

Oregon's Road Usage Charge

The OReGO Program | Final Report



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EXECUTIVE SUMMARY

WHY OREGON IS EXPLORING ROAD USAGE CHARGING

Transportation is the backbone of a functioning economy. The gas tax is currently the main source of transportation funding, which means that the health of the transportation system is directly tied to each gallon of fuel burned. However, revenue from gas tax is projected to decrease as federal fuel efficiency standards, and the public's desire to decrease greenhouse gas emissions, push vehicles to use less gas (or even no gas). This trend jeopardizes ODOT's main revenue generator and, therefore, the well-being of Oregon's transportation system.

Fuels tax is based on a 20th century assumption that fuel purchases mirror road use. Until the advent of hybrids and electric vehicles, vehicles were substantially similar, and fuel efficiency did not vary significantly. That is certainly not true today. Vehicles, technology, and what Oregonians need out of their transportation system have all drastically changed. Because of those changes, road use and fuels tax payments are no longer directly connected. Transportation has evolved, but its funding has not.

The more fuel efficient vehicles we register in Oregon, the more vehicle owners will drive on the road without paying for their road use. Simply raising fuels tax to address the transportation funding gap will not ensure that people pay their fair share. Doing so simply forces rural Oregonians (who are more likely to own less fuel efficient vehicles) and those who can't afford fuel efficient vehicles to shoulder more of the responsibility for funding Oregon's transportation system.

Oregon recognized the gap between actual road use and fuels tax revenue long ago and started thinking creatively about how to charge drivers for miles driven rather than by gallons of fuel. Through the Road User Fee Task Force, established by the Legislature in 2001, Oregon selected a per-mile fee as the best alternative to fuels tax and conducted two pay-per-mile pilot programs in 2006 and 2012.

Road usage charging re-aligns transportation funding with road use—drivers pay for what they use, just as they pay for each kilowatt of electricity used at home. For each mile driven, a driver contributes 1.5 cents, regardless of rural or urban location or whether the vehicle's fuel efficiency is 150 mpg or 20 mpg. Basing each driver's contribution on miles driven is equitable and sustainable.

Meanwhile, technology and vehicles continue to evolve. As they do, a road usage charge will remain relevant and flexible as it adheres to the user pays principle: "pay for what you use."

OREGON CREATED THE FIRST ROAD USAGE CHARGE PROGRAM

Oregon leads the nation as the only state to set up a true tax program for road usage charging that collects and verifies data and tax dollars in accordance with state statutes and policies. The volunteer test program established by the 2013 Legislature, OReGO, has operated effectively since July 1, 2015. Other states are on board: California, Washington and Colorado conducted pilots this year while other states are exploring a road charge option because they, too, are struggling with dwindling transportation coffers.

Volunteers who enroll in the OReGO program self-install a mileage reporting device in their vehicle and are charged 1.5 cents per mile driven. Fuels tax paid at the pump is treated as a pre-payment of road charges and credited to volunteers' accounts. Volunteers can choose between GPS or non-GPS devices, and can elect to have other services, such as: engine diagnostics, "find my car" (for instance, when the car is parked in a large lot at a sports event), and driving badges so drivers can see how well they are driving. Private sector companies manage volunteer accounts; ODOT performs an administrative role to manage volunteers, oversee the companies' contractual obligations and handle tax reconciliation.

More than 1,300 vehicles so far have enrolled in OReGO statewide, providing an adequately diverse fleet to support effective testing.

WHAT ODOT LEARNED FROM OREGO

The most important learning of the OReGO test program is that the system works: charging drivers by the mile instead of gallon consumed is possible.

Further, effective business partnerships are essential to operating a road charge system. The private sector injects innovation and competition into the mix, driven by consumer demand, to ensure the program is viable in the long-run. And because vehicle technology will evolve, it is imperative that the road usage charge framework remain technology agnostic so it can flex as the market changes.

Administrative costs of the OReGO program will need to be reduced before it transitions to a fully mandatory program. There are several ways to do that: offer a flat annual usage charge as an option in the road charge program, create effective compliance mechanisms and partner with other states to realize economies of scale.

A system that relies exclusively on devices installed in vehicles will create challenges for a mandatory tax program. Devices cannot operate in all vehicles; they cannot report fuel consumption accurately in some vehicles; and, they are easily removed. ODOT is actively researching other technology options—such as embedded telematics, cell phone imagery, and data aggregation—that perform better than the devices.

PUBLIC OPINION ON ROAD USAGE CHARGING

ODOT has conducted a variety of research to gauge public opinion on per-mile charging. While the concept is about as popular as increasing vehicle registration fees, increasing fuels tax, or implementing a vehicle sales tax, the majority of Oregonians in a 2016 survey agreed that a mileage-based system for transportation funding is more fair than other options presented. The most convincing message presented about road usage charging was that it ensures all people pay their fair share for use of the roads.

EQUITY FOR RURAL OREGONIANS AND LOW INCOME HOUSEHOLDS

The main public concern about per-mile charging is the perceived unfairness for rural drivers who have to drive long distances. But this perception is inaccurate. An Oregon State University study of Oregonians' driving patterns and vehicle ownership found that rural drivers would not be negatively impacted by a road charge. Drivers of high-efficiency vehicles, since they pay very little in gas tax, would pay more road charge regardless of how far they travel. Urban drivers are more likely to drive fuel efficient vehicles, so they would also be likely to pay more under the road charge program. Rural drivers, who tend to drive less fuel efficient vehicles, would most often pay about the same as they do in gas tax.

The study found that higher income households would pay more than lower income households under a road usage charge because higher income households drive much more. In addition, because fuel efficiency does not vary significantly by income level, a per-mile charge would not disadvantage low income individuals compared to our system today.

NEXT STEPS

Oregon continues to refine the road usage charge program. The Road User Fee Task Force introduced legislation for the 2017 legislative session, House Bill 2464, to make the program mandatory for all new vehicles starting in 2026.

New federal grant funding will be used to expand technology options, improve account management and internal processes, and bolster public outreach. As Oregon participates in RUC West—a voluntary coalition of 14 western

states committed to research funding methods based on drivers' actual road usage—ODOT will share this work with other states. Adoption of road usage charging by neighboring states will make the program even more effective through expanded testing and research.

FOR ADDITIONAL INFORMATION

ODOT welcomes comments and questions about road usage charging. Call (503) 986-7827, email MyOReGO@odot.state.or.us, or visit www.MyOReGO.org.



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THE FUTURE OF TRANSPORTATION FUNDING

The main revenue generators of the Oregon State Highway Fund are Driver and Motor Vehicle (DMV) fees, motor carrier fees, and fuels tax. Of these, fuels tax generates the most revenue. In 2015, the state fuels tax generated \$516 million and constituted more than 40 percent of the State Highway Fund. The federal fuels tax is the primary revenue source for the Federal Highway Trust Fund, which provides over \$600 million each year to Oregon for roads and transit.

FUELS TAX REVENUE WILL BEGIN TO DECLINE IN 2020

Due to a strong economy and a high rate of population growth, Oregon fuels tax revenue is on track for 5.6 percent growth in 2016—the strongest growth seen in recent history. However, according to ODOT’s latest revenue forecast, growth is expected to slow considerably in 2017 and ultimately decline beginning in 2020, a trend Oregon foresaw over a decade ago.

What’s the problem with the current funding model?

Increased vehicle fuel efficiency



Declining purchasing power



Increase in population

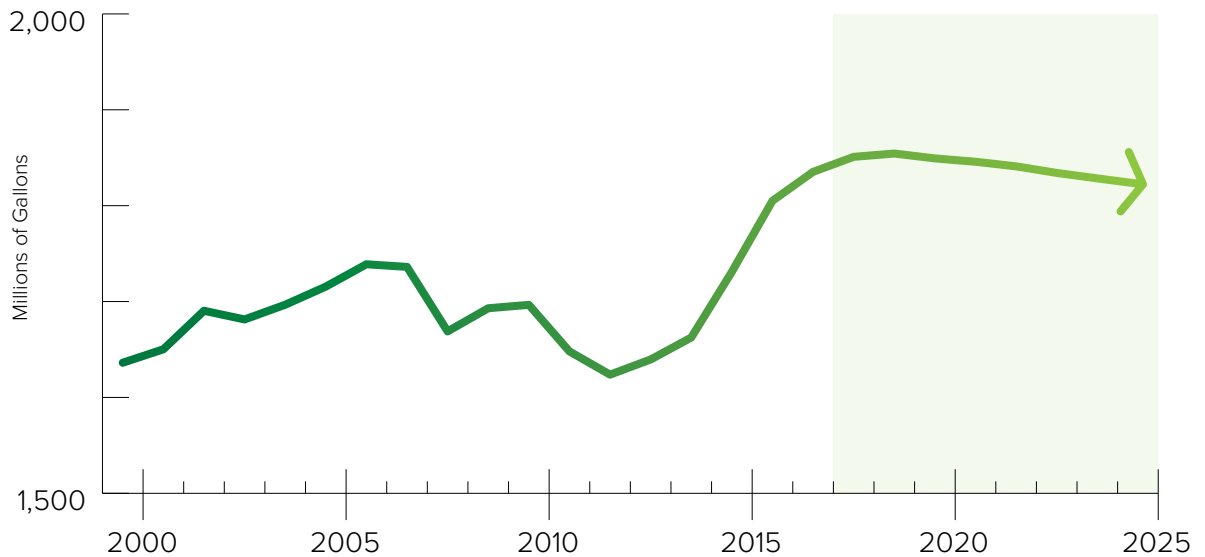


Increase in vehicle miles traveled



The current funding model, fuels tax, is experiencing the following problems: an increase in vehicle fuel efficiency, an increase in vehicle miles traveled (which increases wear and tear on the roads), and declining purchasing power for transportation dollars. Fuels tax will generate less revenue as vehicle fuel efficiency increases; however, wear and tear on the roads will increase because economic and population growth will increase vehicle miles traveled on Oregon roadways. These two factors (less transportation funding, but more wear and tear on roads) coincide at a time when the purchasing power of transportation money is significantly less than it was a decade ago.

Motor Fuels Taxable Gallons in Millions



Forecast from the December 2016 ODOT State Revenue Forecast

Fuels tax revenue is projected to increase until 2020, at which point it is expected to decline because of increase in fuel efficiency and slowing job growth.

In 2020, revenue from fuels tax is projected to decline due to increased vehicle fuel efficiency and slowing employment growth. The combined impact of these two elements— as well as other contributing factors such as projected increased fuel prices—will likely bring overall fuel consumption down in later forecast years. Increased fuel efficiency will continue to reduce fuels tax revenue every year in future years.

FUEL EFFICIENCY IS INCREASING

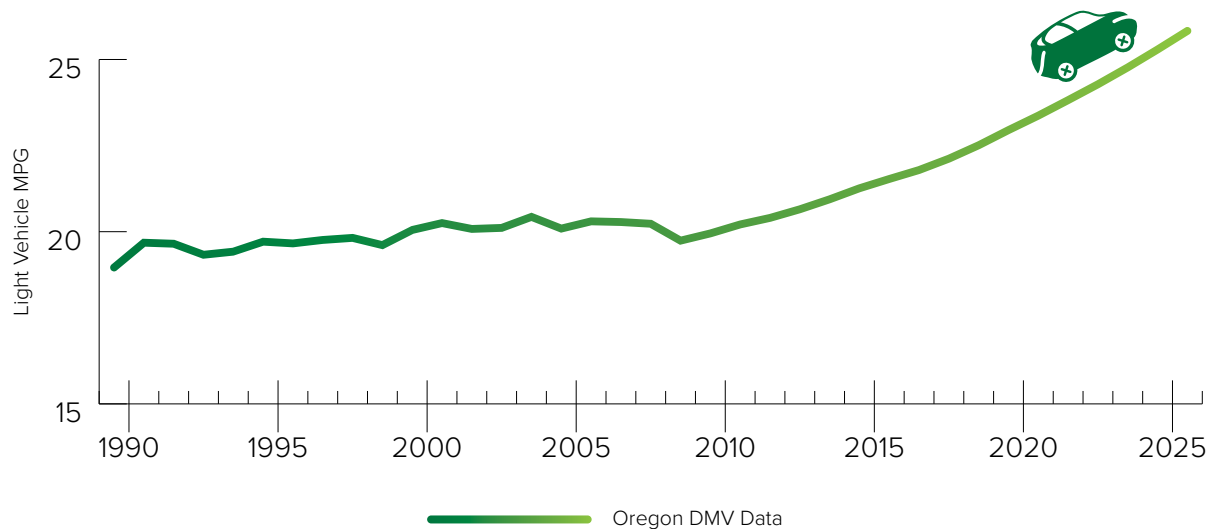
Vehicle fuel efficiency is increasing, which means that fuels tax generates less revenue for each mile driven.

