

TEXAS
ELECTRIC
SCHOOLBUS
PROJECT



Mission:

To facilitate the speedy and equitable transition to a zero-emissions school bus fleet in Texas.

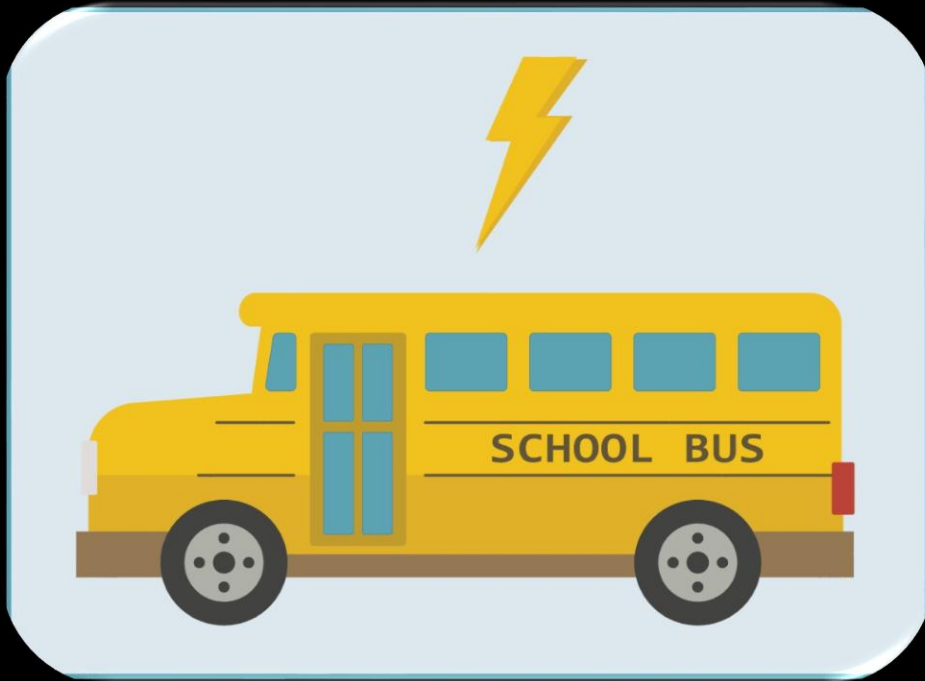


Who is TESBP?

- **Education and Outreach**
- **App**
- **Re-powers**
- **Learning tools**
- **Content and events**
- **Hub for information and networking**
- **CALL TO ACTION**



Why electric school buses?

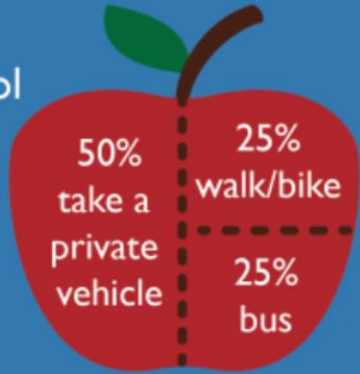


- **More than 95% of school buses in the United States run on diesel fuel.**
- **Diesel exhaust is a known carcinogen and is linked to serious physical health issues like asthma and heart disease.**
- **Exposure to diesel exhaust impairs cognitive development.**
- **Children are especially at risk.**



How Do Kids Get To School?

Pre-high school students who live close enough to walk/bike to school



About 20 million pre-high school students live too far to walk/bike to school.



50%
ride the bus



45%
driven in a personal vehicle

Low-income students



60%
ride the bus

Non-low-income students



45%
ride the bus

80% of low-income families own at least one vehicle and most still take the school bus.



For non-low-income families, over 99% own at least one vehicle, and most take a private vehicle.

