

# Oregon Department of Transportation (ODOT) Oregon Road Usage Charge

**Category: Emerging and Innovative Technologies**



## Sponsor

Kurtis Danka  
ODOT Chief Information Officer (CIO)

## Project Managers

Gina Salang  
Road Usage Charge Program  
Project Manager

Maureen Bock  
Road Usage Charge Program  
Business Implementation Manager

Jim Whitty  
Innovative Partnership and Alternative Funding  
Manager

Chuck Larsen  
Road Usage Charge Program  
Technical Architect / Project Coordinator

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## Executive Summary

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Funding for transportation systems, road maintenance, bridges and new road construction is declining in Oregon and around the country, despite a continued increase in vehicle miles travelled. This is due in part to more fuel-efficient vehicles, some now at more than 55 mpg, purchasing less fuel, and thus paying less in fuels taxes, which go toward maintaining and building roads and highways. Because of the slow erosion of this funding structure, many state DOT's and the federal government have begun to investigate users of the road paying per mile instead of per gallon. Oregon is the first government entity to establish this in law.

The **Road Usage Charge Program (RUCP)** or **OReGO** represents a major shift in the way the public pays for our transportation system. Public understanding and acceptance of a road usage charge depends on how well ODOT engages the public in the issues surrounding the need for the system and how effectively the road usage charge system works.

*The vision for Oregon's Road Usage Charge Program is a reliable, easy-to-use, low cost, enforceable, and publicly acceptable "open" system that replaces the fuel tax with a charge based on measured road use, thereby preserving fairness and accountability in supporting the state's system of roads and highways.*

The operational RUC program, enacted by Senate Bill 810 (2013), will give motorists a choice of technologies to use in reporting miles driven, as well as how they manage and pay their road usage charge. They will be able to obtain RUC program services through nongovernmental entities and be given market-driven choices that are efficient and cost-effective. Oregon Senate Bill 810 required that a voluntary Road User Charge (RUC) program be operational by July 1, 2015. It authorizes the Oregon Department of Transportation (ODOT) to assess a charge of 1.5 cents in place of a fuel tax, for light vehicles voluntarily participating in a Road Usage Charge Program. The program is now in a public testing phase in which up to 5000 citizens voluntarily try out the new form of taxation. Those citizens who participate will provide testing for both workability and citizen acceptance of this form of paying for Oregon highway infrastructure.

The solution set proposed in this program includes innovation in these areas:

- The project supports private sector partnership of an open market, by partnering with the private sector in tax system administration and collection.
- It uses technology in a government context through the OBD-II device for transmitting mileage and fuel consumption data.
- It also supports building in stringent security provisions to support citizen privacy.

The innovation in this project has attracted eleven other states that are now following the Oregon experience to determine if this approach to measure actual miles traveled, and tax citizens in a more equitable way, could work for them as well.

This project also aligns with the NASCIO State CIO Priorities for 2015 in the areas of mobility services/management, security, and customer relationship management.

## Problem and Legislative Mandated Solution Requirements

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**Problem:** One of Oregon's revenue sources is a fuels tax. Oregon collects money for road construction and improvement by charging fuel tax at the pump, at a rate of 30 cents per gallon. The trend toward improved vehicle fuel efficiency results in lower tax revenues, because fewer gallons of fuel are consumed and consequently taxed and collected at the pump. If the driver of a high efficiency vehicle that gets over 55 MPG drives the same miles in a year as a driver of a 15 MPG vehicle, the driver of the lower MPG vehicle would pay over 3 times the fuel tax for the same miles driven. This is not completely fair for owners of low MPG vehicles, as they have to shoulder more of the burden for funding roads and bridges.

