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Across Early Policy and Market Contexts, Women and Men Show Similar Interest in Electric Vehicles

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POLICY BRIEF

Issue

The transition to electric vehicles (EVs) will rely, ultimately, on the participation of all vehicle buyers. While nearly equal numbers of new vehicles are purchased by men and women, to date EVs are being acquired by far more men than women (Figure 1). Prior analysis¹ of data from California at the end of 2014 found no difference between women and men in prospective interest in EVs; similar percentages were interested in an EV being the next new vehicle for their household. Yet today—years after these results were reported—the gender disparity in EV sales and registrations persists.

Researchers at the University of California, Davis examined whether the gender similarities in prospective interest in EVs witnessed in California extended to other states that, while generally supportive of California’s EV goals and signatories to many of California’s air quality standards had less supportive policy frameworks, fewer EV sales, and less EV charging infrastructure in 2014. The researchers re-analyzed the same late-2014 data from Oregon, Washington, and the Northeast States for Coordinated Air Use Management (NESCAUM), a regional alliance consisting of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NESCAUM data covered the region as well as three individual states within the alliance (MA, NJ, NY).

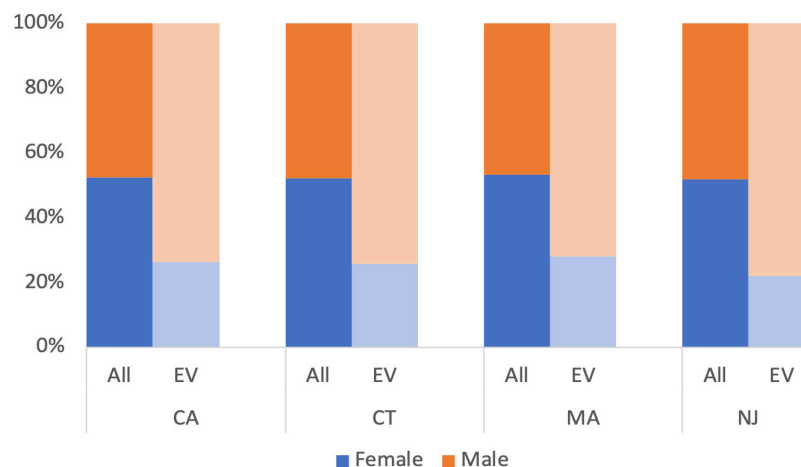


Figure 1. Percentage of all household vehicles and EVs registered to females and males across four of the study states in 2018

Key Research Findings

The ongoing gender disparity in EV sales and registrations is not because women were less likely than men to be interested in an EV as their household’s next new car. Male participants were slightly more likely than female participants to be interested in an EV as their household’s next new vehicle across the state and regional policy and market contexts analyzed (Figure 2). However, this difference was so slight that sex generally was not a significant variable in statistical models of interest in an EV. These models control for socio-economic and demographic characteristics, households’ existing vehicle purchase and use, residential characteristics, awareness of EVs and evaluations of their performance compared to conventional vehicles, familiarity with vehicle technologies, and environmental beliefs.

The slight differences in men’s and women’s prospective interest in EVs in late 2014 does not explain the large disparity in participation in the EV market that existed then and continues to this day. Explanations for the ongoing female-male disparity in observed EV sales may lie in factors not accounted for in the analyses. These include limited body styles of EVs in the real world compared to the ubiquitous availability of body styles within the survey and the experience of shopping for and buying cars.

Men and women reported similar motivations for being interested in EVs within each state and in the northeast region. Fuel cost savings, positive interest in EV technology, and reducing the impact of the participant’s own driving on climate change and air quality were the four most broadly compelling motivations among those interested in purchasing an EV for their next vehicle. Women across multiple states scored fuel costs, air quality, and climate change more highly than men;

