

# LUNCH AND LEARN WEBINAR SCHOOL DISTRICTS' GUIDE TO CLEAN SCHOOL BUS FUNDING

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# Housekeeping

Please keep your microphone muted unless speaking

Questions can be asked in the chat or through the Raise Your Hand feature

Add names and organization into chat

Presentation slides and the Clean School Bus Resource Guide will be emailed to attendees after the meeting

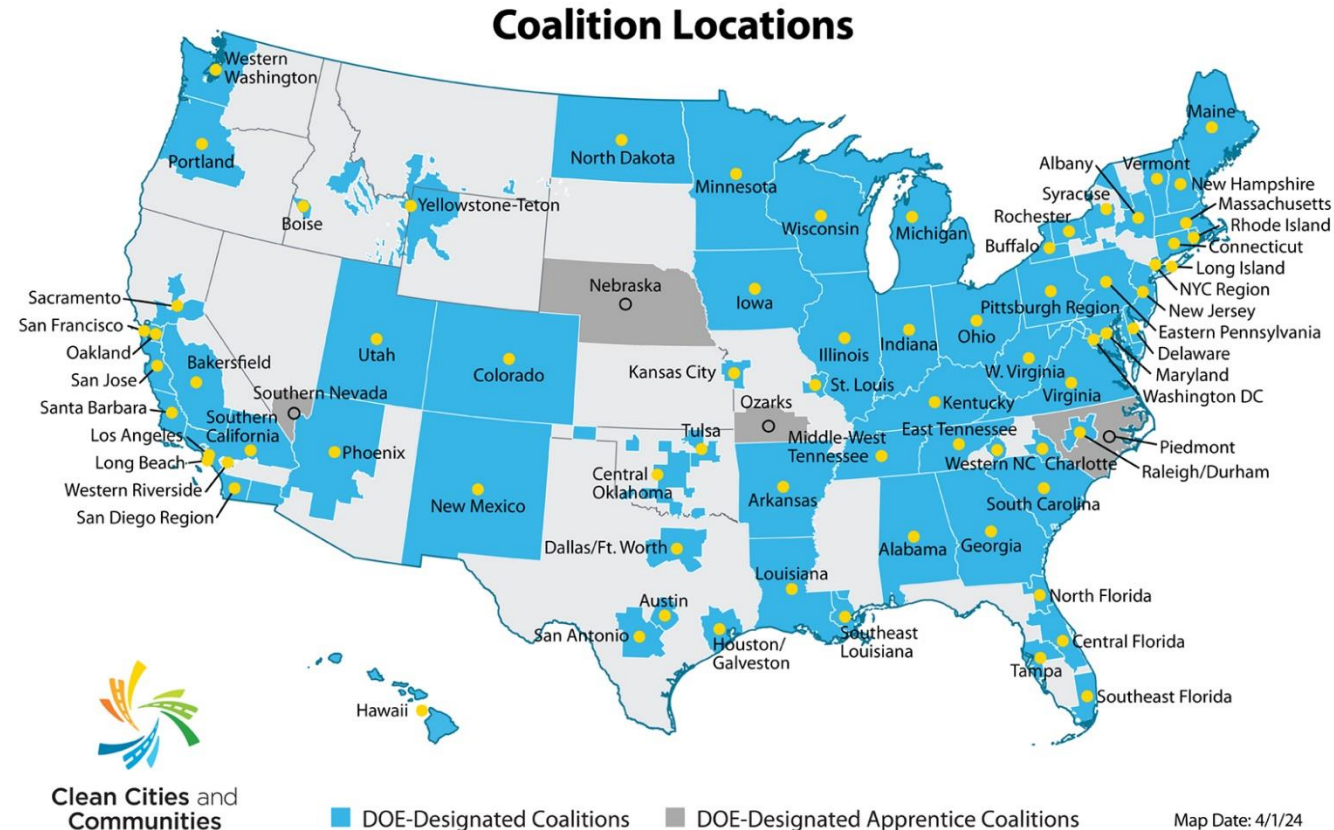
Recording and slides will be added to the Dallas-Fort Worth Clean Cities website – [www.dfwcleancities.org/events](http://www.dfwcleancities.org/events)

# National Network of Clean Cities and Communities Coalitions

More than 80 Clean Cities coalitions with thousands of stakeholders, representing ~91% of US population

Designated by the Department of Energy

Working locally to advance affordable, domestic transportation fuels, energy-efficient mobility systems, and other fuel-saving technologies and practices



