AGENDA

DALLAS-FORT WORTH CLEAN CITIES COALITION
New Year Start-Up Meeting

Tuesday, January 22, 2019

1– 3pm

1. Welcome/Introductions ..... Lori Clark, NCTCOG
2. Annual Fleet Survey Overview ..... Bailey Muller, NCTCOG
3. Volkswagen Settlement – Mitigation Plan Overview .....Nancy Luong, NCTCOG
4. Volkswagen Settlement – How to Evaluate Your Fleet..... Nancy Luong
5. DFWCC Toolbox: AFLEET Tutorial .....Bailey Muller
6. Closing Remarks & 25th Anniversary Testimonial Videos .....Lori Clark

Reminder: Annual Fleet Surveys due February 15
These surveys allow DFW Clean Cities to track regional progress toward petroleum reductions. Submitting an Annual Survey not only demonstrates a fleet's commitment to cleaner air, but also makes them eligible for the coalition's Fleet Recognition Awards. Find the Annual Survey at www.DFWCleanCities.org/annualreport

Upcoming TERP Rebate Grants Workshop – January 28 at NCTCOG at 10 am

Upcoming Webinar - February 26 on Telematics
We will have a webinar on implementing telematics in fleets to improve day-to-day fleet operations and management. Guest speakers will describe how telematics works and will discuss their first-hand experience using these systems.
Register for the webinar at www.DFWCleanCities.org/dfw-clean-cities-meetings

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DALLAS-FORT WORTH CLEAN CITIES COALITION

New Year Start-Up Meeting

January 22, 2019

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2018 Annual Fleet Survey: How-To

DFW Clean Cities New Year Start-Up Meeting

January 22, 2019

Why Report?

Coalition regional report due to the Department of Energy every March

15% increase in annual reduction goal

↳ 2018 goal of ~27 Million gallons of petroleum reduced

Eligible for Fleet Recognition Awards

Scores based upon the data provided in the survey

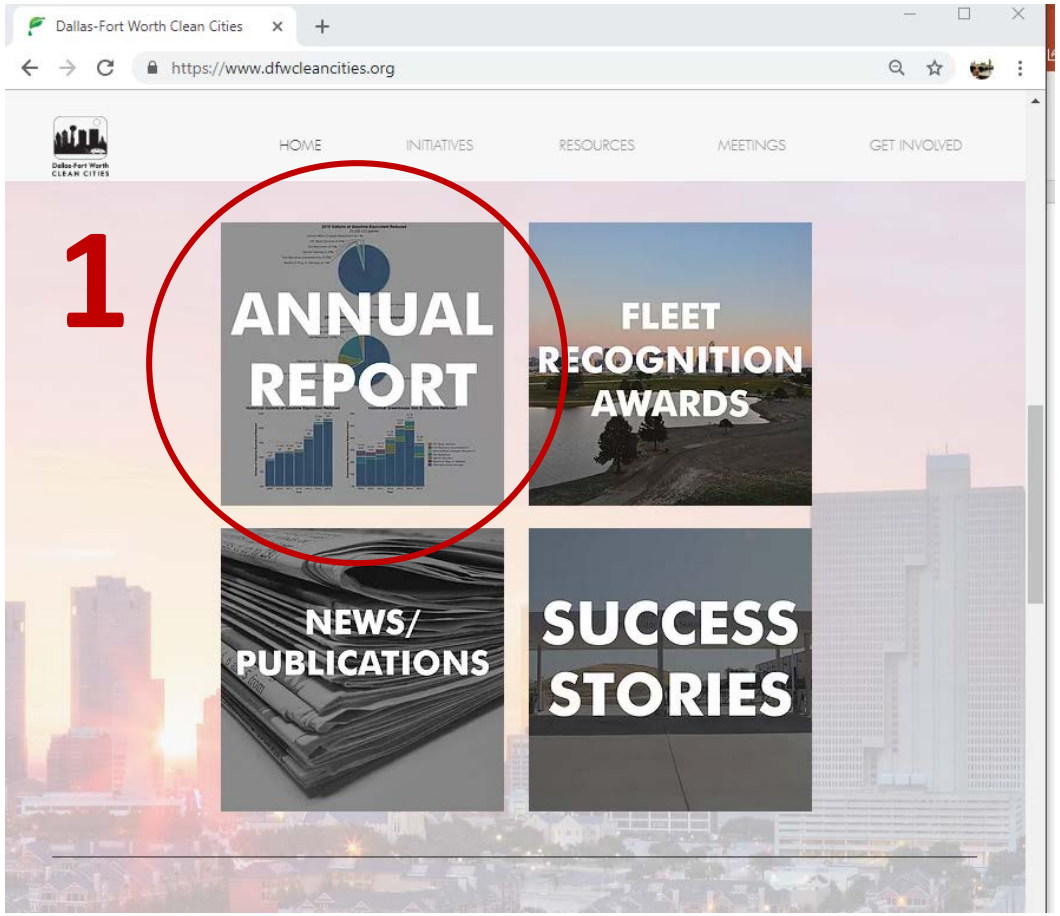
Sections left blank awarded **zero points**

Sections partially completed **do not get full points**

Must adopt the Clean Fleet Policy to be eligible for recognition

DOWNLOAD SURVEY HERE:
https://www.dfwcleancities.org/annualreport

Why Report?



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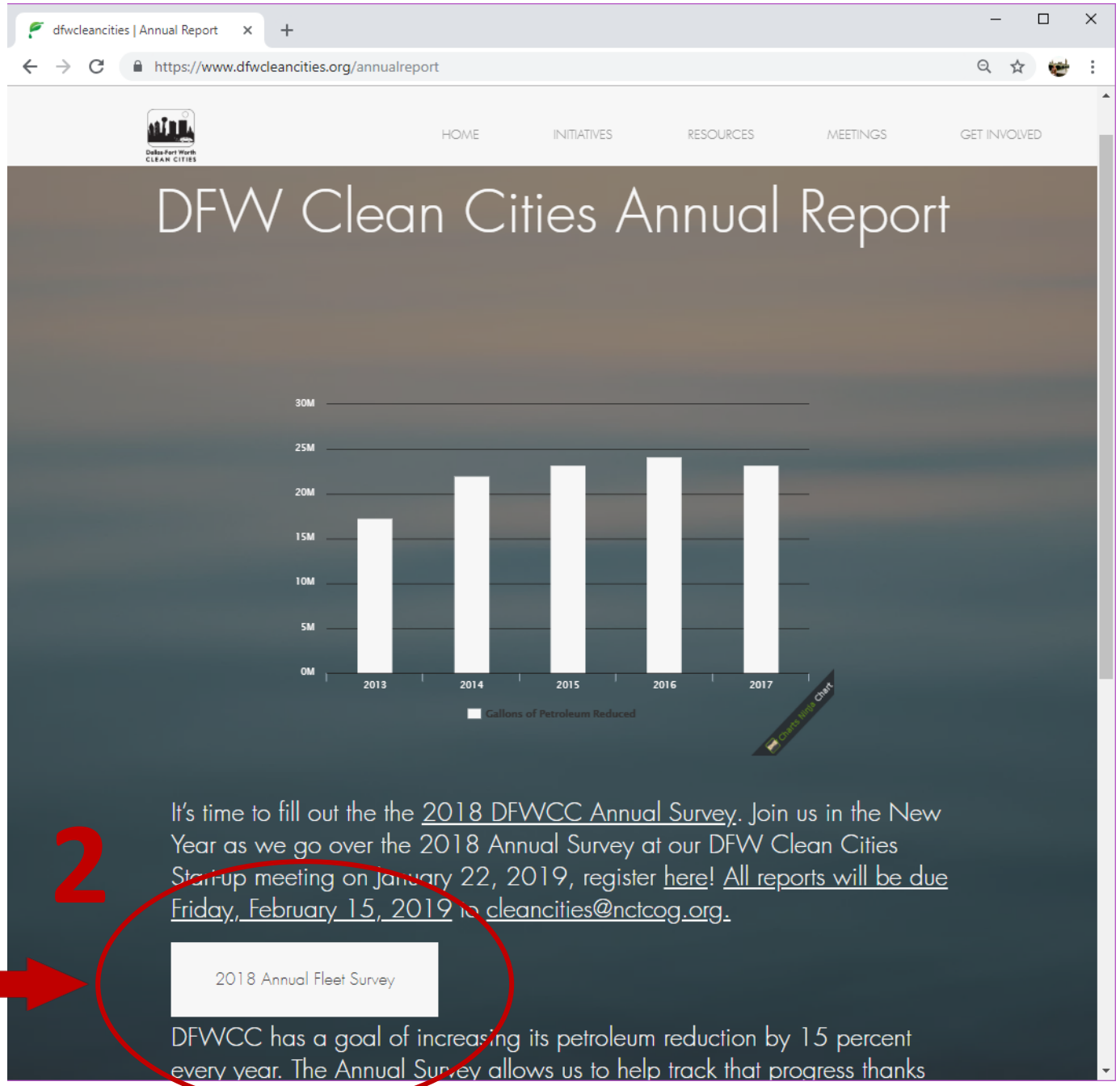
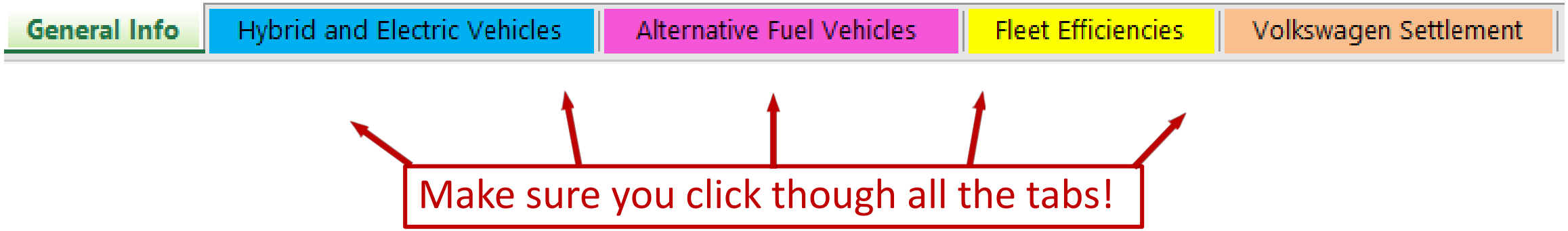


Overview

Survey is broken down into 5 sections/tabs:

- General Information
- Hybrid and Electric Vehicles
- Alternative Fuel Vehicles
- Fleet Efficiencies
- Volkswagen Settlement



General Information

Dallas-Fort Worth CLEAN CITIES

Fleet Annual Survey Form for CY 2018

Contact Information

Organization Name: City of Greenway

Clean Fleet Policy Adoptee?*: ☑ Yes ☐ No

Contact Person:

Email:

Phone: 817-XXX-XXX

Contact Person 2:

Email:

Phone:

*In order to be considered for fleet recognition, your fleet must have adopted the NCTCOG Clean Fleet Policy.

Visit our website to see if your fleet has adopted the Clean Fleet Policy. For more information, please email Bailey at

How many total vehicles made up your fleet in 2018?

100

What was your fleet's greatest accomplishment in 2018?

Did your fleet become cleaner and greener in 2018? Tell us what you're most proud of!

Acquired 4 new EV charging stations and 2 new CNG fueling stations. Reduced our average number of minutes of vehicle idling from 8 to 4 minutes by utilizing automatic engine shut-off on CNG vehicles.

Please Note:

- You must adopt the Clean Fleet Policy to be considered in the recognition process

Additions:

- Total Fleet Vehicles

Gives us a better understanding of the total composition of your fleet

General Information

Fueling Stations

Did your fleet install any new alternative fueling stations in 2018?

Note: Please enter the number of stations, rather than dispensers or nozzles.

	Total Public	Public Installed in 2018	Total Private	Private Installed in 2018
CNG	3	2	0	0
Biodiesel	0	0	0	0
E85 Ethanol	0	0	0	0
LPG	0	0	1	0
LNG	1	0	0	0
RNG	0	0	0	0
Renewable Diesel	0	0	0	0

Electric Vehicle Supply Equipment

Did your fleet install any new EV chargers in 2018?

Note: Please enter the total number of outlets, which may be greater than the number of stations.

	Total Public	Public Installed in 2018	Total Private	Private Installed in 2018
Level 1	8	4	2	0
Level 2	5	0	2	0
DC Fast Charge	1	0	1	0

DFWCC Participation

Did you attend any DFWCC sponsored event/webinar in 2018?

☑ Yes ☐ No

Did you present/speak at any DFWCC sponsored event/webinar in 2018?

☑ Yes ☐ No

If recognized in this year's Fleet Awards, specify the number of recognition decals for your fleet.

65

Fueling Stations

Enables us to track the progress of where certain alternative fueling infrastructure is located throughout the region

EVSE

Enables us to track progress of fleets and verify charging stations in the region

Additions:

- Total Public, Total Private
- Installed in 2018

Additions: Amount of fleet decals requested if awarded

Hybrid and Electric Vehicles

Additions: Record the Fuel Economy of the conventional vehicle replaced - if you do not know this number, look it up on https://www.fueleconomy.gov/

Please use the rows below to enter each type of electric, hybrid electric, or plug-in hybrid electric vehicle that your fleet operated in 2018. Select Type of Electric Vehicle, Vehicle Class, and then Vehicle Type from the dropdown menus.
Note: You must select Vehicle Class before selecting Vehicle Type.
Note: If you wish to change Vehicle Class after selecting a Vehicle Type, you must first delete your Vehicle Type selection in that row.
Lookup the fuel economy of the conventional vehicle replaced here: fueleconomy.gov

Dallas-Fort Worth CLEAN CITIES

Type of Electric Vehicle	Vehicle Class *Light duty is < 10,000 lbs GVRW*	Vehicle Type	If Vehicle Type = *Other*, please describe	Number of Electric Vehicles	Total Vehicle Miles Driven in 2018	Total kWh Consumed per Vehicle in 2018	Fuel Economy of Conventional Vehicle Replaced (MPG) *	Average MPG or MPGE *Hybrid or PHEV only*
Battery Electric	Light Duty	Car		3	8,800		21	
Plug-in Hybrid	Light Duty	Car		11	45,000		20	36
Conventional Hybrid	Light Duty	Pickup/SUV/Van		9	5,800		16	28

- Be sure to record the total number of vehicle miles driven in 2018 **OR** the total kWh consumed per vehicle - you do not need to fill out both but must fill out one or the other!

Alternative Fuel Vehicles

Additions: Record the total miles driven per vehicle in 2018 **AND** the total fuel consumed per vehicle in 2018

Please use the rows below to enter each type of alternative fuel vehicle that your fleet operated in 2018.
Select the Alternative Fuel, Vehicle Class, and then Vehicle Type from the dropdown menus.
Note: Blend % applies to Biodiesel or Renewable Diesel only.
Note: Totals, Fuel Units and Average MPG/MPGe columns are populated automatically.

Dallas-Fort Worth CLEAN CITIES

Alternative Fuel	Blend %	Vehicle Class *Light Duty is < 10,000 lbs GVWR*	Vehicle Type	If Vehicle Type = *Other*, please describe	Number of Vehicles	Total Miles Driven per Vehicle in 2018 (or hours of use for off-road)	Total Fuel Consumed per Vehicle in 2018	Percentage of Time Using Biofuel (%)	Fuel Units	Average MPG or MPGe
Biodiesel (B10 or higher blend)	20	Heavy Duty	Truck: No Trailer		16	2,303	477	75	Gallons	4.83
CNG - Compressed Natural Gas		Light Duty	Pickup/SUV/Van		10	7,800	550		GGEs	14.18
CNG - Compressed Natural Gas		Heavy Duty	Truck: Refuse		8	4,352	3,800		GGEs	1.15
E85 - 85% Ethanol		Light Duty	Patrol Car		29	12,063	935	100	Gallons	12.90
LPG - Propane		Off Road	Construction Equipment		1		450		Gallons	

- Additional vehicle types (i.e. construction equipment etc.) added for each vehicle class

- All biofuels (biodiesel, E85, renewable diesel, and RNG) require a percentage of time used

Vehicle Efficiencies

Additions:

- Everything highlighted in red must be filled out in order to receive full consideration for points in each category
- However, neglecting to fill out un-highlighted sections may also result in point deductions

What we're looking for:

- Complete sections with accurate descriptions (please be as descriptive as possible)

Did your fleet employ any of the following fuel efficiency measures in 2018? If so, please enter as much of the requested information as possible.
Note: We may follow up by phone for additional information.
**Must fill out these fields in order to receive points*

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Telematics

For what type of vehicles were telematics used? ☑ Light-duty ☑ Medium- or heavy-duty

Total number of vehicles:	8	**Type(s) of vehicles:**	Refuse
Average mileage per vehicle per year:	4,352	miles	
Average MPG before telematics:	3.25	MPG	
Average MPG after telematics:	4.00	MPG	
Describe Telematics Used:	Trimble GPS on Refuse Trucks; EJ Ward GPS on Light-duty		

Fuel Economy Improvements

☐ Low rolling resistance tires	☐ Auto air tire inflation	
☑ Cylinder deactivation	☐ Trailer Aerodynamic packages	☑ Vehicle - smaller
☑ Lightweight materials	☐ Vehicle: hydraulic hybrid	☑ Vehicle- more efficient

Total number of vehicles:	10	**Type(s) of vehicles:**	SUVs/Vans
Average mileage per vehicle per year:	7,800	miles	
Average MPG before efficient tires:	13.00	MPG	
Average MPG after efficient tires:	14.18	MPG	
Describe all methods used for fuel economy improvements:	No Idle Policy--No drive-through for meals or banks--must park shut off and go inside--monitor average fuel usage through Fuel System program--if fuel usage average goes up from previous year we questions what the vehicle is being utilized for. The same usage brings into question idle		

Vehicle Efficiencies

Vehicle Miles Traveled (VMT) Reductions

- [x] Carpooling
- [ ] Telecommute
- [ ] Bike/Walk
- [x] Route Optimization
- [ ] Car Sharing (Zip Car)
- [ ] Mass Transit

Total number of vehicles: 87 **Type(s) of vehicles:** All

VMT Reduction per Vehicle (avg miles saved per vehicle): 10 miles

Fuel Type (diesel or gasoline): Both

Describe all methods used for VMT reduction: By utilizing telematics in the vehicles we are able to ensure vehicles are being driven as they should be and not going the "long way" when going from jobsite to jobsite. This is done at a department level. 10 miles is an estimated annual average savings per vehicle.