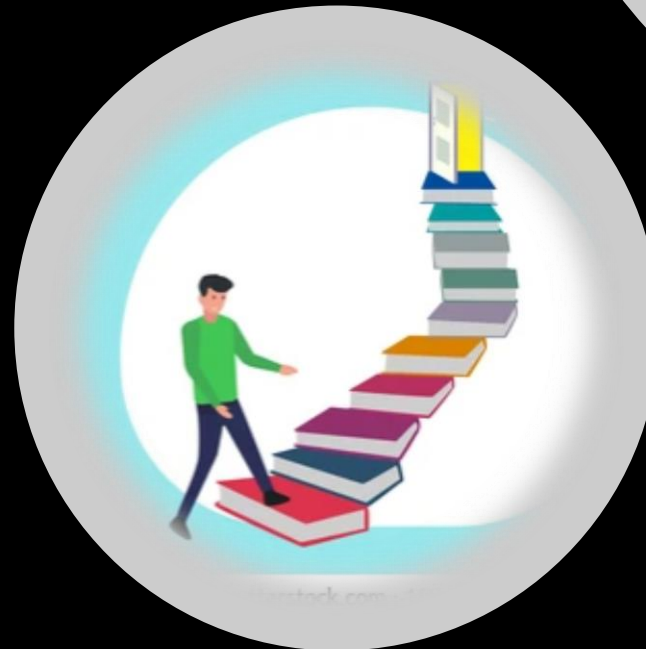


Source: Bureau of Transportation Statistics



Benefits of ESBs

- **Cleaner air and improved health**
- **Reduced noise pollution**
- **Cost Savings**
- **Sustainability/ Environmental Benefits**
- **Education/Economic opportunity**



According to Electric School Bus Initiative analysis, a school district operating an ESB can expect to see over \$100,000 in lifetime fuel and maintenance savings, compared to an equivalent diesel bus.



- 
- **Fewer fluids to maintain: Still need windshield wiper fluid!**
 - **Less moving parts: 20 in electric motor vs. over 2,000 in diesel engine**
 - **4-6 times more braking and tire efficiency**