**Solution:** The solution needed to maintain **transportation revenue streams** and to create a more equitable system, and so, the Oregon State Legislature passed Senate Bill 810 in the 2013 session. With Oregon Senate Bill 810, the Oregon Legislature clearly outlined a number of key requirements for the tax solution, for implementation of Oregon's Road Usage Charge Program, including:

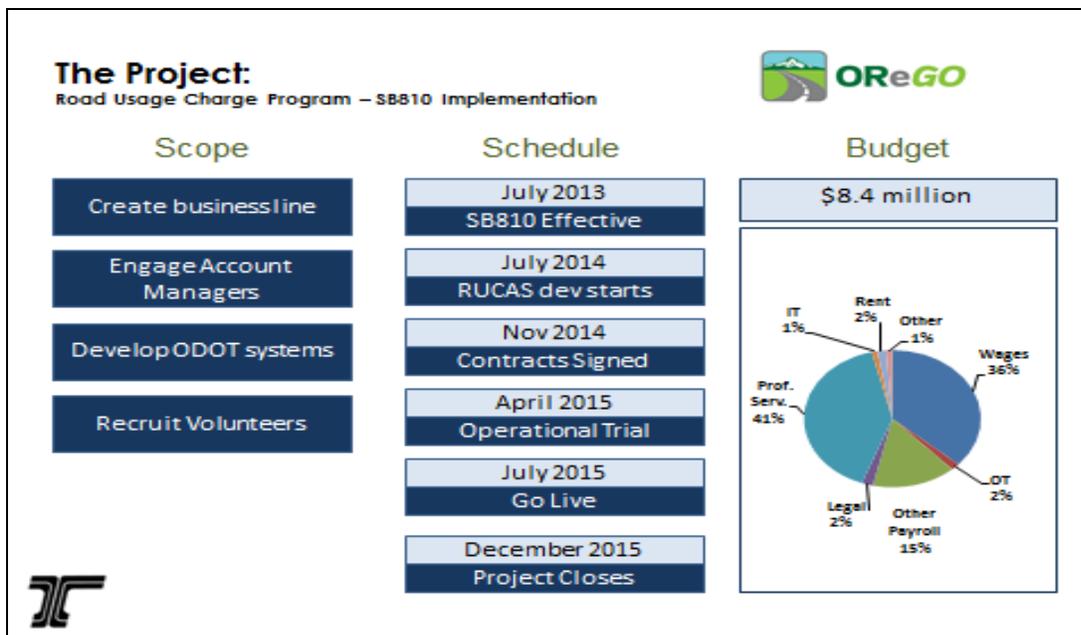
- ▶ **Voluntary Participation** - of up to 5,000 volunteer light vehicles registered in Oregon, with no more than 1,500 vehicles having a fuel efficiency rating of less than 17 MPG, and no more than 1,500 vehicles with a fuel efficiency rating of at least 17 MPG and less than 22 MPG.
- ▶ **Tax Rate** - An initial road usage charge rate of \$0.015 per mile.
- ▶ **Gas Tax Rebate** - A refund/credit of Oregon fuels gas tax paid by these vehicle owners, attributable to taxable miles charged and paid.
- ▶ **Choice** - Methods for measuring and reporting mileage that include at least one method that does not use vehicle location technology. Choices for citizens to select how their billable mileage is collected and reported.
- ▶ **Security** - The protection of citizen information including personally identifiable information, from disclosure and the elimination of all location-based and daily metered use data. This will be done according to strict timelines, unless the volunteer consents to retention or use by private companies.

## Innovative Use of Program Design and Technology

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There are four innovative approaches used to meet legislative requirements that are built into the Road Usage Charge Program through this project.

- 1) **Program Design** - Creation of open market private sector program administrator.
- 2) **Program Quality** - Creation of a certification process for account managers to ensure their private sector systems are viable for a government program.
- 3) **Technology** - The installation of a mileage reporting device by using the OBD-II ports in vehicles to transmit mileage data.
- 4) **Data Security** - The protection mechanisms in the program, for citizen data including Personal Identifiable Information (PII).



**Creation of an Open Market:** One innovative aspect of this project is to place the administration of the tax program with the open market or private sector. This provides volunteers with choices in tax administrators. Account managers are responsible for enrolling volunteers, collecting mileage information, providing volunteer support, and remitting the tax due to ODOT.

