ELECTRIC SCHOOL BUS WEBINAR: BETTER AIR, BRIGHTER MINDS

December 11, 2024

PHILLIP BURGOYNE-ALLEN – MANAGER, TECHNICAL ASSISTANCE & POLICY IMPLEMENTATION

WORLD RESOURCES INSTITUTE

OUR AIM: ELECTRIFY THE U.S. FLEET

- Partner with communities, school districts, industry experts, manufacturers, utilities, and policy makers to **transform and electrify** the school bus market
- Together, build unstoppable momentum to **electrify** 480,000 school buses in the U.S.
- Ensure an **equitable transition** by focusing on underserved communities

Electric School Bus INITIATIVE

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TODAY'S AGENDA

- Introduction
  - **Phillip Burgoyne-Allen**, WRI Electric School Bus Initiative
- Federal funding and tax credits for electric school buses
  - **Serina Morales**, Environmental Protection Agency, Region 2
- State funding for electric school buses
  - **Gabrielle Baet**, New Jersey Department of Environmental Protection
- Nonprofit panel on progress and support in New Jersey
  - **Bill Beren**, Sierra Club, New Jersey Chapter
  - **Caroline McCallum**, New Jersey Clean Cities
  - **Doug O'Malley**, Environment New Jersey
- Audience Q&A

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WHY ELECTRIFY SCHOOL BUSES?

Electrification can accelerate decarbonization while bringing other direct, tangible benefits to every community

Improved health and cognitive outcomes for children

Cleaner air than with diesel buses, especially in communities of color

Reduced operating expenses for school districts

New jobs in green manufacturing

A **tipping point** for MHD + electrification

Enhanced **resiliency** and **renewables integration** with V2G

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HARMS OF DIESEL EXHAUST

- Diesel exhaust pollutants can lead to **asthma, cancer and other respiratory illnesses**
- Diesel exhaust pollution is a **known carcinogen**
- There are **documented negative impacts** on both student health and academic performance – and there is increasing evidence that **children are particularly susceptible**
- Reducing students' exposure to air pollution from school buses has **positive and significant effects on some test scores**

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Sources: EPA; Beatty and Shimshack; Austin, Heutel and Kreisman; Liu and Grigg; WHO

ELECTRIC SCHOOL BUS ADOPTION

12,200+ electric school buses committed, procured, delivered or in operation as of October 2024:

- 1,535 districts and private fleet operators
- 62% are in school districts with the highest shares of low-income households
- Commitments in 49 states, D.C., several territories and Tribal nations

Electric school bus commitments are in:
- cities (38%)
- Suburban areas (35%)
- towns (10%)
- rural areas (15%)

Source: WRI analysis (2024)

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EPA CLEAN SCHOOL BUS

Clean School Bus Funding Overview

Overview of the Bipartisan Infrastructure Law (BIL) Clean School Bus Program

Under **Title XI: Clean School Buses and Ferries,** the Bipartisan Infrastructure Law (BIL) provides **$5 billion** over five years (FY22-26) for the replacement of existing school buses with zero-emission and clean school buses.

These new clean school bus replacements will produce either zero or low tailpipe emissions compared to their older diesel predecessors.

School bus upgrades funded under this program will result in cleaner air on the bus, in bus loading areas, and in the communities in which they operate.

The first funding opportunity was the **2022 Clean School Bus Rebates.** The most recent funding opportunity is **the 2023 Clean School Bus rebate competition**.

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Why Clean School Buses?

Reduced Greenhouse Gas Emissions
CSBs emit zero or low tailpipe emissions.

Cleaner Air
CSBs result in cleaner air on the bus, in bus loading areas, and in the communities in which they operate.

Cost Savings
Replacing older diesel school buses with CSBs often reduces maintenance and fuel costs.

Improved Student Attendance & Achievement
The transport of students with CSBs has been linked to student attendance and academic achievement improvements.

