corporations, Organizations

**Eligible Activities:** Purchase and Install Level 2 Charging Stations for Light-Duty Vehicles

- Up to $2,500 per Installation Not to Exceed:
  - Electric Chargers Available to Public: 70%
  - Electric Chargers Available to Workplace or Multi-Unit Dwelling: 60%

- Level 2 charging equipment must:
  - Offer SAE J1772 Connector
  - Include a dual mount pedestal with charge connect height of < 48” and > 24”
  - Utilize Open Source Software Where Payment is Required

**First-Come, First-Served; $10.4 Million Available Statewide**

**Application Deadline:** September 9, 2021

texasvwfund.org
Resources - www.fueleconomy.gov

Compare Fuel Economy, Price, Safety and More

2020-21 Fuel Economy Estimates Now Available!
Includes plug-in hybrid and electric vehicles
Fuel economy leaders for each vehicle class
More vehicles added weekly
Transition to a Greener, More Efficient Fleet

Overall Efficiency Gains

Reduce Idling ➔ Fuel Savings, Less Emissions

Downsize Fleet – Eliminate Underutilized Assets ➔ Lower Costs

Right-size Vehicles to Operational Needs ➔ Lower Costs, Less Emissions

Light-Duty Vehicle Analysis

Analyze Daily Miles – Opportunity to Electrify?
Step 1: Provide Us With Vehicle/Equipment Information
Template in Excel Provided

Vehicles: Description, Engine Year, Make, Model, Fuel Type, GVWR
Example:

<table>
<thead>
<tr>
<th>Identifying Number</th>
<th>Vehicle Description</th>
<th>Engine Year</th>
<th>Chassis Make</th>
<th>Chassis Model</th>
<th>Fuel Type</th>
<th>GVWR</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456789012345678</td>
<td>Dump Truck</td>
<td>2000 Mack</td>
<td>RDS9OS</td>
<td>Diesel</td>
<td>34,000</td>
<td></td>
</tr>
<tr>
<td>23456789012345678</td>
<td>Box Truck</td>
<td>1998 Freightliner</td>
<td>FL70</td>
<td>Diesel</td>
<td>18,000</td>
<td></td>
</tr>
</tbody>
</table>

Equipment: Description, Engine Year, Make, Model, Fuel Type, HP
Example:

<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Engine Year</th>
<th>Make</th>
<th>Model</th>
<th>Fuel Type</th>
<th>Horsepower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber Tire Loader</td>
<td>1999</td>
<td>Case</td>
<td>621C</td>
<td>Diesel</td>
<td>135</td>
</tr>
<tr>
<td>Excavator</td>
<td>2006</td>
<td>Caterpillar</td>
<td>312CL</td>
<td>Diesel</td>
<td>91</td>
</tr>
</tbody>
</table>
### Grants – Local Support

#### Step 2: Grant Options Provided by DFWCC in Excel

Example:

<table>
<thead>
<tr>
<th>MAKE/MODEL</th>
<th>FUEL TYPE</th>
<th>GVWR</th>
<th>ASSUMED ENGINE MODEL YEAR</th>
<th>Eligible Project Types:</th>
<th>Grants – Local Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989 VOLVO DUMP TRUCK</td>
<td>DIESEL</td>
<td>20,000</td>
<td>1988</td>
<td>5-Year Activity Life: Up to $62,000</td>
<td>Replace, repower, (new) purchase or lease, or retrofit or add-on of emission-reduction technology, heavy duty vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7-Year Activity Life: Up to $82,000</td>
<td>Replace or repower least 10 light-duty or heavy-duty diesel vehicles with hybrid or alternative fuel. Organization must have a fleet size of at least 75 vehicles (including all fuels)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$107,190</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Replace or repower gasoline, medium- or heavy-duty vehicle with natural gas or propane from list of eligible vehicles, engines and conversion systems</td>
</tr>
<tr>
<td>1990 VOLVO DUMP TRUCK</td>
<td>DIESEL</td>
<td>20,000</td>
<td>1989</td>
<td>5-Year Activity Life: Up to $61,500</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7-Year Activity Life: Up to $88,000</td>
<td>Replace or repower gasoline, medium- or heavy-duty vehicle with natural gas or propane from list of eligible vehicles, engines and conversion systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$107,190</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
<td>1991 VOLVO DUMP TRUCK</td>
<td>DIESEL</td>
<td>20,000</td>
<td>1990</td>
<td>5-Year Activity Life: Up to $33,800</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>7-Year Activity Life: Up to $42,300</td>
<td>Replace or repower gasoline, medium- or heavy-duty vehicle with natural gas or propane from list of eligible vehicles, engines and conversion systems</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>$54,976</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
<td>1990 VOLVO DUMP TRUCK</td>
<td>DIESEL</td>
<td>20,000</td>
<td>1989</td>
<td>5-Year Activity Life: Up to $61,500</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>7-Year Activity Life: Up to $88,000</td>
<td>Replace or repower gasoline, medium- or heavy-duty vehicle with natural gas or propane from list of eligible vehicles, engines and conversion systems</td>
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<td></td>
<td></td>
<td>$107,190</td>
<td>Replace or repower heavy-duty diesel vehicles</td>
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**Notes:**
- Grant Programs:
  - Emissions Reduction Incentive Grants Program
  - Texas Clean Fleet Program
  - Texas Natural Gas Vehicle Grant Program
  - Rebate Grants Program
- **Program Status:**
  - Anticipated Summer 2020
  - Open: Deadline June 30, 2020
  - Open: Deadline February 26, 2021
  - Expected to open July 21, 2020
- **Apply to:**
  - TCEQ
  - TCEQ
  - TCEQ
  - TCEQ
- **Grant Details:**
  - Replace repower, (new) purchase or lease, or retrofit or add-on of emission-reduction technology, heavy duty vehicles
  - Up to 80% of the new replacement vehicle or engine minus $1,000 scrap for reductions and $250 scrap for repowers, capped at $77,500 per ton NOx reduced
  - For new purchase or lease (i.e., no scrappage), funds will pay for the cost difference between the manufacturer’s suggested retail price of a baseline vehicle certified to the current federal NOx emission standards and the actual cost of the cleaner vehicle. Program will reimburse up to 100% of the cost difference between the baseline vehicle and the cleaner vehicle, capped at $77,500 per ton NOx reduced.
- **Funding:**
  - Up to 80% of the new replacement vehicle or engine minus $1,000 scrap for heavy-duty vehicles and $300 scrap for light-duty vehicles. Applications are scored competitively based on cost per ton of NOx reduced and other factors.
- **Eligibility:**
  - Replace or repower at least 10 light-duty or heavy-duty diesel vehicles with hybrid or alternative fuel. Organization must have a fleet size of at least 75 vehicles (including all fuels).
- **Replacement Costs:**
  - Replace or repower heavy-duty diesel vehicles
  - Up to 80% of new replacement vehicle or engine minus $1,000 scrap for replacements and $250 scrap for repowers, not to exceed maximum rebate amount.
- Values are based on the maximum rebate grantables from the FY2019 rounds and are subject to change for the next funding round.
Step 3: Decide on Grant and Apply

