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Feasibility analysis of electric roadways

Regan Zane

Utah State University, regan.zane@usu.edu

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Data Management Plan

USU DOE ARPA-E IDEAS, DE-AR0000885: Feasibility analysis of electric roadways

Data types and sources

The following classes of data/materials will be generated and maintained by this project:

- Actual traffic, electric utility, and emissions data provided by affiliated project partners. Potential partners to provide the data include but are not limited to the state department of transportation, local utility, and local air quality management district.
- Simulated traffic, electric utility, and emissions data generated by the project team through use of models and simulation tools.
- Survey data collected (or contracted) by the project team related to market adoption. The data may include results from surveys addressing willingness to pay for passenger cars and trucks, factors that hinder or encourage adoption and identify distinct market segments.
- Educational materials generated by the project team. Data may include project results depicting the value proposition for electric roadways, technology gaps, and incremental technology rollout strategies.

Content and format

Generally, data collected from partners, generated from models, and output from surveys will be placed into MS Excel, Matlab, or MS database files and other software as appropriate. The PIs will accept responsibility for long-term preservation of the research data, which includes a commitment to manage successive iterations of the data as new versions are deposited. The PIs will ensure that the research data are migrated to new formats, platforms, and storage media as required by good practice in the digital preservation community.

Sharing and preservation

Data will initially be maintained by the project team members relative to the type of data gathered as described above. As data are accumulated, analyzed, and interpreted for technical application or public consumption, the project team will endeavor to make educational material data and associated model generated data publicly available within one year of processing and final quality control. Selected data may be withheld temporarily until project completion to allow time for publication by project researchers and/or students or to conform with the collaborating institutions' policies on intellectual property. The team will reevaluate the cost/benefit considerations for maintaining and further sharing the data at the conclusion of the project.

Protection

Physical data (data logs, lab books, field reports, printed papers) will initially be archived by each team member. In accordance with the institutions' auditing practices, all lab data sources are readily available. The team will protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness; and otherwise be consistent with all applicable laws, regulations, and DOE orders and policies. The project team will protect and not share proprietary data provided by project partners.

Rationale

A primary intent of the project is to evaluate feasibility of electric roadways and provide the public with information to inform realistic incremental rollout possibilities and technology gaps to advance electric roadways. The project requires data collection to inform the models being developed. The project results need to be disseminated to inform the public, including policy makers, technology developers and providers, and government agencies.

Software & Codes

Software and codes developed under the project will be maintained by each team member and will be readily accessible. Proprietary software and code will be protected according to the policies of each institution. A simple graphical user interface (GUI) software tool will be made publicly available to depict the results of the project.