[cleancities.energy.gov](http://cleancities.energy.gov)



# Clean Cities and Communities Technology Portfolio



Light-Medium-,  
and Heavy-Duty  
Vehicles



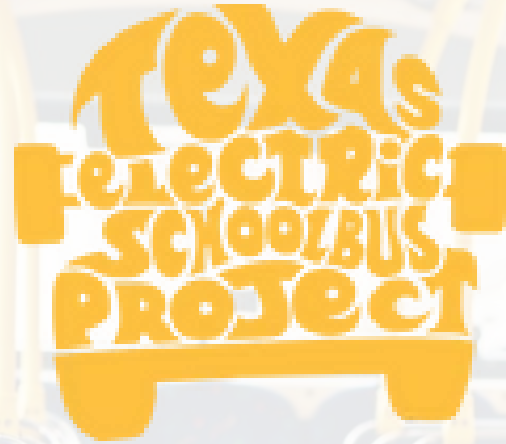
Alternative and  
Renewable  
Fuels and  
Infrastructure



Idle Reduction  
Measures and  
Fuel Economy  
Improvements



New Mobility  
Choices and  
Emerging  
Transportation  
Technologies



# Texas Electric School Bus Project

Director: Jessica Keithan

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Website: [texaselectricschoolbusproject.org](http://texaselectricschoolbusproject.org)

The image shows the interior of a school bus, viewed from the back of the bus looking forward. The bus is empty. There are rows of blue seats with a colorful pattern on the backrests. Yellow handrails and vertical poles are visible throughout the cabin. The windows on both sides show a blurred view of buildings outside. The overall lighting is bright and slightly hazy.

# Funding Programs



# TERP Refresher

J. Ben Finley

[Ben.finley@h-gac.com](mailto:Ben.finley@h-gac.com)

[Houston-cleancities.org](http://Houston-cleancities.org)



# TERP

- Texas Emissions Reduction Plan (TERP) focuses on the reduction of Nitrogen Oxides (NOx)
- TERP funds several types of projects, but most projects are replacing diesel powered vehicles or equipment with newer / cleaner technology
- Main website:
  - [TCEQ.Texas.gov/airquality/terp/](https://TCEQ.Texas.gov/airquality/terp/)



## TERP Grants

Find all of the TERP grant programs below. Each grant has specific eligibility requirements, varying application periods, and separate application instructions. You can also [explore by equipment type](#).

Projected program opening dates are subject to change.

### Seaport and Rail Yard Areas Emissions Reduction Program (SPRY)

Now Accepting Applications

Offers grants statewide to replace older drayage trucks and equipment operating at eligible seaports and rail yards.

[Learn More >](#)

### Emissions Reduction Incentive Grants (ERIG)

Now Accepting Applications

Offers grants to repower or replace older locomotives, marine vessels, stationary equipment, or select non-road equipment to reduce NO<sub>x</sub> emissions in ozone nonattainment areas and affected counties in Texas.

[Learn More >](#)

### Texas Natural Gas Vehicle Grant Program (TNGVGP)

Projected Opening: September 2024

Offers grants in eligible counties to repower heavy-duty or medium-duty vehicles with natural gas engines or replace the vehicles with natural gas vehicles.

[Learn More >](#)

### New Technology Implementation Grant Program (NTIG)

Projected Opening: October 2024

Offers grants statewide to implement new technologies that reduce emissions of pollutants from facilities and other stationary sources.

[Learn More >](#)

### Governmental Alternative Fuel Fleet Grant Program (GAFF)

Projected Opening: December 2024

Offers grants statewide to assist with purchasing or leasing new vehicles that operate primarily on compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen fuel cells, or electricity.

[Learn More >](#)

### Texas Clean Fleet Program (TCFP)

Projected Opening: January 2025

Offers grants in eligible counties to replace heavy-duty and light-duty on-road diesel vehicles with alternative fuel and hybrid vehicles.

[Learn More >](#)

### Light-Duty Motor Vehicle Purchase or Lease Incentive Program (LDPLIP)

Offers grants statewide to purchase or lease an eligible, new light-duty vehicle, such as an electric car or truck.

[Learn More >](#)

### Alternative Fueling Facilities Program (AFFP)

Offers grants to construct or expand fueling stations that provide natural gas and other alternative fuels within the Clean Transportation Zone.

[Learn More >](#)

### Texas Hydrogen Infrastructure, Vehicle, and Equipment Program (THIVE)

Provides grants in eligible counties for hydrogen vehicles, equipment, and refueling infrastructure.