Idle Reduction

- [ ] Auxiliary power unit (APU)
- [x] Automatic engine shut-off
- [ ] Driver Training
- [x] Idle Reduction Policy

Total number of vehicles: 87 **Type(s) of vehicles:** All

Average minutes of idling reduced per vehicle per day: 5 minutes

Average days per year that idling is reduced: 365 days

Is Idle Reduction signage in place? [x] Yes [ ] No

Describe any Idle Reduction Policy exceptions allowed: Emergency Vehicles only

Describe all idle reduction methods used: Monthly reports to Directors of all Waste Idle alerts, Speed alerts, Hard braking or acceleration alerts. The Executive team then discusses and takes appropriate action at the department level. We have 4 larger trucks

Volkswagen Settlement

Eligible Mitigation Action 1

Light-Duty Zero Emission Vehicle Supply Equipment

Actions	Eligibility	Funding Percentages, Non-Government	Funding Percentages, Government
Electric Vehicle Supply Equipment	N/A	50%	50%
Hydrogen Vehicle Supply Equipment	N/A	25% - 33%	25% - 33%

Interest in Projects in this Category?

☐ Yes ☐ No

How Many Potential Sites?

Please note:

- Since the Texas Commission on Environmental Quality (TCEQ) released the Mitigation Plan, funding percentages have shifted and small changes have been made

Dallas-Fort Worth
CLEAN CITIES

Surveys due Friday February 15 to cleancities@nctcog.org

VOLKSWAGEN SETTLEMENT
–
MITIGATION PLAN OVERVIEW

DFW Clean Cities Bi-Annual Meeting
January 22, 2019

Nancy Luong
Air Quality Planner

Dallas-Fort Worth
CLEAN CITIES

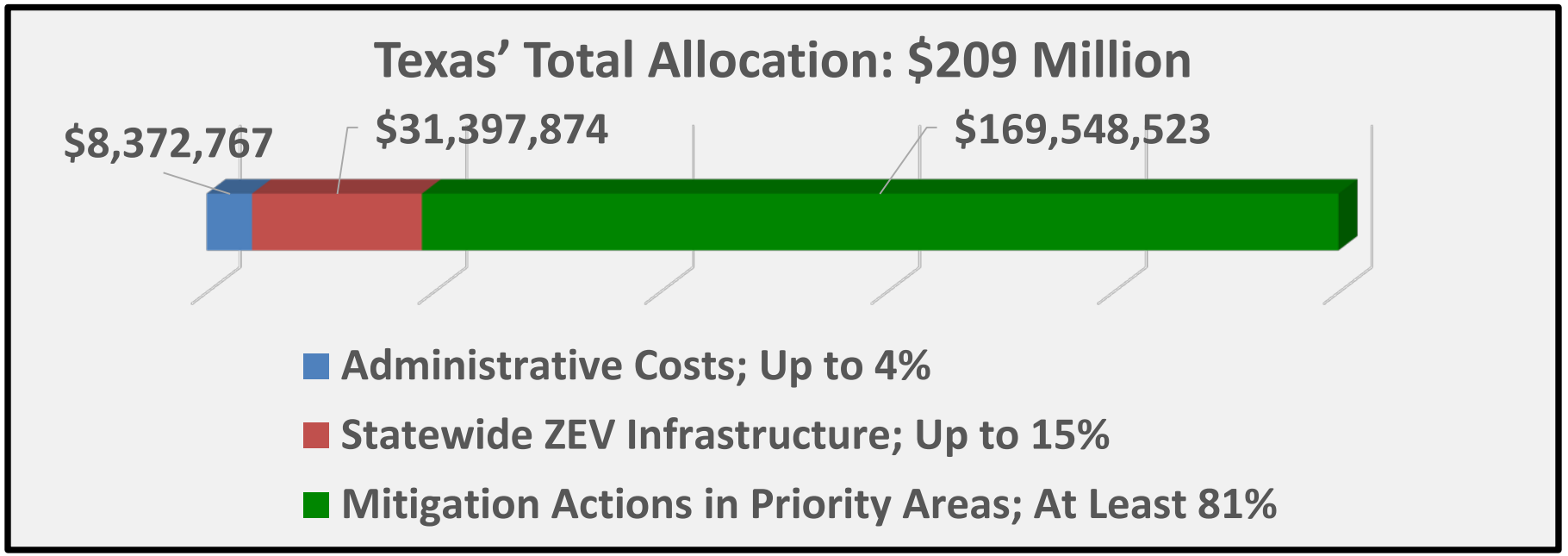
North Central Texas
Council of Governments

VOLKSWAGEN ENVIRONMENTAL MITIGATION TRUST - TEXAS

www.TexasVWFund.org

Texas Commission on Environmental Quality (TCEQ) Goals

1. **Reduce Nitrogen Oxides (NO_X) Emissions**
2. **Reduce the Potential for Exposure of the Public to Pollutants**
3. **Prepare for Increased and Sustained Use of Zero Emission Vehicles (ZEV)**
4. **Complement Other Incentive Funding Programs**



ELIGIBLE PROJECTS AND INCENTIVE LEVELS – $169.5 MILLION

Project Type	Ownership	New Fuel Type	Funding Levels Allowed by Trust[1]	Draft Funding Level Proposed by TCEQ[1]	Final Funding Level for Texas[1]
Every Project Type	Govt Owned	Any	100%	60%	80%
Replace On-Road Vehicles	Non-Govt Owned	Electric	75%	60%	50%
		Other	25%[2]	25%[2]	25%[2]
Repower On-Road Vehicles	Non-Govt Owned	Electric	75%	60%	50%
		Other	40%	40%	40%
Replace/Repower Airport Ground Support Equipment	Non-Govt Owned	Electric	75%	60%	50%
Replace/Repower Forklifts or Port Cargo-Handing Equipment	Non-Govt Owned	Electric	75%	60%	50%

[1]Maximum Reimbursement Allowed Per Activity; Cost of Necessary Infrastructure for Battery Electric or Fuel Cell Vehicles also Eligible at "Electric" Funding Level
[2]Exception is Drayage Trucks, which Qualify for 50%
Not Shown: Ocean-Going Vessel Shorepower (Not Applicable in DFW Area)

STATEWIDE ZEV INFRASTRUCTURE INCENTIVE LEVELS – $31.4 MILLION

Project Type	Ownership	Fuel Type	Funding Levels Allowed by Trust[1]	Draft Funding Level Proposed by TCEQ[1]	Final Funding Level for Texas[1]
Install Light-Duty ZEV Supply Equipment	Govt Owned	Electric	100%	50%	50%
		Hydrogen	25-33%	25%-33%	25%-33%
	Non-Govt Owned	Electric	60%-80%	50%	50%
		Hydrogen	25%-33%	25%-33%	25%-33%

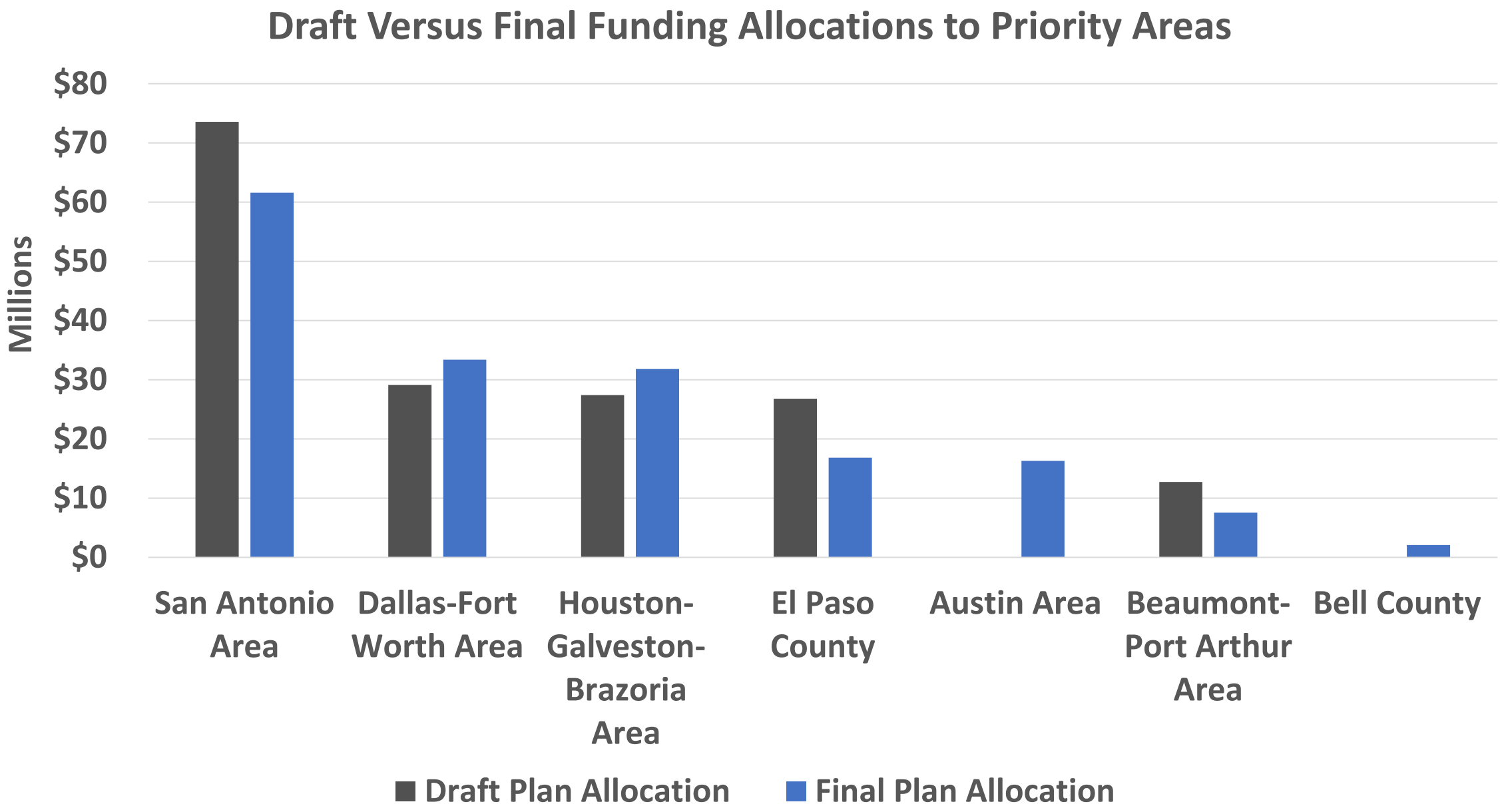
FUNDING DISTRIBUTION AND METHODOLOGY

	33%	15%	33%	81%*
Area	Component 1: Pro-Rata Allocation (% of VW vehicles)	Component 2: Base Funding for Nonattainment Areas	Component 3: Strategic Allocation	Total
Dallas-Fort Worth Area	$22,919,202	$10,465,958	-	$33,385,160
Houston-Galveston-Brazoria Area	$21,360,321	$10,465,958	-	$31,826,279
San Antonio Area	$8,619,558	$10,465,958	$42,500,000	$61,585,516
Austin Area	$11,547,602	-	$4,750,000	$16,297,602
El Paso County	$2,064,031	-	$14,750,000	$16,814,031
Bell County	$1,757,741	-	$325,324	$2,083,065
Beaumont-Port Arthur Area	$806,869	-	$6,750,000	$7,556,869
	$69,075,324	$31,397,874	$69,075,324	$169,548,522

**81% Represents the Amount for Mitigation Actions in Priority Areas*

Source: Final Beneficiary Mitigation Plan for Texas, page 12, Table 2:
https://www.tceq.texas.gov/assets/public/implementation/air/terp/VW/RG_537_VW_Mitigation_Plan.pdf

FUNDING ALLOCATION COMPARISON



VOLKSWAGEN SETTLEMENT
–
HOW TO EVALUATE YOUR FLEET

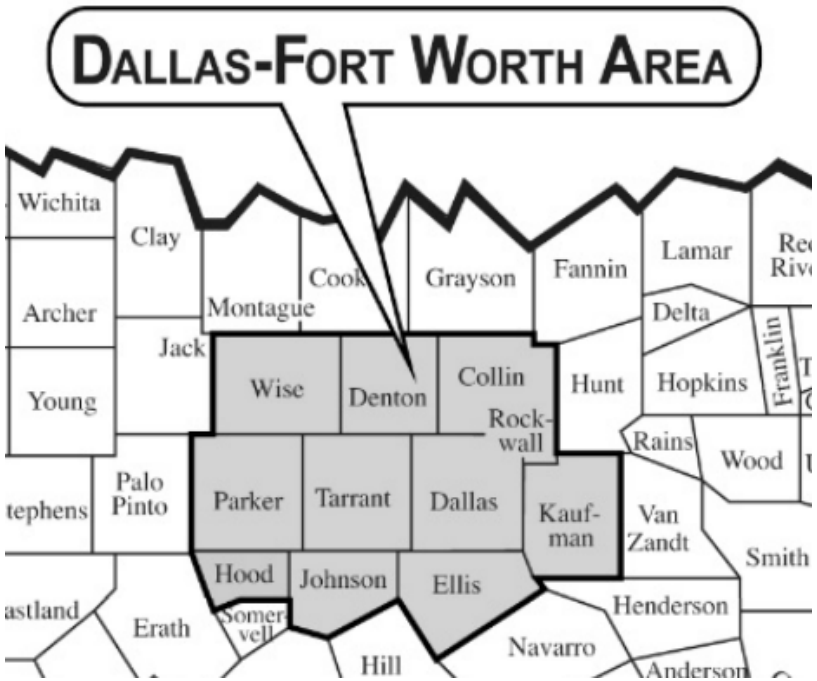
Priority Area Counties:

Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman,

Parker, Rockwall, Tarrant, Wise

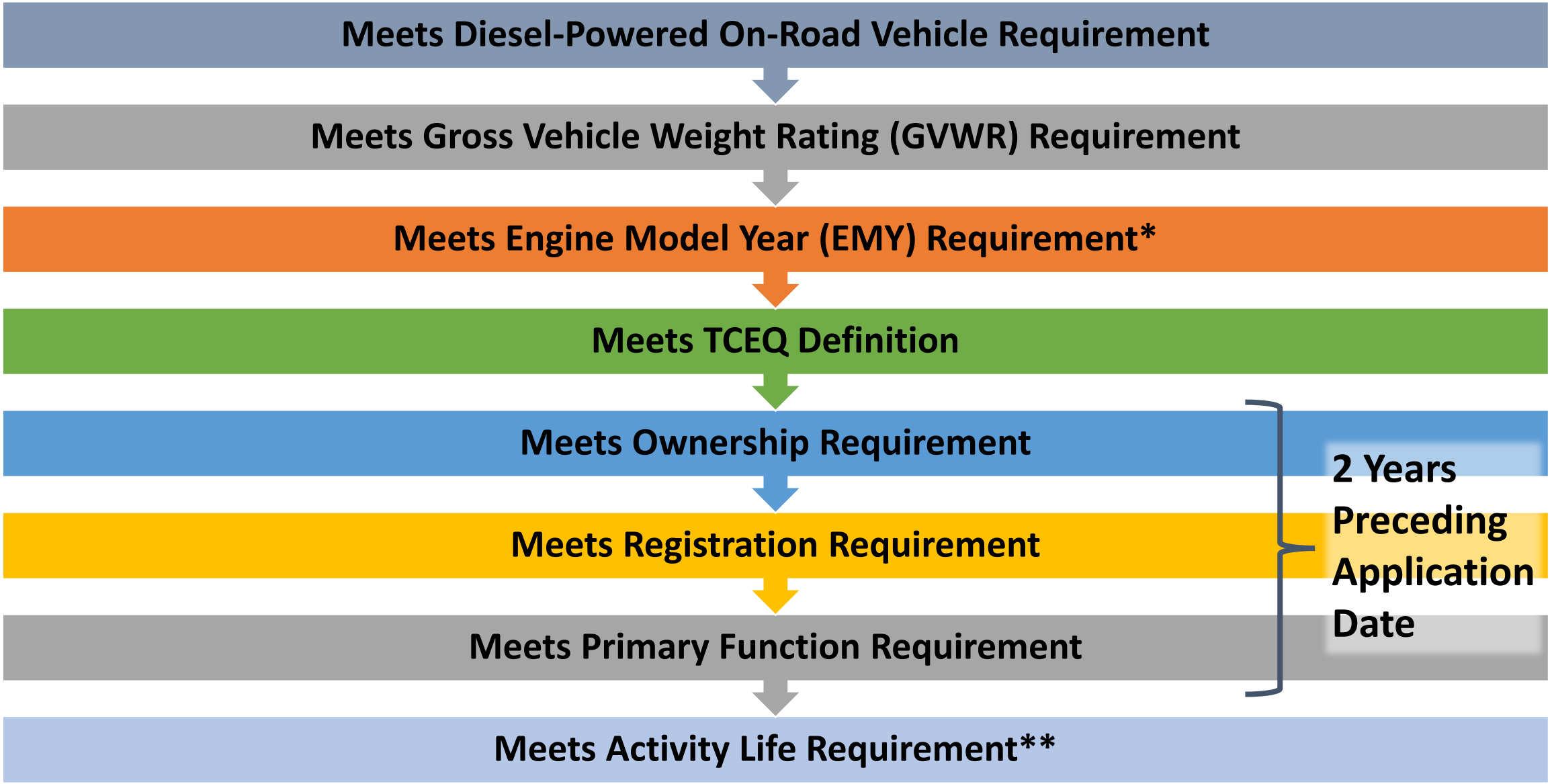
Funding Allocation:

$33,385,160



Source: Final Beneficiary Mitigation Plan for Texas, page 22, Figure A.1:
https://www.tceq.texas.gov/assets/public/implementation/air/terp/VW/RG_537_VW_Mitigation_Plan.pdf

ELIGIBLE MITIGATION ACTIONS CRITERIA – ON-ROAD VEHICLES



*All Eligible Model Years are 1992 – 2009, Except For Buses That Are Model Years Older Than 2009

**Older Vehicle is Capable of Performing Its Function for Next 5 Years From The Application Date

ELIGIBLE MITIGATION ACTIONS CRITERIA – ON-ROAD VEHICLES

Class 4-7 Local Freight Trucks

- GVWR ≥ 14,001 – 33,000 lb
- Trucks, including commercial trucks, used to deliver cargo and freight (e.g., courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, concrete mixers)

Class 8 Local Freight Trucks & Port Drayage Trucks

- GVWR ≥ 33,001 lb
- Trucks used for port drayage and/or freight/cargo delivery (including waste haulers, dump trucks, concrete mixers)

Class 4: 14,001-16,000 lb; Class 5: 16,001-19,500 lb.; Class 6: 19,501-26,000 lb.; Class 7: 26,001-33,000 lb.; Class 8: ≥ 33,001 lb.

