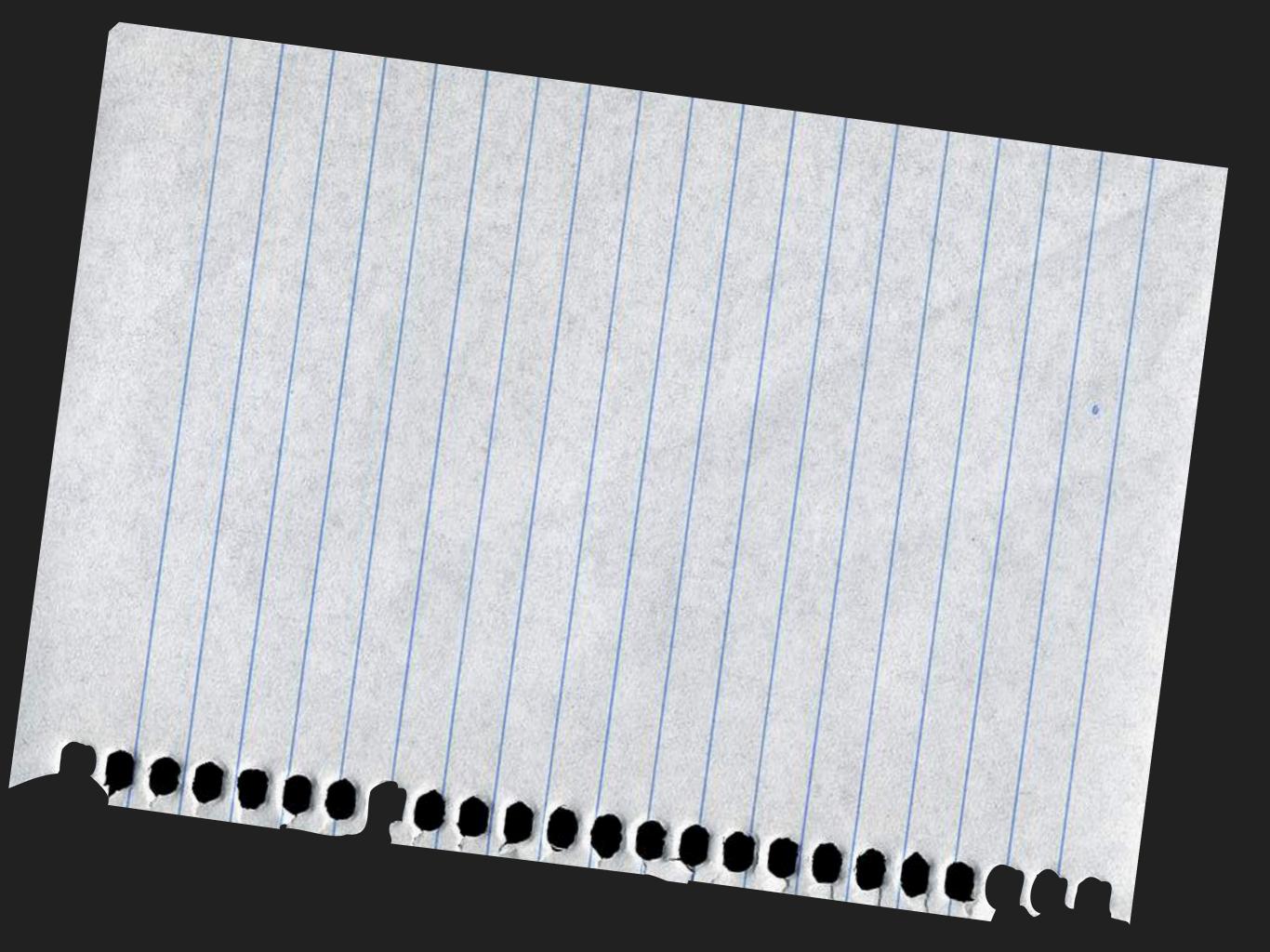
#### CHARLES GERENA, DRIVE ELECTRIC RVA

## THE ZERO EMISSION TRANSPORTATION SOLUTION

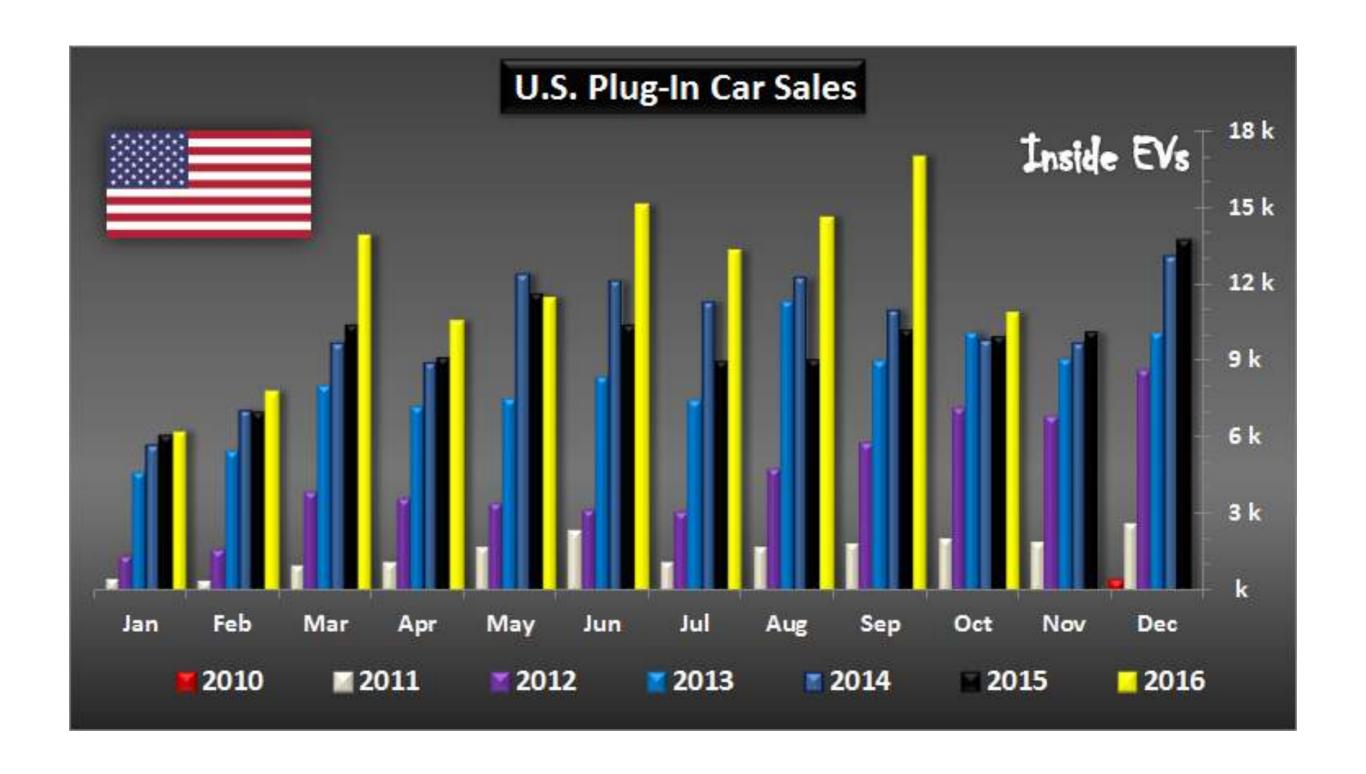
# ELECTRIC VEHICLES ARE NO LONGER A NICHE MARKET





### 120,517

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### WHY?

### Public Policy Evaluation in the Face of Strong Prior Beliefs: The Case of Electric Cars

By Stephen P. Holland, Erin