



EV WATTS

Driving Electrification Through the Power of Data

ENERGETICS
A Division of Akimeka, LLC

EV WATTS: Electric Vehicle Widescale Analysis for Tomorrow's Transportation Solutions

With the rapid increase in vehicle electrification, there is a need for an up-to-date, publicly-available national data to understand end user charging and driving patterns as well as vehicle and infrastructure performance to inform research planning. The U.S. Department of Energy (DOE) selected Energetics' EV WATTS project for a \$4M award conducted from 2019 to 2022. Energetics will work with partners to collect plug-in electric vehicle (PEV) and electric vehicle supply equipment (EVSE) data, analyze data, and make summary results publicly available. All data sets and reported results will anonymize data to protect sensitive information as DOE does not want any personally identifiable information.

Energetics will work with Clean Cities Coalitions, fleets, state/local gov't agencies, vehicle manufacturers, utilities, and charging station providers, to collect and analyze data spanning:

- All-electric and plug-in hybrid electric vehicles (PHEVs)
- Variety of vehicle applications (cars, trucks, buses, etc.)
- Multiple geographic areas and climates
- AC level 2 and DC fast charging infrastructure
- Various EVSE sites (corridors, workplace, multi-unit dwellings, curbside, fleets, transit, ports, airports, etc.)

EV WATTS Partners include:

- Multiple Clean Cities coalitions
- Over 30 data providers and advisors including state agencies, utilities, public/private fleets, and airports
- Leading charging network provider
- Leading vehicle datalogger provider



Data Provider Benefit

- Individualized data analysis reports can be created for any data provider with results compared to others.
- Local partners could have an active project role in gathering supplemental PEV or EVSE information.
- Contribute to aggregated database used by government, research community, local planners, and industry to advance vehicle electrification efforts.

Energetics Relevant Project Experience Includes:

- Utility EV initiative analysis with utilities (CA, MA)
- Multi-unit dwelling EVSE analysis (CA, IL, MD, UT)
- Fleet maintenance and fuel data analysis (FL)
- EV Project and NYSERDA-funded EVSE analysis (NY, US)



EV WATTS Will Collect Data Including as Much of the Following as Possible:

- 18-24 months data collection (2020-2021)
- Vehicle descriptions (e.g., make, model, year)
- Trip-level, longitudinal vehicle data
 - Odometer or EV mode odometer (for PHEVs),
 - Battery state of charge
 - Vehicle GPS location
 - Ambient temperature
 - Charging energy consumed and charging rate
- Information about passenger vehicle owner/lessee
 - Entity type
 - Availability and type of charging equipment
 - Terms of ownership
 - Number of non-plug-in vehicles in household
 - Use of vehicle to provide ridesharing services, etc.
 - Household demographic data (location, number of people and drivers, household income)
- EVSE event-level, longitudinal charging station data
 - Plug-in session start and end times
 - Power transfer start and end times
 - Charging energy consumed
 - 15-min rolling average power

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About Energetics

Energetics, a division of Akimeka, LLC, is a full-service technology and management consulting firm with nearly 40 years of experience in energy-related fields, assisting government and industry clients in developing new solutions to energy problems. The Energetics Sustainable Transportation Solutions division includes over 20 engineers and scientists with extensive experience in energy efficiency, alternative fuels, vehicle electrification, smart mobility, and other advanced powertrain technologies.