Overview of RFF Research on Transportation and Reconciliation

Josh Linn, University of Maryland and RFF Senior Fellow

October 29, 2021
Context

Biden administration goals: cut emissions in half by 2030 (compared to 2005) and net zero by 2050

RFF examined three policies: carbon tax, clean energy standard, and vehicles and energy efficiency subsidies

The policies reduce emissions, but fall short of the 2030 goal

But: carbon tax and clean electricity standard appear unlikely
The light-duty challenge for Congress: pushing past ZEV and federal standards

Policies considered

- Eliminate phase-out of EV tax credits
- 100k new public charging stations
Target EV subsidies to low-income households?

How to extend EV subsidies?

- Continue offering uniform subsidy to all buyers
- Link subsidy to household income
- Link subsidy to vehicle MSRP

Perhaps equity and effectiveness go hand in hand

- Low-income consumers tend to have lower EV demand
- They’re also more sensitive to vehicle prices

Subsidy expenditure per additional plug-in sold

- Uniform subsidy
- Low-income subsidy
- Low-retail-price subsidy
Implications of ZEV and CAFE for Plug-in Subsidies

Subsidies are layered on top of other policies

- Zero emission vehicle (ZEV) requirements through 2025
- Recently proposed fuel economy standards through 2026
- Plug-in subsidies effectively reduce incremental costs of these policies

Standards impose larger costs on high-income consumers

- These consumers have high valuation of fuel economy
- They also care more about forgone horsepower

Implication: income-based subsidies may be regressive in the short term

Effects of 2019 fuel economy standards on consumer wellbeing
Summary of key findings from recent RFF analysis

National GHG standards and ZEV largely determine emissions and EV market shares through mid-2020s

Difficult to predict EV uptake from large-scale investments in charging stations

In reconciliation, targeting plug-in subsidies can improve cost effectiveness, but income-based subsidies may be regressive in the short run
Electric Vehicle Policy Research at RFF

- Examine policies aiming to increase the adoption of electric cars and trucks
- Evaluate costs, effectiveness, and equity

Recent research and blog posts:

- Emissions projections for a trio of federal climate policies
- Electric vehicles and equity: How would aiming subsidies at lower-income households affect sales?
- How targeted vehicle scrappage subsidies can reduce pollution effectively
- Carbon pricing 202: Pricing Carbon in the Transportation Sector
- Have US fuel economy and greenhouse gas standards improved social welfare?
- Reducing the costs of federal fuel economy and greenhouse gas standards by accurately estimating vehicle miles traveled

Joshua Linn
linn@rff.org
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