[Learn More >](#)

### Rebate Grants Program

Offers grants in eligible counties to upgrade or replace diesel heavy-duty vehicles and non-road equipment on a first-come, first-served basis.

[Learn More >](#)

### Texas Clean School Bus Program (TCSB)

Offers grants statewide to offset the cost of projects that reduce emissions from diesel exhaust. Eligible projects include replacing or retrofitting diesel-fueled school buses.

[Learn More >](#)



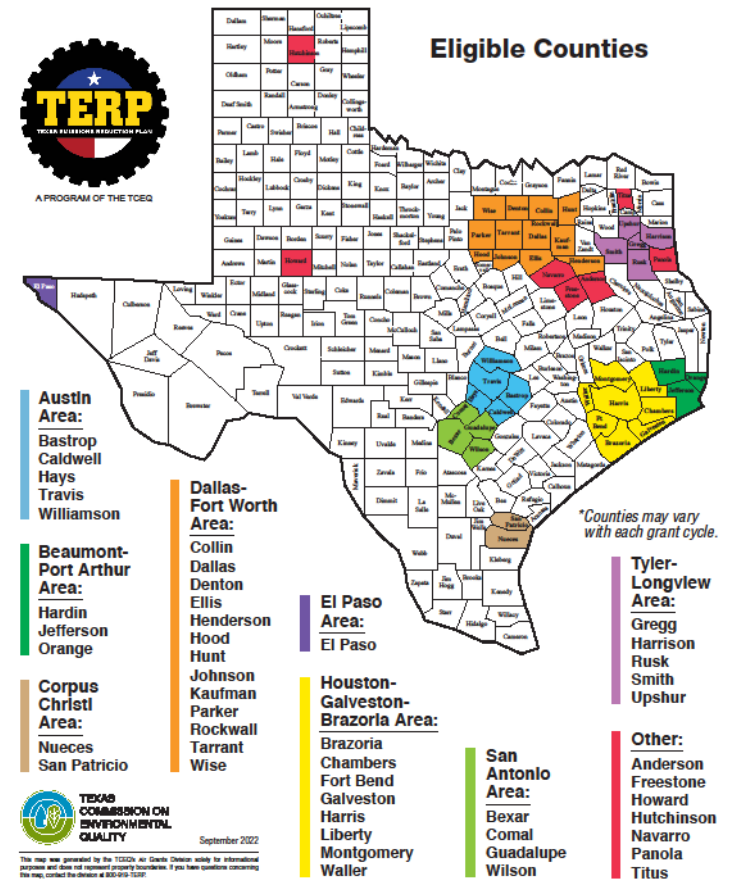
# TERP Programs for Buses – Texas Clean School Bus Program

- Texas Clean School Bus Program {Currently closed}
  - All Texas school districts
    - Charter schools are eligible
    - Private schools are not eligible
  - Replacing and retrofit 2007 or older bus
  - Reimbursement

# TERP Programs for Buses – Diesel Emission Reduction Incentive

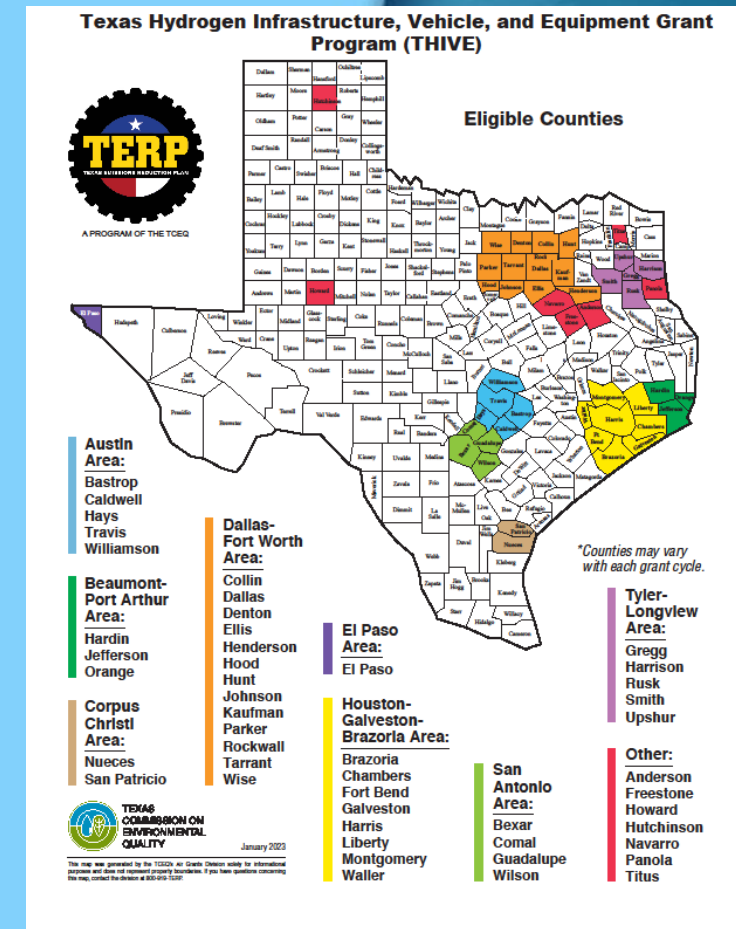
- DERI Grant Program {Currently Closed}
  - Similar to Texas Clean School Bus, but widens eligibility to heavy duty diesel vehicles and equipment
  - Limited to Texas counties
  - Some focus on electrification (EV Buses)
  - Allows for refueling infrastructure for alternative fuels (Chargers)
  - **ALLOWS FOR PURCHASE / LEASE OF NEW BUS!!!**