Eligible Applicants

Public School Districts (local or state governmental entities, and public charter schools)

Nonprofit School Transportation Associations

Indian Tribes, Tribal Organizations, or tribally controlled schools

Eligible Contractors

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Prioritization Criteria

2023 CSB Rebates*

*Please note that program criteria may be different from prior CSB funding opportunities and are subject to change in future rounds of CSB funding

HIGH-NEED SCHOOL DISTRICTS AND LOW-INCOME AREAS

- School districts listed in the Small Area Income and Poverty Estimates (SAIPE) School District Estimates for 2021 as having **20% or more students living in poverty**.
- School districts located in the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
- **Title I-funded public school districts and charter school districts not listed in the SAIPE data.**
- **Title I-funded large public school districts (more than 35,000 students and/or more than 45 public schools) that do not meet the 20% SAIPE threshold may be eligible to self-certify.***

RURAL

- School districts identified with **locale code "43-Rural: Remote"** by the National Center for Education Statistics (NCES).

BUREAU OF INDIAN AFFAIRS FUNDED SCHOOL DISTRICTS

SCHOOL DISTRICTS THAT RECEIVE BASIC SUPPORT PAYMENTS FOR CHILDREN WHO RESIDE ON INDIAN LAND

**See the Prioritization Self-Certification Instructions, which can be found on the CSB Rebates webpage, for more information on this option.*

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CSB Funding per Replacement Bus

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE – Class 7+	ZE – Class 3-6	CNG– Class 7+	CNG – Class 3-6	Propane – Class 7+	Propane – Class 3-6
Buses serving school districts that meet one or more prioritization criteria	Up to $325,000 (Bus + Charging Infrastructure)	Up to $245,000 (Bus + Charging Infrastructure)	Up to $45,000	Up to $30,000	Up to $35,000	Up to $30,000
Buses serving school districts that are not prioritized	Up to $170,000 (Bus + Charging Infrastructure)	Up to $115,000 (Bus + Charging Infrastructure)	Up to $30,000	Up to $20,000	Up to $25,000	Up to $20,000

Selectees may be eligible for Inflation Reduction Act (IRA) tax credits applicable to their bus and infrastructure purchases; Please see the Internal Revenue Service (IRS) website for more information on these credits.

ADA-Compliant Buses: Applicants are able to request up to $20,000 per bus in additional funds for ADA-compliant replacement buses equipped with wheelchair lifts.

Eligible Existing School Buses Must*:

1. **Be a vehicle MY2010 or older diesel-powered school buses that will be scrapped if selected for funding.**
    1. If a fleet has no eligible 2010 or older diesel school buses and is requesting zero-emission school bus replacements, the fleet can either:
        1. Scrap 2010 or older non-diesel internal combustion engine buses; or
        2. Scrap, sell, or donate 2011 or newer diesel or non-diesel internal combustion engine buses.
2. Have a Gross Vehicle Weight Rating (GVWR) of 10,001 lbs or more
3. Be fully operational at the time of application submission.
4. Have provided **bus service for at least 3 days/week on average during the school year** at the time of applying, excluding emergency-related school closures.**

**Refer to the Program Guide for specific eligibility information.*

*** EPA strongly encourages third-party applicants to replace existing buses that provided service to the public school district listed on the application, or another school district eligible for priority consideration, as listed in the Prioritized School Districts list found on the website.*

CSB Program Website Tools and Resources

Technical Assistance

- Clean School Bus Technical Assistance
- Charging and Fueling Infrastructure Resources

Workforce Development

- Bus Manufacturer Job Quality and Workforce Development Practices
- Workforce Development and Training Resources

Educational Materials

- Clean School Bus Reports to Congress
- Benefits of Clean School Buses

All links can be found on: *epa.gov/cleanschoolbus*

Internal Revenue Service Tax Credits

Clean School Bus funding recipients may be eligible for Inflation Reduction Act tax credits via the Internal Revenue Service

More information on IRS Tax Credits.

Commercial Clean Vehicle Tax Credit

- Clean School Bus Selectees may be eligible for Inflation Reduction Act (IRA) tax credits applicable to their bus and infrastructure purchases.
- The Clean Vehicle tax credits for qualifying school buses are worth up to $40,000.
- Who qualifies: Businesses and tax-exempt organizations (such as school districts)

Alternative Fuel Vehicle Refueling Property Tax Credit

- If you install qualified vehicle refueling and recharging property in your business, you may be eligible for the Alternative Fuel Vehicle Refueling Property Tax Credit
- Who qualifies: Businesses, individuals.