Through the 1990's and early 2000's, the fuel efficiency of passenger vehicles remained relatively stable while fuel prices remained low and vehicle manufacturers had no real incentives to improve fuel economy. However,

federal action aimed at reducing greenhouse gas emissions will increase fuel efficiency in two phases. Phase 1 impacted model years 2012 to 2016, setting increasingly stringent greenhouse gas compliance standards for each year. Based on the mid-term evaluation from the EPA, the auto industry has been successful in meeting the Phase 1 standards, in part through increased vehicle fuel efficiency, and recommends continuing into Phase 2. Phase 2 builds on this by expecting continued greenhouse gas reductions and subsequent increases in vehicle fuel efficiency with each model year until 2025.

Oregon DMV data for passenger vehicles (also commonly referred to as light vehicles) shows that fuel efficiency is increasing among Oregon's fleet. The average fuel efficiency of passenger vehicles has increased by 1.5 percent since last year alone, and has increased 7.5 percent since 2008. This pattern will continue.

Passenger Vehicle Fuel Efficiency



Because of federal standards, fuel efficiency of the Oregon fleet has been increasing and will continue to increase.

FUTURE OF TRANSPORTATION FUNDING

Vehicle miles traveled is projected to increase in the United States. In Oregon, an increase in vehicle miles traveled is due to population growth. Though vehicle miles traveled will increase, vehicles will become more fuel efficient at a faster rate than in years past. The result is fuels tax revenue will decline, while transportation infrastructure wear and tear will increase.

US TOTAL PASSENGER VEHICLE MILES TRAVELED

As Oregon's main source of state and federal transportation funding declines, the ability of ODOT and local governments to maintain, improve, and build roads and bridges will correspondingly decline.

Vehicle technology is quickly evolving. And with this change, road use does not directly correspond to fuel use. If transportation funding is to remain sustainable in the long term, it must leave behind the early 20th century assumption that fuel purchases mirror road use. Wear and tear on the highway is not dependent on the

fuel efficiency of the vehicle driving on it, so funding should not be dependent on gallons of fuel purchased. Charging a per mile fee would ensure that funding does not decline due to increased vehicle fuel efficiency.

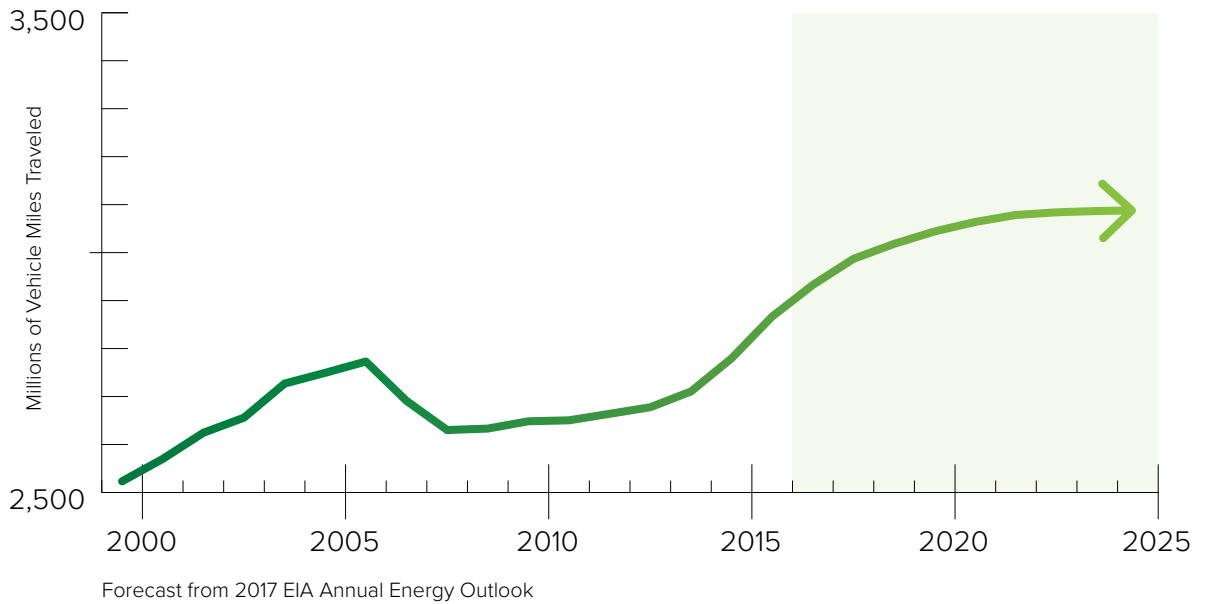
WHAT OREGON WILL LOSE BY RELYING SOLELY ON FUELS TAX

By relying on an increasingly unsustainable revenue source, ODOT and local governments will lack adequate resources to design, construct, operate, and maintain the state's intermodal transportation system. This comes at a time when many of Oregon's road and bridges are in desperate need of repair.

Compared to fuels tax, a RUC system would generate an additional \$340 million dollars in gross revenue within the next 10 years by stemming the loss of revenue. This is because the RUC model is not susceptible to increased vehicle fuel efficiency. Fuels tax is.

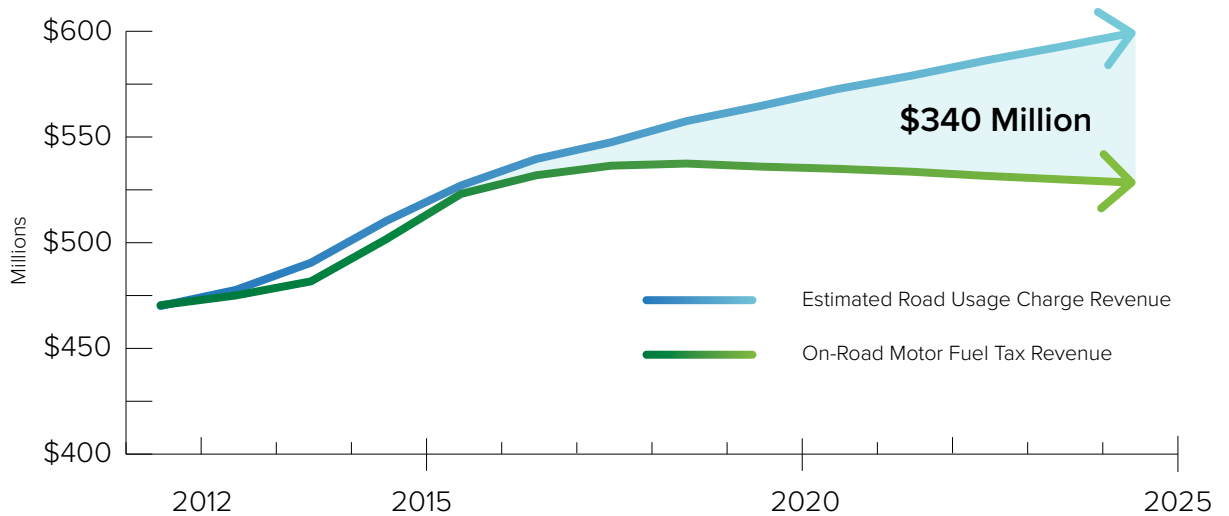
The cost to administer the fuels tax system is very small compared to the revenue it generates. RUC, in its infancy, will be more

National Light-Duty Vehicle Miles Traveled



Vehicle miles traveled continues to increase across the country.

Loss by Relying on Fuels Tax



RUC Revenue is from VMT growth rates in the August 2016 RUC Financial Model. It assumes that all current fuels tax payers switch to a RUC.

ODOT is expected to lose \$340 million in the next decade because of increased fuel efficiency of passenger vehicles. A RUC model will help abate this loss.

expensive to administer until the program can expand, incorporate new technologies, and realize economies of scale.

A strong transportation funding system would combine the strengths of the two models—fuels tax and RUC—to create a revenue stream that is cost-effective for the present (fuels tax), but adaptable to the future of transportation (RUC). Using RUC will create a more sustainable revenue model, unwavering in a time when vehicle technology is changing rapidly.

ODOT launched the OReGO program on July 1, 2015, to test the RUC concept. The program can successfully charge a per-mile fee, credit corresponding state fuels tax on fuel used to travel taxed miles, manage volunteer data, and public funds according to state and federal laws—OReGO is the first RUC pilot in the nation to accomplish this. Other states are following in Oregon’s pioneering footsteps as they face declining revenues of their own.



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POLICY HISTORY

USER PAYS PRINCIPLE

Early in the last century, the Oregon Legislature adopted a “user pays” policy where vehicle operators paid for road costs based on their direct use of the road, akin to a utility tax. The legislature first applied the user pays principle in 1919 by passing the nation’s first gas tax. It extended this principle in 1925 with adoption of the weight-mile tax for heavy vehicles. When the legislature directed the state’s first cost responsibility study in 1935, the existing pay-for-road-use policy became firmly established as state policy. In 1943, taxation of other fuels was added to statute as they became more prevalent in fueling vehicles. Since then, the Oregon Legislature has regularly assessed and reaffirmed the *user pays principle* to raise road revenue as needed. This principle is so important that it is codified as part of the Oregon State Constitution. (See Article IX Section 3A).

In 2001, the Oregon Legislature created the Road User Fee Task Force (RUFTF). In doing so, it recognized that the policy basis for the *user pays principle*—the fuels tax on gasoline, diesel, and other transportation fuels—would soon be undermined by the influx of fuel efficient passenger vehicles (hybrids and all-electric) into the marketplace. Hybrids would use a small amount of fuel and therefore would pay little fuels tax. All-electric vehicles would not use fuel and their operators would not pay fuels tax.

Average Monthly
State Gas Tax Paid



\$30.00

Low Efficiency Vehicle • 10 MPG Median



\$15.00

Average Efficiency Vehicle • 20 MPG Median



\$8.57

High Efficiency Hybrid • 35 MPG Median



\$0.00

Electric Vehicle • Gas not needed

Paid amounts are calculated assuming 1,000 miles traveled per month.

The Oregon Legislature proved prescient in 2010 when major automakers began mass marketing all-electric vehicles and in 2011 when automakers introduced plug-in hybrid vehicles. Automakers have demonstrated their commitment by regularly announcing new models and reducing prices. Recent technology improvements to the standard internal combustion engine fleet have also increased the overall fuel economy of the new vehicle fleet. The average fuel economy of the passenger vehicle fleet remained fairly constant over a 25-year period until the late 2000's. Since 2008, the average fuel economy of passenger vehicles in Oregon has increased 7.5 percent through 2015, and continues to increase as vehicle manufacturers strive to meet increasingly higher fuel economy targets for new passenger vehicles.