## Diesel Emissions Reduction Incentive (DERI) Program



# TERP Programs for Buses – Texas Hydrogen Infrastructure, Vehicle, and Equipment Grant Program

- THIVE Grant Program {Closed}
  - Similar to DERI, but focused solely on hydrogen

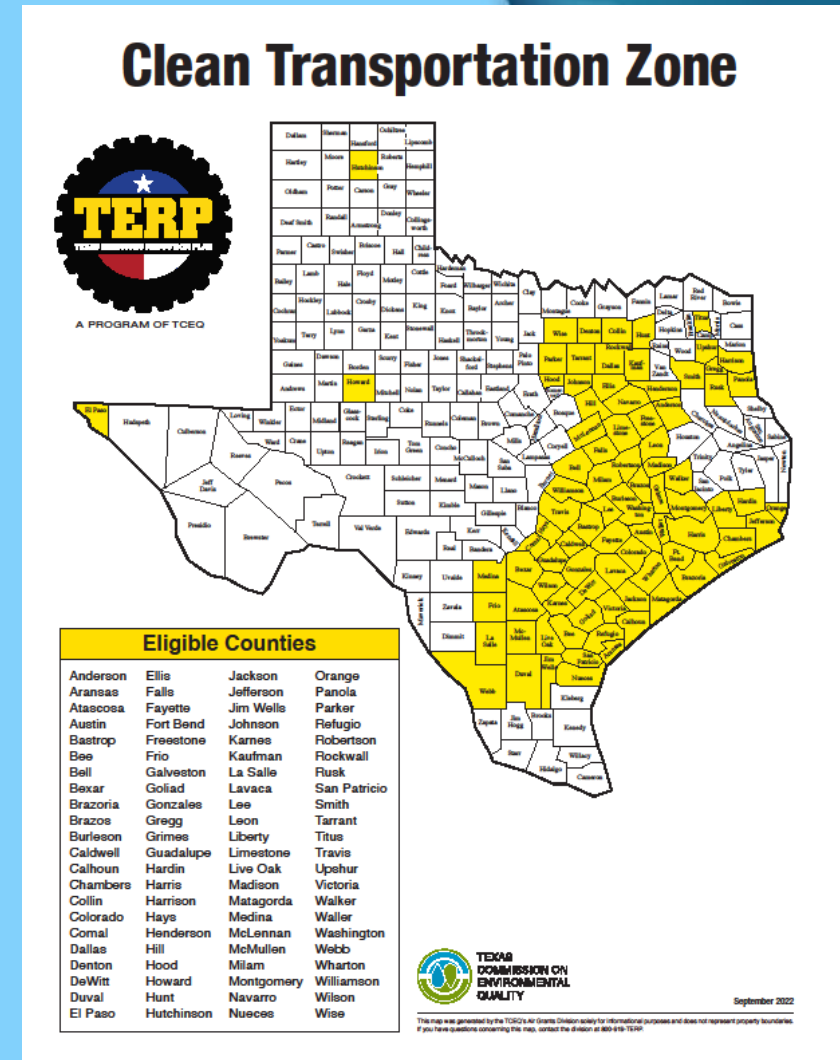




# TERP Programs for Buses – Texas

## Natural Gas Vehicle Grant Program

- TNGVGP {Closed}
  - Traditionally not used by school districts, YET a bus replacement “should” be eligible if the bus is a class 7 to class 8 (GVWR of 26,001 pounds and above)
  - Replace or retrofit with:
    - Compressed Natural Gas (CNG)
    - Liquid Natural Gas (LNG)
    - Liquid Propane Gas (LPG)
  - **ALLOWS FOR NEW PURCHASE / LEASE**



