



Electric Vehicle Fees: What Factors Prompt States to Adopt Them?

Higher fuel efficiency and the rise of electric vehicles (EVs) have an unintended side effect: They reduce the fuel-tax revenues needed to fund transportation infrastructure. To help fill the growing revenue gap and ensure that all vehicle users pay for road maintenance, many states have adopted a surcharge levied on EVs and hybrids. But why do some states adopt surcharges while others do not? A project by TPEC researchers explored key factors that come into play.

BACKGROUND

The EV fee is typically an annual flat fee collected in addition to the motor vehicle registration tax and applies to all fully electric vehicles. Some states have adopted a lower fee for hybrid vehicles.

For their research, the team created a dataset of factors—such as transportation revenue capacity, transportation needs, environmental concerns, and political environment—from states that adopted an EV fee between 2012 and 2020. Through modeling and analysis, they then identified which factors may influence EV fee adoption.

KEY FINDINGS

These factors made it more likely that states would adopt EV fees:

- Higher reliance on the fuel tax
- Improved fuel efficiency
- More roadways in poor conditions
- Higher EV sales
- More nearby states with EV fees

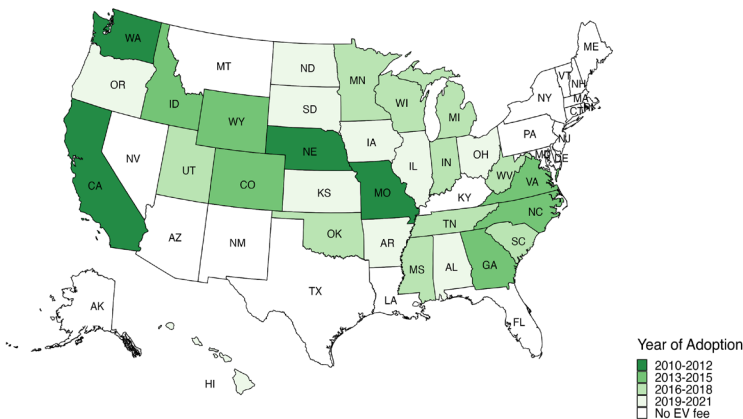
These factors made it less likely that states would adopt EV fees:

- Higher growth in vehicle-miles traveled (VMT)
- Higher share of Democrats in the state's House of Representatives

ANALYSIS

"States that depend heavily on the fuel tax, and ones where drivers get better mileage, have bigger revenue holes to plug and may turn to EV fees," says Camila Fonseca-Sarmiento, the study's principal investigator. "And states with a higher percentage of roadways in poor condition have bigger needs to fill."

Rapid growth in EV sales can hike system costs, particularly to build out the charging infrastructure. Also, some EV models have big batteries and are heavier than their gas-powered versions, causing more pavement damage. "So, states with more EVs turn to EV fees to cover costs," she says. A higher share



of neighboring states with EV fees also correlated with higher odds of a state adopting EV fees.

The higher VMT finding was unexpected. "It could be that states with higher VMT may be considering other revenue mechanisms, such as a per-mile fee, instead of EV fees," Fonseca-Sarmiento says.

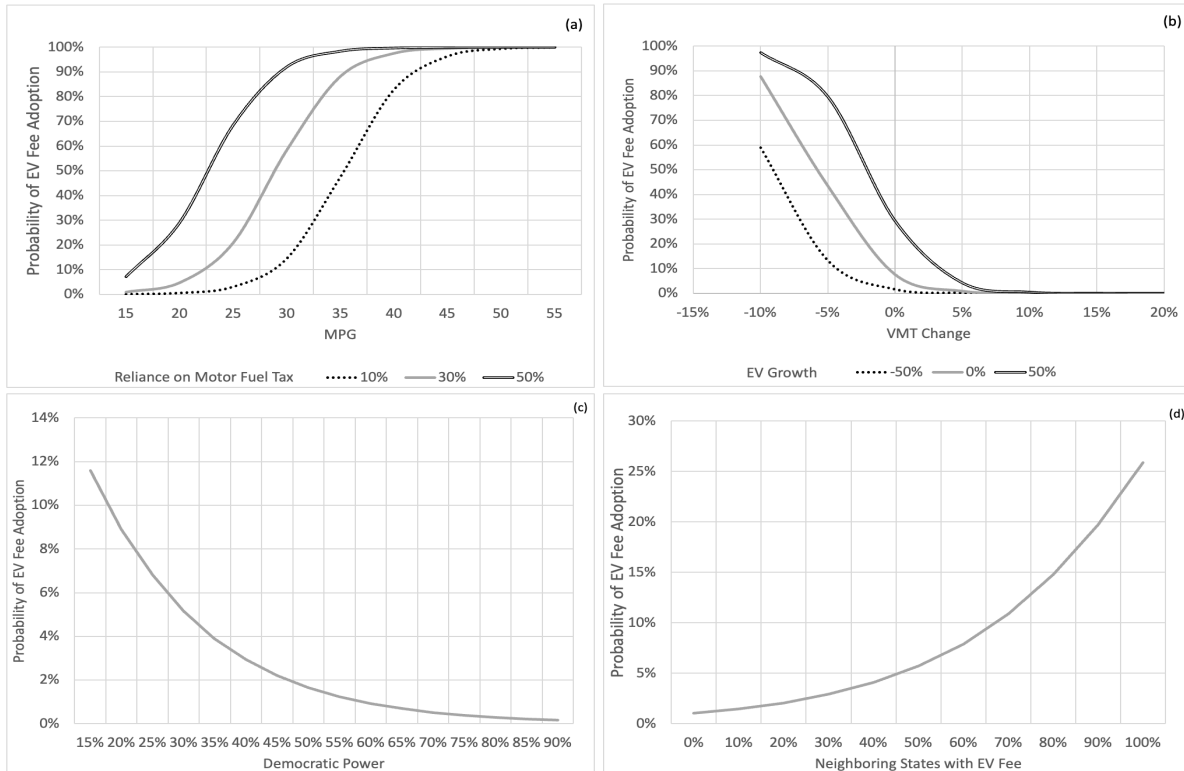
States with Democrats in control of the state's legislative house were less likely to adopt EV fees. "This may be because Democrats are more likely than Republicans to support

environmental policies, such as EV subsidies, and so they may be reluctant to counter that goal with surcharges," she says.

Similarly, states with worse air pollution are less likely to adopt EV fees. These states are more likely to promote EVs as an efficient way to address environmental conditions, she says, and therefore may be less likely to adopt EV fees.

FURTHER READING

"Explaining the Adoption of Electric Vehicle Fees across the United States," *Transport Policy*, Volume 149, April 2024.



Several factors influence whether states adopt an EV fee: reliance on the motor fuel tax, fuel efficiency, VMT, EV growth, political control of the lower legislative body, and neighboring states with a fee.

For more information and additional analyses:

TPEC welcomes public engagement and encourages you to contact us with your questions, comments, and research needs.

Camila Fonseca-Sarmiento
 Director of Fiscal Research
 Institute for Urban and Regional
 Infrastructure Finance
 Humphrey School of Public Affairs
 fonse024@umn.edu, 612-301-1362

Raihana Zeerak
 Researcher
 Institute for Urban and Regional
 Infrastructure Finance
 Humphrey School of Public Affairs
 zeera001@umn.edu

Zhirong "Jerry" Zhao
 Founder and Advisor
 Institute for Urban and Regional
 Infrastructure Finance
 Humphrey School of Public Affairs
 zrzhao@umn.edu