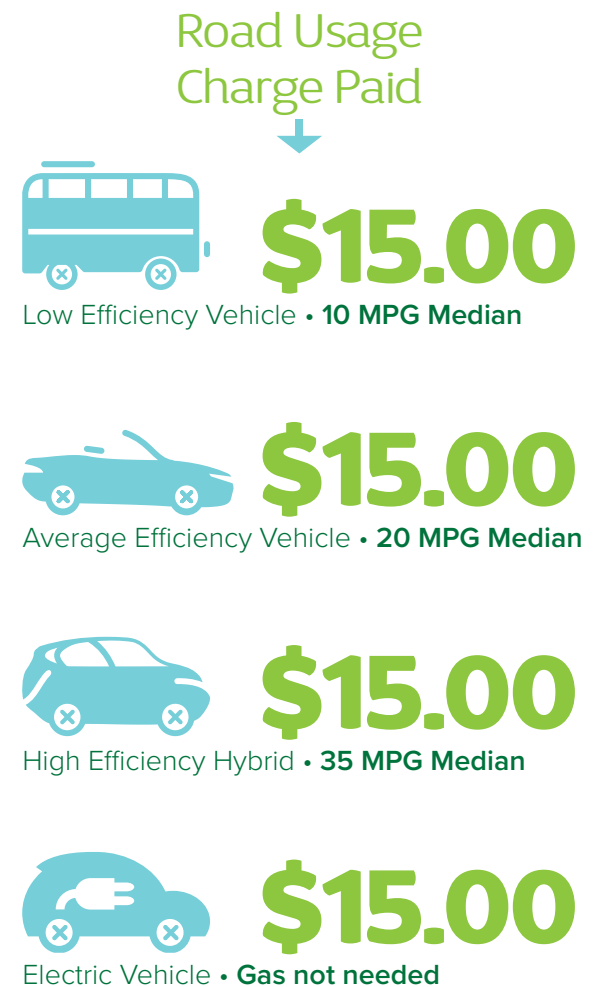
When fuel efficient vehicles become more common on the nation's public road system, the gap between those who are paying significant amounts for the public road system through fuels taxes and those who are not will become more obvious. One class of vehicle owners—the low fuel efficiency group—pays a large amount of revenue for the road system while the high fuel efficiency group pays a much smaller amount, yet the vehicles from each of these groups consume the public infrastructure—concrete or blacktop, roadway lighting and signage—in the same amount. High fuel efficiency vehicles put an unfair burden on low fuel efficiency vehicles while also putting wear and tear on the roads. Furthermore, because new fuel efficient vehicles tend to have a high price, affluent people tend to be most likely to purchase them. Less affluent people purchase vehicles in the secondary market, which tend to be less fuel efficient. As fuel efficient vehicles become an increasingly substantial segment of the nation's vehicle fleet, the burden of road building and maintenance costs will fall more on the less affluent. This gap will widen if the legislature decides to recover lost fuels tax revenues by raising the fuels tax.

Raising the fuels tax cannot mitigate the loss of revenues without placing an even greater burden on drivers of low fuel efficiency vehicles—people who use heavier duty vehicles for work, such as farmers and construction workers, and people who lack resources to purchase a new fuel efficient vehicle for everyday travel. Because their vehicles consume more fuel per mile than the average vehicle, these drivers already pay more than the average share for

road use in fuels tax. If fuels taxes are increased, their burden will become ever greater until policymakers establish an alternative revenue mechanism—such as a charge on distance traveled on state roads—to rectify the inequity.

From the standpoint of tax policy, the fuels tax is close to perfection, but it has the inherent flaw of lacking direct nexus to road use. As a consequence of this flaw, it is becoming obvious that fuels tax is beginning to drift away from its original purpose as a reliable, “user pays” source of revenue for the state's transportation system.

In a road usage charge system, all vehicles will pay an equal amount for the same miles traveled, thus tying it directly to the “user pays” principle.



Paid amounts are calculated assuming 1,000 miles traveled per month at a rate of 1.5 cents per mile.

ROAD USER FEE TASK FORCE

Capitalizing on its pioneering spirit, the Oregon Legislature established the Road User Fee Task Force (RUFTF) in 2001 “[t]o develop a design for revenue collection for Oregon’s roads and highways that could replace the current system for revenue collection.” RUFTF consists of ten members appointed by the Governor, Senate President and House Speaker and two members appointed by the Chair of the Oregon Transportation Commission. All serve four-year terms.

The task force established criteria to guide efforts toward a new revenue system design and ultimate implementation of an alternative to fuels tax. Eight overarching criteria comprise a set of principles essential to an acceptable new revenue source for Oregon:

- » **Users pay:** Any new revenue system should be founded upon the user pay principle that directly relates use of road infrastructure and services to funding.
- » **Local government control of local revenue sources:** The state should not appropriate revenue sources that are traditionally and primarily the province of local governments.
- » **Revenue sufficiency:** The new revenue system must have the ability to raise sufficient revenue to allow replacement of fuels tax as the primary revenue source for Oregon roads.
- » **Transparent to the public:** A new revenue source should be visible to the persons paying it. Individual members of the public should know how much they pay in taxes or fees and understand how any new assessment is calculated.
- » **Nongovernmental burden:** A new revenue source should not impose substantial burdens either on taxpayers or on private sector entities involved with tax, fee or data collection.
- » **Enforceability:** A new revenue source must be readily enforceable, resulting in minimal tax evasion.
- » **Support entire highway and road system:** A new revenue source should be designed to support the operation, maintenance, and preservation of the highway and road system for the state, cities, and counties in all parts of the state, as fuels tax does today.

- » **Public acceptability:** A new revenue source should be acceptable to the public.

These criteria were essential in helping the task force decide which idea to pursue, and also allowed ODOT to maintain focus as it developed and executed the task force’s ultimate recommendation.

IDEAS CONSIDERED FOR REVENUE GENERATION

After establishing the criteria for a successful revenue generator that could replace fuels tax, the task force considered 28 funding ideas. Below are a select few.

Implement a Flat Fee: Some states have enacted flat annual fees for electric vehicles to ensure that operators of those vehicles pay some contribution to road funding. A flat fee (or registration fee increase) is a simple and enforceable way to capture road use revenues from operators of vehicles that pay very little or nothing in fuels taxes. However, a flat fee is not fair if it is instituted in isolation; drivers who drive modest amounts subsidize those who drive a lot.

For many motorists, implementing only a flat fee is even less fair than the increasingly inequitable fuels tax. The following table illustrates that imposing an annual flat annual usage charge of \$150 to both a commercial sales person driving 35,000 miles a year and a retired senior driving 3,500 miles a year results in the senior substantially subsidizing the driving of the commercial sales person. This violates the user pays principle underpinning Oregon road funding policy.

Annual Miles Driven	Flat Fee	Per Mile Charge (1.5 cents/mile)	Difference
35,000	\$150	\$525	+\$375.00
3,500	\$150	\$52.50	-\$97.50

Tax Electricity for Vehicle Use: While taxing electricity for electric vehicle use has some intuitive appeal, practical considerations make it either impossible to implement, or more cumbersome than the per-mile charge. First, electricity use cannot be differentiated by application when it is sold. Because nearly every building has electrical outlets on external walls

and hybrid and electric vehicles generate their own electricity while driving, the only way to charge a separate rate for vehicle electricity use is to install an electricity metering device within the vehicle. Also, paying an additional charge for vehicle electricity use does not solve the problem of the growing fuel efficiency of standard internal combustion vehicles.

Tax Tire Purchases: While at first glance a tire tax is associated with road use, a tax on tires has several practical concerns that make it unfeasible as a proxy for distance traveled. First, a tire tax is not a precise proxy for road use because tires wear at very different rates; furthermore, driving habits and weather affect tire wear in ways unrelated to distance traveled. More importantly, drivers can easily buy tires outside Oregon or buy used tires without tax. Finally, a tire tax would add significantly to the price of tires placing a hardship on less affluent purchasers and discouraging purchase of new tires. This in turn has a negative impact on road safety.

Tax Battery Purchases: A tax on car batteries is also associated with road use, but it is also infeasible as a proxy for road use. Even more than tires, batteries have variable lives depending upon type, geography, electricity use for heat and air conditioning, and luck. Drivers can also easily buy batteries outside Oregon or buy used batteries, thus avoid paying an Oregon tax. A battery tax collected up front would also add significantly to the price of batteries placing a hardship on less affluent purchasers who may be more likely to drive older cars with older batteries.

Toll Interstate Highways: Tolling all highway facilities with large average daily traffic (such as the Interstate Highway System) would certainly raise high levels of revenue. As a way to raise revenue for all roads, this mechanism would be fundamentally unfair because drivers near high volume roadways would pay for the road system while other drivers would not.

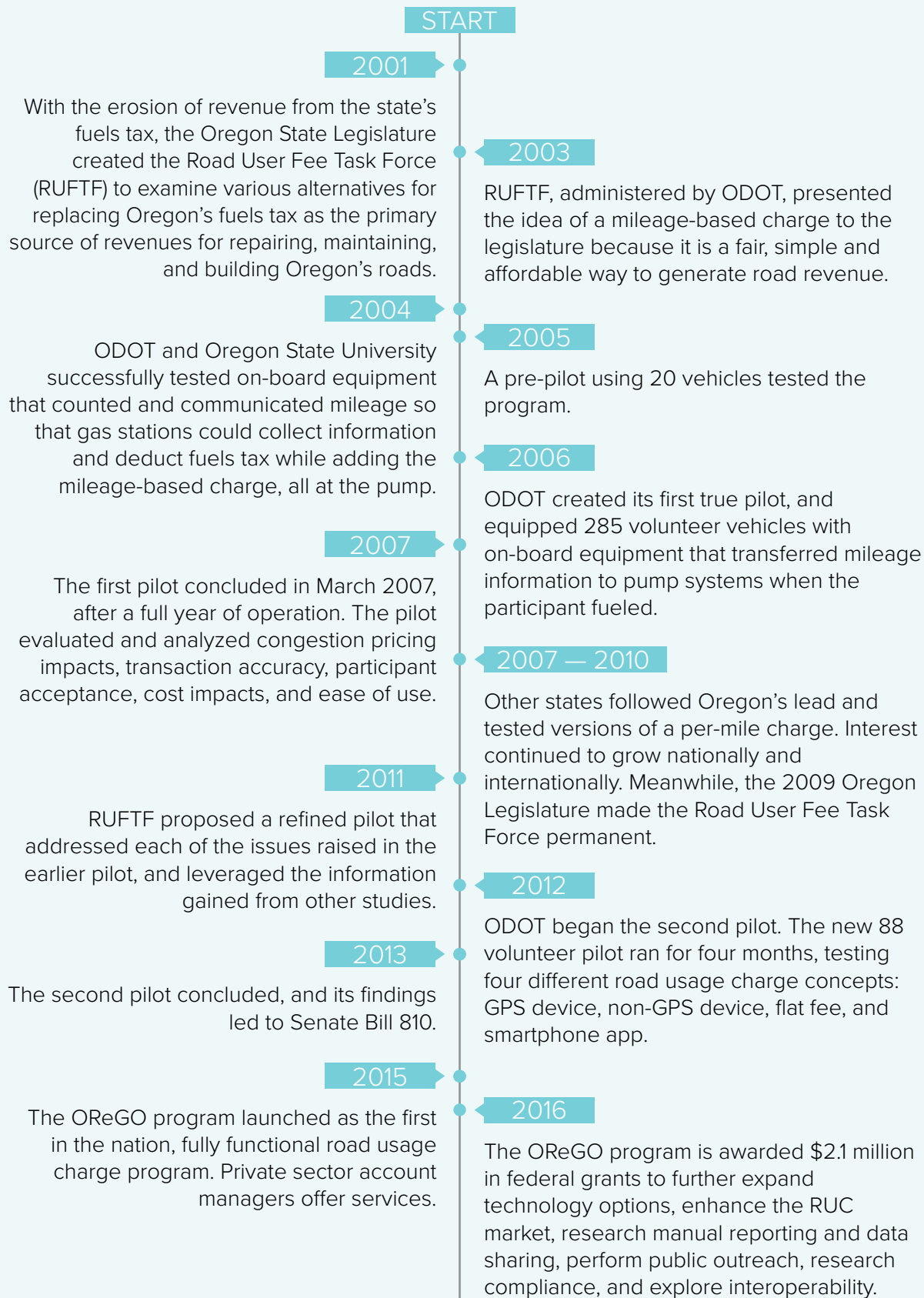
Simply tolling high volume highway facilities would create a range of secondary problems, as many drivers would reroute to non-tolled roads to avoid the tolled highways, causing congestion and wear-and-tear on roads that were not designed to handle so many vehicles. Further, tolling Oregon's interstate highways would be much more costly to implement and operate than other forms of road taxes.

ODOT would have to develop infrastructure, otherwise known as portals, which would read chips, devices, or badges in vehicles once vehicles entered into a tolling area.

Raise or Index Fuels Tax: While short-term adjustments to fuels tax make sense to ensure revenues keep pace with needs during the transition to distance charging, they would make fuels tax even more unfair than it is now. Raising fuels tax is a short-term fix, not a long-run strategy. Vehicles with lower fuel efficiency, including those owned by less affluent drivers—which tend to be older and less fuel efficient—will bear an even greater portion of the road system costs.