T. Mansur, Nicholas Z. Muller, & Andrew J. Yates Luction is crucial in contexts characterized by strong prieted outcome. Federal subsidies

September 9, 2015

ispassionate or beliefs al for purchas tric vehicles generate a use. Rather than simpl quences of gasoline ar

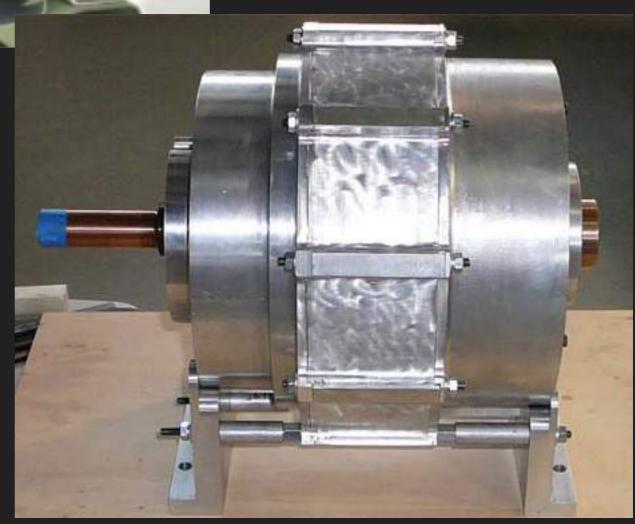
A rigorous assessmen economic and physic Environmental Benefits from Driving Electric Vehicles?