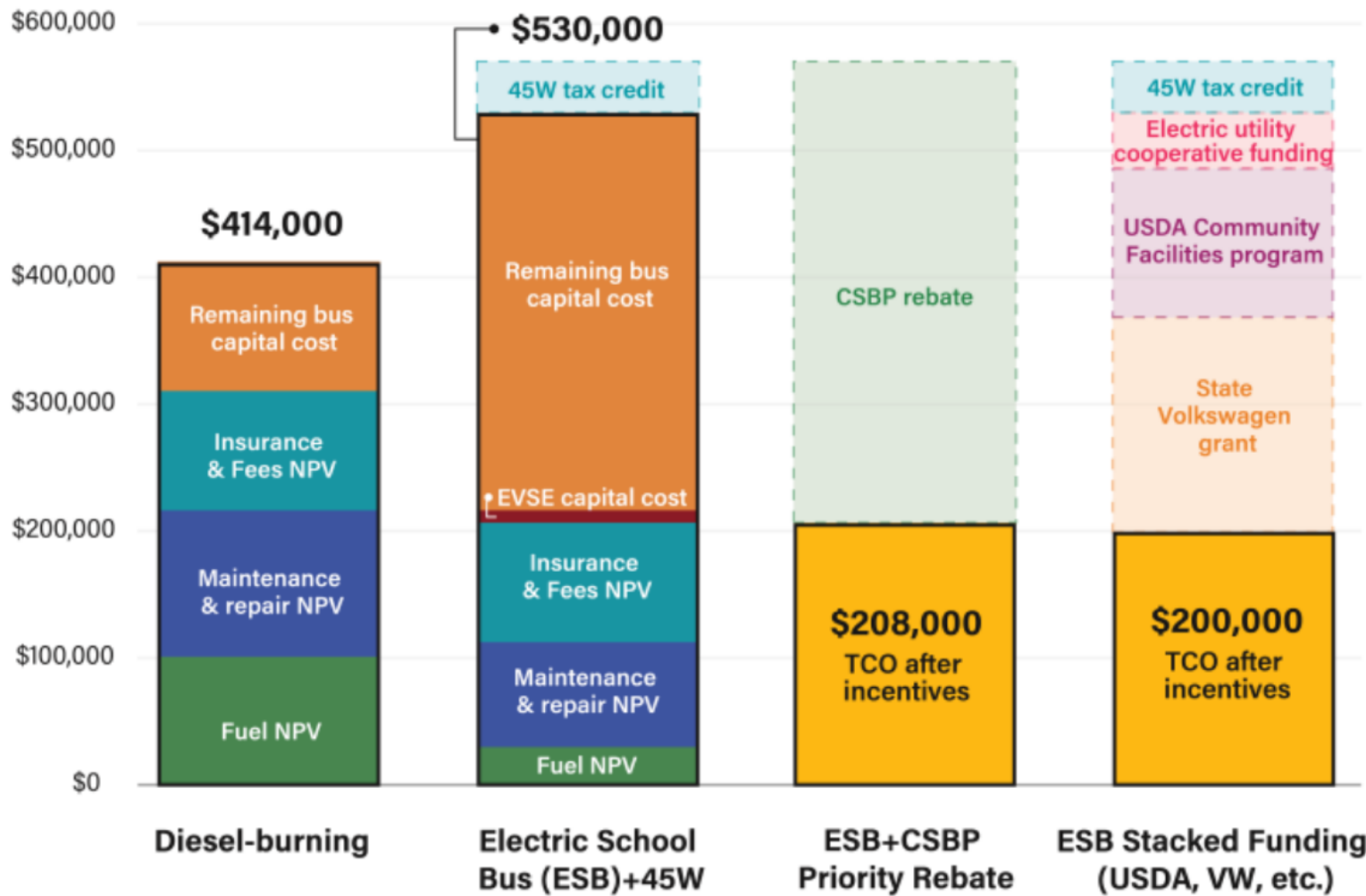




Experienced ESB Operators Share 6 Tips:

- **Plan for Expansion**
- **Match bus routes with range**
- **Take charge of charging costs**
- **Make sure you have backup**
- **Prioritize driver and technician training**
- **Involve all stakeholders in the process**





Notes: NPV= net present value. USDA= U.S. Department of Agriculture.

Source: WRI.

23.05.04



WORLD RESOURCES INSTITUTE



Electric School Bus (ESB) + 45W Scenario. The first ESB TCO funding scenario includes \$40,000



What's taking so long?

- **High upfront cost**
- **Limited charging infrastructure**
- **Lack of information and awareness**
- **Limited availability/long waits**
- **Need for infrastructure upgrades**

Blue Bird	BYD	IC Bus/Navistar	Lion Electric	Thomas Built Buses	Blue Bird
Blue Bird Vision	Type C	IC CE Series Electric Bus/PB10 E	LionC	Saf-T-Liner C2 Jouley	Blue Bird Vision
\$308,029 (FL)- \$491,330 (WA)	\$325,850 (NY)- \$413,500 (WV)	\$280,920 (LA)- \$447,861 (FL)	\$341,229 (ME)- \$399,055 (WA)	\$309,571 (LA)- \$425,347 (KY)	\$308,029 (FL)- \$491,330 (WA)