ELIGIBLE MITIGATION ACTIONS CRITERIA – ON-ROAD VEHICLES

Class 7-8 Refuse Haulers

- **GVWR ≥ 26,001 lb**
- **Compaction truck or a roll-off truck**

Class 4-8 Transit and Shuttle Buses, and School Buses

- **GVWR ≥ 14,001 lb**
- **Vehicles used for transporting people; or**
- **Bus sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events. The bus may be Type A-D.**

Class 4: 14,001-16,000 lb; Class 5: 16,001-19,500 lb.; Class 6: 19,501-26,000 lb.; Class 7: 26,001-33,000 lb.; Class 8: ≥ 33,001 lb.

ELIGIBLE MITIGATION ACTIONS CRITERIA – OTHER

Electric Airport Ground Support Equipment

- **Tier 0, 1, or 2 diesel engines, or spark-ignition engines that are uncertified or certified to 3.0 g/bhp-hr of nitrogen oxides (NO_X) or greater**

Electric Forklifts and Port Cargo Handling Equipment*

- **Tier 0, 1, or 2 diesel engines, or spark-ignition engines that are uncertified or certified to 3.0 g/bhp-hr of nitrogen oxides (NO_X) or greater**
- **Forklifts with greater than 8,000 pounds lift capacity**

*A Class 8 on-road vehicle with a 1992 - 2009 engine being used as a port yard truck may also be replaced with a purpose-built all-electric on-road or non-road yard truck, including the charging infrastructure associated with the new all-electric engine.

HOW TO EVALUATE YOUR FLEET
–
TERP AND OTHER FUNDING OPPORTUNITIES

<u>Texas Emissions Reduction Plan (TERP) Programs</u>:

- **Texas Natural Gas Vehicle Grant Program**
- **Texas Clean Fleet Program**
- **Seaport and Rail Yard Areas Emissions Reduction Program**
- **Light-Duty Motor Vehicle Purchase or Lease Incentive Program**
- **Rebate Grants Program**
- **Emissions Reduction Incentive Grants Program**

<u>Other</u>:

- **NCTCOG Clean Fleets North Texas**
- **EPA Diesel Emissions Reductions Act (DERA) Programs**
- **Propane Council of Texas**

EVALUATION CRITERIA – ON-ROAD VEHICLES

Meets Fuel Requirement, If Any

Meets Gross Vehicle Weight Rating (GVWR) Requirement

Meets Engine Model Year (EMY) Requirement

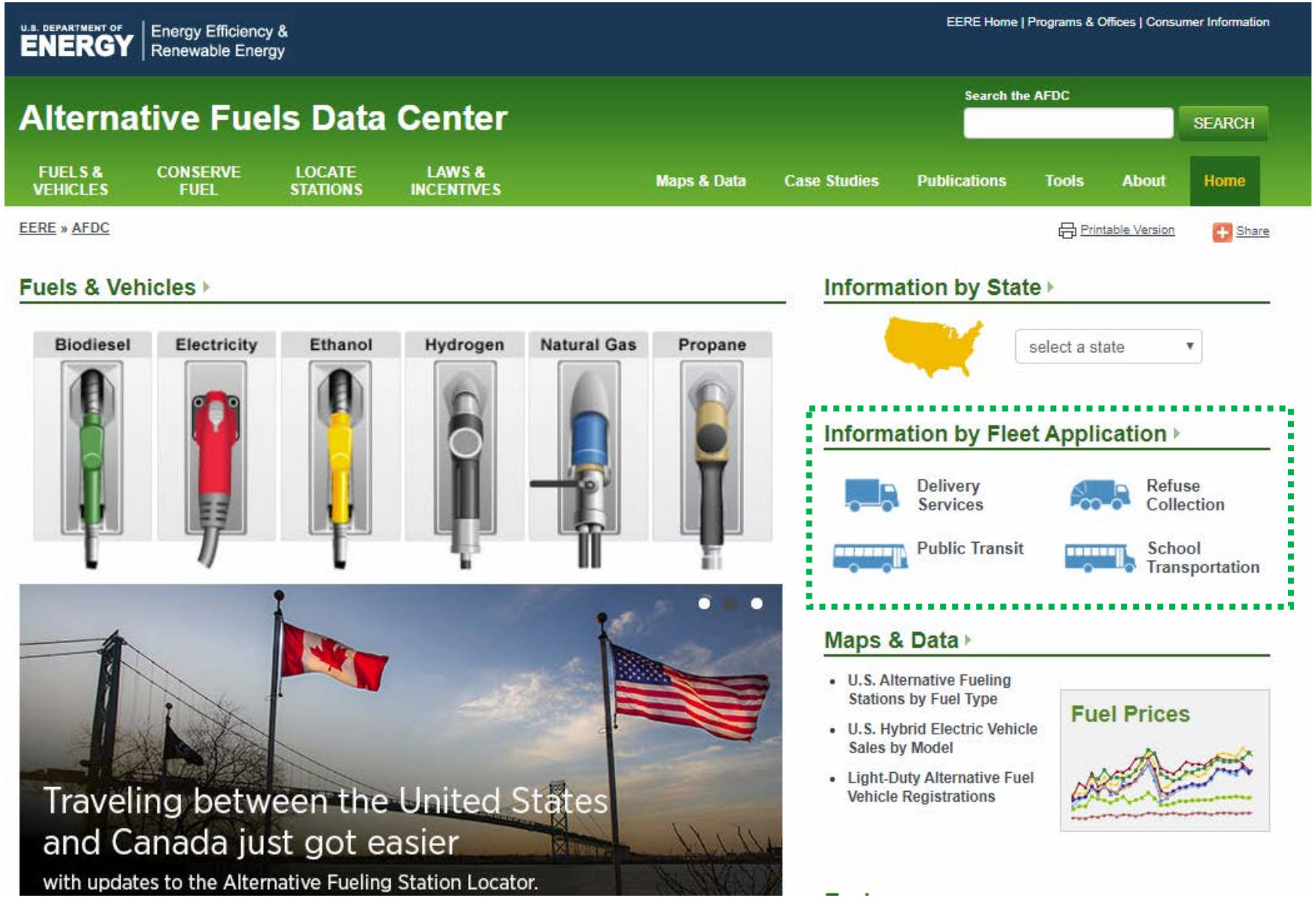
Meets Any Other Grant-Specific Requirements

FLEET EVALUATION EXAMPLE

					Grant Program:	Clean Fleets North Texas	Texas Natural Gas Vehicle Grant Program	Texas Clean Fleet Program	Emissions Reduction Incentive Grants Program	Rebate Grants Program
					Program Status:	Open	Open	Open	Expected to open Spring 2019	Expected to open Spring 2019
					Apply to:	NCTCOG	TCEQ	TCEQ	TCEQ	TCEQ
	Year	Description	Gas or Diesel	GVW	Eligible Project Types:	Replace heavy-duty diesel vehicle	Replace or repower with natural gas or propane	Replace or repower light-duty or heavy-duty diesel vehicles with alternative fuel	Replace, repower, (new) purchase or lease, or retrofit or add-on of emission-reduction technology, heavy-duty vehicle	Replace or repower heavy-duty diesel vehicles Values are based on the maximum rebate grant tables from the FY2018 rounds
88	2005	Ford 1 TON VAN	Gas	9,100			Eligible		Eligible	
89	2005	Ford 1 TON VAN	Gas	9,100			Eligible		Eligible	
90	2005	Ford 1 TON VAN PASS	Gas	9,100			Eligible		Eligible	
91	2005	Ford 1 TON VAN PASS	Gas	9,100			Eligible		Eligible	
92	2005	Ford 1 TON VAN	Gas	9,100			Eligible		Eligible	
93	2005	Ford 1 TON VAN	Gas	9,100			Eligible		Eligible	
94	2004	Ford 450 Step Van	Gas	14,200			Eligible		Eligible	
95	2002	Ford 1 Ton Van	Gas	9,600			Eligible		Eligible	
96	2002	Ford 1 Ton Pick Up	Gas	9,000			Eligible		Eligible	
97	2004	FORD 750 BUCKER Truck	Diesel	33,000		Eligible 45% Cost if New is Electric 35% Cost if New is Powered by Engine Certified to CARB Optional Low-NOx Standards (Both Natural Gas and Propane Engines Currently Available) 25% Cost for All Others	Eligible	Eligible	Eligible	Eligible 5-Year Activity Life: $6,286 7-Year Activity Life: $7,809
98	2004	FORD 550 BUCKER Truck	Diesel	19,000		Eligible 45% Cost if New is Electric 35% Cost if New is Powered by Engine Certified to CARB Optional Low-NOx Standards (Both Natural Gas and Propane Engines Currently Available) 25% Cost for All Others	Eligible	Eligible	Eligible	Eligible 5-Year Activity Life: $5,087 7-Year Activity Life: $7,122
99	2000	CHEVY 1 TON CHASS BED	Gas	10,100			Eligible		Eligible	

ALTERNATIVE FUELS DATA CENTER (AFDC)

https://afdc.energy.gov/



AFDC - FLEET APPLICATION TOOL

Fleet Application Data and Information


Delivery Services


Refuse Collection


Public Transit


School Transportation

Fleet Application for Delivery Services Vehicles

Find transportation data and information about the delivery services vehicle application. Fleets in niche markets operate vehicles designed to serve specific functions, which makes these vehicles ideal for the adoption of alternative fuels and advanced vehicle technologies.

Vehicle Availability

SEARCH ALL VEHICLES

41 vehicles

- 8 Biodiesel (B20)
- 7 CNG - Compressed Natural Gas
- 7 Electric
- 14 Ethanol (E85)
- 1 Hybrid Electric
- 1 Hydrogen Fuel Cell
- 4 Plug-in Hybrid Electric
- 6 Propane


BYD Step Van
Electric


Chanje V8100 Panel Van
Electric


Chevrolet Express 2500
Ethanol (E85)

AFDC - FLEET APPLICATION TOOL

Fleet Application Data and Information

Delivery Services | Refuse Collection | Public Transit | School Transportation

Fleet Application for Refuse Collection Vehicles

Find transportation data and information about the refuse collection vehicle application. Fleets in niche markets operate vehicles designed to serve specific functions, which makes these vehicles ideal for the adoption of alternative fuels and advanced vehicle technologies.

Vehicle Availability

SEARCH ALL VEHICLES

14 vehicles

- 13 CNG - Compressed Natural Gas
- 1 Electric
- 9 LNG - Liquified Natural Gas

Autocar ACX-Xpeditor

- CNG - Compressed Natural Gas
- LNG - Liquified Natural Gas

BYD All-Electric Quantum Rear Loader

- Electric

Heil Environmental Front Loader: Half/Pack, Half/Pack Freedom

- CNG - Compressed Natural Gas

AFDC - FLEET APPLICATION TOOL

Fleet Application Data and Information

Delivery Services | Refuse Collection | Public Transit | School Transportation

Fleet Application for Public Transit Vehicles

Find transportation data and information about the public transit vehicle application. Fleets in niche markets operate vehicles designed to serve specific functions, which makes these vehicles ideal for the adoption of alternative fuels and advanced vehicle technologies.

Vehicle Availability

SEARCH ALL VEHICLES

40 vehicles

- 11 CNG - Compressed Natural Gas
- 21 Electric
- 10 Hybrid - Diesel Electric
- 2 Hydrogen Fuel Cell
- 3 LNG - Liquified Natural Gas

BYD C10 45ft coach

- Electric

BYD C6 23ft coach

- Electric

BYD C9 40ft coach

- Electric

AFDC - FLEET APPLICATION TOOL

Fleet Application Data and Information

Delivery Services | Refuse Collection | Public Transit | School Transportation

Fleet Application for School Transportation Vehicles

Find transportation data and information about the school transportation vehicle application. Fleets in niche markets operate vehicles designed to serve specific functions, which makes these vehicles ideal for the adoption of alternative fuels and advanced vehicle technologies.

Vehicle Availability

SEARCH ALL VEHICLES

22 vehicles

- 6 CNG - Compressed Natural Gas
- 10 Electric
- 9 Propane

Blue Bird All American RE Electric
- Electric

Blue Bird All American Rear Engine
- CNG - Compressed Natural Gas

Blue Bird Micro Bird 5G Electric
- Electric

FOR MORE INFORMATION

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Dallas-Fort Worth CLEAN CITIES

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Program Manager
DFW Clean Cities Coordinator
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lclark@nctcog.org

North Central Texas Council of Governments

Go To www.dfwcleancities.org; Select “Resources” then “VW Settlement”