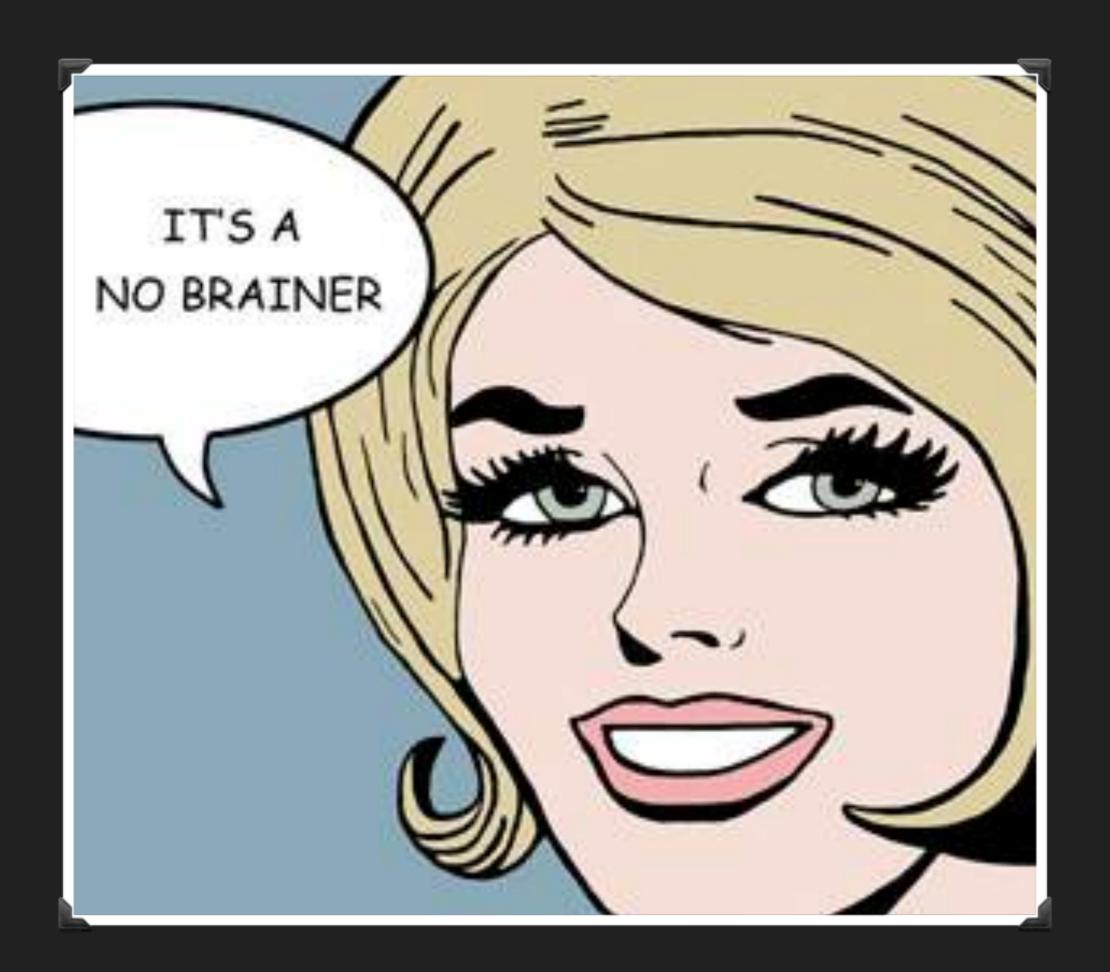
Stephen P. Holland, Erin T. Mansur, Nicholas Z. Muller, Andrew J. Yates

NBER Working Paper No. 21291 Issued in June 2015 NBER Program(s): EEE

Electric vehicles offer the promise of reduced environmental externalities relative to their gasoline counterparts. We combine a theoretical discrete-choice model of new vehicle purchases, an econometric analysis of the marginal emissions from electricity, and the AP2 air pollution model to estimate the environmental benefit of electric vehicles. First, we find considerable variation in the environmental benefit, implying a range of second-best electric vehicle purchase subsidies from \$3025 in California to -\$4773 in North Dakota, with a mean of -\$742. Second, over ninety percent of local environmental externalities from driving an electric vehicle in one state are exported to others, implying that electric vehicles may be subsidized locally, even though they may lead to negative environmental benefits overall. Third, geographically differentiated subsidies can reduce deadweight loss, but only modestly. Fourth, the current federal purchase subsidy of \$7500 has greater deadweight loss than a nosubsidy policy.

