

Mileage-Based User Fee System: Literature Review

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Introduction

Historically, fuel taxes are the primary funding source for surface transportation (Congressional Research Service 2019). Such a source may not be sustainable long-term due to increases in vehicle fuel efficiency, vehicle miles traveled (VMT) and the expanding electric and hybrid vehicles market (EPA 2018, EEI 2018). Mileage-Based User Fee (MBUF) system is a possible solution.

MBUF is charged based on distance traveled as opposed to the gas tax that is charged based on the amount of gasoline purchased.

Potential Challenges for MBUF System

- Lack of public acceptance due to data privacy concerns, program-related administrative and compliance costs
- Interoperability between states and regions with different MBUF systems are the main challenges to implementation of the MBUF system.
- Policy analysis, effective program design, and in-depth research may be helpful in resolving potential issues related to MBUF programs.

Methodology

Online literature review conducted from February-June 2019 was based on research of academic articles and industry reports on the topic of MBUF pilot programs in the U.S. The time-frame of project reports for six pilot MBUF projects in the U.S. used for this analysis was 2016-2019 for project reports and 2010-2019 for academic articles. Three legal cases (decided in 1983, 2005, and 2018) were included in the report.

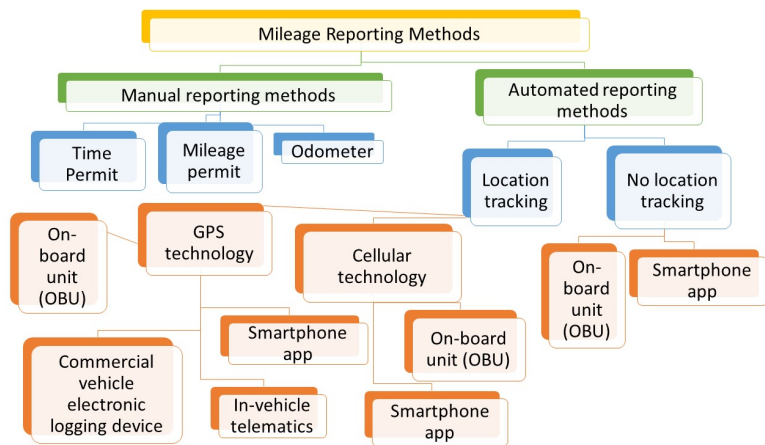


Figure 1: Mileage-based user fee reporting methods.

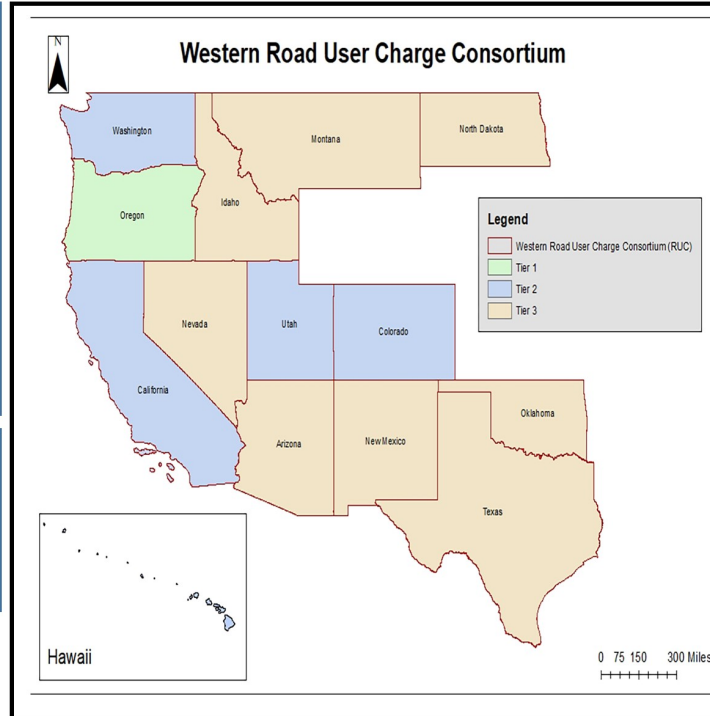


Figure 2: Western Road User Charge Consortium (RUC West) map

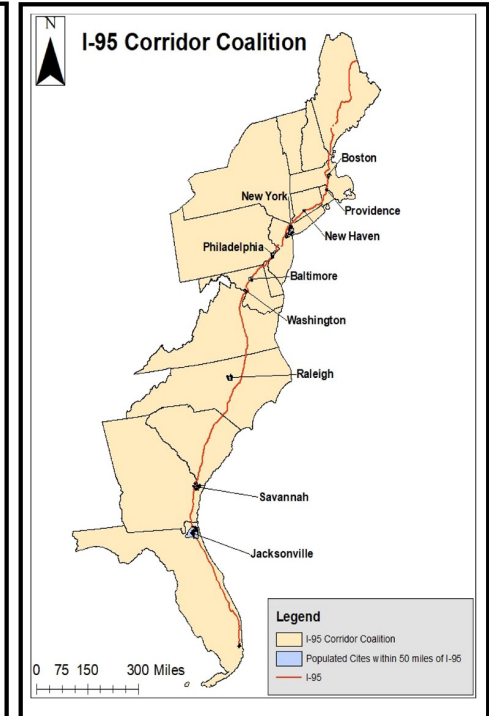


Figure 3: I-95 Corridor Coalition map

MBUF Pilot Programs in the U.S.

- **OREGO**, Oregon, Oregon Department of Transportation, July 2015 – present
- **Western Road-Usage Charge Consortium (RUC West)**, April 2017-present
- **California Road Charge Pilot Program (CalTrans)**, July 2016 – March 2017
- **Colorado Road Usage Pilot Program (RUCPP)**, Colorado Department of Transportation, November 2016 – July 2017
- **Road User Charge (RUC) Pilot Project**, Washington State Transportation Commission (WSTC), 2017 - present
- **I-95 Coalition and Delaware Department of Transportation**, May – July 2018 (Phase 1) and October 2018 – Present (Phase 2)

References

- Congressional Research Service (2019). Funding and Financing Highways and Public Transportation.
- United States Environmental Protection Agency (2018). The 2018 EPA Automotive Trends Report. Executive Summary.
- Edison Electric Institute (2018). EEI Celebrates 1 Million Electric Vehicles on U.S. Roads. Newsroom.

Acknowledgement

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