Funding Opportunities for On-Road Vehicles

Funding Agency	Program	Status	Eligible Applicants	Eligible Activities	Old Vehicle Criteria*	Eligible Funding Levels
North Central Texas Council of Governments	Clean Fleets North Texas	Open until January 25, 2019	Local governments or private companies that contract with local governments	- Replace heavy-duty vehicles and equipment	**Fuel:** Diesel **Model Year:** 1995 - 2006 (up to 2009 if replacing with electric) **Weight:** 16,000 GVWR and up	**Up to 45%** cost if new is electric **Up to 35%** cost if new is powered by engine certified to CARB optional low-NOx standards (both NG and LPG engines currently available) **Up to 25%** cost for all others
Propane Council of Texas	Propane Council of Texas Incentives	Open	Private fleets, local governments, state fleets, law enforcement, school white fleets, or non-profit fleets	- Purchase new, factory-direct propane; engine OEM and/or aftermarket conversions to propane	**N/A for purchase** **For aftermarket conversion:** **Fuel**: Gasoline **Mileage**: < 40,000 miles on odometer	Up to $7,500 per vehicle or conversion
IC Bus	IC Bus Grant Program	Open	School districts	- Purchase new propane CE Series school buses	N/A	$5,000 per bus
Texas Commission on Environmental Quality	TERP Texas Clean Fleet Program	Open until February 18, 2019	Any entity who owns a fleet of at least 75 vehicles and submit a grant application for at least 10 qualifying vehicles	- Replace diesel powered vehicles with alternative fuel or hybrid vehicles	**Fuel:** Diesel	Up to 80% of the new replacement vehicle or engine minus $1,000 scrap for heavy-duty vehicles and $500 scrap for light-duty vehicles
Environmental Protection Agency	Diesel Emissions Reductions Act (DERA) Clean Diesel Funding Assistance Program	Open until March 6, 2019	Public entities	- Replace or repower heavy-duty vehicles or equipment	**Weight:** Over 16,000 GVWR	**Up to 45%** cost if new vehicle is electric; up to 60% if repower **Up to 35%** cost if new is powered by engine certified to CARB optional low-NOx standards (both NG and LPG engines currently available); up to 50% if repower **Up to 25%** cost for all others; up to 40% if repower
Texas Commission on Environmental Quality	TERP Seaport and Rail Yard Areas Emissions Reduction Program	Open until May 29, 2019	Any entity that can operate the vehicle or equipment operating at least 200 days per year of a defined seaport or rail yard in a nonattainment area	- Replace or repower drayage trucks and cargo handling equipment	**Weight:** Over 26,000 GVWR	Up to 80% of the new replacement vehicle or engine minus $1,000 scrap for replacements and $250 scrap for repowers, capped at $25,000 per ton NOx reduced
Texas Commission on Environmental Quality	TERP Light-Duty Motor Vehicle Purchase or Lease Incentive Program	Open until May 31, 2019	Public or private entities/individuals	- Purchase or lease new light-duty motor vehicle powered by CNG, LPG, or hydrogen fuel cell, or plug-in or plug-in hybrid	N/A	Up to $5,000 for eligible CNG or LPG Up to $2,500 for eligible hydrogen fuel cell or other electric drive (plug-in or plug-in hybrid)
Texas Commission on Environmental Quality	TERP Texas Natural Gas Vehicle Grant Program	Open until May 31, 2019	Public and private entities	- Replace or repower a heavy-duty or medium-duty motor vehicle with a CNG, LNG, or LPG, engine or vehicle	**Fuel:** Diesel or gasoline **Weight:** Over 8,500 GVWR	Up to 90% of the new replacement vehicle or engine minus $1,000 scrap for replacements and $250 scrap for repowers
Texas Commission on Environmental Quality	TERP Rebate Grants Program	Workshop at NCTCOG offices on January 28, 2019, from 10 AM - 12:30 PM Webinar January 31, 2019, email terp@tceq.texas.gov to register	Public or private entities/individuals	- Replace or repower heavy-duty vehicles or equipment	**Fuel:** Diesel **Weight:** Over 8,500 GVWR	Up to 80% of new replacement vehicle or engine minus $1,000 scrap for replacements and $250 scrap for repowers
Texas Commission on Environmental Quality	Volkswagen Environmental Mitigation Trust	Expected Spring 2019	Public or private entities/individuals	- Replace or repower heavy-duty vehicles or equipment	**Fuel:** Diesel **Model Year:** 1992 - 2009 (except for buses which are 2009 and older) **Weight:** Over 14,000 GVWR	For Government Owned: Up to 80% For Private Sector: Up to 50% if electric, up to 40% reimbursement for repower, and up to 25% reimbursement for replacement (50% if drayage)
Texas Commission on Environmental Quality	TERP Emissions Reduction Incentive Grants	Expected Spring 2019	Public or private entities/individuals	- Replace, repower, new purchase or lease, or retrofit or add-on of emission-reduction technology, of heavy-duty vehicles, equipment, locomotives, or marine vessels - Install on-vehicle electrification and idle reduction infrastructure, refueling infrastructure (not diesel or gasoline), on-site electrification and idle reduction infrastructure, or rail relocation and improvement	**Weight:** Over 8,500 GVWR	Up to 80% of the new replacement vehicle or engine minus $1,000 scrap for replacements and $250 scrap for repowers, capped at $17,500 per ton NOx reduced For new purchase or lease, 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
Texas Commission on Environmental Quality	TERP Clean School Bus Program	Closed June 18, 2018	Any school district, charter school, or transportation system provided by a countywide school district	- Replace or retrofit buses	**Fuel:** Diesel **Model Year:** 2007 and older	Up to 75% of the cost of the new replacement vehicle minus $1,000 scrap for replacements
Environmental Protection Agency	DERA School Rebate Program	Closed on November 6, 2018	Regional, state, or tribal agency that has jurisdiction over transportation and air quality, including school districts and municipalities, and private entities that contract with them	- Replace buses	**Fuel:** Diesel **Model Year:** 2006 and older **Weight:** Over 10,000 GVWR	$15,000 for buses between 10,001 - 19,500 GVWR $20,000 for buses with GVWR of 19,501 or higher

For more information and the latest updates, visit www.nctcog.org/aqfunding

California Air Resources Board (CARB); Compressed Natural Gas (CNG); Gross Vehicle Weight Rating (GVWR); Liquefied Natural Gas (LNG); Liquefied Petroleum Gas (LPG); Original Equipment from the Manufacturer (OEM); Texas Emissions Reduction Plan (TERP)

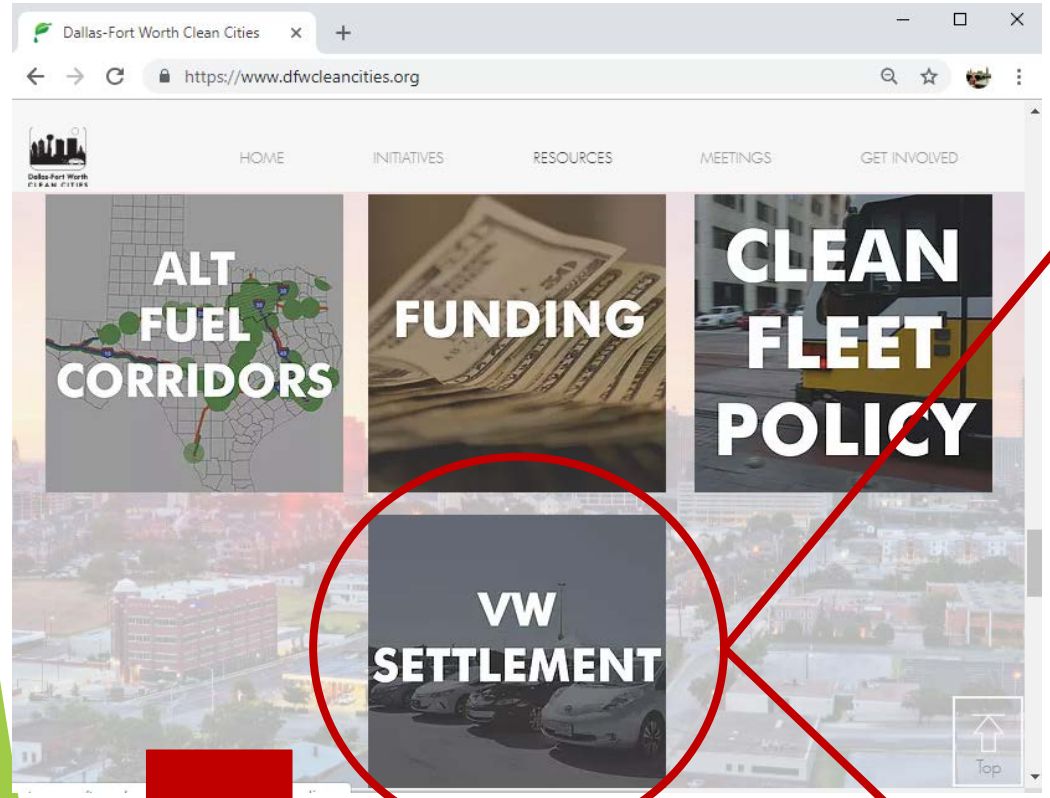
*The criteria presented is not a comprehensive listing, and each program may have additional criteria such as operating hours, a specific counties of operation, vehicle registration limitations, etc.

Alternative Fuel Vehicle Comparisons using the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool

DFW Clean Cities New Year Start-Up Meeting

January 22, 2019

How to Access AFLEET



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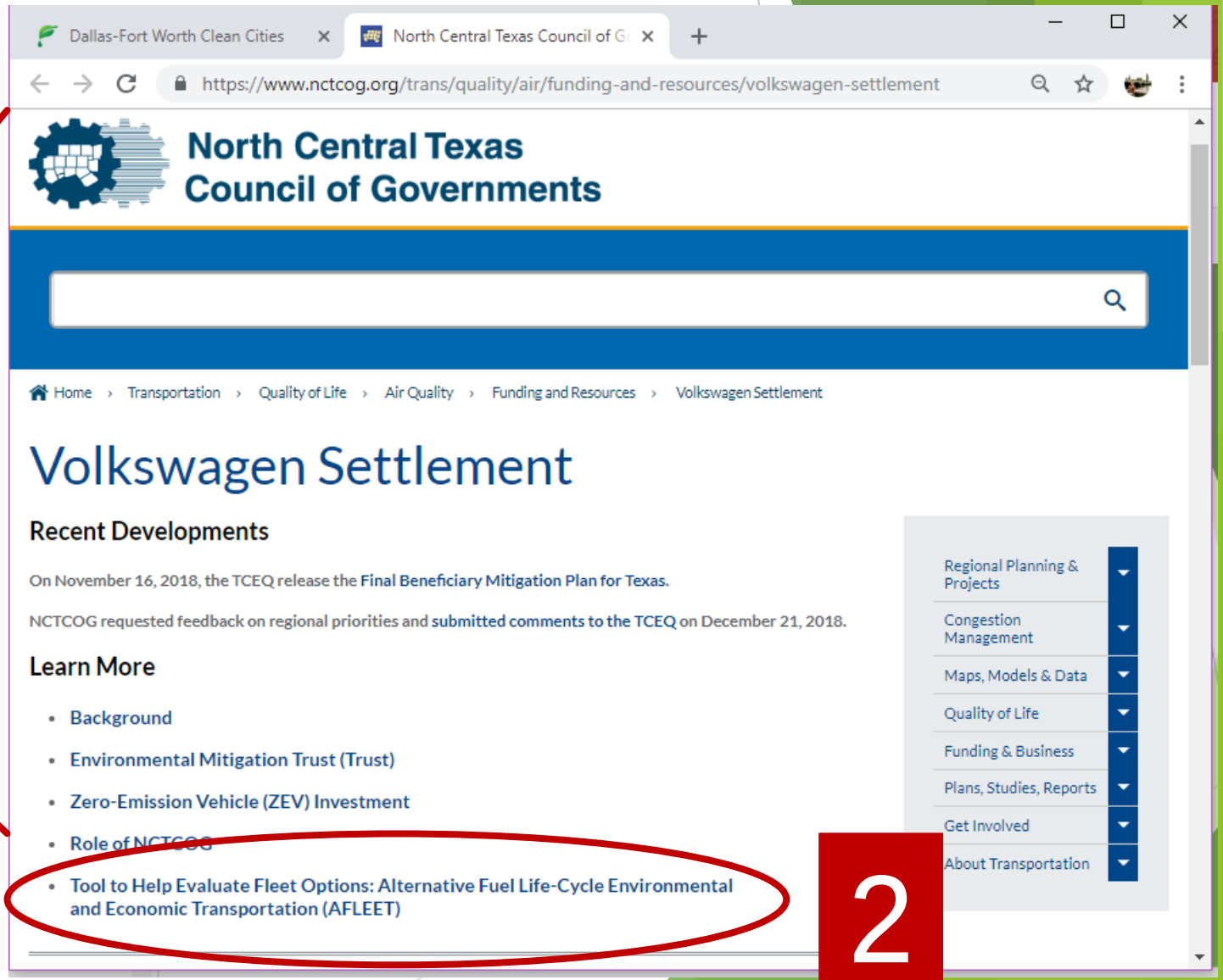
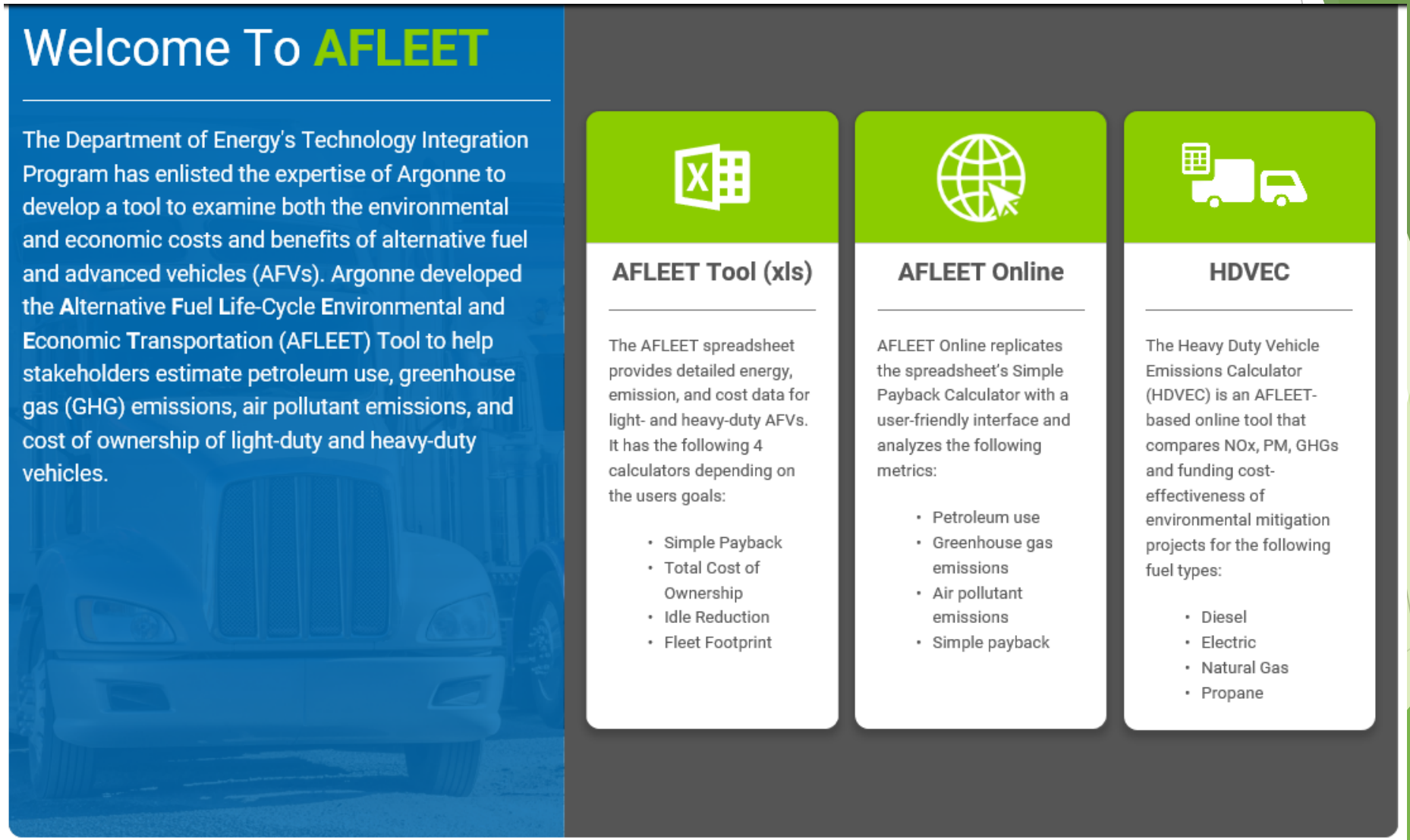
www.dfwcleancities.org



2

Overview of AFLEET



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

Overview of AFLEET

AFLEET Online

- User-friendly, Quick, Online Format
- Simplified Version of the Spreadsheet

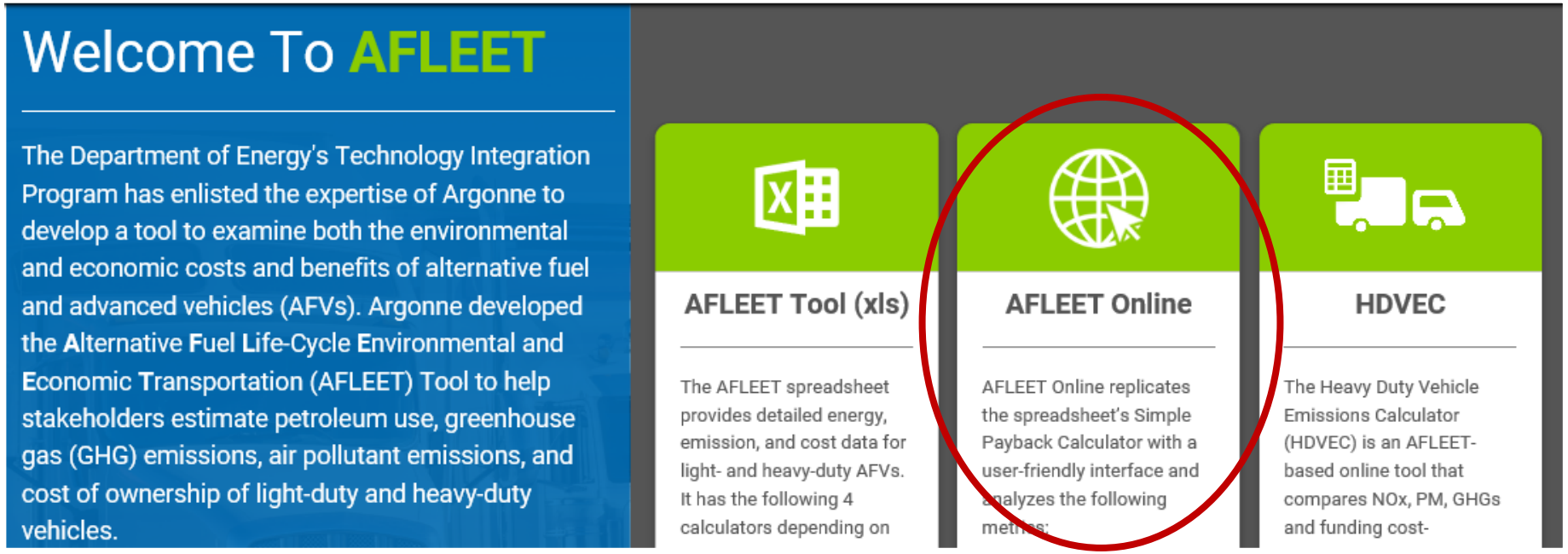
AFLEET Tool Spreadsheet

- More Customizable to Individual Fleets Inputs
- More Detailed and Extensive Data and Outputs