**Program Administration:** By design, the RUC (Road Usage Charge) will have two different types of account managers: an **ODOT Account Manager (OAM)** and a **Commercial Account Manager (CAM)**. Three firms signed with ODOT in November 2014 as account managers: Sanef (as the OAM option), Verizon Telematics and Azuga, (as CAMs). The CAMs will compete for volunteers and will be able to offer value-added services (such as insurance, driving ratings, driving alerts, check engine light diagnostics, and more), in addition to collecting road usage charges.

**Certification:** To assure quality, all account managers are certified by ODOT. To ensure account managers and mileage reporting devices meet the requirements and objectives of the RUCP, ODOT is conducting certification and testing of vendor offerings to determine their eligibility to participate in the RUC market.

There are two certification phases:

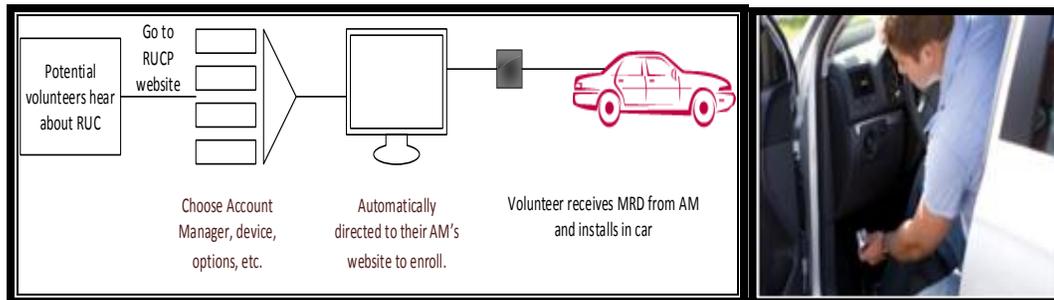
- Initial** - certification steps 1 and 2, which are prior to contract execution
- Formal** - certification steps 3 through 5, which are after contract execution.



**Initial Certification** involves two steps to be completed prior to contract signing. Step 1 involves the vendor submittal and ODOT review of all qualification documentation as required for the vendor's proposal response. Upon successful review of the documentation in Step 1, ODOT will request product demonstrations (Step 2).

**Formal Certification** has three steps. In Self Certification (Step 3), vendors complete their own internal testing at the component (unit), subsystem (integration), and end-to-end (systems acceptance) levels; and submit test results to ODOT for review. Once the review is complete and to the satisfaction of ODOT, the vendor will work with ODOT to conduct Integration Testing (Step 4), which will verify the message format outputs against contractual documents. At the successful completion of Step 4, ODOT will conduct its Systems Acceptance Testing (Step 5) which will test the end-to-end functionality of the system.

**Mileage Reporting:** After completing the registration, the volunteer will receive the mileage reporting device (MRD) which is a self-installed device, placed in the OBD-II port that will collect and report miles driven by the vehicle to the account manager.



The picture above shows the small electronic OBD II device being installed in a port or plug inside the car and used to count mileage from the odometer. These ports/plugs are used by the automotive industry to check for error codes from the vehicles' onboard computers and by insurance companies to correlate auto insurance rates to miles driven.

Miles driven will be reported and compared with the fuels tax assumed to have been paid for the fuel used during the reporting period based on the vehicle's MPG, or reported fuel consumption. The account manager will reconcile the two and do a net calculation of taxes owed per the volunteer's use of the road.

**Security:** Some volunteers will be more comfortable with the government directly collecting their vehicle information, whereas others will prefer a private company to perform this task. RUCP will give them a choice. Privacy of information collected for the administration of the road usage charge program is of utmost importance to lawmakers, Oregonians, and ODOT. Through the requirements outlined in contracts, as well as the certification process, the team ensures that 1) data is safely stored; 2) information is disposed of properly and according to legislatively mandated timelines; and 3) information is not sold or traded without the express consent of the volunteer. With the exception of the OAM option, government does not see the daily mileage of volunteers, nor does it see location data.

