

UTC Project Information	
Project Title	MPC-659 – Equitable Deployment of Wireless Charging Lanes in Transportation Networks
University	Utah State University
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology \$90,000 Utah LTAP, financial support \$90,000
Total Project Cost	\$180,000
Agency ID or Contract Number	69A3551747108
Start and End Dates	August 24, 2021 to July 31, 2022
Brief Description of Research Project	<p>To alleviate GHG emissions, electric vehicles (EVs) are introduced as a promising solution to reduce tailpipe emissions, providing a more sustainable transportation system. However, the primary unfavorable factor that may negatively impact EV market share is the limited driving range of EVs. Wireless charging lanes are one of the most convenient and promising charging solutions that can eliminate range anxiety if they become prevalent in a regional transportation network. Given the limited government budgets, the deployment of public charging infrastructure should address both efficiency and equity concerns.</p> <p>In this study, we develop a modeling framework for the equitable and efficient deployment of wireless charging lanes in general transportation networks. We envision that EVs are about to become common in the road network, and that governmental agencies are striving to apply an equitable and efficient deployment strategy to introduce wireless charging lanes into transportation systems. To efficiently and equitably deploy charging lanes, one must consider the charging and route choice behaviors of EV drivers who follow a selfish decision-making procedure, as well as proper deployment strategies that guarantee the fair distribution of all benefits of charging lanes.</p>
Describe Implementation of Research Outcomes (or why not implemented)	
Place Any Photos Here	

Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none">• Reports• Project Website	