# Common Documents

- **Must Haves:**
  - Application
  - W9
  - Copy of Titles
  - Registration Documentation
  - Color photos of bus and engine identification data
- **Nice to Haves:**
  - Estimate from vendor
  - Alternative destruction plan

Thank You



# EPA Clean School Bus Program

The Environmental Protection Agency (EPA) Clean School Bus Program is funded under the Bipartisan Infrastructure Law to provide \$5 billion over five years (2022-2026).

Two Funding Programs	Rebates (Expected Fall 2024)	Grants (Expected 2025)
<b>Application Process</b>	Quick and simple application; submitted to EPA portal	Requires a longer, more detailed application; submitted to grants.gov
<b>Selection Process</b>	Recipients selected through a random lottery process	Recipients selected based on evaluation of application materials
<b>Bus Minimum/Maximum Requirements</b>	Replace up to 25 buses	School District Sub-Program: 15-50 buses; Third-Party Sub-Program: 25-100 buses
<b>Selectee Support and Flexibility</b>	Funding for products (buses and infrastructure); short duration projects	More support; flexibility in funding and timing of project (e.g., funds for training or longer project periods)

Funding criteria are subject to change

# EPA Clean School Bus Program

\$2.8B Awarded Funds (2 Rebates and 1 Grants Round)

45 Awarded School Districts in Texas

Two Funding Programs	Rebates (Expected Fall 2024)	Grants (Expected 2025)
<b>Eligible Projects</b>	Replace 2010 or older diesel school buses with battery-electric, CNG or propane Replace 2010 or older non-diesel ICE buses or 2011 or newer diesel or non-diesel ICE buses with battery-electric buses	
<b>Eligible Applicants</b>	Public school districts, tribal applicants, and third-party applicants	
<b>Available Funding</b>	\$500M available for 2023 CSB Rebates; Replace up to 25 buses	\$400M available for 2023 Grants; School District Sub-Program: 15-50 buses; Third-Party Sub-Program: 25-100 buses
<b>Prioritization Criteria</b>	Must meet one or more criteria: High-need or low-income districts; Rural districts (locale code 43-Rural: Remote); Bureau of Indian Affairs-funded districts	



# Alief ISD Clean School Bus Grant

August 27, 2024



# Decision Factors to Going Electric

- AISD's priority is the safety of our students and staff. We are committed to providing our students, staff, and community with cleaner air by reducing the pollutants released by diesel operated buses.
- Alief ISD represents 37 square miles which is a perfect fit to allocate ZE (Zero Emissions) school buses within our routing environment.
- This grant provided the district an excellent opportunity to upgrade its current fleet of buses.



# Why the EPA Clean School Bus Program?

- The EPA Clean School Bus Program was chosen because Alief ISD was interested in incorporating low-emission buses in order to address historical community concerns for both air and noise pollution.
- The program covered a majority of the cost of **15-50** electric buses as well as a portion of the charging stations.
- The program provided a lot of upfront support for applicants (webinars, research, ect.).



**Alief**

Independent School District  
THE SMART CHOICE

# The Application Process: Hurdles

- ZE school buses have a limited travel range. Understanding and having an in-depth knowledge of routing schemes is vital so districts know where to best allocate ZE buses. This is important data that was required during the application process.
- Applicants had to have a number of diesel buses to scrap or sell equal to the number of ZE buses requested (but must be 2010 or newer).
- EPA funds could not be used for any infrastructure costs associated with work on the utility's side of the electrical meter- that means they do not cover any upgrades needed to support charging stations, which can be costly.



Independent School District  
THE SMART CHOICE





# The Application Process: Successes

- The EPA has many resources for applicants, including webinars explaining how EV technology works and reports on the effects of incorporating these technologies in densely populated areas.
- EPA grants team is very responsive to any questions grantees may have, and once awarded a dedicated team member will be assigned to you.





