

# Transportation Electrification in the US Virgin Islands

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# Battery Electric Vehicles 101

- All Electric Drivetrain
  - ICE - 1200 Moving Parts
  - BEV – 300 Moving Parts
- Charged by external Charging Source
  - Level 1
  - Level 2
  - DC Fast Chargers
- Zero-Emissions
- Reduced Dependence on Fossil-Fuels
  - Total Cost of Ownership
  - Transportation and Energy Resilience
    - Post Storm Recovery
- High Performance Acceleration
  - All-Terrain Capabilities

# GO FLEET Initiative

- GVI Fleet Transition Plan
  - Government Operations Fleet Efficiency & Electrification Transformation
- Current Fleet Inventory
  - Appx – 1500 Vehicles
  - Currently Less than 5 Vehicles are BEV
- Assessment of Fleet for Transferability
- Reducing Fleet Management Costs
  - Fuel Costs
  - Maintenance Cost
  - Vehicle Misuse
- Improving Financial Viability to the Utility
- EV-Readiness At Government Buildings
  - St. Croix and St. Thomas Government Houses Installs

# Federal Funding Driving the Transition

- US – DOI
  - \$2.15 Million Granted to VIEO & VIWAPA
- US – DOE
  - State Energy Program
    - Funding for Charging Stations
    - Workforce Development
    - EV Specific Rebate Program
- Infrastructure Bill
  - \$7.5 Billion towards National EV infrastructure

# Gas Station to Charging Station Conversion

Washington DC



Charging Station at Virgin Islands  
Energy Office on St. Croix

St. Thomas Coming Soon...





Thank You



# Emissions Reduction Opportunities for USVI Vehicles and Equipment

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EPA Region 2



October 20, 2021





## Today's Presentation

- Benefits of EVs
- Tax Credits for EVs
- The Diesel Emissions Reduction Act (DERA)
- DERA Funding Opportunities
  - School Bus Rebate Program
  - National & Insular Area Programs
  - State DERA Program
- Project Examples



# Environmental and Public Health Benefits of Electric Vehicles

## Environmental

- EVs emit fewer planet-warming greenhouse gases and other air pollutants that can affect local air quality.

## Public Health

- With fewer air pollutants, cleaner air reduces respiratory distress such as asthma, lung cancer, and various other cardiac and respiratory diseases.



## **Federal Subsidies for Electric Vehicles**

### **Federal Plug-In Electric Drive Vehicle Credit:**

Up to \$7,500 per vehicle tax credit for new vehicle purchases depending on manufacturer sales.

The credit phases out after 200,000 qualifying vehicles have been sold by a manufacturer.

This incentive applies to USVI residents.

Use IRS Form 8910

<https://www.irs.gov/forms-pubs/about-form-8910>



## Federal Subsidies for Electric Vehicles

### **Federal Vehicle Refueling Property Credit:**

The smaller of 30% of installation costs or \$1,000 available as a tax credit for installation of refueling equipment at a private residence.

This incentive applies to USVI residents.

Use IRS Form 8911

<https://www.irs.gov/forms-pubs/about-form-8911>



# DERA Programs

## School Bus Rebates



- EPA offers rebates to eligible entities reduces harmful emissions from older, dirtier diesel vehicles.
- Timeline: Fall
- USVI applicants eligible? YES

<https://www.epa.gov/dera/rebates>

## State Grants



- EPA allocates DERA funds to eligible U.S. states and territories for the establishment of diesel emissions reduction programs.
- Timeline: Spring
- USVI applicants eligible? YES

<https://www.epa.gov/dera/state>

## National Grants



- Program solicits applications for projects that achieve significant reductions in diesel emissions and exposure, particularly from fleets operating in designated poor air quality areas.
- Timeline: Winter
- USVI applicants eligible? YES

<https://www.epa.gov/dera/national>

## Insular Area



- Program solicits applications from eligible entities that achieve significant reductions in diesel emissions and exposure.
- Timeline: Spring
- USVI applicants eligible? YES

<https://www.epa.gov/dera/tribal>



## DERA School Bus Rebate Program

- Students are particularly vulnerable to air pollution both inside and near diesel school buses
  - Rebates are selected in a lottery and selectees will receive payment after receiving new engines or vehicles and completing scrappage process
  - Selected applicants that scrap and replace their old diesel buses will receive a rebate of \$20,000-\$65,000 per bus, depending on the fuel type of the replacement bus.
- ★ Maximum funding of \$65,000 per vehicle is available only for Zero Emission Vehicles.