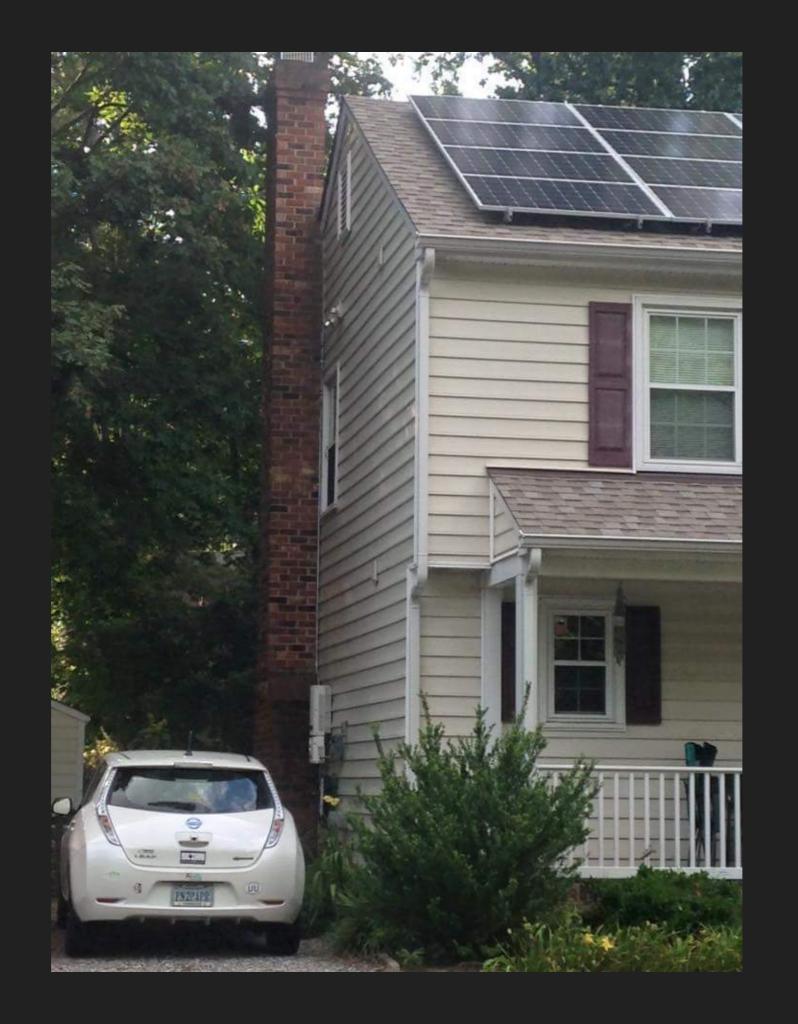




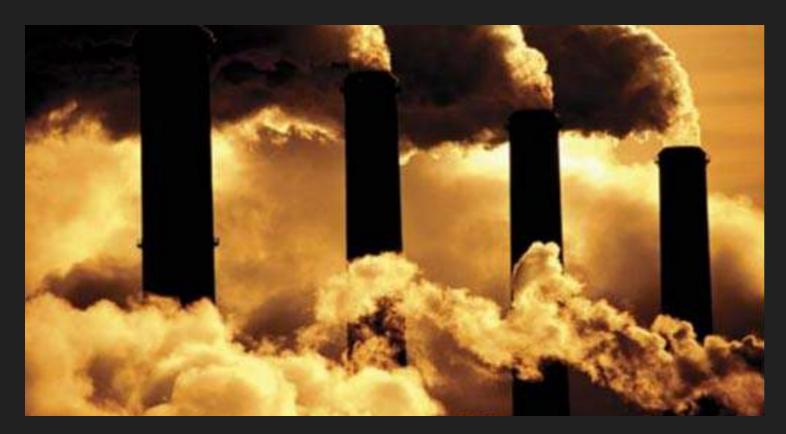


## THE PV COMES FIRST, THEN THE EV

### WHY?















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## THE ZERO EMISSION TRANSPORTATION SOLUTION