# Advice for Future Applicants

- Do your homework- learn as much as you can about clean school bus options that work best for your district. This program allowed for the purchase of electric, propane, or compressed natural gas (CNG) school buses.
- This process involves extensive collaboration with key individuals in the district. Make sure to identify and involve these key players throughout the application process and beyond.
- The application is very detailed and requires patience, dedication, and commitment to complete.

# TxVEMP All-Electric Round

The Texas Commission on Environmental Quality (TCEQ) administers alternative vehicle funding through the Texas Volkswagen Emissions Mitigation Program (TxVEMP).

Funding available through August 31, 2025; First-come, First-served

Purchase New Battery or Fuel Cell Electric Vehicle/Equipment to Replace or Repower Existing Diesel	Funding Available as of August 2024	Funding Threshold
Class 4-8 School, Shuttle, or Transit Buses* GVWR 14,001 Pounds and Up Used to Transport Passengers within a City or Defined Region Model Year 2009 or Older	~ \$22,000,000 Available Across Entire Program	For Government Entities: Up to 100% of Incremental Cost  For Non-Government Entities: Up to 75% of Incremental Cost

\*All old vehicles/engines/equipment must be scrapped; default scrap value = \$1000 for replaced vehicles/equipment and \$250 for replaced engines

Grant criteria are subject to change



The background image shows the interior of a bus, viewed from the back of the vehicle looking forward. The perspective is down the aisle, showing rows of blue seats on both sides. Yellow handrails are visible, extending from the ceiling and curving over the seats. The lighting is bright and slightly hazy, suggesting a sunny day. The overall color palette is dominated by the yellow of the handrails and the blue of the seats, with a warm, golden glow from the sunlight.

# Estimating Vehicle Emissions Reductions



# TERP Texas Clean School Bus Grant Amounts

Program does not require vehicle emissions reduction estimates

TERP TCSB Program Maximum Grant Table*						
	≤2003	≤2003	≤2003	2004-2006	2004-2006	2004-2006
School Bus/Fuel Type	CI	SI	Zero	CI	SI	Zero
Type A	N/A	\$104,720	\$238,000	N/A	\$65,450	\$148,750
Type B	\$100,375	\$103,768	N/A	\$62,734	\$64,855	N/A
Type C	\$87,822	\$126,616	\$333,200	\$53,699	\$79,135	\$208,250
Type D	\$112,811	\$153,510	\$380,800	\$70,508	\$95,944	\$238,000

Ignition Types are as follows: CI = compression-ignition (e.g., diesel), SI = spark-ignition (e.g., LPG, CNG, gasoline), Zero = zero emission vehicles (e.g., electric, hydrogen).

\*Table has been replicated from the [TERP Texas Clean School Bus 2024 RFGA](#), amounts may be subject to change

# TxVEMP All-Electric Grant Amounts

Program does not require vehicle emissions reduction estimates

## TxVEMP All-Electric Program Maximum Grant Table\*

	Government Entities – 100% Reimbursement			Non-Government Entities – 75% Reimbursement		
Model Year	1993-2003	2004-2006	2007-2009	1993-2003	2004-2006	2007-2009
Type A	\$310,000	\$184,094	\$77,481	\$232,519	\$138,051	\$58,111
Type C	\$370,000	\$219,711	\$92,537	\$277,537	\$164,764	\$69,347
Type D	\$400,000	\$237,504	\$99,965	\$299,965	\$178,111	\$75,009

\*Table is based off the Grant Tables from the [TxVEMP All-Electric RFGA](#), amounts may be subject to change

# AFLEET Tool

**A**lternative **F**uel **L**ife-Cycle **E**nvironmental and **E**conomic **T**ransportation (**AFLEET**) Tool

Two versions: Simple, easy to use online version; detailed downloadable excel file version

Estimates petroleum use, greenhouse gas emissions, air pollutant emissions, and cost of ownership of LD and HD vehicles

Evaluates environmental and economic costs and benefits of alternative fuel vehicles

<b>Heavy-Duty Vehicle Information</b>					
Vehicle Type	School Bus				
Vocation Type	School Bus				
Heavy-Duty Fuel Type	Number of Heavy-Duty Vehicles	Annual Vehicle Mileage	Fuel Economy (MPDGE)	Purchase Price (\$/vehicle)	Maintenance & Repair (\$/mi)
Gasoline	0	0	5.8	\$0	\$0.61
Diesel	1	15,000	7.0	\$100,000	\$0.93
All-Electric Vehicle (EV)	1	15,000	22.5	\$300,000	\$0.56
Gaseous Hydrogen (G.H2) Fuel Cell Vehicle (FCV)	0	0	14.5	\$0	\$0.56
Propane (LPG)	1	15,000	5.8	\$108,000	\$0.61
Compressed Natural Gas (CNG)	0	15,000	5.9	\$130,000	\$0.93