After weighing all 28 options, the task force decided to pursue a **road user fee based on distance traveled** as the most equitable funding alternative to fuels tax. ODOT completed two pilots, the first in 2006-2007, and the second in 2012-2013, employing the criteria developed by the task force to measure the success of the concept. Following enactment of Senate Bill 810 in 2013, ODOT launched the OReGO program on July 1, 2015. The pilots and the current program will be discussed in length in the ensuing chapters.

Oregon has led the way to develop the policy that underlies the road usage charge program. What follows is a brief history of how the policy has evolved.





4

PILOT HISTORY

Oregon conducted three pilots to test the road usage charge concept: one in 2006-2007, another in 2012-2013, and a statute-driven program launched in 2015. Each pilot built on

the lessons learned from its predecessor, and each was necessary to test, develop and at times adapt the road usage charge concept in order to create a successful system.

The below table compares the two pilots and the current program.

Pilot	Name	Budget	Cost	Number of Volunteers	Duration	Authority
# 1	Road User Fee Pilot	\$2.9 Million	\$2.9 Million	299 volunteers	Mar. 2006- Mar. 2007	HB 3946 (2001)
# 2	Road Usage Charge Pilot	\$2.5 Million	\$1.9 Million	88 volunteers	Nov. 2012- Mar. 2013	HB 3946 (2001)
# 3	SB810 Implementation Project	\$8.1 Million	\$5.4 Million	N/A	Nov. 2014- Dec. 2015	SB 810 (2013)
	OReGO Operations	\$5.0 Million 2015 – 2017 Biennium	\$2.3 Million to date (Dec 2016)	1,238 vehicles 1,103 volunteers (as of Dec 2016)	Jul. 2015- Ongoing	ORS 319.883- 319.947

2006-2007 PILOT

ODOT launched a 12-month pilot program in April 2006 to test the technical and administrative feasibility of the RUC concept. The program included 285 volunteer vehicles and two service stations in Portland that were equipped with point of sale systems to collect the data from vehicles.

HOW IT WORKED

Volunteer vehicles were equipped with GPS-enabled devices. Volunteers were charged a road user fee and credited gas tax while they

drove in different zones. Creating zones allowed pilot administrators to test if devices could differentiate when they crossed zone borders, and appropriately apply the RUC. When the volunteer went to an authorized service station to fuel his or her vehicle, a central reader at the station read mileage from the device, and passed this information to the point of sale system. The point of sale system then determined the vehicle's last mileage reading and applied RUC to the difference between the vehicle's last and current mileage readings to calculate the mileage fee. The system then deducted gas tax and added the mileage fee to the fuel purchase.

KEY FINDINGS

The concept is viable. The pilot program showed that, using existing technology in new ways, a mileage fee could be implemented to replace fuels tax as the principal revenue source for road funding. At the conclusion of the pilot program, 91 percent of the pilot program participants said they would agree to continue paying the mileage fee in lieu of the gas tax if the program were extended statewide.

Paying at the pump is possible. The pilot showed that the mileage fee could be paid at the pump, with minimal difference in process or administration for motorists, compared to how they pay fuels tax. Like fuels tax, collection of the mileage fee can be embedded in routine commercial transactions at the pump. By including the mileage fee in the fuel bill, cash or credit payments are accommodated, just like fuels tax. Although many of the prototype components used in the pilot program did not, by definition, meet the standards of commercial products, the next stages of technology development could take the technology to commercial viability.

Though the 2006-2007 pilot worked with two fueling stations, it was too difficult to implement paying at the pump for the 2015 OReGO program, where volunteers went to stations around the state. All service stations would have to upgrade pump technology and equipment in order to “talk” to vehicles that participated in the program. This would have been costly and politically difficult.

The mileage fee can be phased in. The study showed the mileage fee could be phased in gradually alongside the fuels tax, allowing non-equipped vehicles to continue paying the gas tax, while equipped vehicles could pay the mileage fee.

Integration with current systems can be achieved. The study demonstrated the ability to integrate with two main existing systems: the service station point of sale system and the current system of gas tax collection by the state. The availability of this technology amongst service stations remains a challenge.

Congestion and other pricing options are viable. The study showed that different pricing zones could be established electronically

and the assigned fees could be charged for driving in each zone, even at particular times of day. This proves the mileage fee concept could support not only congestion pricing but also assessment and collection of local revenues and other “zone-oriented” features. Furthermore, the zone pricing strategy applied in the pilot program produced a 22 percent decline in driving during peak periods.

Privacy is protected. ODOT developed the system used in the pilot program with specific engineering requirements to maintain as much privacy as practicable while still allowing a feasible way to audit and challenge billings. Key, privacy-related requirements for the pilot program were: no specific vehicle point location or trip data could be stored or transmitted, just general zone information and aggregated mileage; all on-vehicle device communication must be short range; and, the only centrally-stored data needed to assess mileage fees were zone mileage, totals for each vehicle, and the amount of fuel purchased.

TRANSITION

Although the pay-at-the-pump system functioned as intended and met its technical objectives, negative public reaction stalled its momentum toward implementation. Citizens showed grave concerns about the potential for invasion of privacy, particularly about GPS-based mileage reporting devices, and the cost for government administration of a new revenue collection system. In addition, some raised equity concerns for the less affluent. Finally, many rural drivers regarded the system as unfair, stating that their lives require driving longer distances than their urban counterparts for the same services.

Using the above key concepts, and adjusting the road usage charge program to accommodate general public opinion, ODOT reassessed the policies underlying the conception framework of the first pilot program. The entire attitude of the program shifted from a top-down, ODOT-directed approach of “can it technically be done?” to a conscious desire to build a program that would address public needs and concerns. From this shift, the 2012-2013 pilot was formed.

2012-2013 PILOT

The Road User Fee Task Force intended the second pilot program to show key elements of a distance-based charging system based on open architecture principles and motorist choice, and to have results available in time for the legislature to act on road usage charging during the 2013 session. The task force wanted the second pilot to demonstrate to state legislators, transportation stakeholders, and others interested in roadway finance that electronic mileage reporting based on an open system was a viable, easy to use concept for drivers and for ODOT. The task force also wanted the pilot to determine whether private firms had the ability and willingness to provide and implement system components for an efficient, reliable, and secure road usage charging system that could protect sensitive information, provide benchmarks for system set-up and operating costs, and reduce compliance issues.

ODOT re-conceived the per-mile charging system with four key aspects in mind:

First, the mileage reporting system should have an open architecture. This means that government should not select only one distance reporting technology for the vehicle, like it did with the pay-at-the-pump model in the first pilot. Instead, motorists should have the opportunity to select whatever technology option they like, such as telematics, or a device from the assortment available in the marketplace, both now and in the future. The government's role would be to establish standards for the technology and account managers to verify that they are complying with these standards, ensuring data security, and monitoring compliance.

An open road usage charging system would also allow for greater flexibility in administration, efficient technological advancement, and market evolution over time. An open system would become the foundation for interoperability among states and make the system scalable from one state to multiple states, or to a regional or national system. An open system would also allow road usage charge information to be shared between jurisdictions to facilitate charging for multi-state driving.

Second, there should be no government mandate for GPS technology installation into vehicles, or for any other technology with the capability for location-based mileage reporting. Motorists must instead have the opportunity to report only mileage.

Third, motorists should have choices for how they report mileage and from whom they obtain mileage reporting technologies. The government must not choose one technology for all participants. The public should have choices for mileage reporting and payment, just as they do for other services such as cell phones. Motorists should be able to select a mileage reporting device and service plan that works best from their perspective.

Fourth, private sector companies should have a market opportunity to provide road usage charge payers not only mileage reporting devices but also tax processing and account management services. Vendor companies should be allowed the opportunity to provide these services along with other value-added services that are unrelated to revenue collection. Bundling bills for multiple services would reduce collection costs for the per-mile charge, and would increase public acceptance if the charge was already coupled with services that motorists wanted. With private sector alternatives for administration, the road usage charging system would take advantage of market efficiencies to minimize administrative costs and interface with a known commercial entity with which they may already share their personal information.

With 88 volunteers, the second pilot was relatively small. The pilot lasted from November 2012 to March 2013. Participants were from three states—Oregon, Washington, and Nevada—and were given four options: the basic plan (a non-GPS device), the advanced plan (a GPS device), the smartphone plan, or the flat fee. Sanef, a private sector company, administered portions of the pilot (advanced and smartphone plan), whereas ODOT administered the basic plan and the flat fee.

HOW IT WORKED

Participants would first submit an application to participate in the program, and once the application was approved, would sign up



for their preferred mileage reporting plan on the pilot website. The four plans were:

- » **Basic Plan:** The basic plan provided mileage reporting devices with no location-determination technologies (no GPS technology). The mileage reporting devices supporting the basic plan reported only the total number of miles traveled and fuel consumption, having no ability to determine where the miles were driven. ODOT administered the basic plan.
- » **The Advanced Plan:** The advanced plan provided devices that employed location-determination technology (GPS) for reporting mileage. These devices reported distance driven on public roads in Oregon separately from other mileage driven, and only distances driven on public roads in Oregon were charged. Note that the non-public/public road differentiation used in the 2012-2013 pilot did not pass requirements testing for the 2015 OReGO program. It was subject to GPS drift, and Oregon also lacks a clear definition and application of “non-public road.”
- » **Only Sanef offered the advanced plan.** No ODOT plan had an option for an advanced distance reporting device. By design, ODOT did not have access to any location information transmitted by the mileage reporting devices.
- » **Smartphone Plan:** With the smartphone plan, participants could choose between two reporting modes using an application (app) on their smartphones: 1) “record all miles driven,” which did not transmit any location information, or 2) “record only Oregon miles,” which used location information to just charge for miles driven in Oregon. With the smartphone plan, participants could control when the location data was enabled or disabled. Only Sanef offered the smartphone reporting option.
- » **Flat Fee:** A motorist choosing the flat fee avoided mileage reporting altogether. In this plan, ODOT charged motorists a flat rate of \$45 per month (equivalent to about 3,000 miles), or \$135 for all three months of pilot participation. Under the flat fee, ODOT charged participants the same rate regardless of how many miles they drove. The flat fee rate was based on an assumed maximum number of miles driven per month. This provided an important alternative for drivers who drove near the assumed maximum number of miles per month or who did not want to have any form of mileage reporting technology in their vehicles. Drivers on this plan did not receive any refund for fuels tax credit. ODOT provided account management services for this plan.



After choosing a plan, participants received and installed a device into their vehicle (unless they chose flat fee). Oregon participants were billed monthly at a rate of 1.56 cents per mile. The mileage rate was the same for all Oregon participants and was set to approximate fuels tax paid by a vehicle getting about 20 MPG plus an administrative cost component. Sanef and ODOT used fuel consumption information from the mileage reporting devices or, for some vehicles, Environmental Protection Agency (EPA) fuel economy ratings, to estimate fuel usage during the month. Based on the reported miles and estimated fuel usage, Sanef provided participants with a credit on their invoices for estimated fuels tax paid.

Basic plan participants were charged for all miles traveled. Advanced plan participants were charged only for miles traveled on Oregon public roads. Smartphone plan participants were charged for all miles traveled in Oregon, and any miles traveled outside of Oregon when they disabled the location on the smartphone app.

Those participants who chose plans administered by Sanef, including all Washington and Nevada participants, received an electronic copy of their invoice. Oregon participants on Sanef plans paid their invoices online via credit or debit card (Washington and Nevada participants were not asked to pay invoices). Participants

enrolled in the ODOT-administered basic plan or flat fee plan received an invoice in the mail from ODOT and made payment by check.

It is important to note that though the 2012-2013 pilot collected actual money, it was directly deposited in ODOT accounts, and did not formally go through Treasury-approved banks. Because the current 2015 OReGO program is a tax program, it meets Treasury statutes and policies.

LESSONS LEARNED

The Road User Fee Task Force directed ODOT to monitor the following attributes of system operations during the pilot to determine whether the pilot was successful.