Things to Consider

• Fuel Type Required for New Vehicle
  Vehicle Availability for Fuel Type
  Refueling Availability

• Amount of Possible Grant

• Simple Payback – AFLEET Online, AFLEET Tool (xls)

• Total Cost of Ownership – AFLEET Tool (xls)

• DFWCC Assistance - cleancities@nctcog.org

Grant Applications
Tools – AFLEET Online, AFLEET Tool (xls)
DFWCC - dfwcleancities.org/

Tools & Resources
Tools & Resources – Alternative Fuel Information

Alternative Fuels Data Center - https://afdc.energy.gov/

Learn About a Fuel

Find a Vehicle

Find Refueling Stations
Tools & Resources – Find Alt Fuel Vehicles

Pick a Vehicle Type and Fuel for List of Vehicles
Tools & Resources- Find Alt Fuel Stations

Basic Search by Location and Fuel

More Specific Location and Station Search

Map Stations Along a Route
Natural Gas

Natural gas, a domestically produced gaseous fuel, is readily available through the utility infrastructure. Whether produced via conventional or renewable methods, this clean-burning alternative fuel must be compressed or liquefied for use in vehicles.

- **Basics**
  - Find information about natural gas, including production and distribution.

- **Benefits and Considerations**
  - Explore the benefits and considerations of using natural gas as a vehicle fuel.

- **Stations**
  - Locate natural gas fueling stations in your area and learn about natural gas fueling infrastructure.

- **Vehicles**
  - Learn about natural gas vehicles and how they work, and find information about vehicle availability, conversions, emissions, maintenance, and safety.

- **Laws and Incentives**
  - Find laws and incentives related to natural gas in your area.
Welcome To AFLEET

The Department of Energy's Technology Integration Program has enlisted the expertise of Argonne to develop a tool to examine both the environmental and economic costs and benefits of alternative fuel and advanced vehicles (AFVs). Argonne developed the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) tool to help stakeholders estimate petroleum use, greenhouse gas (GHG) emissions, air pollutant emissions, and cost of ownership of light-duty and heavy-duty vehicles.

Tools & Resources – Estimate Emissions and Vehicle Costs

https://afleet-web.es.anl.gov/home/

Simple Payback
• Easy Online Tool
• Useful Only When AFV Costs More Than Diesel
• Uses 2018 Maintenance Costs

Total Cost of Ownership, Idle Reduction and More
• Excel Spreadsheet
• Customizable Inputs
• Uses 2019 Maintenance Costs
Tools & Resources – Simple Payback

Short-Haul Truck Example Comparing Diesel, Propane

- Start New Project
- Select Vehicle Type – **Single Unit Short-Haul Truck**
- Pick Fuels to Compare to Diesel – **LPG**
- Update if Desired:
  
  Fuel Economy, Purchase Price, Fuel Prices, Annual Mileage
- Vehicle Options - Set State to **Texas**
- Fuel Prices - **Diesel $1.98, LPG $0.86**

Payback is 7.5 years
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