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Upcoming funding opportunities for school buses

Jan 9th, 2025	2024 EPA Clean School Bus Rebate Application Due
Open/Ongoing	NYSERDA New York School Bus Incentive Program

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Questions?

Email us:

Morales.Serina@epa.gov

CleanSchoolBus@epa.gov

NJ Electric School Bus Program Funding

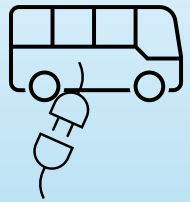
NJ Department of Environmental Protection - Gabrielle Baet

The New Jersey Electric School Bus Law

P.L.2022, c.86 (C.26:2C-8.58 et al.)

The Law: What Exactly?

*… the Department of Environmental Protection shall implement a three-year "Electric School Bus Program" **to determine the operational reliability and cost effectiveness** of **replacing diesel**-powered school buses with **electric** school buses for the daily transportation of students.*



Grants to purchase or lease all-electric school buses and charging infrastructure

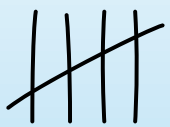
10 or more passenger capacity

90 miles minimum electric range

Grantee reporting and telematics data required

Training for personnel required

The Law: Who and How Much?



Award a minimum of six projects per year for three years

Include a mix of districts and contractors. Contractors must have a district partner.