Efficiency of administering the road usage charge: The system was able to successfully administer the road usage charge and credit fuels tax. The only unexpected difficulty was achieving communications between mileage reporting devices and electric vehicles. This difficulty arose because fully electric vehicles have a difficult time communicating to devices plugged into the OBD-II ports. OBD-II ports are in all vehicles that were manufactured after 1996 (2006 for diesel vehicles) to help with vehicle diagnostics. Electric vehicles use the port differently than their fuel-powered counterparts, and it is

difficult for the device to “read” information out of the OBD-II ports of electric vehicles.

Administering the pilot system was cost-effective because it used hardware and software designed and made operational for other purposes. The pilot did not have to develop new technology.

Ease of use and cost of compliance with the per-mile charging system: The system was easy and affordable for drivers to use and comply with, based on interviews with vendors and survey responses by pilot participants. Vendor interviews indicated that the system would be easy for participants to comply, free or inexpensive to use, and hard to evade.

Most participants who responded to surveys said they found all aspects of the system either easy or very easy to use. The only aspect of the system that more than one participant found difficult was locating the OBD-II port for installation of the mileage reporting device.

Accuracy and perception of accuracy of per-mile charge data: Participants believed the mileage measurement and billing were accurate, although several reported that they could not know the accuracy of the system. Mileage reporting device accuracy was measured during acceptance testing and shown to be 97-98 percent accurate when compared to mileage measured by the vehicle’s odometer.

Privacy options for per-mile charge payers: Vendors and participants felt that the system protected privacy well. In fact, most participants felt that the system protected privacy as well as or better than common systems such as credit cards and mobile phones.

Ability to audit: The pilot system was auditable, and lessons about mileage accounting reporting measures were learned during the pilot. These improvements were incorporated into updated requirements, interface specifications, and business rules documents that were used for the 2015 OReGO program. The improvements included formalizing and standardizing the monthly reports from the account management system, defining the precise nature of a transaction, requiring comprehensive numbering of transactions, and allowing no missing, purged, or deleted transactions. The ability to audit the account management system is important because it allows ODOT to be certain the system is compliant with the requirements, interfaces,

and business rules of the program. This in turn is vital for the public to trust the system.

In addition to RUFFT’s metrics, ODOT, pilot participants, and Sanef noticed the following positive attributes of the system.

Adaptability of the per-mile charging system:

All parties involved in the pilot found the per-mile charging system to be adaptable. It was capable of accepting charges and payments from a variety of sources, and was highly scalable. An account manager could easily configure the system to accept multiple types of charges, such as tolling, parking, and value-added services.

System performance: There were no identified or reported lost transactions, inaccurate billing, or missed or misreported mileage in the pilot. This was determined by evaluating several different values, including road usage charge accounting records, participant surveys, testing records, odometer values for some participants, and system error logs. The system performed well across numerous dimensions:

- » **Ease of installation of mileage reporting devices:** The majority of pilot participants found the mileage reporting device easy and quick to install.
- » **Functionality:** The system operated as specified.
- » **Reliability:** The mileage reporting devices and account management system did not have failures, and were functional throughout the pilot.
- » **Security:** Authentication measures used in the software made the system secure from potential cyber-attacks.
- » **Openness:** The system was open to hardware from any vendor, as shown by the use of the same, standard message for mileage information from all mileage reporting devices; the fact that mileage reporting devices from several vendors all successfully communicated to one account management system during the pilot; and the fact that users were able to make choices about their hardware and account management service provider.
- » **Energy consumption:** The devices did not drain car batteries or cause drops in fuel consumption, and the account management system operated efficiently.

» **Suitability in account management experience:** Surveys showed that participants were pleased with the service provided and ease of use of the account management system.

NATION'S FIRST ROAD USAGE CHARGE FOR PASSENGER VEHICLES

Following the successful pilot, which concluded in March 2013, the Oregon Legislature considered options for an operational road usage charging program for passenger vehicles. The first per-mile charge bill in the 2013 session was House Bill 2453, which proposed a road usage charge on passenger vehicles rated at 55 MPG and above.

During hearings in two House committees on House Bill 2453, legislators weighed testimony submitted by leaders of government, industry, and private citizens. The bill had overall support from a broad base of interests, including the Road User Fee Task Force, legislators from both major political parties, the League of Oregon Cities, Association of Oregon Counties, AAA Oregon/Idaho, the Metro Council and the American Council of Engineering Companies of Oregon.

At the outset, some opposed House Bill 2453. The American Civil Liberties Union opposed the bill until ODOT agreed to stronger provisions to protect personally identifiable information. The Alliance of Automobile Manufacturers and General Motors cautioned that additional, broader study should be pursued before passing any legislation that mandated road usage charges because of the potential negative impact on emerging vehicle technologies such as electric vehicles. The automakers ultimately supported alternative legislation in the Senate with Senate Bill 810 (Appendix F). That proposed legislation created a road usage charge program for up to 5,000 volunteer vehicles.

Both bills, House Bill 2453 and Senate Bill 810, reflected the policy evolution, lessons learned and stakeholder input painstakingly gathered over the previous decade. Both bills established a per-mile road usage charge program to begin July 1, 2015 and mandated that processes be developed to refund state fuels taxes paid for the new taxable miles. The two bills had essentially the same provisions creating an operational road

usage charge program. The bills' only significant difference was the category of passenger vehicles that would be subject to the law.

Each bill progressed through substantive House and Senate committees before reaching the budget-writing Joint Ways and Means Committee. After extensive debate in the Joint Sub-committee for Transportation and Economic Development, the Joint Ways and Means Committee sent House Bill 2453 to the Speaker's desk for a vote on the House floor. When it became apparent that the necessary votes to attain the supermajority required for this bill would not materialize in the Senate, the Joint Ways and Means Committee sent Senate Bill 810 to the floor of the Senate. Both chambers passed Senate Bill 810 with a vote of 24 to 6 in the Senate and 47 to 13 in the House. Governor John Kitzhaber signed the bill into law. Senate Bill 810 is codified in Oregon Revised Statute 319.

Just as the Oregon Legislature in 1919 established the nation's first state gas tax, 94 years later it also passed the first mileage-based revenue program for passenger vehicles to fund the state's road system.



5

OReGO PROJECT *(Building the Road Usage Charge System)*

Many valuable lessons were learned during the previous two pilots, and those lessons would be reflected in the next phase of the concept. The operational program, enacted by Senate Bill 810 (2013), directed ODOT to give motorists choices for technologies in reporting miles driven and how they manage and pay their road usage charges. They must be allowed to obtain RUC services through nongovernmental entities and given market-driven choices that are efficient and cost-effective. The legislation also stipulated the following:

- » Participation of up to 5,000 volunteer passenger 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.
- » A road usage charge rate of 1.5 cents per mile for travel on public roads in Oregon to be paid by vehicle owners.
- » A refund/credit of Oregon state fuels tax paid by vehicle owners.
- » Refunds for travel on private roads in Oregon and out of state miles.
- » Methods for measuring and reporting mileage that includes at least one method that does not use vehicle location technology (GPS).

- » Choices for volunteers in how their billable mileage is collected and reported.
- » An open system that will allow different types of technology to collect and submit mileage and fuel consumption data.
- » Contracted private sector partners that will help administer the program and provide volunteers with choices.
- » Protection of personal information from disclosure and the elimination of all location-based and daily metered use information according to strict timelines, unless the volunteer requests the retention.
- » Enforcement of the new law via penalties for false statements, non-payment, and tampering with technology.

The 2015 volunteer project was conceptually very similar to the 2012-2013 pilot, but it differed in a couple of ways.

	2012-2013 Pilot	2015 OReGO Program
Pilot Costs	1.9 million- Nov 2012-Mar 2013	5.4 million (to build)- July 2014-July 2015 2.3 million (to operate)-July 2015-Dec 2016
Timeframe	5 months in operation	There is no sunset date in legislation
Number of Participants	88 volunteers	The OReGO program was prepared to welcome 5,000 vehicles on July 1, 2015. Because of automation, the OReGO program is able to enroll more vehicles. Since December 31, 2016 the program enrolled over 1,300 vehicles.
Internal System Development	None developed.	ODOT's internal system was developed to collect information from five systems, and keep updated mileage, fuel, and tax data for each volunteer and vehicle.
Payment Collection	Personal checks submitted to ODOT and manually deposited. The program also had one ODOT debit/credit card participants used.	Account managers had to set up systems and payment options that were in compliance with State Treasury's public fund laws. ODOT ensured account managers were in compliance. Payment from account managers is received into the Fuels Tax System and automatically deposited into ODOT's accounts.
Account Manager Contracts	1 account manager for 6 months	3 account managers with 2 year contracts that are open for renewal.

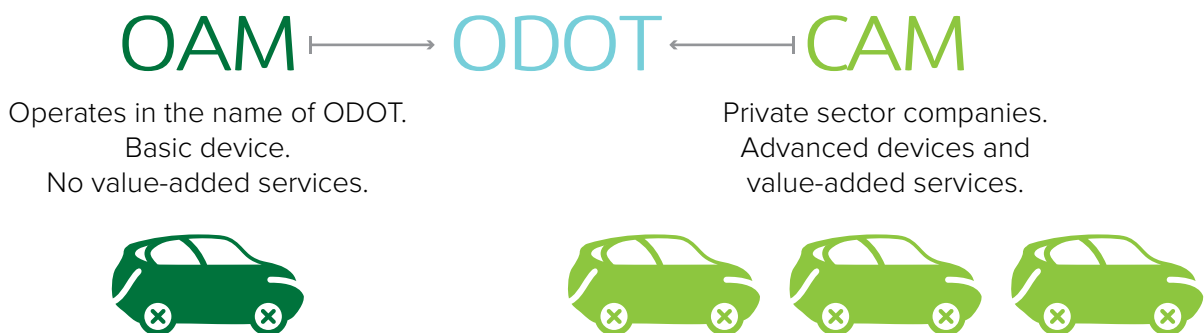
The biggest difference between the OReGO program and the 2012-2013 pilot is that the OReGO program is able to operate as a true tax program. Data collected from account managers is verifiable, and payments are collected in accordance with Treasury requirements. Further, ODOT spent up-front costs to create a robust, expandable, and automated internal system so the program can easily realize economies of scale.

HOW IT WORKS

CREATION OF A ROAD USAGE CHARGE MARKET

The legislature chose the private sector to help manage the program. The private sector would provide volunteers with choices, and would also infuse innovation, expertise, an entrepreneurial spirit, and technical variety into the program that would otherwise be limited by government-only administration.

ODOT administers the program through private sector account managers. Account managers are responsible for enrolling



volunteers, collecting mileage and fuel consumption data, providing volunteer support, and remitting the tax due to ODOT.

There are two different types of account managers: the ODOT Account Manager (OAM), which is a government-approved and closely managed system that does not use location technology; and Commercial Account Managers (CAM), which are private sector managed systems. Some volunteers are more comfortable with the government directly collecting their vehicle information or with a non-GPS device, whereas other volunteers prefer a private company to perform this task, accompanied by value-added services available in the private market. OReGO gives them choices.

The CAMs compete for volunteers by offering value-added services, in addition to collecting road usage charges. Overall, ODOT involvement in their business activities is collaborative and minimal, though ODOT continues to perform program oversight, such as ensuring volunteer inquiries are responded to promptly, tax information is accurate, etc. Failure for the CAMs to perform according to ODOT requirements can impact ODOT payments to the CAMs.

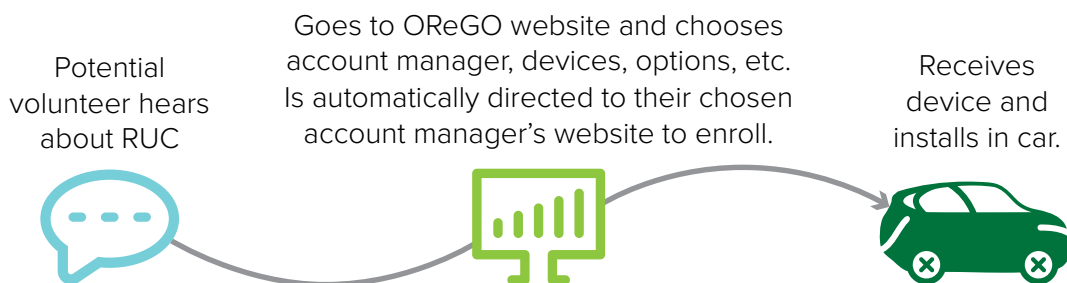
Through a procurement and certification process, ODOT established two vendors to be CAMs for the July 1, 2015 launch date, Verizon Telematics and Azuga, and one vendor, emovis (previously Sanef) to be the OAM. Since then, the OReGO market, true to its purpose, has seen account managers and devices enter and leave the system as expected. Verizon Telematics left the market in October 2016, which provided the OReGO program with an opportunity to learn how to successfully end ODOT's relationship with an account manager during functional program operations. Azuga added a basic (non-GPS) device option, and emovis entered the RUC market as a commercial account manager, which increased options for volunteers.



