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Designing Policy Incentives for Cleaner Technologies: Lessons from California's Plug-in Electric Vehicle Rebate Program

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Abstract

We assess the performance of alternative rebate designs for plug-in electric vehicles. Based on an innovative vehicle choice model, we simulate the performance of rebate designs that vary in terms of vehicle technologies, consumer income eligibility, and caps on the price of vehicles eligible for subsidies. We compare these alternatives in terms of 1) the number of additional plug-in electric vehicles purchased, 2) cost-effectiveness per additional vehicle purchase induced, 3) total program cost, and 4) the distribution of rebate funding across consumer income classes. Using the status quo rebate policy in California as a reference case, we identify two alternative types of designs that are superior along all four performance criteria.

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