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Caltrans Division of Research, Innovation and System Information

Research Results

Federal Road Charge Tax Administration Process

Understanding the current administration of federal fuel taxes and identification of key administration aspects when transitioning away from a traditional fuel tax towards a road charge mechanism.

Executive

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Project Title:
Alternative Transportation Finance

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WHAT WAS THE NEED?

The revenue and purchasing power of funds raised from federal gasoline taxes has decreased over time due to a combination of factors (from most to least significant) including inflation, improvements in the average fuel economy of new vehicles, and vehicle electrification.

As revenue shortfalls have continued to grow over the last several decades, additional transportation funds are authorized through a special Congressional authority granted via transportation infrastructure investment legislative bills. Through this Congress has begun to inject funds for transportation infrastructure directly from the general fund.

Much of the institutional structure related to the gasoline tax could be retained in an alternative funding scheme such as the Road User Charge (RUC). However, there are both potential benefits and difficulties associated with the implementation of a mileage-based fee. While there is currently a fairly robust anti-tax evasion program, the scale of such a program required for a RUC would be significantly larger since the number of collection points would increase from hundreds (for terminals) to hundreds of millions (for individual vehicles).

WHAT WAS OUR GOAL?

The primary goal of this project was to understand the current administration of federal fuel taxes and to identify key aspects of administration when transitioning away from a traditional fuel tax towards a road charge mechanism.

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This included the understanding of who collects it, where the point of collection happens, how the revenue is redistributed back to the states at the federal level, and the expected associated costs of administration. The project will identify different models of implementing cost recovery for a road charge program and how these costs could be minimized.

WHAT DID WE DO?

The deliverables under this Task Order were primarily comprised of reports, both in the interim and a final report provided at the end of the study. The PI maintained a close working relationship with the Caltrans Road Charge Program which require s regular communication and updates throughout the research process.

The research tasks included an evaluation of federal excise tax and the identifying administrative mechanisms for a road charge program. A final report and research findings were provided to Caltrans Road Charge Technical Advisory Committee (TAC) at the end of the project.

The study included a theoretical discussion and introduce several different mechanisms for administration of the road charge program, but it did not conduct any pilot programs to implement in practice.

WHAT WAS THE OUTCOME?

While the federal gasoline tax appears to be a fairly simple mechanism for raising funds for transportation infrastructure, administration of the fee has been developed and refined for nearly a century. A RUC program must navigate an entirely new fee system as well as the apportionment/ allocation, obligation, and outlay system. In some respects, the RUC is better suited to certain administrative issues, while in other areas the program may face new challenges.

For a new fund program, Congress would need to provide budget authority to the road user charge derived fund. However, since the downstream program of the road user charge would be "self-funded" (similar to how the operations of the Highway Trust Fund (HTF)are funded primarily through fuel taxes rather than the general fund), Congress could arguably endow contract 12 authority to it in the same manner it does the HTF. Having a separate fund program for a RUC would enable Congress to approach the fund disbursement from an entirely new slate. The disbursement of funds to states would likely be significantly more accurate (since the current system relies on estimates from each state since the revenue at the rack doesn't correspond to consumption of the final fuel).

WHAT IS THE BENEFIT?

A RUC could be used to help remedy the transportation funding shortage for the HTF due to 1) inflation, 2) continuing improvements to fuel efficiency, and 3) electrification of on-road vehicles. While fuel efficient cars and electric vehicles are beneficial for air quality and public health, they still damage roads and cause other negative externalities such as congestion. A RUC will provide a "user-based fee" to account for these negative externalities that do not depend on how much fuel is used, but the miles driven.

LEARN MORE

California's Road Charge Program:
https://caroadcharge.com/en-us/

Western U.S. (RUC West) Road Charge Program:
https://www.rucwest.org/