Spread awards across state

At least 50% of funding must go to overburdened communities

$15 million per year, $45 million total

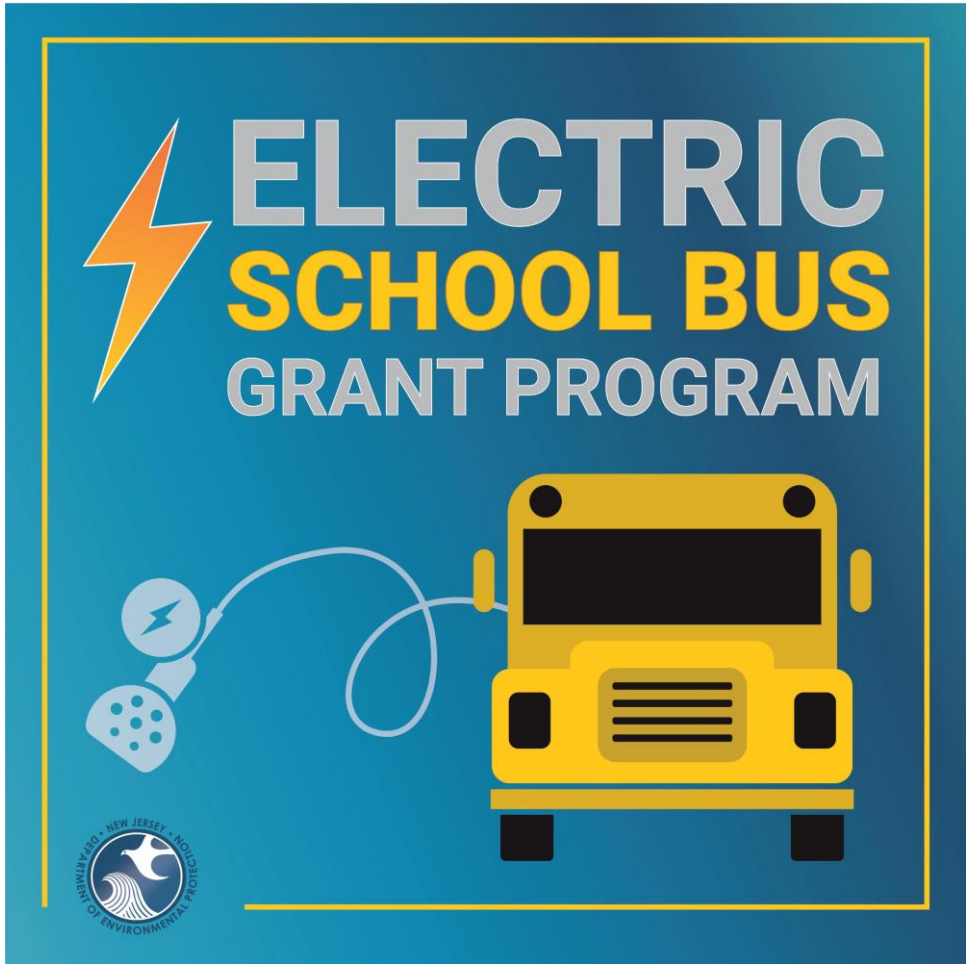
Year 1 Funding amounts

Program Funding Amounts*

Program	Standard Amount	Overburdened School District Amount
Bus + Level 2 charging station	$270,000	$300,000
Bus + DC fast charging station	$290,000	$320,000
Bus + Bi-directional charging option	$320,000	$350,000

*Up to $40,000 in tax credits are offered by the federal government for applicants acquiring qualified clean vehicles. These tax credits can be combined with the funding amounts shown here.

**Overburdened school districts include school districts located in municipalities categorized as overburdened communities.



Eligible Applicants

School districts that own their own buses

School bus contractors providing busing services to schools.

Eligible Buses

All electric

Type C or D

New

(No repowers or used buses)

Purchase or leased

(A minimum five-year lease is required)

Vehicle to Building Pilot Program

Electric School Bus Law

$15M a year for 3 years

48 buses were awarded with Year 1 funding

~$76M has been awarded for 253 electric school buses

Rolling application process

ELECTRIC SCHOOL BUS RESOURCES

- Types of Electric School Buses
- 2024 ESB market report and buyer's guide
- All About Charging Infrastructure
- Step by Step Guide for ESB electrification
- Cold Weather Impacts on Electric School Buses
- Technical Assistance Menu
- WRI weekly office hours for 1:1 support
- Power Planner- coordinating with your utility
- NJ Utility Contact Sheet
- Explainer on how school districts can access IRA tax credits
- ESB batteries and battery safety

Important Links

1. MUD Toolkit
2. Model EV Ordinance
3. NJ's Medium & Heavy - Duty Vehicle Incentives
4. EDA NJZIP
5. NJDEP Diesel Modernization Program
6. Electric Vehicle and Charging Incentives
7. Alternative Fuel Vehicle Refueling Property Credit
8. Commercial Clean Vehicle Credit
9. Electric Vehicle Law P.L.2007, c.340 and P.L.1999, c.23
10. Right to Charge Law P.L. 2020, c. 108
11. Electric Vehicle Installation Requirement Law P.L. 2020

ESB Feedback

Scan for the survey

School Bus Electrification Survey

Follow NJDEP Bureau of Mobile Sources on social media!

DRIVECLEANNJ

NJ DEP Instagram

NJ DEP Bureau of Mobile Sources Instagram (@DriveCleanNJ)

NJ DEP Facebook

NJ DEP Air, Energy & Materials Sustainability (AEMS) Facebook

NJ DEP Twitter @NewJerseyDEP

NJ DEP YouTube Channel

Visit NJ DEP Bureau of Mobile Sources webpages

- www.nj.gov/dep/drivegreen
- www.stopthesoot.org

Gabrielle.Baet@dep.nj.gov

Join our DEP mailing list for updates and funding announcements
www.state.nj.us/dep/stopthesoot/sts-listserv.htm

ELECTRIC SCHOOL BUS PLANNING SUPPORT TOOLS

SIERRA CLUB New Jersey Chapter

December 10, 2024

ELECTRIC SCHOOL BUSES IN NEW JERSEY TODAY

- Sixty Districts/Contractors/Private Schools have applied for and received ESB grants since 2019
- Total amount of approved grants was $122 million for 372 buses – $87 million in state grants and $35 million in federal grants
- State funds came from the VW Settlement Agreement, income from our participation in the regional green house gas initiative (RGGI) and the Electric School Bus Program
- Total number of buses in service is 23
- Total number of buses pending is 289
- Total number of buses cancelled is 83 - $30 million returned

SIERRA CLUB New Jersey Chapter

NJ School Board Association
October 23, 2024

FIRST DO YOUR HOMEWORK

1. Get buy-in from School Board & Administration
2. Talk with your school bus dealer
3. Analyze your routes
4. Survey your property for charging infrastructure
5. Know your existing electrical service and capacity
6. Bring your utility on board to determine needed additional capacity
7. Consult early with your local zoning board & building inspectors