Provides Direct Comparison of Different Fuel Options of Vehicle Types

ALFEET Online

Exercise: Comparing Alternative Fuel Options of Refuse Haulers using AFLEET Online



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

AFLEET TOOL

Argonne NATIONAL LABORATORY

<Back

Select a vehicle type to get started

Passenger Car

Passenger Truck

Light Commercial Truck

School Bus

Transit Bus

Refuse Truck

Single Unit Short-Haul Truck

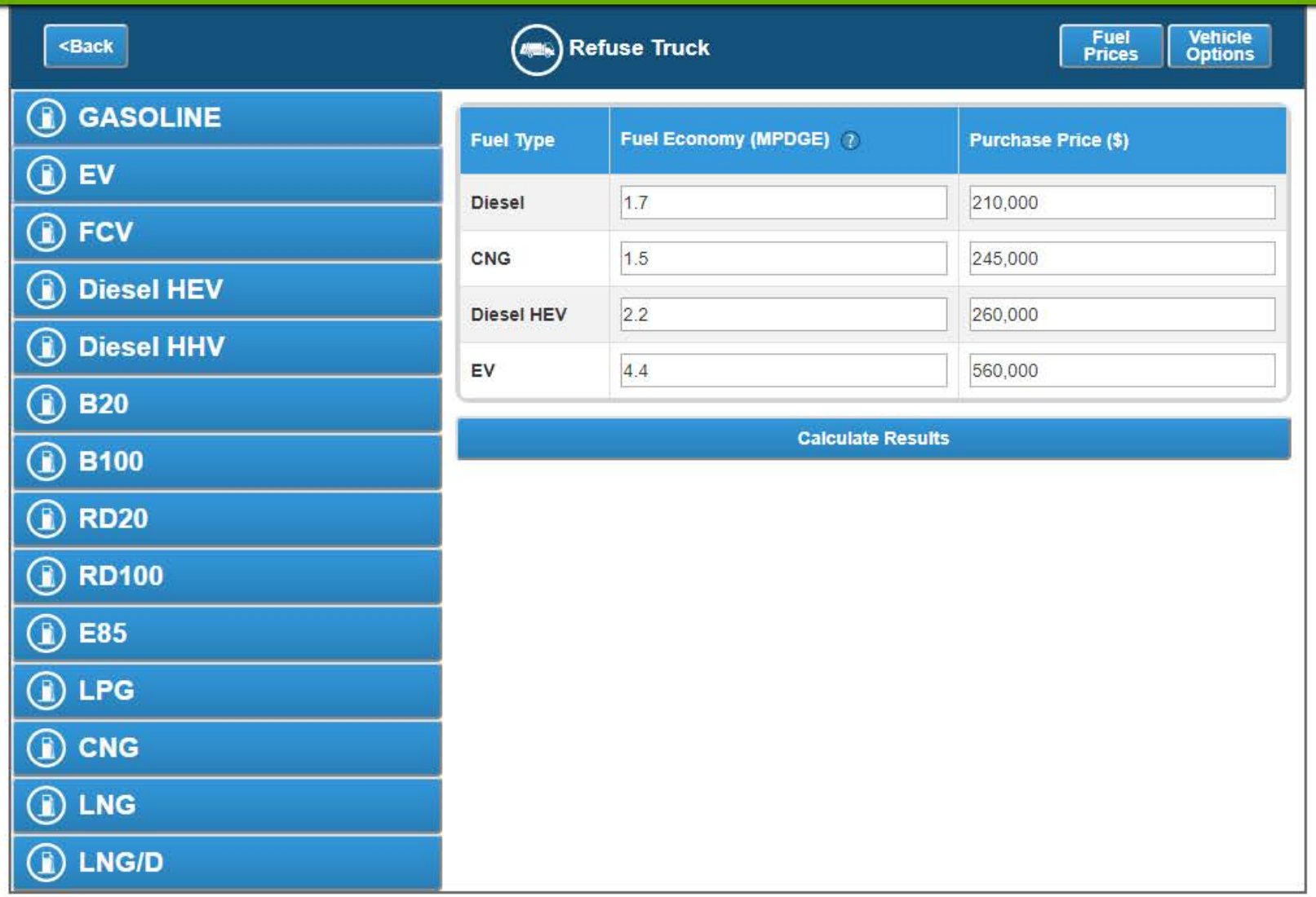
Single Unit Long-Haul Truck

Combination Short-Haul Truck

Combination Long-Haul Truck

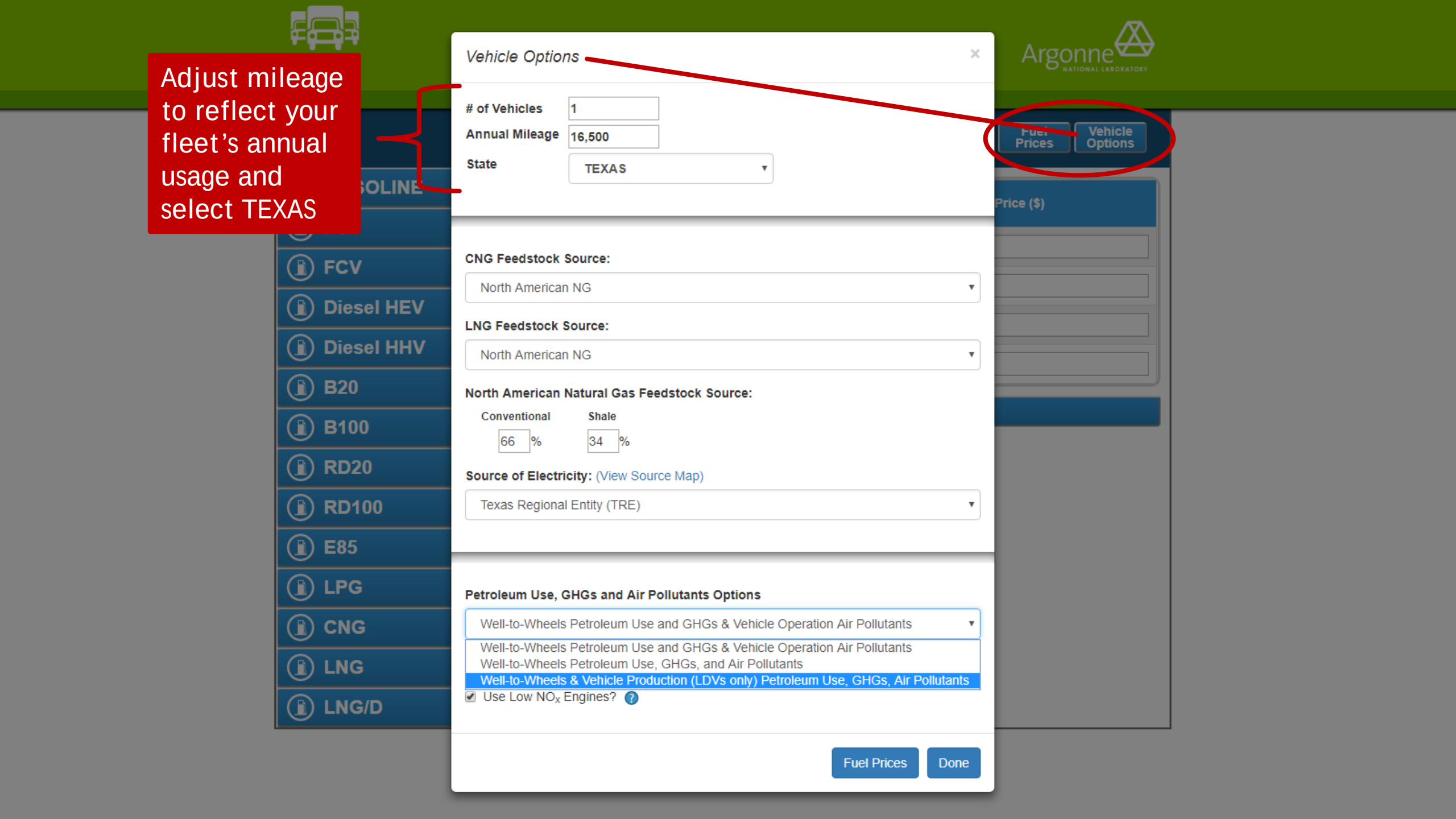
AFLEET TOOL

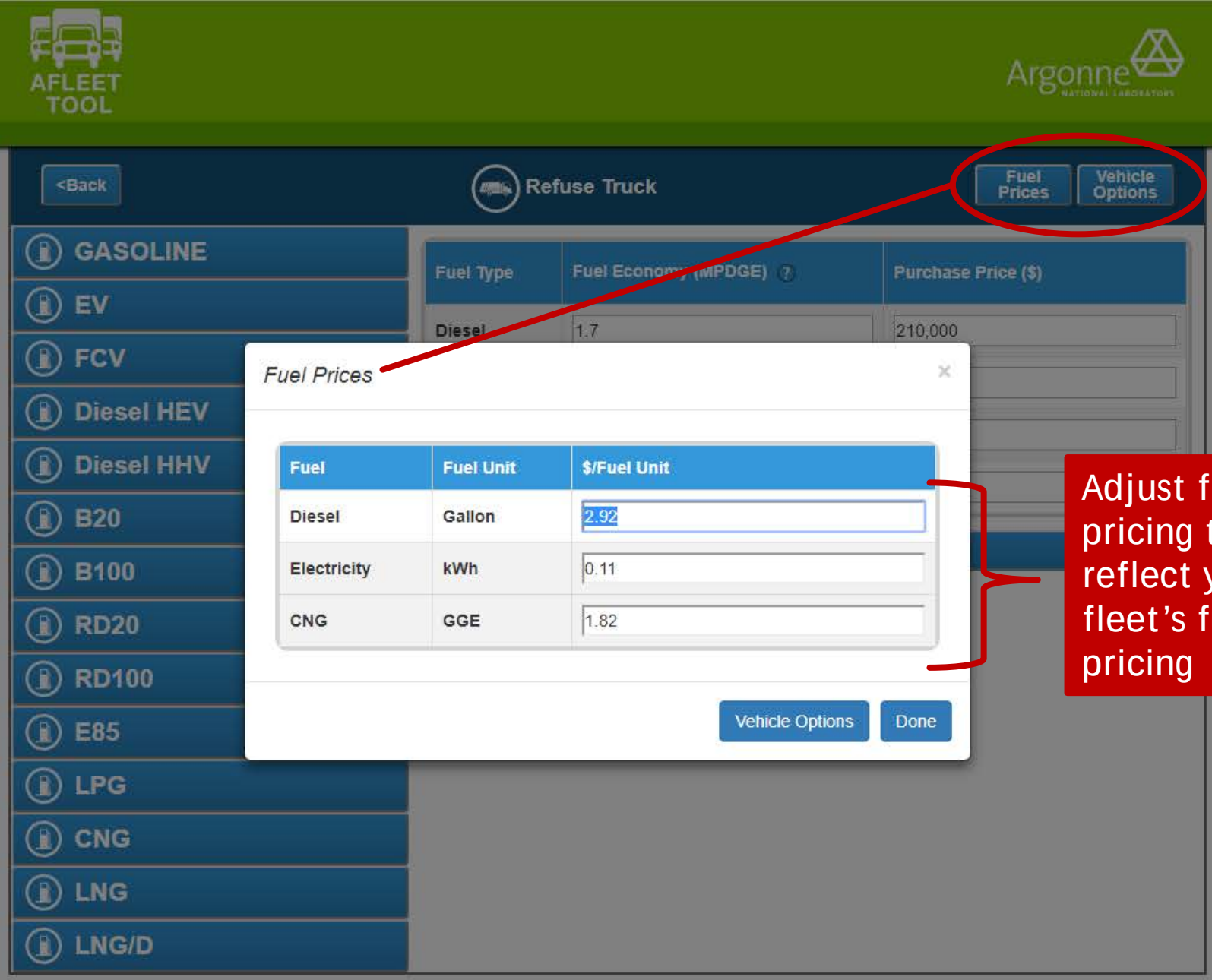
Argonne NATIONAL LABORATORY



Add Fuel Types to Compare

Adjust Purchase Default Prices to Include Funding Opportunities if Desired


Adjust mileage to reflect your fleet's annual usage and select TEXAS
Vehicle Options
# of Vehicles
1
Annual Mileage
16,500
State
TEXAS
Fuel Prices
Vehicle Options
Price ($)
FCV
Diesel HEV
Diesel HHV
B20
B100
RD20
RD100
E85
LPG
CNG
LNG
LNG/D
CNG Feedstock Source:
North American NG
LNG Feedstock Source:
North American NG
North American Natural Gas Feedstock Source:
Conventional
Shale
66 %
34 %
Source of Electricity: (View Source Map)
Texas Regional Entity (TRE)
Petroleum Use, GHGs and Air Pollutants Options
Well-to-Wheels Petroleum Use and GHGs & Vehicle Operation Air Pollutants
Well-to-Wheels Petroleum Use and GHGs & Vehicle Operation Air Pollutants
Well-to-Wheels Petroleum Use, GHGs, and Air Pollutants
Well-to-Wheels & Vehicle Production (LDVs only) Petroleum Use, GHGs, Air Pollutants
Use Low NOx Engines?
Fuel Prices
Done


AFLEET TOOL
Argonne
<Back
Refuse Truck
Fuel Prices
Vehicle Options
GASOLINE
EV
FCV
Diesel HEV
Diesel HHV
B20
B100
RD20
RD100
E85
LPG
CNG
LNG
LNG/D
Fuel Type
Fuel Economy (MPDGE)
Purchase Price ($)
Diesel
1.7
210,000
Fuel Prices
Fuel
Fuel Unit
$/Fuel Unit
Diesel
Gallon
2.92
Electricity
kWh
0.11
CNG
GGE
1.82
Vehicle Options
Done
Adjust fuel pricing to reflect your fleet's fuel pricing

AFLEET TOOL

Argonne NATIONAL LABORATORY

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Refuse Truck

Fuel Prices | Vehicle Options

- GASOLINE
- EV
- FCV
- Diesel HEV
- Diesel HHV
- B20
- B100
- RD20
- RD100
- E85
- LPG
- CNG
- LNG
- LNG/D

Fuel Type	Fuel Economy (MPDGE)	Purchase Price ($)
Diesel	1.7	210,000
CNG	1.5	245,000
Diesel HEV	2.2	260,000
EV	4.4	560,000

Calculate Results

AFLEET TOOL

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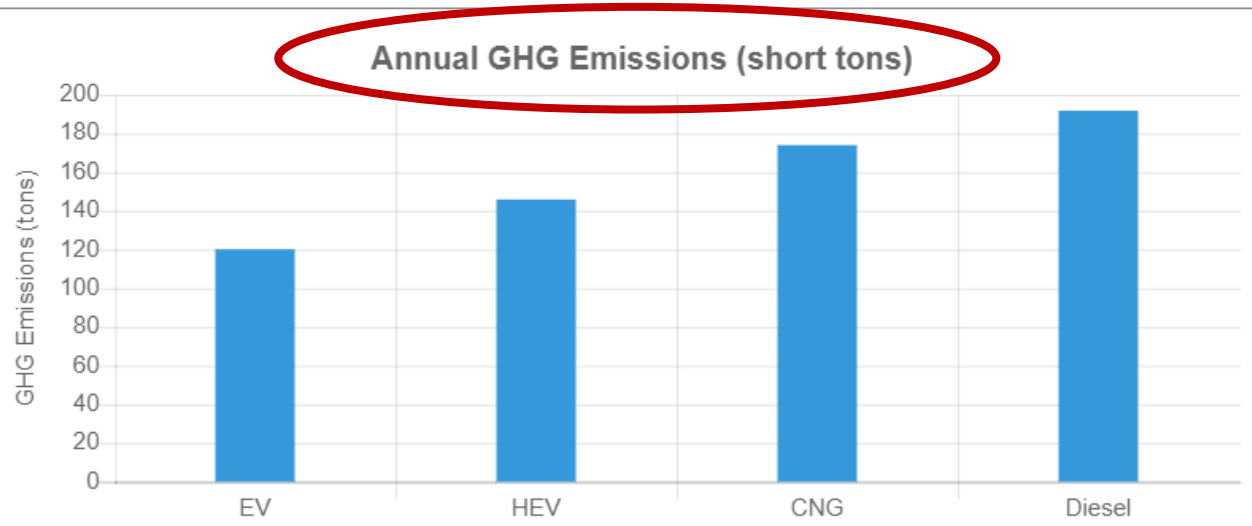
Different Graph Outputs from Your Data