Source: WRI

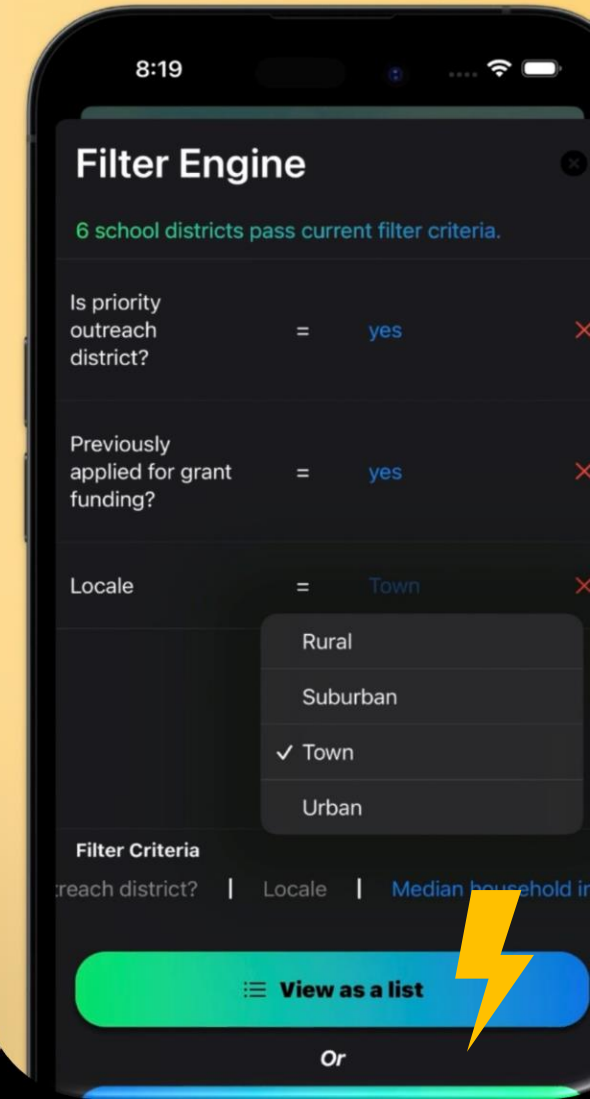
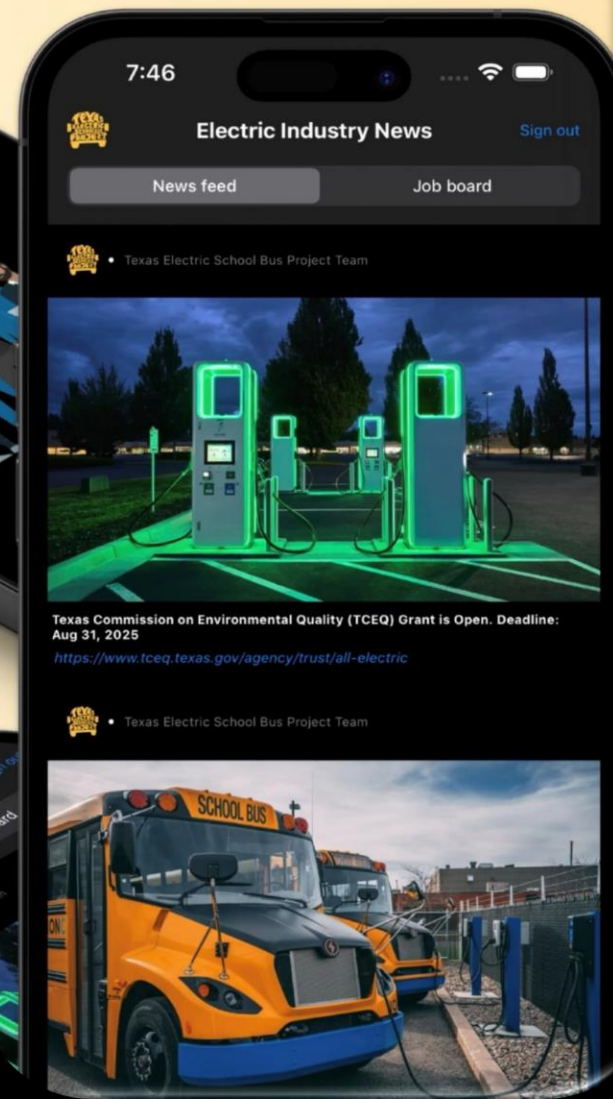
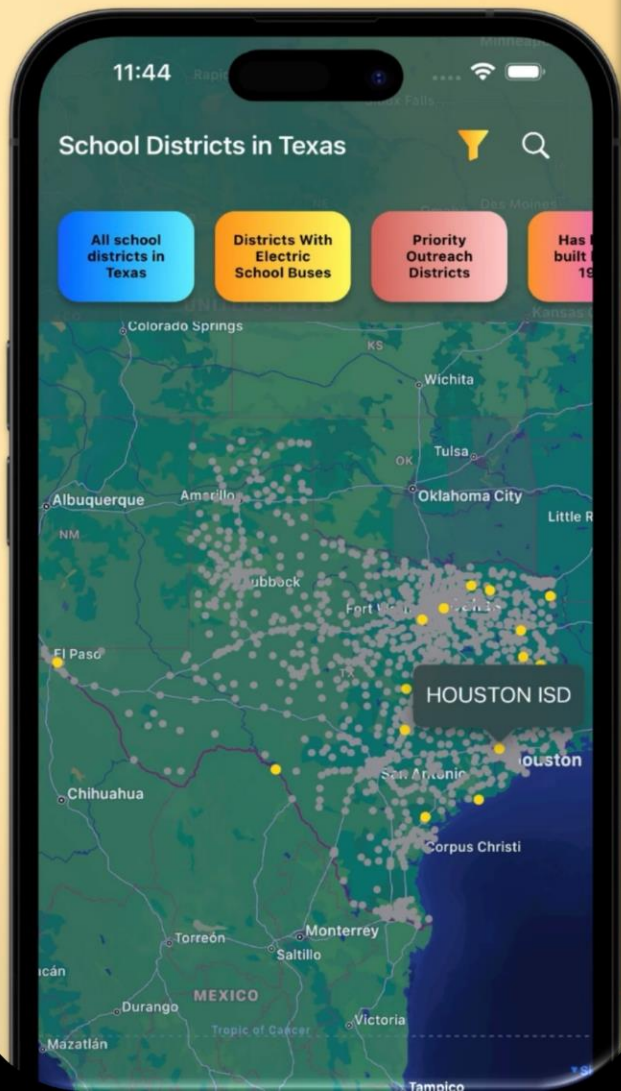


