

Technical Report Documentation Page

1. Report No. SWT-2016-13		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Consumer Preferences for the Charging of Plug-In Electric Vehicles				5. Report Date November 2016	
				6. Performing Organization Code 383818	
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9. Performing Organization Name and Address The University of Michigan Sustainable Worldwide Transportation 2901 Baxter Road Ann Arbor, Michigan 48109-2150 U.S.A.				10. Work Unit no. (TRAIS)	
				11. Contract or Grant No.	
12. Sponsoring Agency Name and Address The University of Michigan Sustainable Worldwide Transportation				13. Type of Report and Period Covered	
				14. Sponsoring Agency Code	
15. Supplementary Notes Information about Sustainable Worldwide Transportation is available at http://www.umich.edu/~umtriswt .					
16. Abstract <p>The growth of the market for plug-in electric vehicles (PEVs) is expected to continue to increase in the coming years. This expected increase is due to several factors, including the need to meet more stringent future CAFE fuel economy goals for manufacturers, and the general expectation that PEVs might turn out to be an ideal vehicle embodiment (in terms of fuel source) for future self-driving or fully-autonomous vehicles.</p> <p>In anticipation of more widespread adoption and use of PEVs by the general public, this study was designed to explore the factors that are important to consumers when considering charging a PEV. A survey was performed to examine consumer preferences and expectations for several charging scenarios, and the relative importance of each applicable technology or function to potential PEV users.</p> <p>The following issues were explored: plug-and-charge, eVehicle roaming, optimized load management (with and without renewable energy), optimized load management for home area networks, reverse charging, and inductive (wireless) charging. Consumer preference levels and ranking of importance for different charging scenarios were compared. The alignment of consumer expectations and preferences with existing support from the current charging protocol standards were also examined. Finally, the potential effects of prior PEV experience were discussed.</p>					
17. Key Words consumers, charging, electric vehicle, EV, plug-in electric vehicle, PEV, plug-in hybrid vehicle, PHEV, battery electric vehicle, BEV, ISO 15118, SEP 2.0, Smart Energy Profile				18. Distribution Statement Unlimited	
19. Security Classification (of this report) None	20. Security Classification (of this page) None	21. No. of Pages 40	22. Price		