ENROLLING VOLUNTEERS

Volunteers learn about the program through marketing by commercial account managers and via ODOT's strategic communications and outreach. To enroll, volunteers go to MyOReGO.org. On this website, volunteers review options for devices, account managers, value-added services and other program offerings.

Once volunteers identify their preferred account manager, they are directed to the vendor's website where they register by entering their vehicle information. After completing the registration, the account manager sends the device to the volunteer. It is a self-installed device that collects and reports miles driven and fuel consumed by the vehicle.



ASSESSING AND TAXING USE OF THE ROAD

The account manager collects mileage and fuel consumption, as transmitted by the device, and applies 1.5 cents per mile to the volunteer's account. Fuels tax credits are estimated either through actual fuel consumption reported by the device, or by applying the vehicle's combined EPA rating to miles driven. The account manager credits the state fuels tax of 30 cents per gallon to the volunteer's account. The account manager reconciles the two and bills or refunds the amount determined by a net calculation per the volunteer's use of the road. The program was designed to be revenue neutral to fuels tax for a vehicle that gets 20 MPG.

CAMs invoice a volunteer when they choose. One of the CAMs, Azuga, requires that volunteers establish a prepaid wallet, and the tax due is simply deducted from the wallet on a daily basis. The OAM does not invoice volunteers until their account meets a \$20 threshold.

Some volunteers accrue a refund, and not a tax payment, because their fuels tax credits exceed their road usage charge. CAMs issue refunds according to their own business models. ODOT issues refunds on behalf of the OAM to volunteers on a quarterly basis, and only once the refund is \$20 or more, or if the volunteer specifically requests it or leaves the program.

The account managers report basic mileage and volunteer account information to OReGO on a weekly and monthly basis for management purposes, and the data is automatically sent and uploaded into the Road Usage Charge Administration System (RUCAS).

Each calendar quarter the account manager submits its official tax report and tax payment to ODOT. This official report and payment is remitted via the ODOT fuels tax system, which shares the information with RUCAS and ODOT's financial system.

ODOT regularly reviews account manager data to ensure the proper amount of tax is reported and paid.

TECHNOLOGY

Although ODOT's system design is technology-agnostic and is open to various approaches, the private sector partners chose to only offer devices. Device technology was the only

technical choice of sufficient maturity to meet the implementation time line. While a few vehicles had embedded telematics, no account manager brought it forward as a method to collect mileage and fuel consumption.

PROJECT MANAGEMENT

The RUC Project officially started in July 2014 when project scope, schedule, and budget were established and baselined for the legislatively-mandated go-live date of July 1, 2015. The project was scheduled for completion on December 31, 2015.

WORKSTREAMS

In order to better organize and manage the project, it was broken up into work streams according to project function.

- » **Operations** contained all of the business and administration elements of the OReGO program; this included accounting, audit and compliance, volunteer coordination, policy compliance, and other functions that ensured project success.
- » **RUCAS** (Road Usage Charge Administration System) is the back-end system that receives data from the account managers as well as the fuels tax system, transcribing it into reports necessary for program administration.
- » **Fuels Tax System Integration** was a workflow outside of OReGO that was integral to the program. Account managers file and pay their official taxes through the fuels tax system. The project team closely coordinated its work with the fuels tax system project.
- » **Communications** centered on public education and attracting volunteers into the program. This included engaging the public in a statewide listening tour and online.
- » **Account Manager Systems** was developed to support the certification of account managers and to provide ongoing guidance.
- » **Oversight** was focused on program governance. This included reporting to the RUC executive board, meeting with the RUC steering committee, and reporting to external entities, such as the quality assurance contractor, Legislative Fiscal Office and Department of Administrative Services.

Each work stream had its own detailed budget, schedule, project charter, and work flow plan. The project team regularly reported progress of each work stream to stakeholders. In addition, the project team identified the “minimum viable product,” which was the minimum scope that needed to be delivered per Senate Bill 810. This helped the project team focus energy and effort so the go-live date was never compromised. Because the team was effectively able to focus its efforts on essential tasks per work stream, the team ultimately delivered more than its identified scope by the go-live date.

Below is a brief overview of the efforts behind each major work stream. Fuels tax system was largely outside of project control, so it will not be discussed in detail. The communications effort will be discussed in further detail in chapters 8 and 9.

OPERATIONS

The operations work stream focused on preparing the business team to administer an operational program after go-live. The main subdivisions were compliance, volunteer management, and Oregon Administrative Rules (OARs) development.

Compliance

During the project, the ODOT compliance work stream, headed by the Compliance Specialist, focused on developing the service level agreement in the contracts, which would measure account manager performance during program operations. The compliance area also played a key role in certification, to ensure that account manager systems were ready to adhere to program requirements after go-live. In order to better prepare for program operations, the Compliance Specialist worked closely with ODOT Financial Services and State Treasury to write procedures and manuals on reviewing reports, reviewing tax payments, verifying MPG variances, conducting audits, and issuing refunds.

Volunteer Management

During January to June 2015, ODOT prepared to welcome volunteers, make them ready for participation, provide training and resources, and communicate with the interested public and potential volunteers through the interest

group. The interest group was an email list that interested parties could subscribe to in order to obtain information on project progress and be informed of enrollment opportunities. By go-live, just shy of 2,500 email addresses were on the interest list.

Outside of marketing and outreach efforts to recruit volunteers the ODOT business team prepared processes on how to manage volunteers once they enrolled in the program. This included writing and validating processes encompassing: volunteer enrollment, conditional vehicle approvals, a volunteer standby list (in case the 5,000 maximum was reached), volunteer and vehicle account changes, volunteer exits, and volunteer issue and inquiry management.

Ensuring that volunteers can easily enroll and participate in the system was and continues to be a priority for ODOT. ODOT also regularly engages volunteers throughout the program to ensure their user experience is positive. ODOT uses their comments to find ways to increase satisfaction with the program.

OAR Development

ODOT developed the program’s Oregon Administrative Rules. The rules are broken down into four main sections: definitions; confidentiality; roles and responsibilities of RUC payers; and roles and responsibilities of the account managers. A public hearing was held on December 15, 2014: four people attended. No one objected to the rules, either through Secretary of State or during the public hearing. The rules were later approved by the Oregon Transportation Commission and captured in chapter 731-090 in May 2015, and officially became effective at the start of the program on July 1, 2015.

The rules were revised in September 2016 to better accommodate program needs.

RUCAS DEVELOPMENT AND MAINTENANCE

Although the account managers handle volunteer accounts, ODOT administers the program. To do this, ODOT needed its own system to effectively interface with account managers, meet accountability and audit expectations, and help provide a seamless volunteer experience.

In anticipation that technology would evolve throughout the life of the program, ODOT created a flexible and technology-agnostic backend system. The purpose of the Road Usage Charge Administration System (RUCAS) is to receive and house aggregated mileage and fuel consumption information from account managers to allow ODOT to administer the program. No matter what technology is used, the system can receive and work with the data, provided the data is in a format specified by ODOT.

Specifically, the system has the following purposes:

- » **Volunteer management.** RUCAS validates volunteer vehicle information at the time of enrollment with the DMV database. This ensures the vehicle is registered in Oregon to the applicant, meets weight restrictions, and is thus eligible for the program. RUCAS also keeps a record of each volunteer and the associated vehicle(s). Tax reports and device reporting errors can be viewed per volunteer or vehicle within a timeframe specified by the user. This helps the OReGO operations team research errors, answer volunteer inquiries, and run tax reports.
- » **Account manager management.** RUCAS organizes volunteer and vehicle information per account manager. The OReGO team regularly runs RUCAS reports to validate that account managers are compliant with contractual obligations and specified levels of performance.
- » **Tax reconciliation.** Account manager systems submit their reports directly to RUCAS on a weekly and monthly basis. They also submit their quarterly tax reports to the fuels tax system, which in turn submits them to RUCAS. The OReGO team is able to review tax information in RUCAS, which includes RUC and fuels tax credits, per individual vehicle or volunteer, or as an aggregate, within a timeframe specified by the user. This enables the OReGO team to report program status to stakeholders, as well as research and identify any anomalies.
- » **Program monitoring and reporting.** RUCAS reports are designed to meet the program's needs for oversight, operations, data analysis, and management reporting. The OReGO team works with technology resources to request and implement new reports as needed to manage the program effectively.

- » **Issue resolution.** The OReGO team logs both project and program issues into RUCAS. RUCAS is able to track the issues and alerts the staff when issue resolution is past due, or is of utmost priority.

On the following page is a brief overview of the systems and information flowing into RUCAS.

ACCOUNT MANAGER SYSTEMS

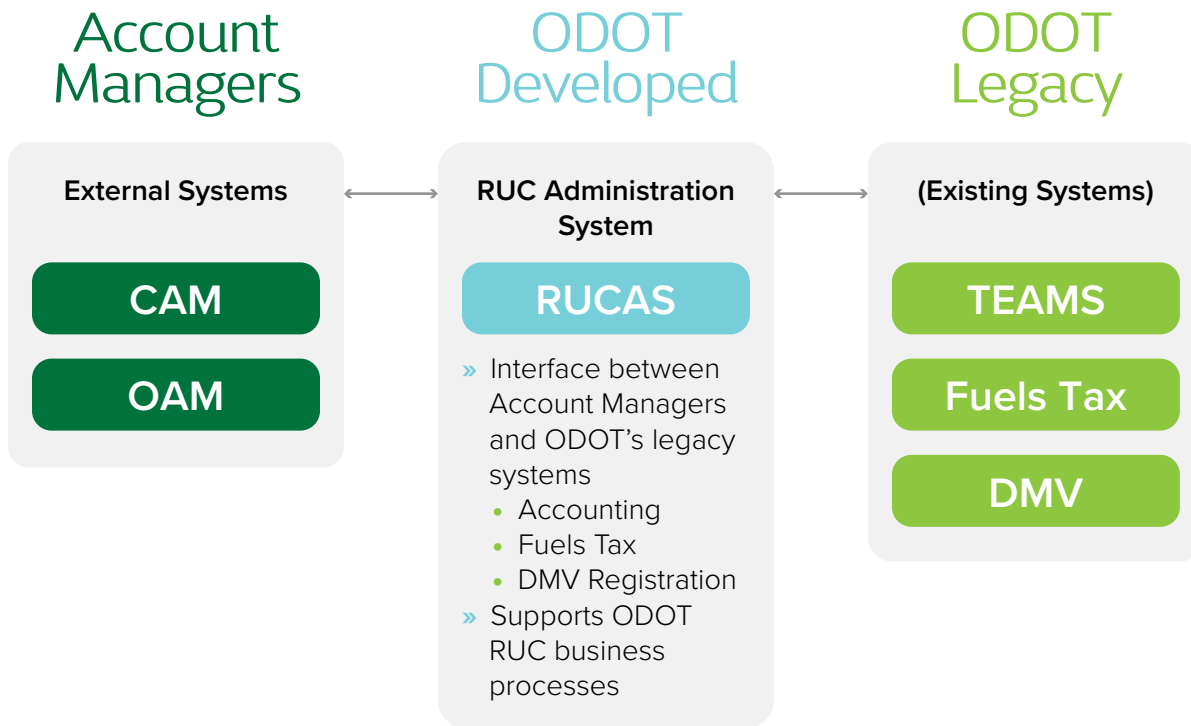
Procurement of Account Managers

The OReGO program contracted out the ODOT Account Manager (OAM) services to the private sector. This was done because former program management believed ODOT could not deliver complete OAM services—such as the ability to enroll volunteers, deliver devices, perform account management services and reconcile tax payments—within the short timeframe before the launch date. Vendor submittals detailed their technical and managerial capacity, past performance, and cost offerings to provide OAM account management services for ODOT. ODOT evaluated responses and began contract and cost negotiations with the selected vendor.