Sierra Club Electric School Bus Website

The Sierra Club's web site has a page dedicated to school bus electrification with links to

- Technical white papers
- Videos
- State and Federal Grant Programs and Tax Incentives
- NJ Electric School Bus Buyers' Guide

Electric School Bus Campaign | Sierra Club

SIERRA CLUB New Jersey Chapter

NJ School Board Association
October 23, 2024

ELECTRIC SCHOOL BUS BUYERS' GUIDE

SIERRA CLUB
NEW JERSEY CHAPTER

New Jersey Clean Cities

Buyers Guide Covers:

- Options for buying, leasing, and entering into service contracts for ESBs
- How to specify options such as battery capacity, heating & cooling systems, operator and maintainer training, and telematics
- What you need to know about charging systems, infrastructure and facility planning
- How and when to deal with your utility companies and local zoning and building inspectors
- Disaster Planning

SIERRA CLUB New Jersey Chapter

December 11, 2024

Sierra Club Electric School Bus Website

Grants & Tax Credits

State Grants

- NJDEP ELECTRIC SCHOOL BUS PROGRAM
- NJDEP REGIONAL GREEN HOUSE INITIATIVE
- NJEDA NJ ZIP PROGRAM
- NJBPU CLEAN FLEET EV PROGRAM

Federal Incentives

- EPA INFRASTRUCTURE INVESTMENT & JOBS ACT (IIJA)
- EPA INFLATION REDUCTION ACT (IRA)
- EPA DIESEL EMISSIONS REDUCTION ACT (DERA)
- IRS DIRECT PAY TAX CREDITS FOR GOVERNMENT AGENCIES

SIERRA CLUB New Jersey Chapter

December 11, 2024

WHAT'S ON THE HORIZON?
NJBPU MININUM FILING REQUIREMENTS

Coming mid-2025 Utilities will not charge school districts "make ready costs"

EDCs will invest in, and earn on, the wiring and backbone infrastructure necessary to prepare MHD Make-Ready locations that (i) are at Publicly-Accessible MHD Charging Depots, (ii) serve government or Public-serving fleets, or (iii) are Private Fleet Charging Depots located in or primarily operating in OBMs or in OBCs directly adjacent to federally recognized Freight EV corridors.

WHAT'S ON THE HORIZON?
NJSBA AGGREGATION CONTRACT

Buying Options:

- Education Services Commissions
- Sourcewell
- School Bus as a Service
- Repowers

SIERRA CLUB New Jersey Chapter

December 11, 2024

New Jersey Chapter

Bill Beren, Transportation Chair

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Clean Cities and Communities

December 11, 2024

Better Air, Brighter Minds

Caroline McCallum
Co Director, NJ Clean Cities Coalition

New Jersey Clean Cities

NJ Clean Cities Coalition (NJCCC)

Clean Cities and Communities

Clean Cities and Communities advances the nation's environment, energy security and economic prosperity through collaboration with communities by building partnerships with public and private stakeholders that create equitable deployment of clean transportation solutions for all.

The New Jersey Clean Cities Coalition is an IRS 501(c)3 non-profit corporation and is formally designated by the US Dept. of Energy as the statewide Clean Cities Coalition. We are dedicated to the establishment of Public/Private Partnerships for the reduction of petroleum in transportation, and the equitable advancement of alternative transportation fuels and advanced vehicle technologies.

NJ Clean Cities Coalition Staff

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Greener by Design


Québec


SOUTH JERSEY
GAS


AAA


ACUA
Atlantic County Utilities Authority


NEW JERSEY
PROPANE GAS ASSOCIATION


e-Boost
EV Charging @ the Edge


New Jersey
Natural Gas


MAHER
TERMINALS


SUSTAINABLE
PRINCETON.