## Significance of the Project

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- **Citizen Involvement.** Recruit volunteers and inform them throughout the onboarding process. Provide the assistance they need to sign up and manage their accounts in a limited amount of steps. Encourage enthusiasm about the program and their role in it.
- **Free Market Services are created.** In partnership with the private sector, create and maintain positive, effective relationships with potential/established account managers in order to develop a competitive market and foster an experience that will enable the RUC (Road Usage Charge) model to expand into other states. Establish positive, effective relationships with the account managers and create a forum to vet their concerns, questions, and suggestions in a timely manner.
- **Contracting Mechanisms are tested.** Establish long-term, flexible, and clear contracting mechanisms that support an open and competitive market, accommodate the evolution of technologies, and lead to increasingly improved methods for collecting and processing road charges. Foster a work culture within the Road Usage Charge Operations Office (RUCOO) that is agile and adaptable. This includes adapting processes as needed to meet project and program goals.
- **Demonstration of ODOT Tax Collection Ability.** Build, test, and implement an IT system that will interface with account manager data and internal ODOT systems to functionally support the Road Usage Charge Operations Office (RUCOO) with minimal risk and resistance to system failures.
- **Customer Services System Tested.** The system should effectively collect and report data, and must be able to accommodate future expansion of the program. Ensure that customer service standards set out in the RUC Program Business Requirements are met or exceeded, such that volunteer inquiries are answered and resolved expediently. Ensure that a positive volunteer experience is the first priority for the RUCOO team and the account managers.
- **Adequate Citizen Testing prior to GO-Live.** Create an ODOT organizational structure that will effectively and efficiently guide the RUC Program post implementation. This includes having processes for compliance, financial management, change and contract management, as well as plans for volunteer and account manager support, in place before the go-live date.
- **Test Administrative Costs.** Maintain administrative costs within the prescribed budget, and implement continual process improvement in order to make the RUC Program an increasingly effective system for tax collection and distribution.

## Benefits of the Project

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**Increased Tax Fairness:** The innovative government use of the mileage reporting device (MRD), which counts actual miles driven allows for a *fair tax collection system* based on actual use. Those who use the roads the most pay the most and those who drive less pay less. The current fuel tax on the other hand, allows those with higher

mileage vehicles to pay less tax than those with low mileage vehicles. Essentially this adopts a utility model of paying for infrastructure.

**Tax System Workability:** Oregonians and the state legislature must have confidence that a revenue generation system works and is reliable. In the initial pilot test (in 2012), revenue collected was small. However, the significance of the program lies in the fact that *it worked*. If it can work for under 50 volunteers in the 2012 pilot, and if it can work for 5,000 volunteers in the 2015 program, it will be able to be extended to a larger group of Oregonians and introduced as a proven mechanism to accurately and efficiently assess and collect taxes.

**Innovative Rebate of Gas Taxes:** It is important that volunteers are not subject to double taxation: fuel tax and the road usage charge. The team and account managers had to bring innovative technical solutions to the table in order to read fuel consumption from a mileage reporting device (MRD), and credit that amount against miles driven. This is important as it demonstrates that the program can be a tax replacement for the gas tax.



**Innovative Choice Supported:** Through two pilots and multiple focus groups, the theme was common: people wanted choices. The structure of the road usage charge program provides citizens with options. Through the creation of an open market, Oregonians can choose their account managers, devices, value-added services, billing options, and much more. One size does not fit all.

## Conclusion

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The Road Usage Charge Program **is the first in the nation:** a truly innovative solution to nationwide problem of transportation funding. Oregon is adhering to its pioneering heritage in leading the way to try out this new form of taxation. Oregon was the first state to adopt the gas tax in 1919. It will be the first US state to create and test a user pay system based on actual miles driven in 2015.

In summary, where the rubber hit the road, and the OBD-II device measured the miles of rubber on the road, one of the current test driver RUCP participants, an Oregon legislative representative said,

*“The Road Usage Charge Pilot Test has passed without me really noticing – and that’s a good thing! The experience proves that it’s a smooth transition and an easy system. Through the three months of the program, we had no trouble dealing with the data or making our payments.” – Tobias Read D-Beaverton*