The official Texas Electric School Bus Project App

Access informative Texas school district maps

Get the latest industry news

With a powerful filtering engine



So that we can help Texas school districts

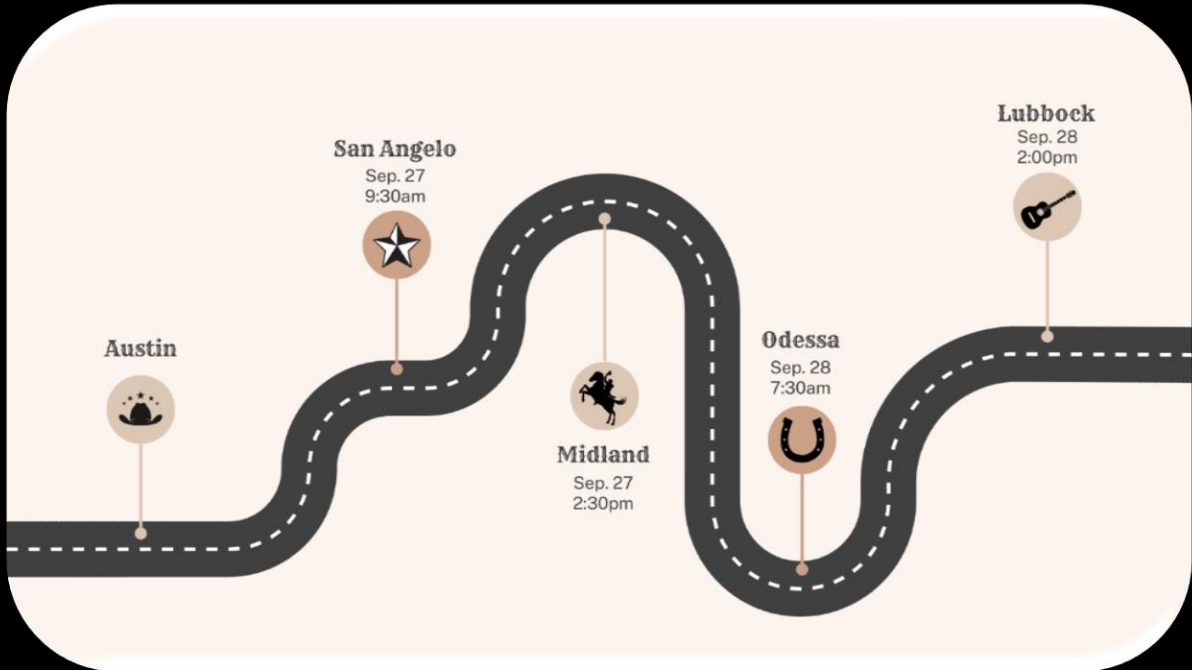


ELECTRIFYING TEXAS: THE EV ROADSHOW

SEPTEMBER 27-29

SAN ANGELO • MIDLAND • ODESSA • LUBBOCK

BROUGHT TO YOU BY:



★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Electrifying Texas: The EV Roadshow

