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**Title:** An Inferential Study of the Potential Consumer Value of Free Charging

**Abstract:** Although there is economic and marketing evidence of consumers assigning additional benefits to free products and bundles, there is limited research into the behavioral consequences of offering public electric vehicle charging for free. Previous exploratory research by Maness and Lin analyzed possible economic and environmental benefits from offering free public charging infrastructure and policy. Their work found that providing free public charging infrastructure could increase plug-in electric vehicle sales and thus cause decreased reliance on fossil fuels in the personal transportation sector. But their study relied on assumptions about the increased value which consumer would place on free charge events. This project proposes to establish an early estimate of the value of free charging in the United States. Existing research efforts have been insufficient to study the behavioral implications of a free charging program. This is due to two problems: lack of a control treatment and lack of variability in charging prices. To solve these problems, this project proposes to study consumers' responses to a free charging program through a stated preference approach. Under this approach, valuation behaviors would be explored through varying experimental scenarios. In these scenarios, the respondent would need to be presented with a charging location choice where two or more charging stations are presented with one charger being free and the others having a cost. The choice experiment data will be analyzed using a discrete choice approach. Determining the value of free would entail adding a dummy variable to the model for when fueling cost was zero. Discrete choice models are versatile enough to determine the valuation through a ratio of coefficients and to determine if there is systematic taste variation in the value of free. The presentation will conclude with an analysis and distributional estimate of the value of free charging through a discrete choice approach.