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ECON 1002

Consumer Preferences For Battery Electric Vehicles Considering Energy Mix: A US Choice Experiment Study

We conduct an online discrete choice experiment survey of 1,500 drivers to assess their willingness to pay (WTP) for clean energy as an attribute of battery electric vehicles (BEVs). We also explore consumers’ attitudes towards various policy incentives for BEVs, changes in the number of jobs, and ultimate changes in electricity costs. Using GIS, we calculate exposure to charging infrastructure and renewable energy facilities across the U.S.

Leveraging conventional and advanced logit models, we find that U.S. drivers have a positive WTP for increasing the share of BEVs in the transportation system and support the use of clean energy to power them. They also support increasing the number of jobs associated with accelerated vehicle fleet decarbonization in the U.S., prefer tax credit incentives over free charging and free parking initiatives, and dislike the current transportation plan. Controlling for spatial and individual heterogeneity reveals divergent values. Respondents who reside in urban areas, are pro-environment, male, young, possess a high income and education level, have exposure to charging infrastructure and renewable energy facilities, and identify as Democratic affiliates, tend to be more supportive of BEV and clean energy policies.

Dr. Jamal Mamkhezri is an Associate Professor of Economics at New Mexico State University. His research interests lie in the field of environmental and natural resource economics with a specific emphasis on energy. His current research focuses on renewable electricity generation and its impacts on people’s opinions (i.e., non-market valuation), the economy (e.g., explicit costs, employment, etc.), and the environment (e.g., externalities, implicit costs such as health impacts, water use, greenhouse gases, etc.). His work has appeared in top field journals such as The Energy Journal and Journal of Environmental Management, among others. Additionally, he is a gold medallist in various martial arts and takes pride in helping students belonging to underrepresented groups with their social mobility.