

# Plug-in Electric Vehicle (PEV) Data Collection Using Project-Installed Telematics

## FAQ Sheet for EV Fleets and Individual EV Drivers

### Project Background

**About:** Energetics, a division of Akimeka, LLC, is leading a PEV Data Collection project, EV WATTS (*Electric Vehicle Widescale Analysis for Tomorrow's Transportation Solutions*), funded by the US DOE. The objective of this project is to collect, validate, collate, analyze, summarize, and publicly release real-world use data and datasets to inform future research and deployment planning.



**Where and how is EV WATTS obtaining the data?** Energetics is working with its partners—including Clean Cities Coalitions, fleets, state and local government agencies, vehicle manufacturers, utilities, and charging station providers—to collect the data and remove all sensitive and personally identifiable information. The project is collecting data from approximately 1,600 plug-in electric vehicle (PEV) and 10,000 electric vehicle charging infrastructure nationwide representing diverse vehicle sizes (all-electric, plug-in hybrid electric vehicles), types (light, medium, heavy-duty), settings, and operating conditions.

**What will EV WATTS do with the data?** Energetics will use a secure process for transferring and storing the raw data before any sensitive information is removed, and the data entries are anonymized. Energetics will develop summary data reports to showcase trends and findings and will share the cleaned dataset with DOE for further analysis.



### What the Project is Seeking from Fleets and Individual PEV Drivers Looking to Install Telematics

**PEV Data Collection using Project Telematics Goal:** To gather new PEV data (12-18 months of data) from fleets and individual PEV drivers using project funded and installed telematics device/datalogger for each PEV that currently does not have telematics.

**Data Sharing Agreement:** Prior to receiving a telematics device/datalogger, each fleet and/or individual PEV driver must review and sign an agreement to ensure the participant has data rights and understands the project's terms and conditions of data sharing, security, and privacy. Once the agreement is executed, the participant will provide preliminary information to the project team.

#### Process for Fleets:

1. Sign a Telematics PEV Data Sharing Agreement (available upon interest/request)
2. Provide fleet and vehicle information to project team
3. Establish a timeline for installing telematics devices

#### Process for Individual PEV Drivers:

1. Fill in an Individual PEV Driver Agreement (available upon interest/request) with driver and vehicle information, then sign the agreement
2. Establish a timeline with Clean Cities coalition partner for installing telematics device



### Geotab GO9™ Telematics Device

**What telematics device/datalogger is the project providing?** The Geotab GO9™ telematics device ([www.geotab.com/documentation/go9-support-document/](http://www.geotab.com/documentation/go9-support-document/)) is a vehicle tracking device with near-real-time vehicle data, compact design, intelligent in-vehicle driver coaching, IOX technology expendability, and LTE connectivity.

**How will the project be using the Geotab GO9 devices?** The project is providing Geotab dataloggers for free and covering subscription fees for 12-18 months. If a device is damaged or a vehicle is taken out of service before 12 months of data collection is completed, the fleet will be responsible for replacing it.

**Will the fleet/PEV owner have access to the data that is collected?** All data captured by these telematics devices are available to the PEV owner through the myGeoTab dashboard portal and will remain available for the duration of the subscription and at least 6 months after the subscription is discontinued. If a fleet is already using GeoTab devices but would like to add more devices to the fleet through the project, the project devices use a specific database platform that is accessed by the fleet through a separate account.

**Do the devices work on Tesla PEVs?** Yes. While Tesla PEVs don't have a standard diagnostic port that is typically found on other vehicles just below the driver's dashboard, they do have a diagnostic port. This is accessed through a panel on the dashboard.



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### Telematics Device Installation Process

**Who is facilitating the telematics installations?** Sawatch Labs will facilitate the installation of Geotab dataloggers. Sawatch is the most experienced Geotab reseller for PEV installations and has developed PEV analytics that will be applied to the data streams collected by the telematic devices.



**How are telematics installations being handled with COVID-19 concerns?** The installation would ideally take place in a covered location for a fleet, but for personal vehicles, it would likely be at a parking lot where there is plenty of space for separation. Installers will be taking precautions (sanitizing surfaces they touch in the car) and there should be little need for direct interactions between the installer and driver. The objective is to schedule things as efficiently as possible while accommodating the PEV owner requests. Sawatch and the installer will work out all the logistics after the participation agreements are signed.

**What happens if, in the unlikely event, the contractor does damage to the owner's vehicle while installing the telematics device?** Sawatch Labs works with licensed installers who carry insurance so the installer would be responsible.

**Can fleets or individuals install the devices themselves to avoid scheduling an installation as part of a group which may be difficult?** The preference is for a professional installer to do the job since they have worked with those vehicles. While technically, the telematics device can be plugged into the exposed diagnostic port under the driver's dashboard, this can be problematic for when a mechanic needs to access it and then forgets to connect it again or if it is accidentally hit and no longer makes a good connection. A proper installation uses a harness that connects under the dashboard to create an additional diagnostic port for the Geotab device to connect and be out of the way for the driver or mechanic.



**Can telematics devices be self-installed?** While PEV owners could do a similar installation, there is concerns that it might not be done secure enough and potentially lead to a bad data connection if it comes loose or something was done wrong. Success rate will be higher if the devices are professionally installed. We also want to avoid the potential for owners to damage their own cars. PEV owners with experience working on their vehicles would increase the likelihood of a proper self-installation. Another possible approach is trying to coordinate a small group of PEV owners with similar vehicles to they can work together to help each other as needed, preferably with one PEV driver that has some experience working on their vehicle. Self-installations are allowed, but these will be decided on an individual basis with arrangements that provide the highest chance of success.

### Telematics Device Self-Installation Resources:

- Telematics Installation Guide: <https://www.geotab.com/documentation/go9-device-install/>
- Telematics Installation Video: <https://www.youtube.com/watch?v=MIMMyUCvHH4/>

### Telematics Device Data Collection and Analysis

**What data will the telematics devices be collecting?** Data collected will include trip-level, longitudinal vehicle data such as miles driven, charging energy consumed, charging rate, battery state of charge, vehicle GPS location, ambient temperature, and odometer or PEV mode odometer (for PHEVs). The EV WATTS team will provide data analysis reports for each data provider with at least 20 PEVs that will include analysis on all PEVs operated by that entity.

**When is the data collection period?** Telematics devices need to be installed by March 30, 2021 to gather 18 months data and absolutely need to be installed before September 30, 2021 to gather a minimum of 12 months data.

**What PEV data will the EV WATTS project anonymize?** VIN, location (latitude/longitude), and any driver information. There will be no personally identifiable information in the final anonymized public data set.

### Telematics Device Use After the EV WATTS Project

**What is the cost if car owner wants to keep device after the project?** The telematics device is already fully paid for, but there is a cost to continue the monthly subscription for the device to transmit data. After the project, the fleet or PEV owner can choose to continue paying the monthly subscription fees with Geotab for their services at the regular commercial price would be around \$25 per month per vehicle or just discontinue use.

**Can a fleet data partner access telematics data after the project has terminated?** A fleet would still have access to the data and dashboard for six months after the device subscription ends. It is recommended participants download the data they are interested in within those six months. In addition to downloading reports, they can also export the entire dataset easily from the Geotab dashboard.



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