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Wed. September 27 & 28
2023





THE POWER OF PLANNING: SCHOOL BUS FLEET ELECTRIFICATION



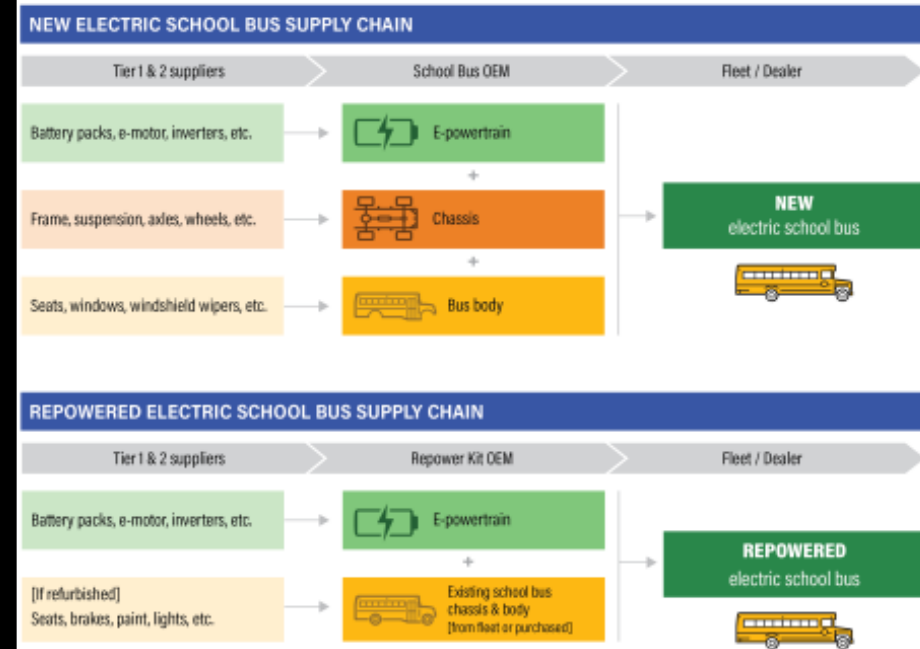
A CONVERSATION BETWEEN PAOLA MASSOLI
OF MICROGRID LABS AND JESSICA KEITHAN OF
THE TEXAS ELECTRIC SCHOOL BUS PROJECT



Why re-powers?

- **Drastically reduced upfront cost**
- **Faster delivery, shortened supply chain**
- **Stewardship of existing resources**
- **Creation of regional jobs**
- **Ease of transition**
- **Answer for electrifying developing world**

New vs. Repower School Bus Supply Chains



Note: New Electric School Bus Supply Chain depicts one model for bus supply and assembly. Depending on bus type and original equipment manufacturer (OEM), this process can vary. Source: WRI 2023.



Vehicle Repower Process

1. Existing Bus

Used bus sourced from the fleet or purchased



2. Inspect & Evaluate

Examine structural integrity required for EV components



3. De-content

Remove internal combustion systems (engine, fuel tank, etc.)



4. Refurbish

Perform cosmetic and mechanical updates to the bus as needed



5. Repower

Install and integrate EV drivetrain components (batteries, motor, etc.)



6. Commission

Vehicle undergoes testing & quality control assessment

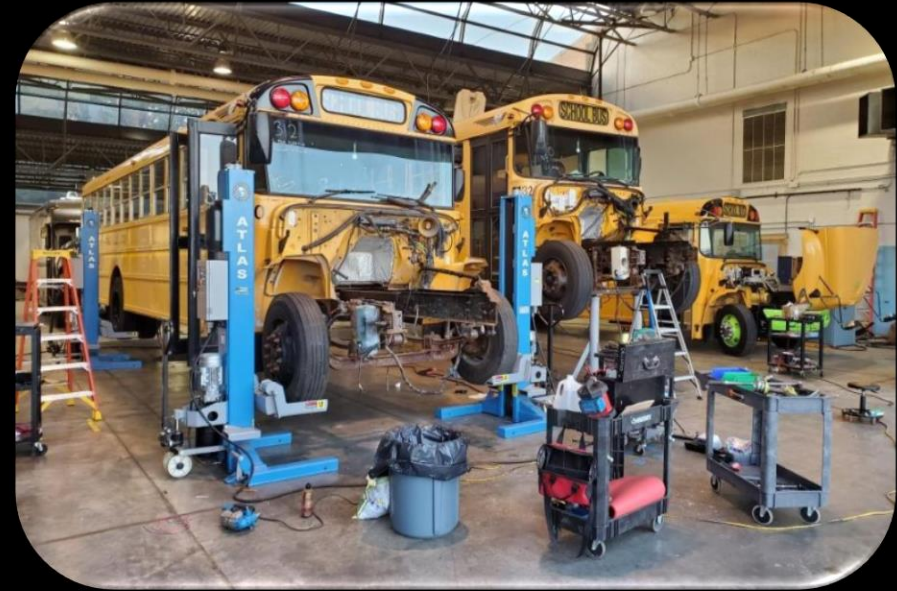


Source: WRI 2023, adapted from ABC Companies.