# AFLEET Tool Example for School Bus Emissions

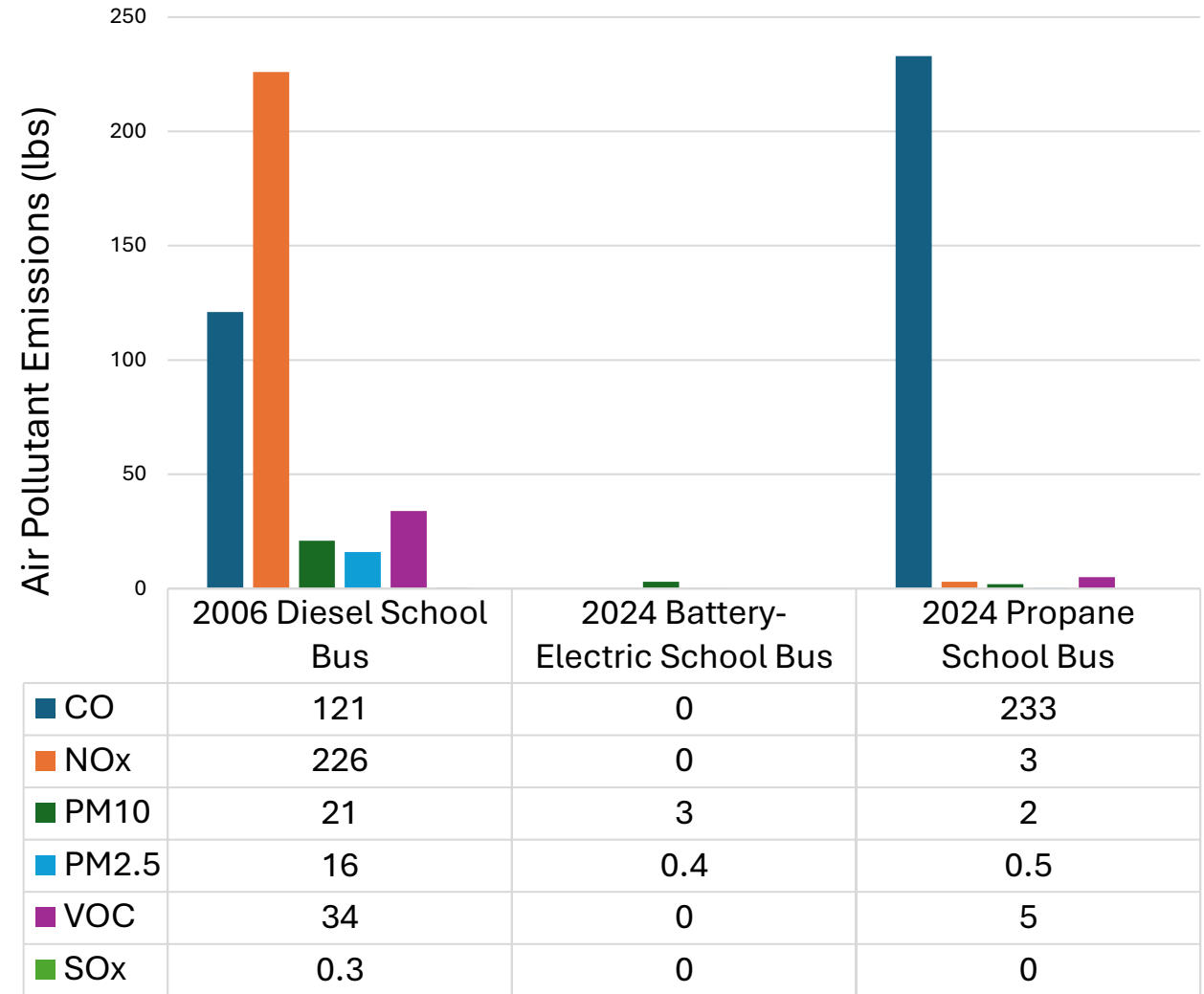
Example vehicle data inputs and estimated emissions results

## On-Road Fleet Footprint Calculator

State  
**TEXAS**

Vehicle Type	Model Year	Annual Vehicle Mileage	Fuel Use		
			Diesel (gal)	Electricity (kWh)	LPG (gal)
School Bus	2006	15,000	2,142		
School Bus	2024	15,000		24,814	
School Bus	2024	15,000			3,941

Current Year Vehicle Operation Air Pollutants





# EPA Diesel Emissions Quantifier (DEQ) Tool

Easy to use online tool

Evaluates clean diesel projects for medium- and heavy-duty vehicles

Estimates baseline emissions, reduced emissions, cost effectiveness for NO<sub>x</sub>, PM<sub>2.5</sub>, HC, CO and CO<sub>2</sub>, and PM-related health benefits

Group Name  ?