Through the procurement process, emovis (formerly Sanef) was selected. ODOT established a six-year price agreement (one two-year “base” contract with two, two-year renewal options) with emovis. The contracted OAM, in turn, sub-contracted out a lease for the devices. ODOT reserves the right to cancel the contract with emovis and issue a contract for OAM services to other pre-certified vendors, or to establish OAM services itself.

The Commercial Account Manager (CAM) services were offered to the vendor community in the form of a Request for Qualifications which required vendors to provide information proving they met the qualifications and requirements. Two commercial account managers, Azuga and Verizon Telematics, were selected and offered a six-year price agreement (two-year “base” contract with two, two-year renewal options). In December 2016, emovis was certified as a CAM.

As needed, procurements will be issued or updated to provide access to new account managers (both OAM and CAM), and/or to reflect changes to the program. Account managers that wish to participate will be required to agree to ODOT contract specifications and successfully pass a certification process.



Certification

Before any of the account managers were selected, they had to be certified. The certification process created by ODOT ensured that account managers, and their systems and sub-contracts, could meet the requirements in the contract documents.

The requirements were broken down into the following documents:

The Business Requirements Document defines the business related policies that must be adhered to in order to collect and process tax payments. There are two distinct sets of business requirements, one for the OAM and one for the CAM. Because the CAMs compete with one another in an open market and their revenues are based on volunteer choice, their requirements are less prescriptive, but the requirements are highly prescriptive for the OAM, as the OAM represents ODOT.

The Systems Requirements Specifications defines the technical and functional specifications for the key components of the RUC system. The specifications currently reflect a particular architecture and functionality defined by ODOT. The specifications have been and will continue to be modified as the RUC program evolves.

The Interface Control Document defines the interfaces between the Mileage Reporting and Data Collection subsystems, the Data Collection and Account Management subsystems, and the Account Management and Mileage Tax Accounting subsystems. The purpose of the document is to maintain the open architecture objective for the RUC program. As with the system requirements specifications, the interface control document was based on an initial architecture and it has been modified as the program evolves.

The System Overview provides the description of the RUC program architecture and operational narratives for the processes experienced by RUC volunteers, vendors, and ODOT administrative and operations staff. As with the system requirements specifications and interface control document, it is expected to be updated as the RUC program evolves to incorporate new methods and technologies.

The Service Level Agreement defines the business processes and methods which account managers (OAM and CAMs) must adhere to. The service level agreement establishes performance categories, parameters for reviewing compliance, and key performance indicators for compliance measurement. A

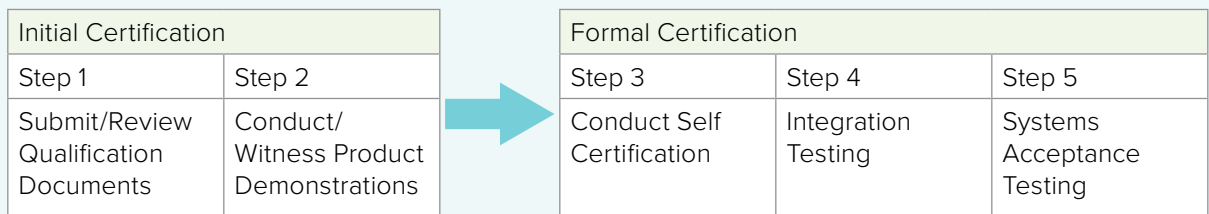
separate service level agreement was developed for each account manager, as each has a different business model. The service level agreement reports are submitted monthly to ODOT. ODOT reviews the reports to ensure there is not any performance deviation. ODOT works with the vendor to remediate any areas of deviation or amend the service level agreement. Should continued non-compliance occur, ODOT may terminate the vendor contract if no mutually agreeable remediation can be reached.

The Verification Cross Reference Index is a cross-reference tool that vendors use to validate their offerings and processes against the technical and business requirements and processes. A separate index was created for the OAM and the CAMs. During procurement, the account

managers used the index as a compliance matrix for proving their offered hardware and services complied with the requirements. They provided material such as audit reports, standard operating procedures, hardware specification sheets, performance specifications, and test data as evidence that their offerings meet the requirements established in the index.

For account managers that started service July 1, 2015, there were two certification phases: initial (certification steps 1 and 2), which were prior to contract execution, and formal (certification steps 3 through 5), which were after contract execution.

Any account manager that entered the program after the July 1, 2015 implementation date had a slightly different certification process.



Step 1 occurred when private sector account managers submitted their proposals to ODOT during the procurement process. All submitted documentation had to meet the requirements enumerated in the contract documents. The expectation is the provided documentation will not be specific to any particular RUC architecture and will only encompass the overarching business processes for account managers relative to collecting a tax, remitting payment to the US Bank (who handles all state of Oregon accounts), and being auditable at multiple points along their revenue and payment chain.

Step 2 required system demonstrations from account managers. The demonstrations were used to show ODOT staff that the vendor systems and oversight framework would meet the requirements in the contract documents with minimal modifications.

Step 3 required vendors to 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. Vendors also had to submit documentation, such as policies and product specifications, to prove compliance with process-related requirements that were not represented in test results.

Step 4 required the vendors to work with ODOT to conduct Integration Testing (Step 4) which verified the message format outputs against the interface control document.

Step 5 mandated that ODOT conduct its systems acceptance testing (Step 5) which tested the end-to-end functionality of the system, from account manager systems to ODOT's internal system.

Once the vendors completed all the steps, they began operational trial. The three month trial (consisting of 10 participants per account manager) was used to validate the internal processes from end to end – from data collection to accepting and processing payment. The vendors were required to provide support to ODOT during the operational trial including data collection, account management, and customer support. At the end of operational trial, there was a punch list of requirements that required additional documentation or test results that each vendor had to complete. The punch lists were divided into two categories: those that had to be accomplished before go-live, and those that had to be accomplished within three months after go-live.

At the go-live date, the three selected account managers were ready to support the ongoing operations of the OReGO program. Over the course of these operations, ODOT closely monitors the vendors' performance against the business and technical requirements, and the performance metrics in the service level agreement. Whenever vendors update processes or technologies, ODOT performs recertification of the account manager and/or the new technology.

PROJECT OVERSIGHT

There were key entities which governed the overall direction of the RUC project. These decision-making bodies were responsible for determining that the RUC program aligned with overall strategic objectives and legislative mandates.

Road User Fee Task Force (RUFTF) – RUFTF was given project progress briefings at each of its meetings. Any additional questions or areas of concern were promptly addressed by the project team. RUFTF was also given monthly written progress reports.

RUC Executive Board – included members of different divisions within ODOT and the director. It provided executive management an overview of the program's quality management plan, gave necessary resources to accomplish the project, and oversaw the project's scope, schedule and budget. The RUC executive board met every other week through the end of the project.

The Road Usage Charge Administration System (RUCAS) Project Steering Committee – consisted of ODOT representatives from Fuels Tax Group, Motor Carrier Division, Driver and Motor Vehicles Division, Transportation Application Development, Enterprise Technology Operations, and Financial Services. This group obtained resources for the project, and oversaw the project's scope, schedule, and budget, as well as gave subject matter expert advice on project decisions.

External Quality Assurance, Public Knowledge LLC – Because of the size of the project's technology component, per DAS guidelines, the project had to procure external quality assurance firm, Public Knowledge. Public Knowledge analyzed the project through key personnel interviews and document reviews. It wrote a monthly report for executive management, which identified project risks. The project would address the risks and report on its progress against those risks in its response.

Department of Administrative Services (DAS) Office of the State Chief Information Officer and Legislative Fiscal Office (LFO): ODOT worked closely with DAS-CIO and LFO to ensure that the project was consistent with Senate Bill 810, was correctly moving through Stage Gate, and utilized the program management plan as a basis for ongoing accountability, transparency, and appropriate program controls.

REPORTING

ODOT regularly reported on project progress, specifically on budget, schedule, accomplishments, resource constraints, risks and associated mitigations, and issues.

Monthly Progress Reports were issued by the 10th of the following month, and included program updates, accomplishments, progress against goals, progress against the schedule, schedule risks and possible mitigations, project costs, and an updated quality assurance report and response. Copies were distributed to key program stakeholders, including ODOT leadership, LFO, DAS, and legislative committee members.

Quarterly IT Report: In compliance with state oversight requirements for large technology



projects, a quarterly report was coordinated and finalized with ODOT's Information Systems section and provided to DAS Enterprise Information Strategy and Policy Division. DAS then provided a roll up of all agency reports to the Joint Legislative Committee on Information Management and Technology.

This quarterly report provided a financial update; milestone achievements and overall progress update; reports on key risk items; mitigations ongoing or planned; and forward looking concerns. Some of the key risk items listed in the report were risks identified in the project's independent quality assurance firm's reports. The risk items are coordinated and linked between the two reports.

Quality Assurance Response: Every month, Public Knowledge would issue a quality assurance report, outlining accomplishments and risks, as identified by an objective third party. ODOT would issue its response within a couple of days, acknowledging the presence of the risks, and its implemented plan to resolve them.

PROJECT OBJECTIVES

In November 2014, eight months before go-live, the project team documented objectives that would guide the work until project launch. The objectives are listed below, as well as an update on whether the objectives were achieved.

1. Recruiting volunteers and informing them throughout the onboarding process. This included providing assistance as they signed up and managed their accounts.

OUTCOME: Objective achieved. When a volunteer exits the program, the OReGO staff sends an exit survey. Over 90 percent of exiting volunteers report that their enrollment into the program was easy. Public Knowledge also issued a survey to all volunteers in October 2015, and 95 percent of all volunteers reported that the registration process was simple and straightforward. The second survey issued by Public Knowledge in November 2016 confirmed the same findings as the October 2015 report (see *Appendix B, Public Knowledge Volunteer Survey 2017*).

2. Creating and maintaining positive, effective relationships with potential/established account managers in order to develop a competitive market and foster a positive experience that enables the RUC program to expand in the state and nation.

OUTCOME: Objective achieved. ODOT maintains a good and productive relationship with its account managers. Account managers reported having positive working relationships with ODOT, through third party interviews by Public Knowledge (see *Appendix C, Public Knowledge Account Manager Evaluation 2017*).

3. Establishing long-term, flexible, and clear contracting mechanisms that support an open and competitive market, while accommodating the evolution of technologies, and leading to increasingly improved methods for collecting and processing road charges.

OUTCOME: Objective partially achieved. The OReGO program did create flexible and clear contracting mechanisms with account managers, which were helpful to other states when they built their own systems. One area of improvement is that ODOT required account managers to complete the Statement on Standards Attestation Engagements audit, which is a national, standardized audit that ensures private companies that collect funds on behalf of government adhere to strict guidelines of conduct. The audit is expensive and incredibly detailed. The account managers believed the small amounts of state funds they were collecting did not warrant an audit of this depth. ODOT is looking into streamlining its own requirements with this audit, so that the audit is not needed for other account managers that want to enter the system.

The system has also proved that it is agile. Since its inception, one account manager left the program, another came into the program, and more devices have entered the RUC marketplace. The program team has continued to streamline marketplace entrance and exit and will further streamline processes through the federal government STSFA grant it was awarded in 2016.

4. Building, testing, and implementing an IT system that interfaces with account manager data and internal ODOT systems to functionally support OReGO with minimal risk and resistance to system failures. The system effectively collects and reports data, and accommodates future expansion of the program.

OUTCOME: Objective achieved. ODOT's internal system successfully captures information from account manager systems, and works with the fuels tax system and DMV's system. The OReGO system has not failed since its launch. The system is also able to accept data from new account managers, as proven by the emovis CAM entrance. The OReGO team continues to meet regularly to refine and expand the system as needed for operations.

5. Creating an organizational structure that effectively and efficiently guides the OReGO program post implementation. This included developing processes for compliance, financial management, change management, contract management, as well as plans for volunteer and account manager support.

OUTCOME: Objective achieved. Processes for all work areas of the program are documented and regularly updated.