AIR & GAS
TECHNOLOGIES


ZEEM
SOLUTIONS


ENCORE
ENERGY GROUP


PSEG


WM
WASTE MANAGEMENT


PORT
AUTHORITY
NY NJ
AIR LAND RAIL SEA


BAYSHORE
Family of Companies


HUDSON COUNTY
IMPROVEMENT
AUTHORITY


KEMA Labs


MOTIV
DELIVERS


95
Fill It
Up Clean
New Jersey


FPG
ELECTRIFIED

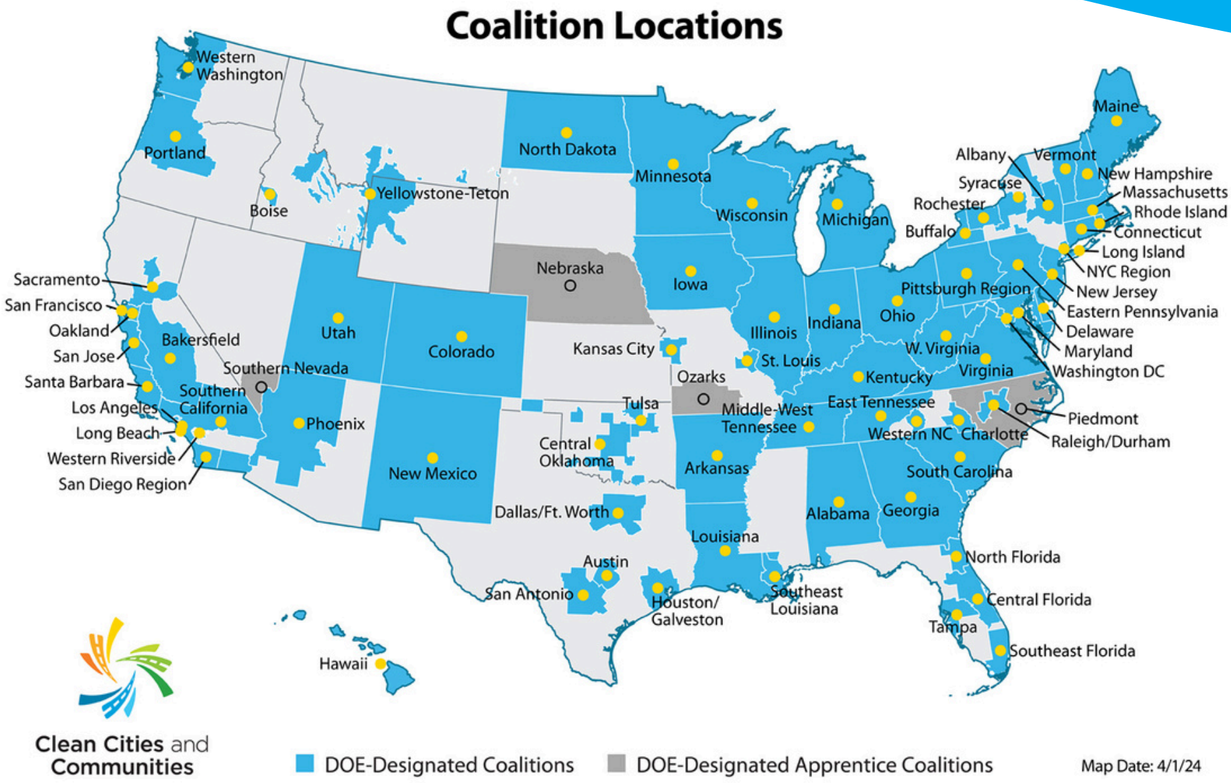

Gage Zero


Clean
Energy


CW Solutions
making smart
connections

What We Do

- Clean Cities and Communities is a U.S. Department of Energy (DOE) partnership to advance clean transportation nationwide.
- More than 75 DOE-designated Clean Cities and Communities coalitions work locally in urban, suburban, and rural communities to strengthen the nation's environment, energy security, and economic prosperity.



- 1.6 million alternative fuel vehicles on the road
- 72 million tons of emissions prevented
- Energy use impact of 14 billion gasoline gallon equivalents
- Nearly 20,000 public and private stakeholders.

