

**Project Information Form**

Project Title:	Exploring the Potential of Solar-powered Two-wheeled Electric Mobility
University:	University of California, Davis
Principal Investigator:	Beth Ferguson Co-PI: Angela Sanguinetti
PI Contact Information:	Email: bferguson@ucdavis.edu
Funding Source(s) and Amounts Provided (by each agency or organization):	U.S. Department of Transportation (US DOT)
Total Project Cost:	\$
Agency ID or Contract Number:	UCD-DOT-501 DOT 69A3551747114
Start and End Dates:	February 1, 2019 – January 31, 2020
Brief Description of Research Project:	This proposed project explores the potential for solar-powered two-wheel electric vehicle mobility. The researchers will install a solar charging station at UC Davis West Village for electric bikes and scooters, deploy a small fleet of shared two-wheel cargo bikes, and evaluate usage patterns and solar charging needs. The station was designed and built by PI Beth Ferguson's studio Sol Design Lab. The station was previously located at Stanford University where it offered students and community members the opportunity to gather in the shade while recharging their laptops, phones and electric bicycle, scooter, or skateboard via USB ports or standard electrical outlets. With three solar panels (585 watts) and a 1000 watt inverter, the station provides a WiFi workstation for four people and solar laboratory for students during the day. Two batteries extend the charging capacity on cloudy days and into the night with vibrant LED lighting and data loggers track station use. The researchers will assess the impacts of this solar charging station, including intensity of station and shared vehicle use, travel patterns, and modes and trip types being replaced with two-wheeled electric mobility. This integrative project represents innovations in mobility, charging station design, and solar energy.
Describe Implementation of Research Outcomes (or why not implemented):  Place any photos here	



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Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<a href="https://ncst.ucdavis.edu/project/solar-powered-two-wheeled-electric-mobility/">https://ncst.ucdavis.edu/project/solar-powered-two-wheeled-electric-mobility/</a>