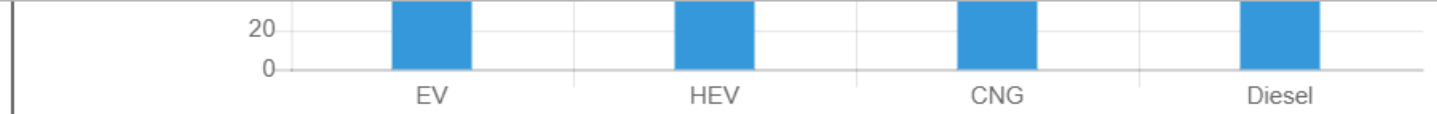
<Back

Refuse Truck

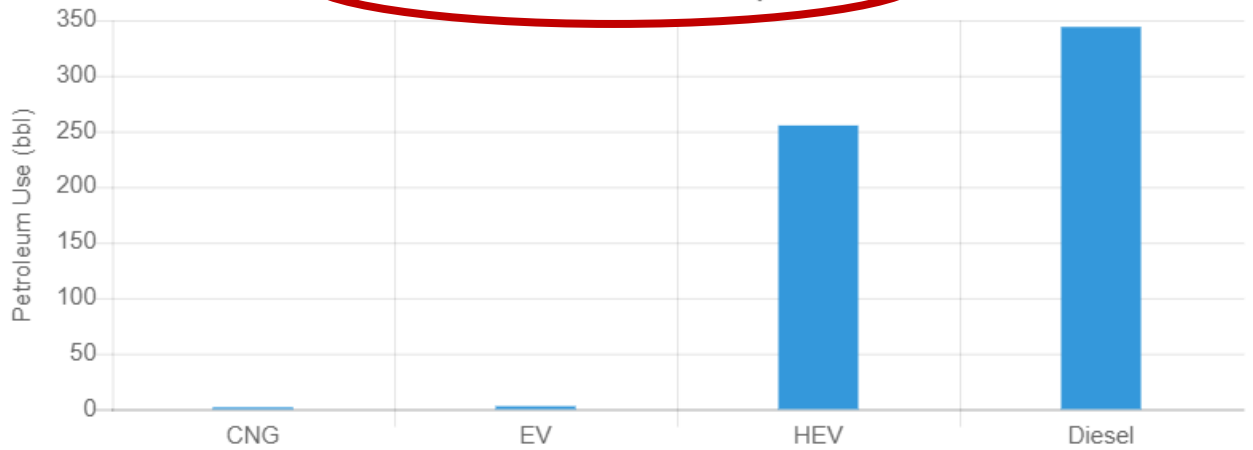
Sort By: Low to High



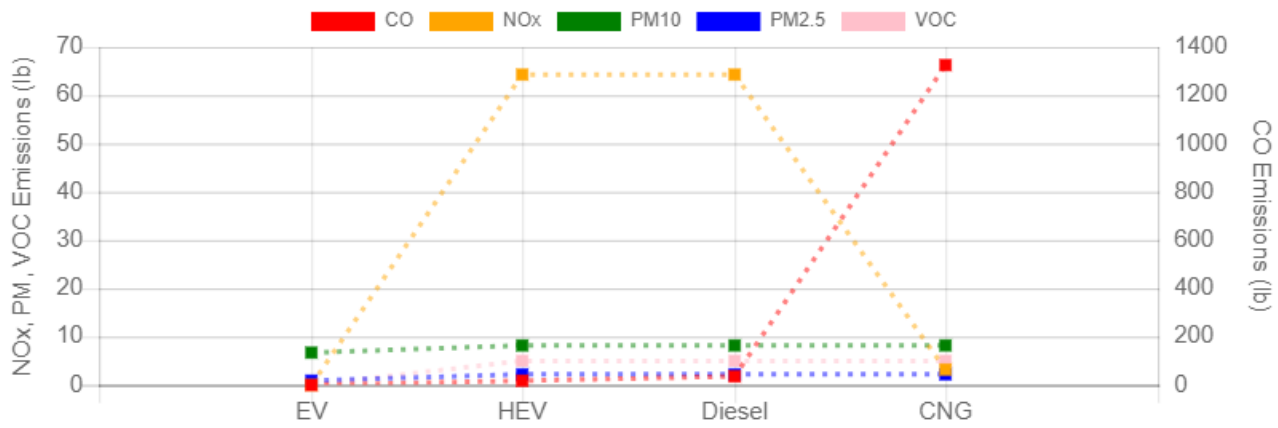
Annual Petroleum Use (barrels)



Annual Petroleum Use (barrels)



Annual Air Pollutants (pounds)



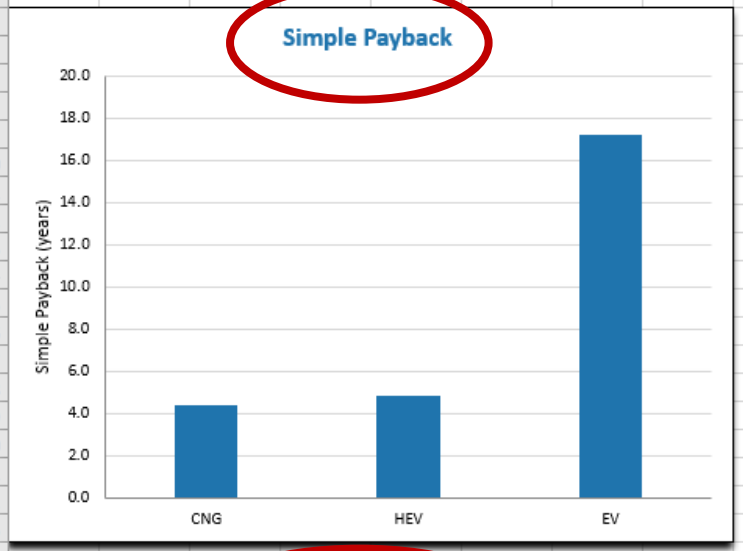
[No Title]

Save And Export Results

Save and export the results to Excel

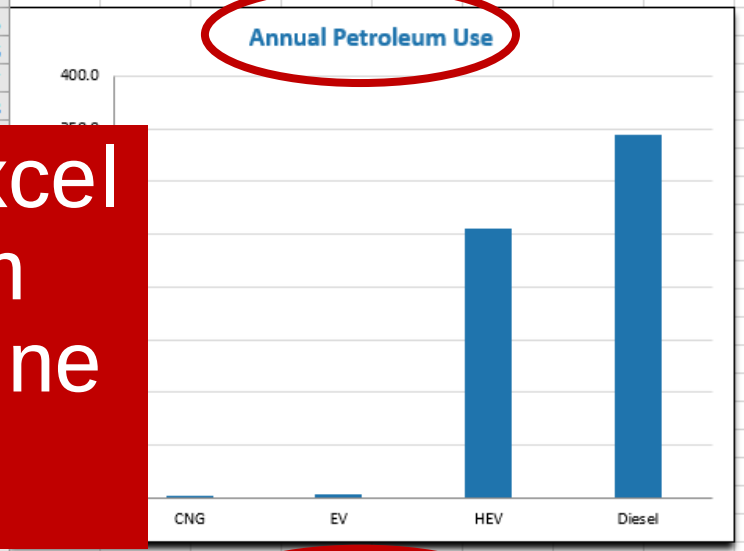
Exported Excel Results from AFLEET Online Tool

Simple Payback



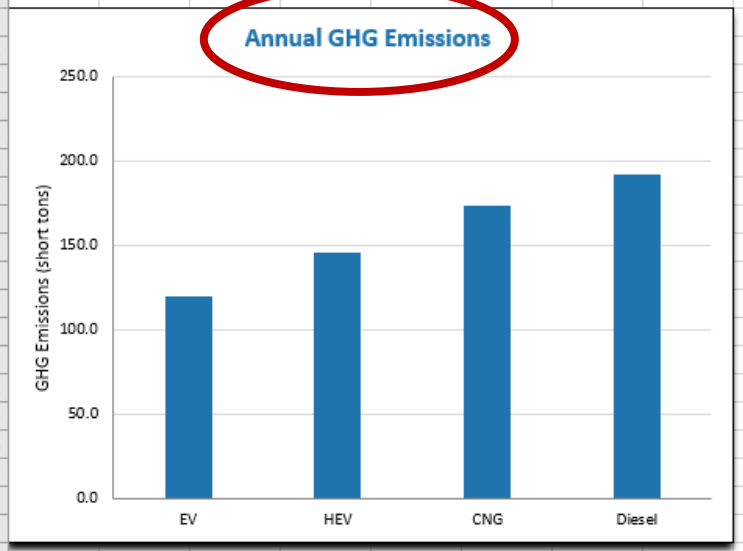
Fuel	Simple Payback
CNG	4.4
HEV	4.8
EV	17.2

Annual Petroleum Use



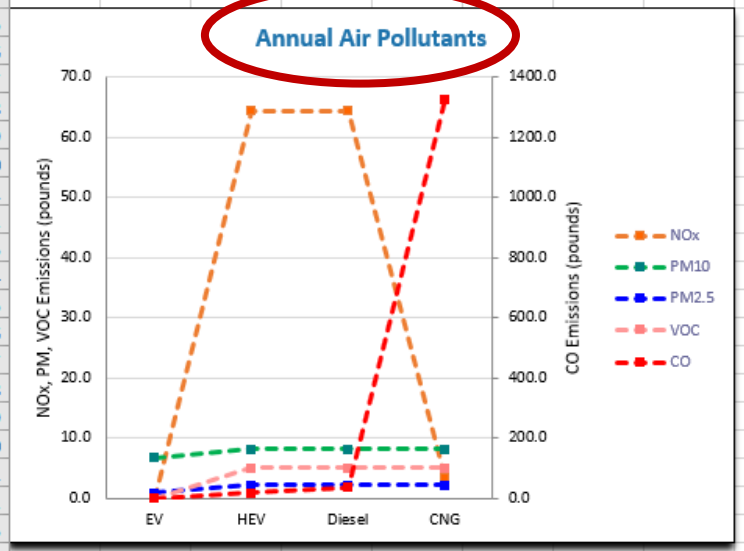
Fuel	Petroleum Use
CNG	1.7
EV	2.7
HEV	255.3
Diesel	343.9

Annual GHG Emissions



Fuel	GHG Emissions
EV	120.2
HEV	145.9
CNG	174.0
Diesel	191.8

Annual Air Pollutants

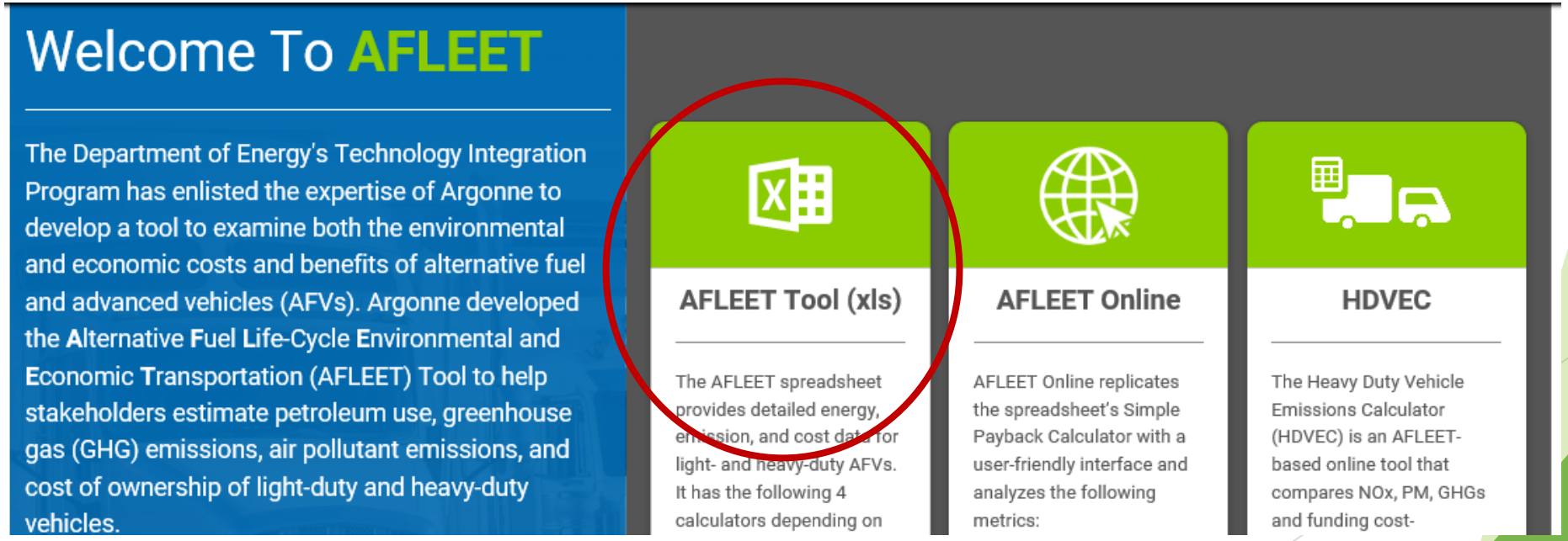


Fuel	CO	NOx	PM10	PM2.5
EV	0.0	0.0	6.7	0.9
HEV	17.8	64.3	8.2	2.2
Diesel	35.6	64.3	8.2	2.2
CNG	1325.4	3.2	8.2	2.2

Fuels | Fuel Prices | Vehicle Options | Resu ... | Fuels | Fuel Prices | Vehicle Options | Results

ALFEET Tool Spreadsheet

Exercise: Finding Total Cost of Ownership for Class 4-7 Local Freight Trucks Using AFLEET Spreadsheet



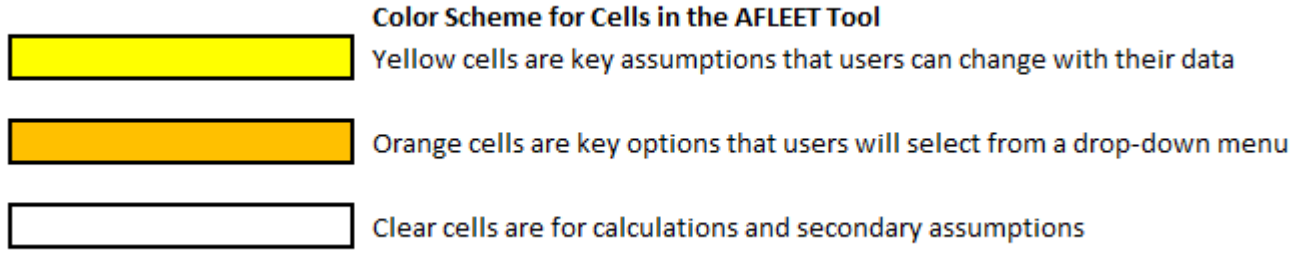
https://afleet-web.es.anl.gov

Overview of AFLEET Tool Spreadsheet

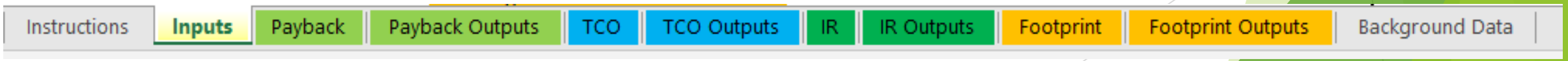
Additional metrics that are not available in the AFLEET Online tool with more customizable/fleet specific data

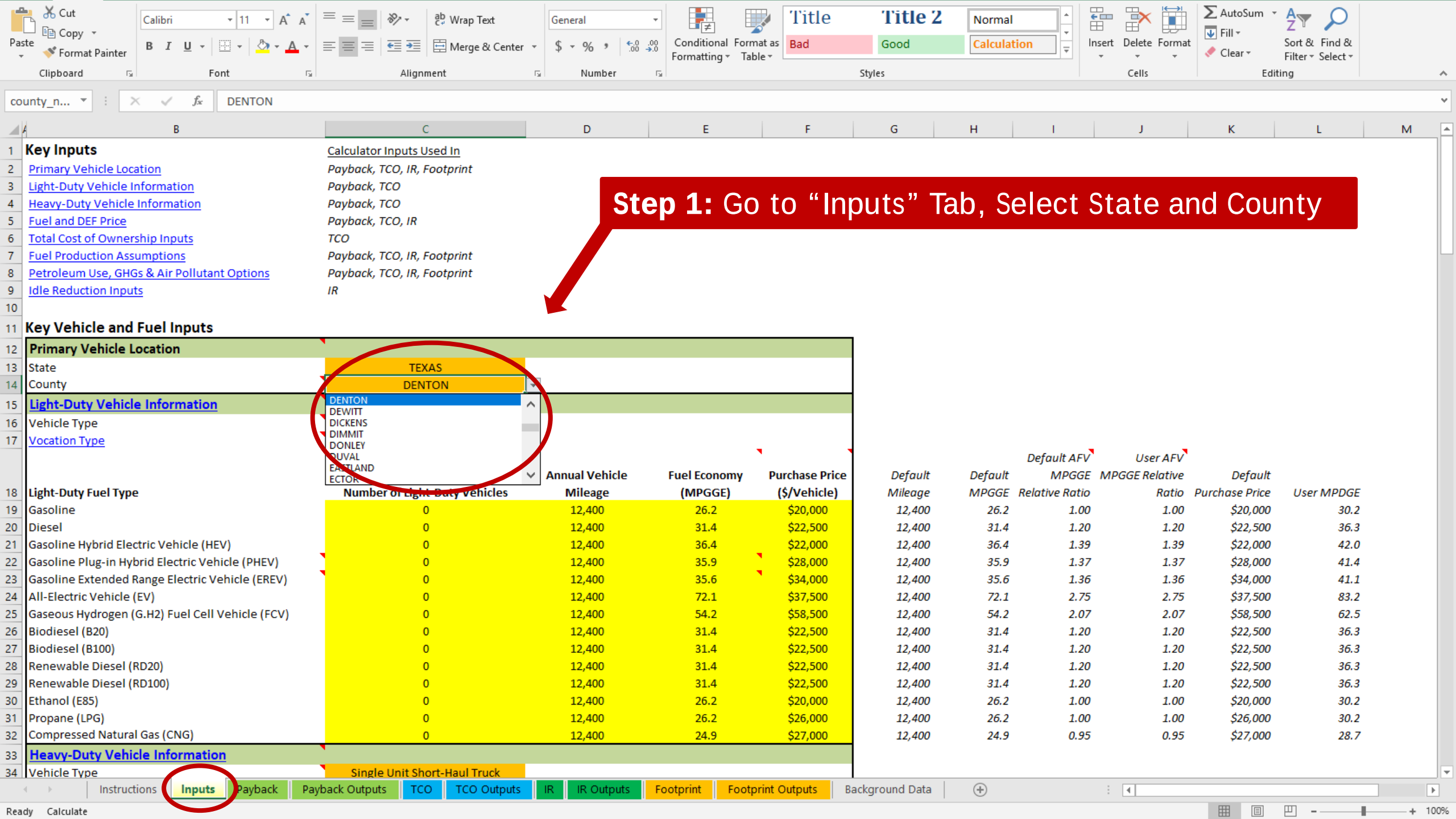
- Total Cost of Ownership
- Idle Reduction Calculator
- Customizable Footprint Calculator
- Customizable Payback