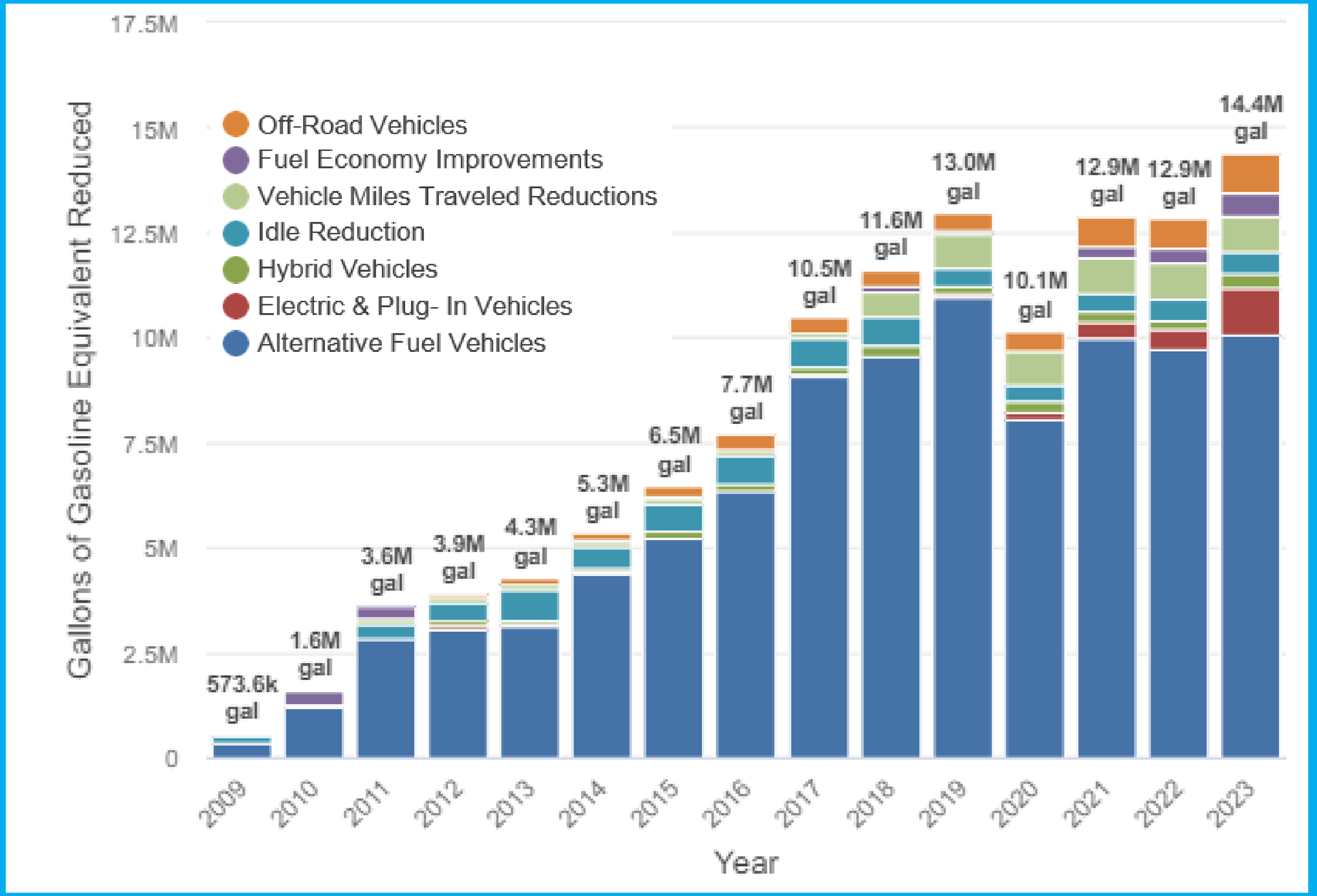
30+ Years of Transforming Transportation

NJ Clean Cities 2024 Goal:

