



Road usage charging Policy, planning and implementation

For decades, the per-gallon motor fuel tax served as a stable and sustainable user fee for transportation funding. However, the financial future of the Highway Trust Fund is uncertain given the increase of alternative fuel and highly fuel-efficient vehicles and rising inflation and construction costs, combined with increased demand for capacity projects due to population growth. Public agencies are already struggling to keep up with the growing demands on the transportation system in terms of maintenance, operations and mobility improvements.

Road usage charging (RUC) provides a more equitable, sustainable transportation funding model compared to the current approach.

RUC has gained significant momentum over the past several years. Initially talked about only behind closed doors and in research papers, it has evolved into a mainstream consideration for states to improve transportation funding models.

WSP USA has led some of the largest and most successful RUC pilots in the country, dating back to our work for the Federal Congestion Pricing Pilot Program in 1994. These efforts have led to wider consideration by states and enhanced regional interest in RUC as a viable future transportation funding source.

Benefits of RUC over traditional funding programs include:

- More equitable connection between distance traveled and costs incurred by the customer
- Treats roads like a utility; motorists pay for their use as opposed to their fuel consumption
- Captures lost revenues from electric and hybrid vehicles
- Leverages innovation by using commercially available technology with very little need for infrastructure enhancement
- Supports more urban/rural equity, including differentiation of road types and variable road pricing
- Maintains motorist privacy through secure technologies and strict data governance policies
- Provides increased planning capabilities through enhanced traffic data

OUR RUC SERVICES

- Grant writing
- Planning
- Research
- Privacy and data protection/security audits
- Legislative policy and administrative rule development
- Operational and administrative scenario development
- Organizational, technical and economic analyses
- Stakeholder facilitation and engagement
- Economic and revenue forecasting
- Benefit/cost analysis and business case development
- Outreach and communications/
communications visualization
- Requirements development
- Systems design and technology selection
- Systems and process certification and testing
- Security audits
- Deployment/implementation support
- Demonstration operations
- Interoperability path planning
- Systems integration
- Process engineering
- Program evaluation

OUR EXPERIENCE

CALIFORNIA ROAD CHARGE DEMONSTRATION

WSP supported the California Department of Transportation with planning, design, deployment, administration and evaluation of the California Road Charge Demonstration. This demonstration assessed how to report, collect and administer a road charge across four emerging transportation technology markets including fuel pump and electric charge stations; usage-based insurance; transportation network companies and automated vehicles. WSP led the pilot planning, design and implementation activities including creating revenue models, rate evaluations, technical requirements, user and administrative scenarios, policy considerations, risk evaluation, communications and outreach strategies, state and regional collaboration and final federal and state legislative reporting.

OREGON OPEN ARCHITECTURE TOLLING DESIGN

WSP provided strategic consulting, visioning and technical guidance to the Oregon Department of Transportation's (ODOT) Office of Innovative Funding in exploring, planning and designing an open architecture tolling system. The concept developed by ODOT and WSP will revolutionize transportation funding by enhancing interoperability opportunities with other states and the private sector and offering a variety of technological solutions and payment options for users. WSP researched considerations with open architecture platforms, emerging tolling technologies and various reporting and payment options. WSP identified industry standards and lessons learned which were leveraged to create system requirements, Concept of Operations an evaluation strategy for an open architecture tolling system. WSP engaged the private sector for input throughout the research and development phase of the project. In the end, the WSP team delivered a series of solutions that that can adapt as technology changes, enhance interoperability opportunities, reduce administrative costs and enhance the way that ODOT's customers use their transportation services.

WYOMING ROAD USAGE CHARGE FEASIBILITY STUDY

WSP provided policy and technical feasibility support to the Wyoming Department of Transportation in exploring how International Fuel Tax Agreement (IFTA) and non-IFTA systems can be leveraged in a state RUC. WSP offered strategic guidance, developed comprehensive lessons learned, identified policy considerations, developed revenue forecasts, researched technologies, created operational and administrative scenarios, defined the organizational framework, created a communications and public engagement strategy and provided strategic guidance for engaging legislators and other professional agencies.

MINNESOTA DISTANCE-BASED FEE DEMONSTRATION

WSP provided policy guidance, operational expertise and innovative program support to the Minnesota Department of Transportation for its recent distance-based fee demonstration. The project operated for 12 months and illustrated the feasibility of assessing a distance-based user fee (DBF) on shared mobility providers and automated vehicles using in-vehicle technologies. WSP led development of several key deliverables including the concept of operations, business case, risk identification and mitigation strategies, technical requirements, system architecture and operational and organizational considerations. In addition, WSP led testing, deployment and administration of the demonstration which spanned more than half a million miles.

RUC WEST REGIONAL ROAD CHARGING SYSTEM DEFINITION AND PILOT PLANNING

WSP supported RUC West, a coalition of 14 western state departments of transportation with system definition, design and planning services for a regional, fully interoperable RUC pilot. WSP led planning, design, public outreach and policy recommendations for each state to further RUC studies; establish dedicated organizational structures for conducting innovative research studies; develop a fully interoperable financial clearinghouse concept to collect and disseminate RUC revenues to states; and provide long-range operations planning and guidance for system interoperability throughout the West, establishing the foundation for future interstate RUC interoperability.



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CONTACT US

For more information about how we can help you deliver your next project, please contact:

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