EPRI

eRoadMAP™

v2.2

eroadmap.epri.com

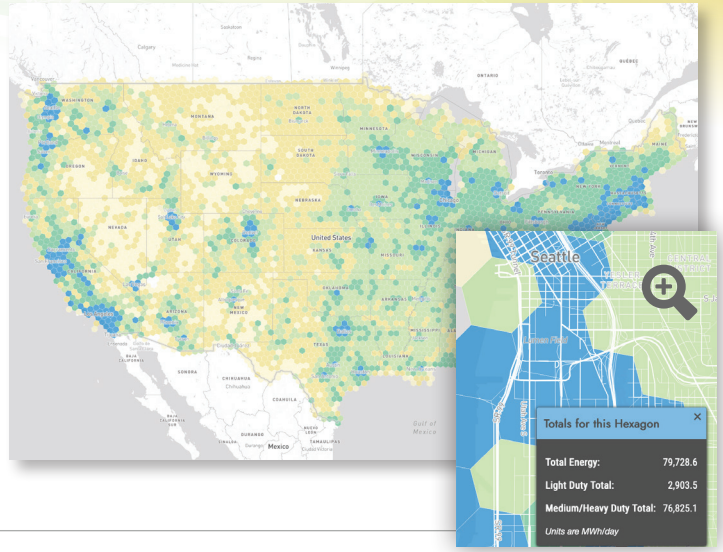
IF YOU CANT MEASURE IT, YOU CAN'T PLAN FOR IT

eRoadMAP™ is a first-of-its kind interactive power and energy map designed to estimate the grid needs for electrifying transportation at the local level, covering light-, medium-, and heavy-duty vehicles. This online data tool identifies where, when and how much EV charging load is likely to materialize on the U.S. electric grid.

eRoadMAP allows users to explore how quickly electric vehicles are expected in different regions, and identifies the power and energy needs at roughly the individual feeder level where critical utility planning occurs.

This free and public resource highlights both immediate and future charging needs.

eRoadMAP sends clear demand signals that build confidence in the timing and pace of EV adoption enabling utilities, regulators, boards, and industry stakeholders to prioritize "no regret" investments.



METHODOLOGY: The following simplified methodology was used to create eRoadMAP:

1. **Documenting Conventional (Gas and Diesel) Vehicle Behavior:** EPRI gathered data from travel models, OEMs, registrations, and other sources to document local daily miles traveled and the primary locations where vehicles are stationed. Until now, this dataset for conventional vehicles across light-, medium-, and heavy-duty sectors was nonexistent. In cases where vehicle data was lacking, EPRI applied weighting to accurately represent the overall behavior of the vehicle fleet.
2. **Conversion of Conventional Vehicle Behavior to Electric Vehicle Needs:** EPRI combined vehicle behavior data with energy conversion factors to translate the daily requirements of conventional vehicles into those for electric vehicles. The pace of adoption was guided by policy goals. These conversion factors varied among light-, medium-, and heavy-duty vehicles. As more data is gathered from electric vehicles in operation, these factors will be updated to better reflect real-world conditions.
3. **Adoption Timeline:** EPRI is monitoring vehicle sales, fleet adoption trends, policy developments, and multiple yearly EV forecasts. These are all incorporated into an adoption trajectory out to 2030. EPRI also includes a 100% electrification scenario to show what energy and power would be needed if all on-road transportation is electrified.
4. **Ongoing Addition of Fleet Electrification + Charging Infrastructure Plans:** Where fleet electrification and charging infrastructure plans are known, EPRI is incorporating these specific energy and power needs. As more actual electrification plans are added over time, the eRoadMAP estimates will become increasingly valuable to all planning stakeholders.

A STARTING POINT FOR STRATEGIC PLANNING + STAKEHOLDER ENGAGEMENT