23.02.17



WORLD RESOURCES INSTITUTE



Funding Opportunities

- **EPA Clean School Bus Program**
 - **Grants and Rebates**
- **TCEQ TxVEMP – Volkswagen Emissions Mitigation Program**
- **DERA – Diesel Emissions Reduction Act**
- **Check out our Texas specific funding guide for more!**

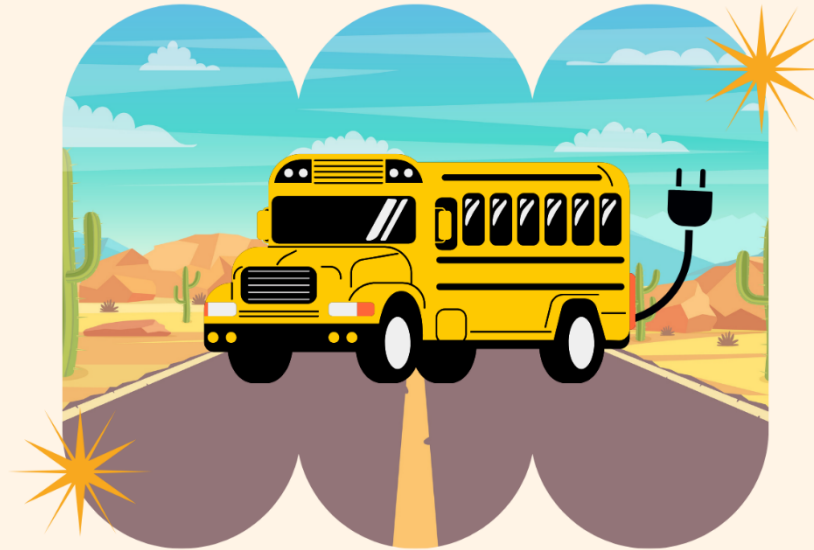




The Texas Electric School Bus Project's



FUNDING GUIDE



Scan the QR code to explore funding opportunities to help bring Electric School Buses to your community. Check back often for updates.



Grants, Loans, Rebates and more!



www.texaselectricschoolbusproject.org



EPA Clean School Bus Program

2023 Rebate Info



Total Funding

\$500 Million

Funding Uses

ESB (Including delivery and warranty), charging stations (L2, DCFC, V2G), charging installation, and workforce training

Number of Buses

1-25

Eligible Applicants

Public school districts, Native American Tribes*, Third parties including non-profit school transportation associations and eligible contractors*

Allocation

60% to Priority Applicants, 40% Non-priority*

Funding Amount

Priority School District - \$345,000 for Class 7+, \$265,000 for Class 3-6
Non-Priority School District - \$200,000 for Class 7+, \$145,000 for Class 3-6

Stackable?

Not stackable with other federal grants but can be combined with IRA Tax Credits and other local, state and private programs. Cost share not required.

Selection

Lottery. Priority selected first. Announced in April 2024

Award Timeline

Upfront

Application Req

One application per district.
Must have ACTIVE SAM.gov account.
School board must be aware, must have already initiated conversation with utility

Other Reqs

Scrappage

Other Funding

\$20,000 for shipping to HI, AK and U.S. Territories
\$20,000 for wheelchair lifts

Other Considerations

Charging infrastructure must be installed by EVITP-certified workers.

Applicants are encouraged to develop workforce plans.

Bus manufacturers are asked to fill out questionnaire on their workforce.

Buy America requirements may apply to charging equipment.

Rebate funds must not be used to support or oppose union organizing.