Sheet Instructions



Different Tabs





Key Inputs

	Calculator Inputs Used In
Primary Vehicle Location	*Payback, TCO, IR, Footprint*
Light-Duty Vehicle Information	*Payback, TCO*
Heavy-Duty Vehicle Information	*Payback, TCO*
Fuel and DEF Price	*Payback, TCO, IR*
Total Cost of Ownership Inputs	*TCO*
Fuel Production Assumptions	*Payback, TCO, IR, Footprint*
Petroleum Use, GHGs & Air Pollutant Options	*Payback, TCO, IR, Footprint*
Idle Reduction Inputs	*IR*

Key Vehicle and Fuel Inputs

Primary Vehicle Location

State: TEXAS

County: DENTON

DENTON, DEWITT, DICKENS, DIMMIT, DONLEY, DUVAL, EASTLAND, ECTOR

Light-Duty Vehicle Information

Vehicle Type

Vocation Type

Light-Duty Fuel Type	Number of Light-Duty Vehicles	Annual Vehicle Mileage	Fuel Economy (MPGGE)	Purchase Price ($/Vehicle)	*Default Mileage*	*Default MPGGE*	*Default AFV MPGGE Relative Ratio*	*User AFV MPGGE Relative Ratio*	*Default Purchase Price*	*User MPDGE*
Gasoline	0	12,400	26.2	$20,000	*12,400*	*26.2*	*1.00*	*1.00*	*$20,000*	*30.2*
Diesel	0	12,400	31.4	$22,500	*12,400*	*31.4*	*1.20*	*1.20*	*$22,500*	*36.3*
Gasoline Hybrid Electric Vehicle (HEV)	0	12,400	36.4	$22,000	*12,400*	*36.4*	*1.39*	*1.39*	*$22,000*	*42.0*
Gasoline Plug-in Hybrid Electric Vehicle (PHEV)	0	12,400	35.9	$28,000	*12,400*	*35.9*	*1.37*	*1.37*	*$28,000*	*41.4*
Gasoline Extended Range Electric Vehicle (EREV)	0	12,400	35.6	$34,000	*12,400*	*35.6*	*1.36*	*1.36*	*$34,000*	*41.1*
All-Electric Vehicle (EV)	0	12,400	72.1	$37,500	*12,400*	*72.1*	*2.75*	*2.75*	*$37,500*	*83.2*
Gaseous Hydrogen (G.H2) Fuel Cell Vehicle (FCV)	0	12,400	54.2	$58,500	*12,400*	*54.2*	*2.07*	*2.07*	*$58,500*	*62.5*
Biodiesel (B20)	0	12,400	31.4	$22,500	*12,400*	*31.4*	*1.20*	*1.20*	*$22,500*	*36.3*
Biodiesel (B100)	0	12,400	31.4	$22,500	*12,400*	*31.4*	*1.20*	*1.20*	*$22,500*	*36.3*
Renewable Diesel (RD20)	0	12,400	31.4	$22,500	*12,400*	*31.4*	*1.20*	*1.20*	*$22,500*	*36.3*
Renewable Diesel (RD100)	0	12,400	31.4	$22,500	*12,400*	*31.4*	*1.20*	*1.20*	*$22,500*	*36.3*
Ethanol (E85)	0	12,400	26.2	$20,000	*12,400*	*26.2*	*1.00*	*1.00*	*$20,000*	*30.2*
Propane (LPG)	0	12,400	26.2	$26,000	*12,400*	*26.2*	*1.00*	*1.00*	*$26,000*	*30.2*
Compressed Natural Gas (CNG)	0	12,400	24.9	$27,000	*12,400*	*24.9*	*0.95*	*0.95*	*$27,000*	*28.7*

Heavy-Duty Vehicle Information

Vehicle Type: Single Unit Short-Haul Truck

Instructions | Inputs | Payback | Payback Outputs | TCO | TCO Outputs | IR | IR Outputs | Footprint | Footprint Outputs | Background Data

Ready Calculate

Step 2: Select Vehicle Type and Number of Vehicles of Each Fuel Type You Would Like to Compare

Heavy-Duty Vehicle Information

Vehicle Type: Single Unit Short-Haul Truck

Vocation Type: Delivery Step Van

Heavy-Duty Fuel Type	Number of Heavy-Duty Vehicles	Annual Vehicle Mileage	Fuel Economy (MPDGE)	Purchase Price ($/Vehicle)
Gasoline	0	0	6.2	$0
Diesel	1	16,500	7.4	$65,000
All-Electric Vehicle (EV)	1	16,500	18.9	$145,000
Gaseous Hydrogen (G.H2) Fuel Cell Vehicle (FCV)	0	0	14.8	$0
Diesel Hybrid Electric Vehicle (HEV)	0	16,500	9.4	$83,000
Diesel Hydraulic Hybrid (HHV)	0	0	9.5	$0
Biodiesel (B20)	0	16,500	7.4	$65,000
Biodiesel (B100)	0	16,500	7.4	$65,000
Renewable Diesel (RD20)	0	16,500	7.4	$65,000
Renewable Diesel (RD100)	0	16,500	7.4	$65,000
Ethanol (E85)	0	0	6.2	$0
Propane (LPG)	0	16,500	6.2	$73,000
Compressed Natural Gas (CNG)	1	16,500	6.3	$105,000
Liquefied Natural Gas (LNG)	1	16,500	6.3	$95,000
LNG / Diesel Pilot Ignition	0	0	7.0	$0

	Default Mileage	Default MPDGE	Default AFV MPDGE Relative Ratio	User AFV MPDGE Relative Ratio	Default Purchase Price	Default MPGGE	User MPGG
	0	6.2	0.83	0.83	$0	5.3	5
	16,500	7.4	1.00	1.00	$65,000	6.4	6
	16,500	18.9	2.55	2.55	$145,000	16.3	16
						12.8	12
						8.1	8
						8.3	8
						6.4	6
						6.4	6
						6.4	6
						6.4	6
						5.3	5
	16,500	6.2	0.83	0.83	$73,000	5.3	5
	16,500	6.3	0.85	0.85	$105,000	5.4	5
	16,500	6.3	0.85	0.85	$95,000	5.4	5
	0	7.0	0.95	0.95	$0	6.1	6

Adjust Purchase Default Prices to Include Funding Opportunities if Desired

Refueling Information

Fueling Type: Private Station

Infrastructure costs (go to 'Payback')

Enter fuel price range (go to 'Payback')

NOTE: If you want to do a direct side-by-side comparison of different fuel options, enter '1' for number of vehicles for each relevant fuel type

Step 3: Keep Default Values Or Adjust to Your Fleet's Mileage, Fuel Economy, or Purchase Price

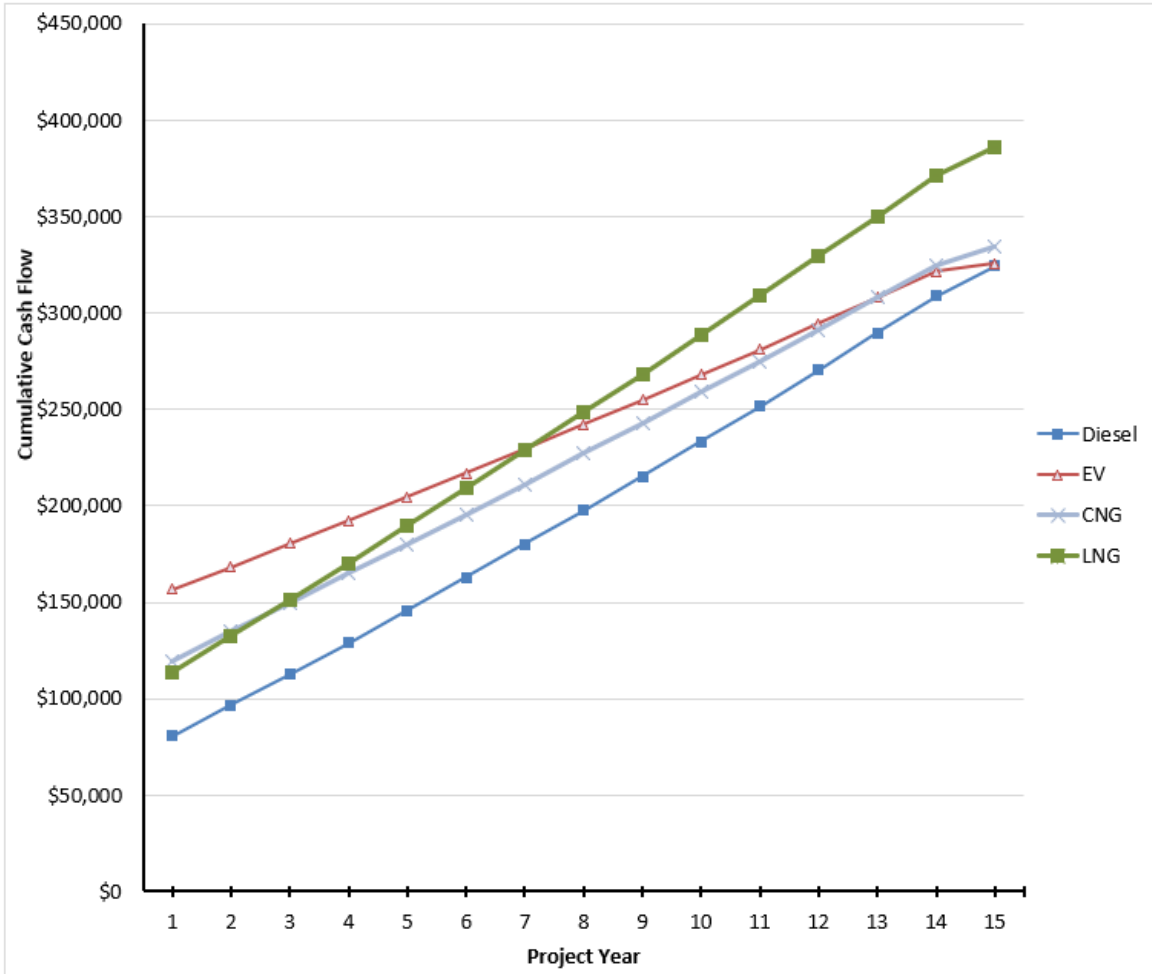
								Private Station			
								Default $/Fuel Unit	Default $/GGE	User $/GGE	User $/DG
Gasoli							71	$2.68	$2.68	$2.68	$3.0
Diesel							65	$2.92	$2.53	$2.53	$2.9
Electri							18	$0.11	$3.62	$3.62	$4.1
G.H2		kg						$15.26	**$15.26**	$15.26	$17.6
B20		on	$2.78	$2.25	$2.78	$2.45	$2.45	$2.82	$2.25	**$1.98**	$1.98	$2.2
B100		lon	$2.63	$3.84	$2.63	$2.47	$2.47	$2.85	$3.84	$3.60	$3.60	$4.1
RD20		lon										
RD100		lon										
E85	E85	gallon	$2.11	$2.48	$2.11	$2.88	$2.88	$3.32	$2.48	**$3.38**	$3.38	$3.9

Instructions | Inputs | Payback | Payback Outputs | TCO | TCO Outputs | IR | IR Outputs | Footprint | Footprint Outputs | Background Data

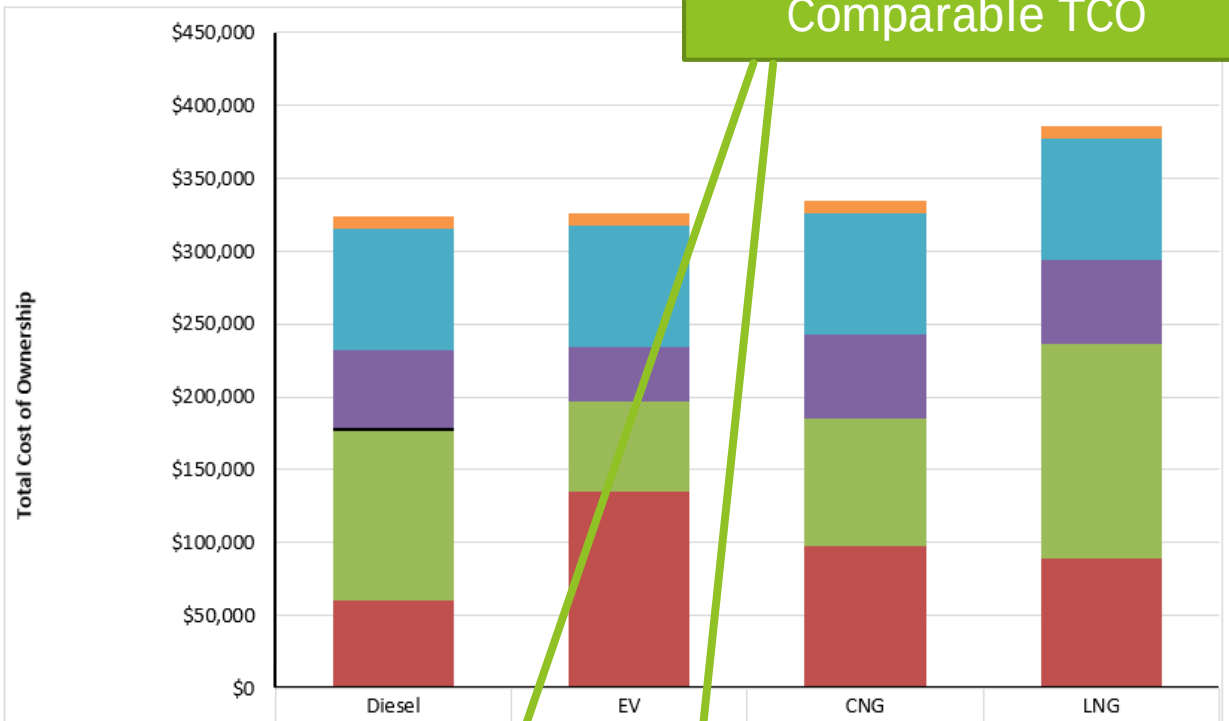
Ready Calculate

Total Cost of Ownership Outputs

Cumulative Cash Flow - Single Unit Short-Haul Truck Fleet



Total Cost of Ownership - Single Unit Short-Haul Truck Fleet



	Diesel	EV	CNG	LNG
License and Registration	$8,752	$8,752	$8,752	$8,752
Insurance	$83,094	$83,094	$83,094	$83,094
Maintenance and Repair	$53,751	$37,171	$57,762	$57,762
Diesel Exhaust Fluid	$2,271	$0	$0	$0
Fuel	$115,731	$61,340	$86,834	$147,576
Depreciation	$60,701	$135,411	$98,056	$88,717
Financing	$0	$0	$0	$0

EV Versus Diesel- Although More Than 2x Purchase Price, Has Comparable TCO

Instructions | Inputs | Payback | Payback Outputs | TCO | TCO Outputs | IR | IR Outputs | Foot

Ready Circular References

Instructions | Inputs | Payback | Payback Outputs | TCO | TCO Outputs | IR | IR Outputs | Footprint | Footprint C