## Eligibility for Old Buses to be Replaced

- Diesel school buses powered by a 2006 or older model year engine;
- Gross Vehicle Weight Rating (GVWR) of 10,001 lbs or more;
- Owned by the applicant or VI government without any liens on the title;
- Operational and in use for at least 4 days/week on average transporting students between [9/1/2019](#) and [2/29/2020](#).



Gross Vehicle  
Weight Rating (lbs.)

17-character VIN



## DERA Grant Programs Eligible Projects

	Drayage Truck Replacement
	Vehicle or Equipment Replacement with EPA Certified Engine
	Vehicle or Equipment Replacement with CARB Certified Low NOx Engine
★	Vehicle or Equipment Replacement with Zero-tailpipe Emission Power Source
	Engine Replacement with EPA Certified Engine
★	Engine Replacement with CARB Certified Low NOx Engine
★	Engine Replacement with Zero-tailpipe Emission Power Source
	Certified Remanufacture Systems
	Highway Idle Reduction Technologies when combined with new or previously installed exhaust after-treatment retrofit
	Highway Idle Reduction Technologies without new exhaust after-treatment retrofit
★	Marine Shore Connection Systems
★	Electrified Parking Space Technologies
	Exhaust After-treatment Retrofits
	Engine Upgrade Retrofits
	Hybrid Retrofit Systems
	Fuel and Additive Retrofits when combined with new retrofit, upgrade, or replacement
	Aerodynamics and Low Rolling Resistance Tires when combined with new exhaust after-treatment retrofit
	Alternative Fuel Conversion





## DERA Eligible Vehicles, Engines & Equipment

### School Buses

- Includes **diesel powered school buses** of Type A, B, C and D. To be eligible as a school bus, a vehicle should **meet the definition of a school bus as defined by the National Highway Transportation Safety Administration.**

### Medium-duty or heavy-duty trucks

- Includes **diesel powered highway vehicles** with gross vehicle weight rating (GVWR) including Class 5 – 8 (16,001 lbs GVWR and over)

### Nonroad engines, equipment or vehicles

- Diesel powered nonroad engines, equipment and vehicles including, but not limited to, those used in **construction, handling of cargo (including at ports and airports), agriculture, mining, or energy production (including stationary generators and pumps).**

### Marine Engines

- Includes **diesel powered Category 1, 2, and 3 marine engines and vessels.**

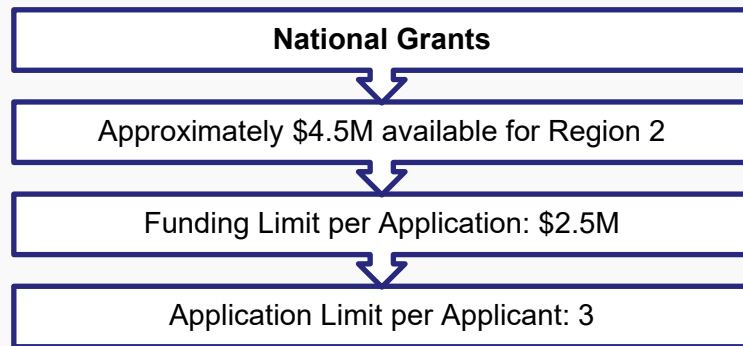
 **Although private fleet owners are not eligible to apply directly to EPA for DERA funding, both public and private fleets can benefit from the programs implemented by DERA grant recipients.**



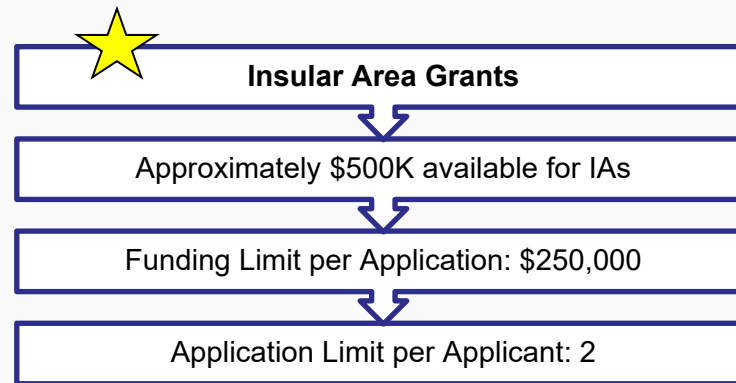
# 2021 National and Insular Area Programs

## WHO CAN APPLY?

- **National Program:** Regional/state/local government agencies, non-profit organizations or institutions.
- **Insular Area Program:** Insular area government agencies



Cost Share waived up to \$200k



.No Mandatory Cost Shares

Less Stringent Eligibility Requirements for Vehicles & Equipment



## 2021 Insular Area Program: Ownership, Usage, and Remaining Life

1

The existing vehicle, engine, or equipment must be **fully operational**.