More Info

<https://www.epa.gov/cleanschoolbus/clean-school-bus-program-rebates>



EPA CLEAN SCHOOL BUS PROGRAM

Comparing Rebates vs. Grants

	REBATES	GRANTS
TOTAL FUNDING	\$500 million offered to start	\$400 million offered in 2023
SELECTION	Lottery - selected at random	Competitive - applications scored and ranked
ALLOWABLE USES FOR FUNDING	<ul style="list-style-type: none"> • New clean school bus • Electric school bus charging station • Electric school bus charging infrastructure installation on the customer's side of the meter • Workforce training and development 	<ul style="list-style-type: none"> • New clean school bus • Electric school bus charging station • Electric school bus charging infrastructure installation on the customer's side of the meter • Workforce training and development • Staff time & benefits, supplies, sub-contractors and other project implementation costs
FUNDING AMOUNTS	<p><u>Priority School District</u>: Up to \$345,000 per electric school bus and charging station</p> <p><u>Non-Priority School District</u>: Up to \$200,000 per electric school bus and charging station</p> <p>Total amounts include all project costs, including infrastructure installation and workforce training.</p>	<p>Funding amounts are expected to change in future grant rounds, likely lower or equal to the funding amounts for 2023 rebates.</p> <p>Additional funding IS available for project implementation costs, beyond the combined amount offered for bus and charging station.</p>
NUMBER OF BUSES	1-25 school buses per applicant	<p>15-50 school buses for a single school district</p> <p>25-100 school buses for a third party serving at least 4 school districts</p>
APPLICATION REQUIREMENTS	Applicant submits short, simple form with details for diesel buses they'd like to replace and which fuel type will replace them. Applicant must have an active SAM.GOV account.	Applicant submits multiple forms and materials (some optional, some required) as well as project narrative and budget (maximum of 15 pages). Applicant must have active SAM.GOV and GRANTS.GOV accounts.
IDEAL APPLICANT	Small or rural fleets Electric school bus pilot projects	Large fleets Fleets seeking significant or full conversion



Electric School Bus Roadmap

Transitioning to electric school buses generally follows a standardized process and can take around two years of planning. Your timeline may be different and will depend on local capacity, financing and processes, and the availability of buses.



3 TO 6 MONTHS

1. Foundation Setting

- 1.1 Build and educate project team
- 1.2 Engage key stakeholders
- 1.3 Research funding and financing options
- 1.4 Create a roadmap with equity strategies

12 TO 24 MONTHS

2. Charging Infrastructure and Operations Planning

- 2.1 Conduct facility assessment
- 2.2 Develop charging infrastructure plan
- 2.3 Develop operations plan

3. Procurement and Installation

- 3.1 Procure buses and other services
- 3.2 Select and procure chargers
- 3.3 Upgrade facilities and install electrical infrastructure

ONGOING

4. Training, Testing and Deployment

- 4.1 Train drivers, maintenance workers and first responders
- 4.2 Test fleet and charging equipment
- 4.3 Deploy buses

5. Performance, Benefits and Scaling

- 5.1 Monitor and report on performance and benefits
- 5.2 Leverage project for learning and other impacts
- 5.3 Update your roadmap and scale



ELECTRIC SCHOOL BUSES



Why are Electric School Buses (ESBs) Important?


- More than 95% of school buses in the United States run on diesel fuel.
- Diesel exhaust is a known carcinogen and is linked to serious physical health issues such as asthma and heart disease.
- Exposure to diesel exhaust can have serious impacts on cognitive development.
- Children are especially at risk.
- Studies show that disabled students, students of color, and students from low-income families are more likely to ride school buses, and ride them for longer.





Where does Texas fit in?

Texas has the largest school bus fleet in the nation!



kids ride the bus in the  state

Benefits of ESBs

- Zero tailpipe emissions! 
- Improved student, driver, and public health.
- Cost savings in fueling and maintenance.
- Energy independence and community resilience. 



Fact Sheet



Community Toolkit



ANNUAL MEMBERSHIP LEVELS



GIGAWATT - \$10,000

- Company profile page on TESBP website
- Logo on print materials
- Priority for event sponsorships
- Unlimited seats at quarterly round table
- 10 included users for TESBP app



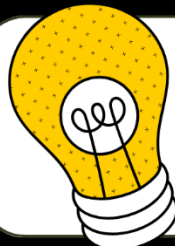
MEGAWATT - \$5000

- Half-page profile on our website
- Logo on print materials
- Priority for event sponsorships
- Five seats at quarterly round table
- 5 included users for TESBP app.



KILOWATT - \$1000

- Logo and link on our website
- Priority for event sponsorships
- One seat at quarterly roundtable
- One included user for TESBP app.



CLEAN AIR COMMUNITY MEMBER

- Non-profit - \$100
- Student - \$25
- Individual/Household - \$50 - \$50,000



**TEXAS
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website

www.texaselectricsschoolbusproject.org