Type Onroad

Target Fleet School Bus

Quantity

Baseline Engine Model Year

Baseline Fuel Type  ?

Please enter your actual or estimated per vehicle usage. If you do not have this information, some defaults are available.

Annual Fuel Gallons  [Get Default Value](#)

Diesel-equivalent Gallons

Annual Miles Traveled  [Get Default Value](#)

Annual Idling Hours  [Get Default Value](#) ?

Upgrade Year  ?

<i>Annual Results (short tons)<sup>2</sup></i>	NO <sub>x</sub>	PM <sub>2.5</sub>	HC	CO	CO <sub>2</sub>	Fuel <sup>3</sup>
Baseline for Upgraded Vehicles/Engines	0.056	0.000	0.004	0.016	15.3	1,360
Amount Reduced After Upgrades	0.042	0.000	0.003	0.007	0.0	0
Percent Reduced After Upgrades	74.4%	59.0%	90.4%	42.5%	0.0%	0.0%
<i>Lifetime Results (short tons)<sup>2</sup></i>						
Baseline for Upgraded Vehicles/Engines	0.282	0.001	0.019	0.081	76.5	6,800
Amount Reduced After Upgrades	0.210	0.001	0.017	0.035	0.0	0
Percent Reduced After Upgrades	74.4%	59.0%	90.4%	42.5%	0.0%	0.0%

Estimated emissions reductions from a 2009 diesel school bus to a 2024 CNG school bus

The image shows the interior of a yellow school bus, viewed from the back of the bus looking forward. The bus is empty, with rows of blue seats and yellow handrails visible. The word "Resources" is centered in the middle of the image in a dark blue, bold font. The background is slightly blurred, showing the front of the bus and the driver's area.

# Resources

# Tax Credits Direct Pay Option

## Commercial Electric Vehicle (EV) and Fuel Cell Electric Vehicle (FCEV) Tax Credit



Purchase or lease light-duty EVs, Plug-In Hybrids, or Fuel Cell Electric Vehicles  
\$7,500 for <14,000 lbs GVWR and \$40,000 for >14,000 lbs GVWR



No Deadline



Tax exempt entities can still claim these tax credits through elective pay, also known as direct pay, through the IRS. For more information on Elective Pay and Eligibility, see <https://www.irs.gov/credits-deductions/elective-pay-and-transferability>



Source: [Tax-Exempt Orgs Flyer \(irs.gov\)](https://www.irs.gov/credits-deductions/elective-pay-and-transferability)

# Clean Bus Planning Awards

Free technical assistance for fleet electrification transition plans

Funded by the Joint Office of Energy and Transportation and managed by the National Renewable Energy Laboratory

Eligible fleets generally includes fleets eligible for EPA Clean School Bus

Applications open on a rolling basis

Electrification plans include:

- Existing fleet baseline analysis
- Vehicle electrification feasibility analysis
- Infrastructure assessment
- Procurement and project staging

- Financial analysis/modeling
- Emissions analysis/modeling
- Workforce considerations
- Recommended next steps



Source: [Roadmap to the Clean Bus Planning Tech Support Program Webinar](#)  
([lonestarcfa.org](http://lonestarcfa.org))



# Clean School Bus Resource Guide

Resource Guide Curated to School Bus  
Funding and Planning Needs

Fuels Covered – Battery-Electric,  
Compressed Natural Gas, Propane

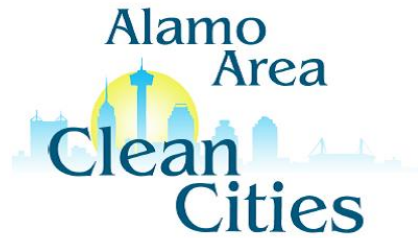
Resource Guide Includes:

- Organizations and Resources for  
Planning Assistance
- Funding
- Educational and General Information
- Alternative Fuel Vehicles and  
Infrastructure
- Technician and Driver Training



Source: NCTCOG

# Contact Us



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