**Participating fleet owner** must currently own and have owned and operated vehicle(s) or equipment(s) during the **two years prior to upgrade**.

The existing vehicle, engine, or equipment must have **at least two years of remaining life** at the time of upgrade.

**School Buses:** Must have at least **1,000 miles/year for Insular Areas** during the two years prior to upgrade, or during calendar year 2019.

**All Other Highway Engines:** Vehicles must have **1,000 miles/year for Insular Areas** during the two years prior to upgrade.

**Agricultural Pumps:** Must have operated at least **250 hours per year** during the two years prior to upgrade.

**All Other Nonroad Engines:** Nonroad engines must operate at least **300 hours per year** during the two years prior to upgrade.

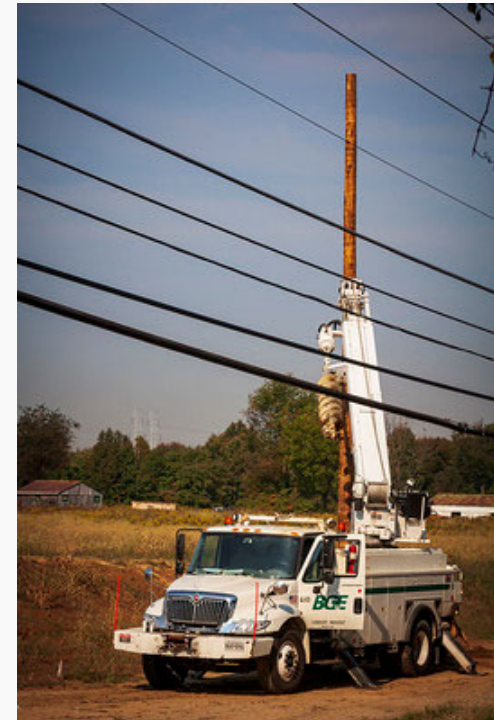
**Marine:** Marine engines must operate at least **500 hours per year** during the two years prior to upgrade.

**Documentation:** Participating fleet owners must attest to each criterion in above in a **signed eligibility statement**.



## DERA State Grant Program

- Annual funding opportunity since 2008
- Allocates funds to eligible states and territories to establish programs that reduce harmful heavy duty diesel emissions
  - States/territories can use funding for grant or rebate programs
- No cost-share for Insular Areas





## Example Project: Truck Replacement

Includes diesel powered medium-duty and heavy-duty vehicles.

	<b>Gross Vehicle Weight Rating:</b>	<b>Example:</b>
<b>Medium-duty or heavy-duty trucks</b>	Class 5 (16,001 -19,500 lbs GVWR);	Bucket Utility Truck Delivery Truck
	Class 6 (19,501 - 26,000 lbs GVWR);	Beverage Truck Single Axle Truck Stake Body Truck
	Class 7 (26,001 - 33,000 lbs GVWR);	Home Fuel Truck Garbage Truck Tow Truck
	Class 8 (33,001 lbs GVWR and over)	Dump Truck Cement Truck



## Example Project: Bay Shore School District



### School Bus Replacement Project

- National DERA Program
- Partnered with private bus fleet
- Purchased 4 Blue Bird electric buses
- Installed electric charging stations

Source: <https://www.schoolbusfleet.com/10112832/new-york-contractor-district-roll-out-4-electric-school-buses>



## Example Project: Alabama Department of Transportation



### Marine Engine Replacement Project

- National DERA Program
- Privately-owned Gee's Bend Ferry
- Retrofitted from diesel to electric
- Installed charging station at the ferry terminal

Source: <https://www.workboat.com/passenger-vessels/first-all-electric-ferry-in-u-s-reaches-milestone>



## Questions?

Please contact Valerie Askinazi

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[www.epa.gov/DERA](http://www.epa.gov/DERA)

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