17 Million Gasoline Gallon Equivolents!!!

DRIVE 4 DATA

MEASURING NJ'S IMPACT ON PETROLEUM DISPLACEMENT



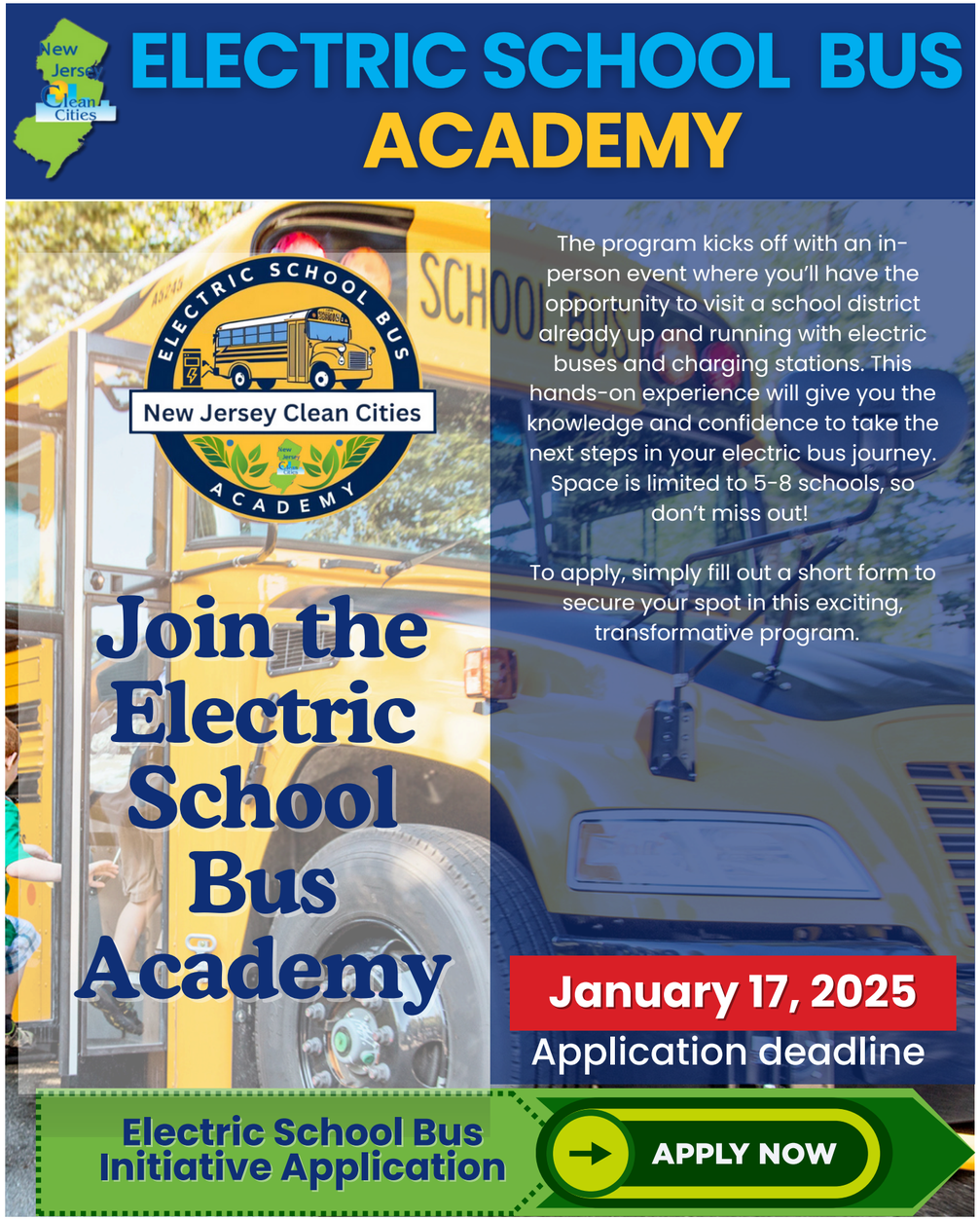
ESB Academy

NJCCC working with WRI Electric School Bus Initiative to educate local school districts on the resources available to help with the transition to electric.

Our goal is to work with 5 - 8 NJ school district champions to train them on the various planning and deployment tools available to help with the transition to electric.

Electric School Bus

INITIATIVE



https: njcleancities.org/Electric_School_Bus_Initiative

Ways to engage with us:

DRIVE 4 DATA
MEASURING NJ'S IMPACT ON PETROLEUM DISPLACEMENT

NJ CLEAN CITIES ECO PATROL

DRIVE ELECTRIC New Jersey

EMPOWER
EV FRIENDLY WORKPLACES

ELECTRIC SCHOOL BUS ACADEMY
New Jersey Clean Cities

Thank You!

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