Ready Circular References

All numbers based on Inputs data

Using AFLEET to Analyze Volkswagen Mitigation Options

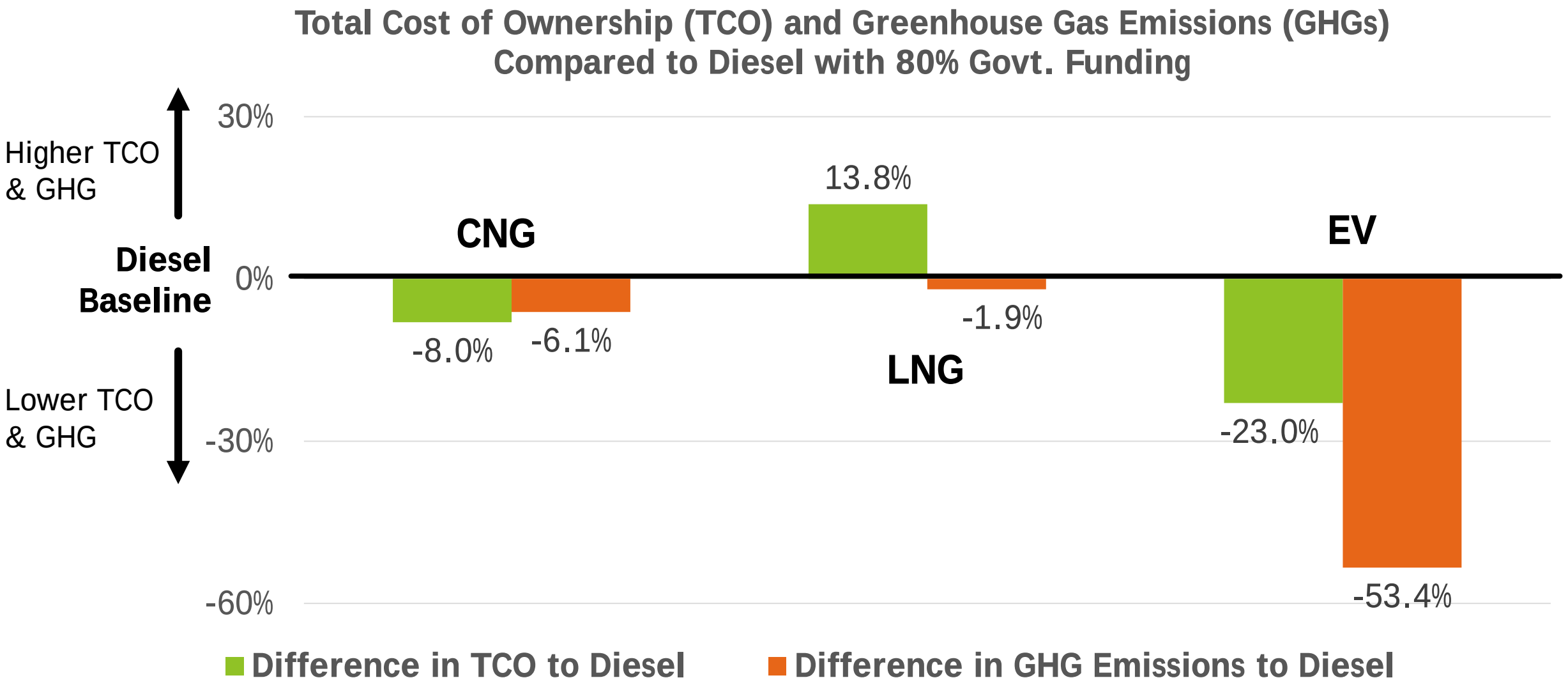
https://afleet-web.es.anl.gov

AFLEET Can Help Make Your VW Mitigation Plan Decision

Class 4-7 Local Freight **Class 8 Local Freight** **Class 7-8 Refuse Trucks**			
Actions	**Eligibility**	**Funding Percentages, Non-Govt.**	**Funding Percentages, Govt.**
Repower or Replace	1992 - 2009	25% / 40% / 50%	80%
Note: Original Vehicles Must be Diesel; Scrappage of Old Vehicles/Engines Required			
Class 4-8 School Buses **Class 4-8 Transit & Shuttle Buses**			
Actions	**Eligibility**	**Funding Percentages, Non-Govt.**	**Funding Percentages, Govt.**
Repower or Replace	2009 or older	25% / 40% / 50%	80%
Note: Original Vehicles Must be Diesel; Scrappage of Old Vehicles/Engines Required			

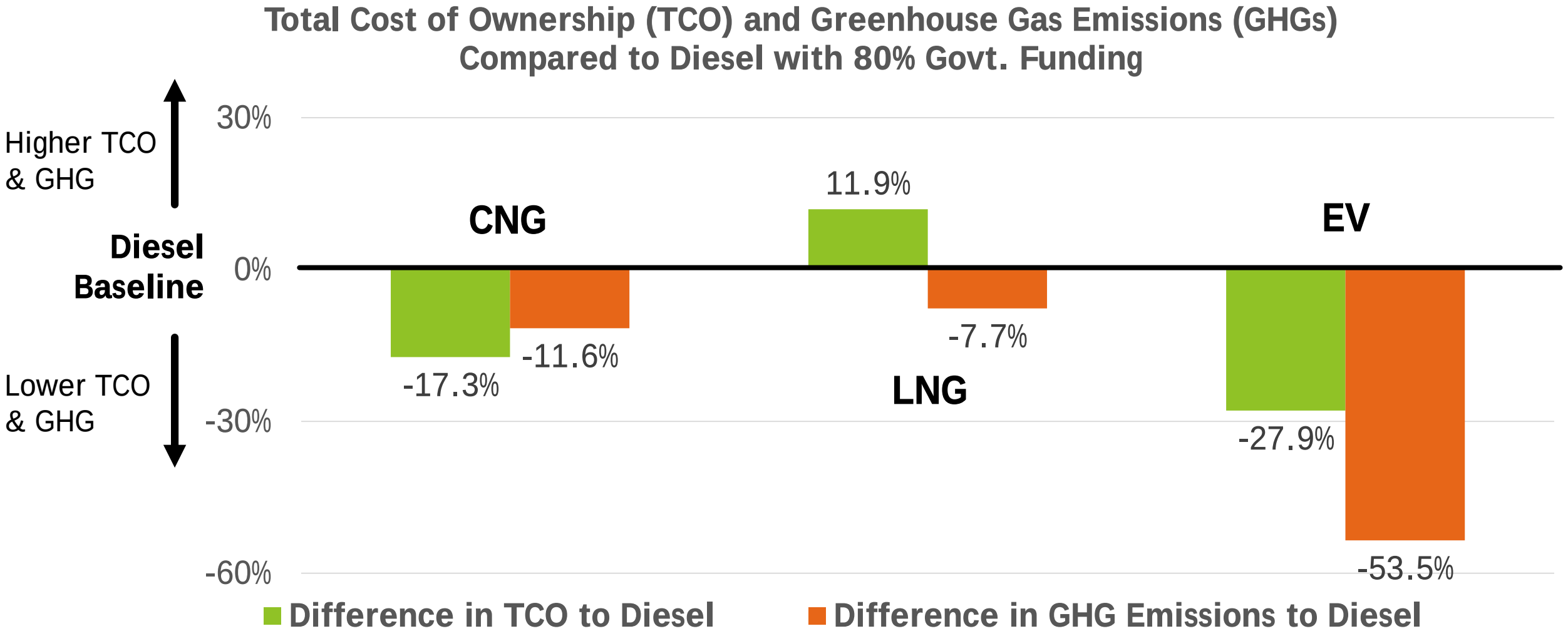
Class 4-7 Local Freight- AFLEET Results

Actions	Eligibility	Funding Percentages, Non-Govt.	Funding Percentages, Govt.
Repower or Replace	1992 - 2009	25% / 40% / 50%	80%



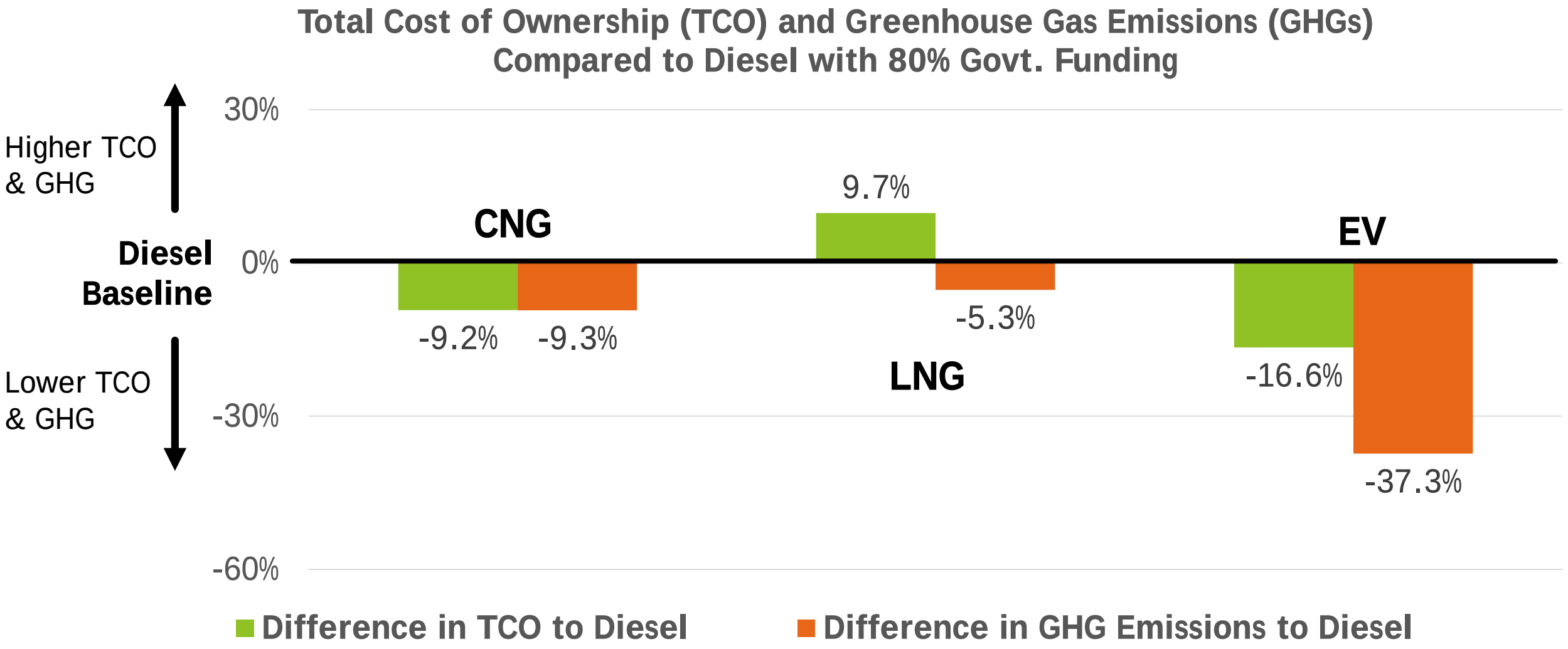
Class 8 Local Freight & Port Drayage Trucks- AFLEET Results

Actions	Eligibility	Funding Percentages, Non-Govt.	Funding Percentages, Govt.
Repower or Replace	1992 - 2009	25% / 40% / 50%	80%



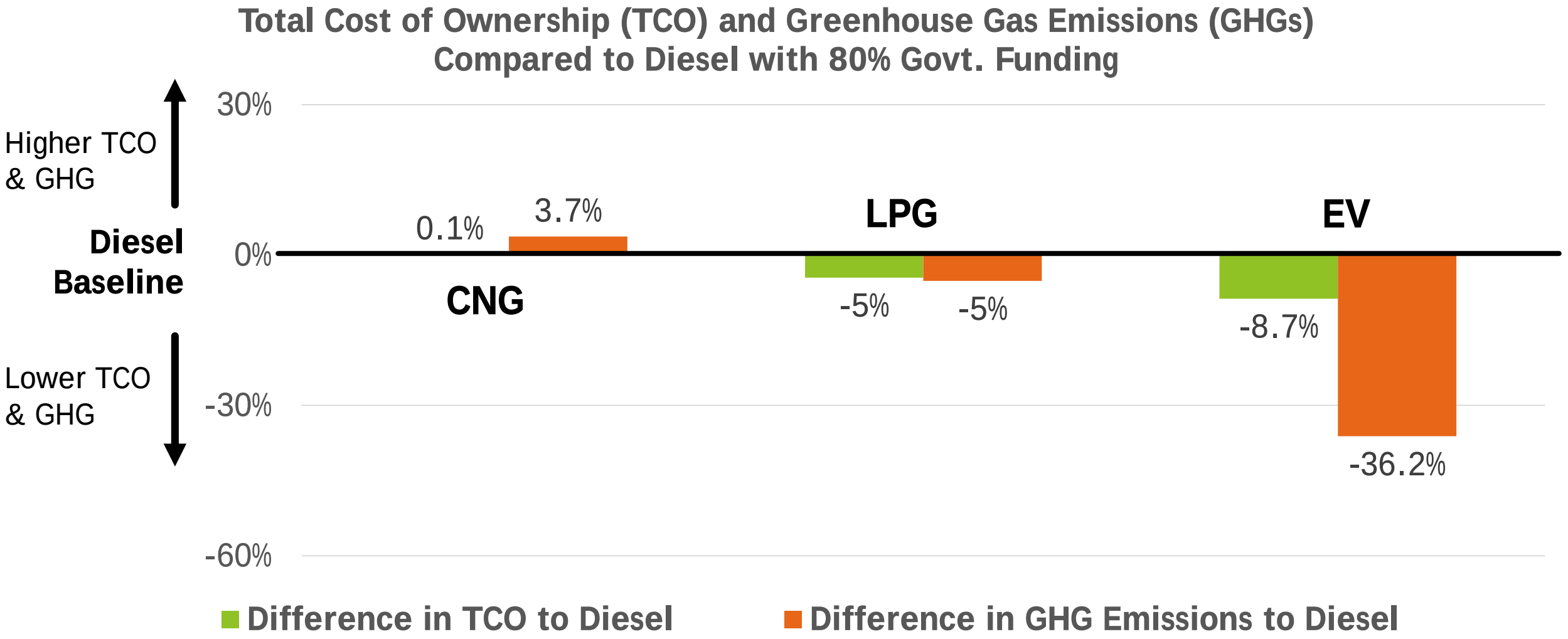
Class 7-8 Refuse Trucks- AFLEET Results

Actions	Eligibility	Funding Percentages, Non-Govt.	Funding Percentages, Govt.
Repower or Replace	1992 - 2009	25% / 40% / 50%	80%



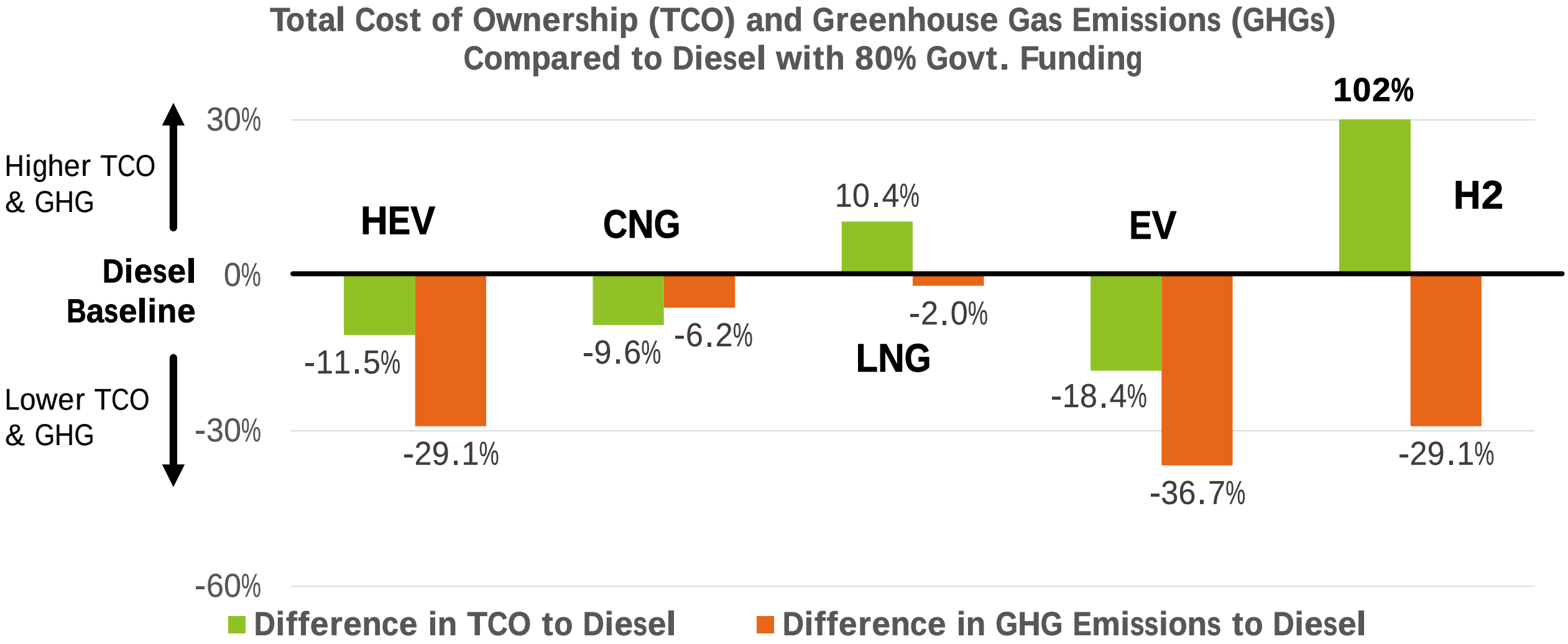
Class 4-8 School Buses- AFLEET Results

Actions	Eligibility	Funding Percentages, Non-Govt.	Funding Percentages, Govt.
Repower or Replace	≤ 2009	25% / 40% / 50%	80%



Class 4-8 Transit & Shuttle Buses- AFLEET Results

Actions	Eligibility	Funding Percentages, Non-Govt.	Funding Percentages, Govt.
Repower or Replace	≤ 2009	25% / 40% / 50%	80%



Questions On How Your Fleet Can Use AFLEET?

Email:
cleancities@nctcog.org

DOWNLOAD THE TOOL AND GET OTHER VW INFO HERE:

www.dfwcleancities.org