



MEDIUM- AND HEAVY-DUTY EV DEPLOYMENT DATA COLLECTION

CALSTART and partners will collect, clean, and analyze data from a diverse set of electric vehicles across different applications, geographies, terrains, and climatic conditions. Data from medium- and heavy-duty electric vehicles including electric school buses, transit buses, trucks and off-road equipment are of particular interest to support the anticipated growth of electrified transportation nationally. We welcome the participation of both public and private fleets as well as Clean Cities Coalitions.

INVOLVEMENT

1. Meet with CALSTART
2. Review and sign a **Data Sharing Agreement**
3. Install or configure existing **Data Loggers**
4. Establish automatic data sharing or transfer data
5. Receive **Report of Findings** from CALSTART

FLEET BENEFITS

- **Analytics:** Each participating fleet will receive data analysis of their participating vehicles
- **Final Report of Findings:** Each participating fleet will receive a summary report of major findings
- **Information Sharing:** Learn insights from fleet participants nationwide

DATA OVERVIEW

- **Vehicle Data:** Collected using on-board data loggers
- **Charging Data:** Collected from EVSE using charging management software provided on the majority of equipment
- **Facility Data:** Information on electricity consumption and energy throughput
- **Maintenance Data:** All related vehicle information including maintenance data, service calls, and vehicle/equipment availability

PROJECT DURATION

- **12 Months** of data collection
- Rolling start with data collection concluding Q1 2022
- Project **end December 2022**

PROJECT PARTNERS



GEOTAB



DATA COLLECTION

ELIGIBLE VEHICLES

Participating vehicles may include battery-electric transit buses, school buses, trucks, off-road equipment, light-duty vehicles, and other clean mobility solutions.

DATA USAGE

The data will be used to perform analyses that will include but not be limited to the following:

- **Project-level** analyses to understand the relative performance of each deployment project
- **Vehicle-type** analyses to understand the performance of different vehicle types
- **Climate** analyses to understand vehicle performance under different climatic conditions
- **Use-case** analyses to understand performance of vehicles related to applications/use cases
- **Location-based** analyses to understand performance of the MD and HD EV sectors based on different geographies
- **Vehicle charging and energy consumption** analyses to understand energy cost savings, emissions reductions, and energy consumption patterns

STORAGE & SECURITY

- Data will be **verified, cleaned, anonymized** and stored on a secure server
- All Personal Identifiable Information (PII) or data deemed proprietary will be treated as **confidential**

SAMPLE PARAMETERS

	Sample Measures	Collection Method
Vehicle Data Performance	Trip duration, average speed, total distance, average efficiency, total kWh used	Data loggers
Vehicle Data Specifications	Model year, manufacturer, GVWR/ Bus length, range estimate, battery chemistry	Self-report
Charger Data	Charging session duration, electricity charged, electricity cost, average charging power	Built-in software, sub-meter
Facility Data	Electricity source, electrical consumption, base price, demand charges	Self-report
Maintenance Data	Data/time of service, type of maintenance, cost	Self-report

Learn how to enroll your fleet by contacting Lily Paul at lpaul@calstart.org.

CALSTART evaluates and promotes clean vehicle technologies, supporting the transportation industry, fleets, and government at all levels to better understand and accelerate the deployment of sustainable solutions. Visit www.calstart.org for more information.