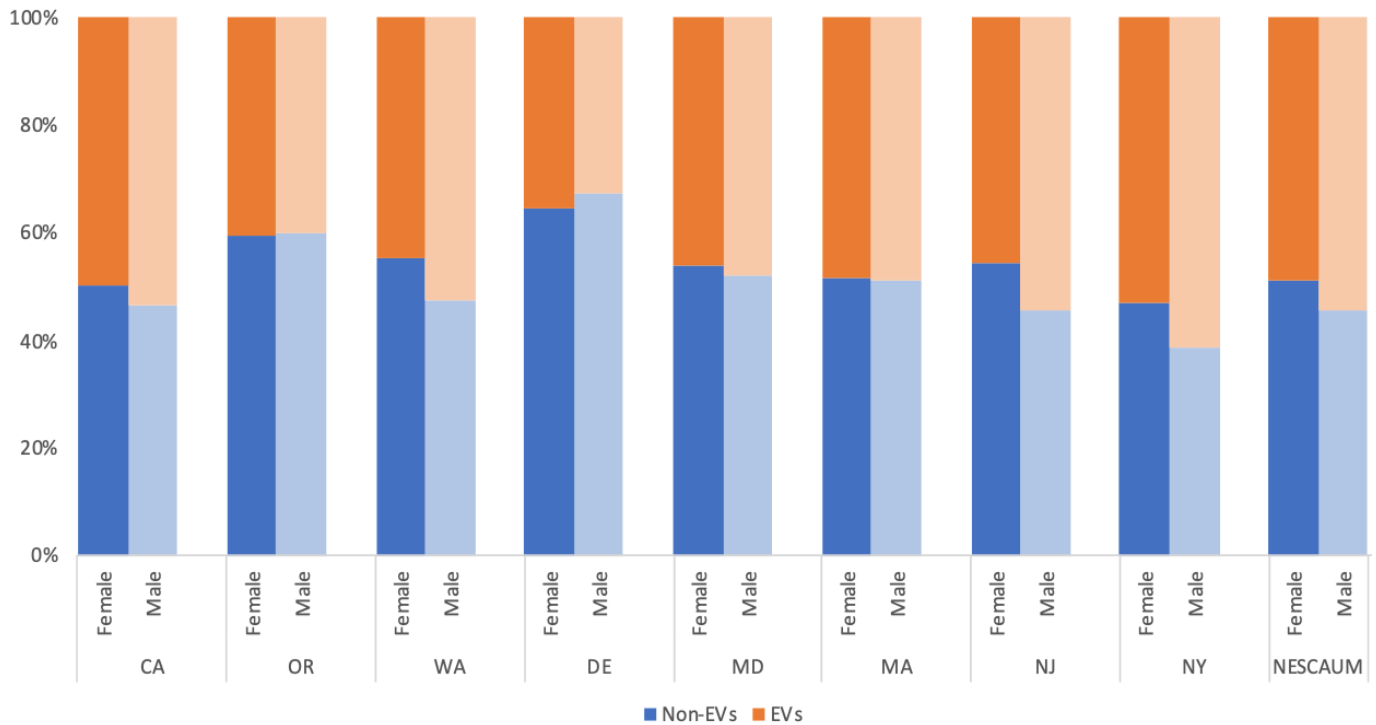


Figure 2. Percentage of female and male participants who indicated interest in EVs and non-EVs (conventional gasoline or hybrid) as their next household vehicle within the analyzed states and the northeast region (NESCAUM)

men across an overlapping but not identical set of states scored interest in EV technology higher than did women.

Men and women who were not interested in EVs also reported similar motivations within each state and the northeast region. Among participants who were not interested in buying an EV, the two most common motivations against doing so were limited EV charging networks and vehicle purchase cost. These were followed by unfamiliarity with EV technology, effect of EVs on electricity supply, and driving range. Women who were not interested in EVs were more likely than men to indicate it was because they were unfamiliar with EV technology.

Policy Implications

This research shows that similar interest among women and men in EVs is not being turned into similar outcomes. Additional research is needed into why this has persisted as new makes and models of EVs become available. Research is also needed into the relative role of incentives, outreach, education, and marketing in ensuring that all are able to participate in the transition to EVs. The results

raise questions about whether EV incentives, outreach, education, and marketing should be tailored for the (slight) differences in motivations between women and men. There are precedents for structuring incentives to differentially promote EVs, such as California programs that provide increased rebates for lower-income buyers and residents of the San Joaquin Valley, a region with poor air quality.

More Information

This policy brief is drawn from “Across Early Policy and Market Contexts Women and Men Show Similar Interest in Electric Vehicles,” a report from the National Center for Sustainable Transportation, authored by Kenneth S. Kurani and Koral Buch of the University of California, Davis. The full paper can be found on the NCST website at <https://ncst.ucdavis.edu/project/are-gender-differences-early-electric-vehicle-markets-pervasive-across-policy-and-market>.

For more information about the findings presented in this brief, contact Kenneth Kurani at knkurani@ucdavis.edu.

¹Kurani, K.S., Caperello, N. & TyreeHageman, J. (2018). *Are We Hardwiring Gender Differences into the Plug-in Electric Vehicle Market?* UC Davis: National Center for Sustainable Transportation. Retrieved from <https://escholarship.org/uc/item/Onb2m911>

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