CONCLUSION: The objectives were achieved. At go-live on July 1, 2015, the OReGO program was launched. The project successfully delivered its work products and completed final deliverables by December 31, 2015. The project ultimately delivered more than scope, and was completed on time and within budget.



6

OReGO PROGRAM

The OReGO program had three independent evaluations, performed by third parties, completed in January 2017. The technical evaluation, performed by Info@Risk, analyzed the security of RUC information and the adequacy of its technical requirements. The results of this evaluation, as well as ODOT's response, are found in Appendix D. The operational evaluations, done by Public Knowledge, gauged volunteer and account manager satisfaction with the OReGO program. The results of these evaluations can be found in Appendix B and C respectively.

The OReGO program began operations on July 1, 2015 and is still operational. The program is the first in the nation to execute and manage a RUC program for passenger vehicles; as such, the project and operations team took an educated guess on what to anticipate. No one knew how many volunteers would enroll on the first day, within the first month, or even in the first year. The project staff could guess, but could not exhaustively anticipate unique volunteer issues that would arise. The program is largely operating as expected, and Oregon is actively documenting its lessons learned to inform the national discussion and inform further evolution of its own program.

CURRENT PROGRAM NUMBERS

Since December 2016, OReGO has served 1,111 total volunteers and 1,307 total vehicles, and those numbers continue to climb.

Per statute, only 1,500 vehicles in the program can have a fuel efficiency rating of less than



Vehicles

1,307 Enrolled
June 1, 2015 -
Dec. 31, 2016

669 Active
Dec. 31, 2016



Volunteers

1,111 Enrolled
June 1, 2015 -
Dec. 31, 2016

800 Active
Dec. 31, 2016

17 MPG, and 1,500 vehicles can have a fuel efficiency rating between 17 MPG and 22 MPG. There is no cap on the amount of vehicles that can have a 22+ MPG in the program, except the general cap of 5,000 vehicles.

The number of vehicles enrolled in the 22+ MPG category consistently exceed the other categories. OReGO's most commonly enrolled vehicles are the Toyota Prius and the Ford F-150. Fifteen electric and plug-in hybrid vehicle drivers, who previously paid little or nothing in the fuels tax system, have enrolled vehicles in the OReGO program to help support the transportation system.

Senate Bill 810 set a maximum number of 5,000 vehicles for the program. This limit was important to ensure a small sample size, allowing the program to contain costs and maintain a small operations team.

The 1,200+ vehicles enrolled in OReGO during its first year in operations provided an ample fleet to support effective testing. The list includes:

- » 40 vehicle makes
- » more than 300 vehicle models
- » model years 1996 through 2017
- » more than 100 hybrid vehicles
- » 15 electric/plug-in hybrid vehicles (trial basis)

ODOT has been actively addressing the previously identified challenges with electric and plug-in vehicles in the OReGO volunteer program, and many can now participate.

FUEL EFFICIENCY

Although drivers of vehicles that get higher than 20 MPG pay more in OReGO than in the fuels tax system, enrollment in the 22+ MPG fuel efficiency category has consistently exceeded the other categories.

Vehicle Program MPG Counts (as of Dec 2016)			
	Active	Pending	Total
Under 17 MPG	231	0	231
17 to < 22 MPG	297	0	297
22 < MPG	272	1	273
Grand Totals	800	1	801

VEHICLE ENROLLMENT PER COUNTY

Vehicle enrollments mirror population density across the state. It is important for OReGO to include as many different types of vehicles in as many parts of the state as possible. Part of the purpose of the volunteer program is to test the system to learn how to improve it. For example, the OReGO team continues to seek greater rural participation in order to ensure that those Oregonians' voices are included in the feedback that goes to decision-makers.

MARKET CYCLE

The RUC market is operating as originally envisioned. One of the key lessons learned from the 2006-2007 pilot is that volunteers wanted choices. They wanted to be in charge of how their data is collected (or not) how they are charged, and how they pay a road usage fee. The 2012-2013 pilot created the RUC market, and the concept proved not only viable, but essential to build a sustainable RUC program. If the RUC concept was to truly gain traction, it needed to be attached to services volunteers wanted. Account managers could come and go, depending on their individual business goals, and the technology that supported the program could morph, based on volunteer demand. The OReGO program, like the 2012-2013 pilot, is based on the open-market concept and it has adapted as its own market has changed throughout its operations.

EXPANDED VALUE-ADDED SERVICES

Since its launch, the commercial account manager Azuga has enhanced its program offerings to attract more volunteers. The mobile app was launched shortly after program initiation, which allowed volunteers to quickly check their mileage and other driving statistics, and review their badges. Badges are awarded for certain driving behaviors, such as when a person consistently drives after midnight or goes a certain number of miles during the week. Azuga also created a "safe zone" value-added service, which allow a driver to set a geographical boundary for an enrolled vehicle, and informs the driver through the app if his/her vehicle leaves this boundary. This is helpful if the driver's vehicle is driven, for example, by a younger dependent. Participants also

get driving scores based on hard braking and other factors. Account managers continue to enhance their services in order to entice more volunteers to the RUC market.

ACCOUNT MANAGER EXIT

It is inevitable in a viable marketplace that some vendors will leave. In October 2016, after more than a full year of operations, Verizon Telematics left the RUC marketplace to pursue another business model. The operations team learned a lot from the transition: it learned how to close an account manager contract, finalize RUC billings and refunds, perform a closing account manager audit, and smoothly transition volunteers out of, and in some cases back into, the program. This was a necessary hurdle to jump in order to be better prepared for a mandatory program.

ACCOUNT MANAGER ENTRANCE

Another aspect of the market cycle is onboarding new account managers. Emovis, which is the same company that currently operates the ODOT account manager system, was certified as a commercial account manager in December 2016. Like Azuga, it offers value-added services which are designed to draw new volunteers to the program.

OPERATIONAL AREAS

The program was divided into five operational areas: account manager oversight, volunteer coordination, compliance, RUCAS maintenance, and program management. Throughout the project, staff wrote procedures, processes and manuals for each area, which would guide the program after initial launch. Since then, each of the manuals and procedures has been updated or revised as the program staff has increased its understanding of data flows and the program, and has encountered unanticipated events.

ACCOUNT MANAGER OVERSIGHT

The operational area of account manager oversight is overseen by the Account Manager Coordinator. This area of work oversees account manager contracts, and the certification processes which onboard new account managers and technology into the program. The Account Manager Coordinator ensures that program documentation, including business and technical requirements, is updated in order to improve the certification process and its results. Once an account manager and its associated technology(ies) are in the program, the Account Manager Coordinator ensures that account managers are providing the requisite



level of service in a manner consistent with their certification status, and that the supplied devices, or other technology used, meet the ongoing security needs of road usage charge payers. The Account Manager Coordinator actively coordinates with the Oregon Department of Justice, Oregon State Treasury and other sections of ODOT to ensure that account manager certification and subsequent contract administration and possible amendments meet the statutes, rules, and policies of those entities. If requirements change, the Account Manager Coordinator is responsible for ensuring that account managers are certified according to the newly developed standards. In some cases, this requires coordination with the ODOT Procurement Office to amend existing contracts.

In short, the account manager oversight operational area is the liaison between ODOT and the account managers. It is responsible for certification, contract administration, which includes reviewing and approving deliverables and invoice payments, and ensuring tax reports, payments, and service delivery reports are submitted to ODOT in a timely manner.

VOLUNTEER COORDINATION

Ensuring that volunteers have a seamless experience is the crux of the program. The program heavily relies on volunteers to test the feasibility of the program and provide feedback. The volunteer coordination work stream is headed by the Volunteer Coordinator. The Volunteer Coordinator is the liaison between the OReGO program, the customer service branch of account manager operations, and the volunteer. Account managers may refer volunteers to the program for issues and inquiries they need help resolving, or volunteers may contact the program directly.

The Volunteer Coordinator is responsible for helping account managers with volunteer enrollment, maintenance and exit. For enrollment, the Volunteer Coordinator ensures vehicles meet the requirements of Senate Bill 810 and helps answer volunteer questions and concerns during the enrollment process. For maintenance, the Volunteer Coordinator helps account managers resolve their volunteer issues, tracks volunteer issues and inquiries in RUCAS, maintains the MyOReGO email box, takes telephone calls on behalf of the program, and analyzes data specific to volunteers for program

oversight and reporting purposes. For exiting volunteers, the Volunteer Coordinator helps account managers and the OReGO compliance section with final billing and administers the exit survey to volunteers. Most importantly, the Volunteer Coordinator ensures that the voices of volunteers are heard, and ideas are reflected in the continuous improvement of the program and its associated practices and policies.

A very important function of this work stream is working collaboratively with ODOT Communications and with account managers to increase public awareness of the program. The Volunteer Coordinator hosts booths at conferences to provide education and information about the OReGO program to the public, helps respond to public inquiries, generates program outreach documentation, and helps edit and create presentation materials when others are representing the program.

An important outreach tool is the [MyOReGO.org](https://www.myorego.org) website. The OReGO website is the program's main method to educate the public. It has a wealth of program information including an expanded FAQ section, which is updated frequently. It also has a blog, videos on the purpose of RUC and device installation, a research page, a page especially for media contacts, an online road usage charge calculator, and more. All content is reviewed and maintained to support volunteers and the public.

COMPLIANCE

As with any tax program, compliance is a multi-faceted function with three key components: education, assistance, and enforcement. The compliance section helps develop training tools to assure successful education for both RUC payers and account managers as well as actively assists private sector partners with questions or concerns they may have about statutes, rules, procedures and goals. The compliance team is responsible for:

- » Implementing and refining standards and procedures that guide compliance and enforcement activities for account managers.
- » Implementing and refining compliance measurement tools.
- » Identifying regulatory changes to achieve desired compliance levels and program goals for any future legislation.

- » Researching anomalies in RUC data in weekly and monthly reports, as well as in the quarterly tax report.
- » Issuing refunds on behalf of the ODOT Account Manager.
- » Reporting and reviewing OReGO program finances.
- » Reviewing and accepting account manager tax payments.
- » Reviewing account manager performance reports (service level agreements).
- » Implementing and refining analytical procedures to identify compliance issues.
- » Independently performing audits of account managers and/or RUC payers to ensure compliance with OReGO program statute and rules, which includes coordinating, implementing, and documenting audit plans and procedures.
- » Evaluating organizational systems for effectiveness, and plans or designs improvements in operations.

with internal and external stakeholders to raise public awareness and acceptance. The program management section gives presentations on the OReGO program when asked, and reports to RUFTF. Maintaining relationships with industry groups and account managers is also critical.

By necessity, this function is closely coordinated with the account management oversight function. Both functions are ultimately responsible for addressing compliance issues. In some cases, compliance reviews may result in recommending changes to business and technical requirements.

RUCAS MAINTENANCE

The internal IT system, RUCAS, is maintained by ODOT's Information Systems Branch. Since inception, it has had six releases, as the business team has refined the system to better fit business needs. Most notably, releases have included redesigned and additional reports, expanded tax information, increased operational functionality, and improved enforcement and oversight efforts.

PROGRAM MANAGEMENT

Program management for this first of its kind program requires knowledge of tax administration along with innovative thinking, to ensure that all of the above operational areas are effectively coordinating with one another to not only make the program functional, but to also constantly improve and adapt the program and its requirements to respond to the ever-changing RUC market. It also involves effectively partnering



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LESSONS LEARNED

After more than a year of operations, the OReGO team has learned about the opportunities and challenges inherent in running a road usage charge system. ODOT gained valuable experience through the process of negotiating, contracting with, and certifying account managers, as well as establishing a tax system that satisfies the requirements of the Oregon State Treasury and other financial statutes and protocols. ODOT can transfer this knowledge to other states and decision makers to provide a better understanding of how to prepare for volunteer or mandatory road usage charge programs using the open market concept as a platform. The main objective of this chapter is to communicate the lessons learned by the implementers and day-to-day operators of Oregon's road usage charge system.

With the implementation of Senate Bill 810, ODOT was the first state in the nation to prove that taxing per mile instead of per gallon is feasible. Through this experience, ODOT learned effective private sector partnerships were essential to the implementation of Senate Bill 810; road usage charge systems should be technology agnostic; and state fuels tax replacement is possible. Oregon also learned the importance of the momentum and energy increasing in other states and the nation around per mile charge concept.

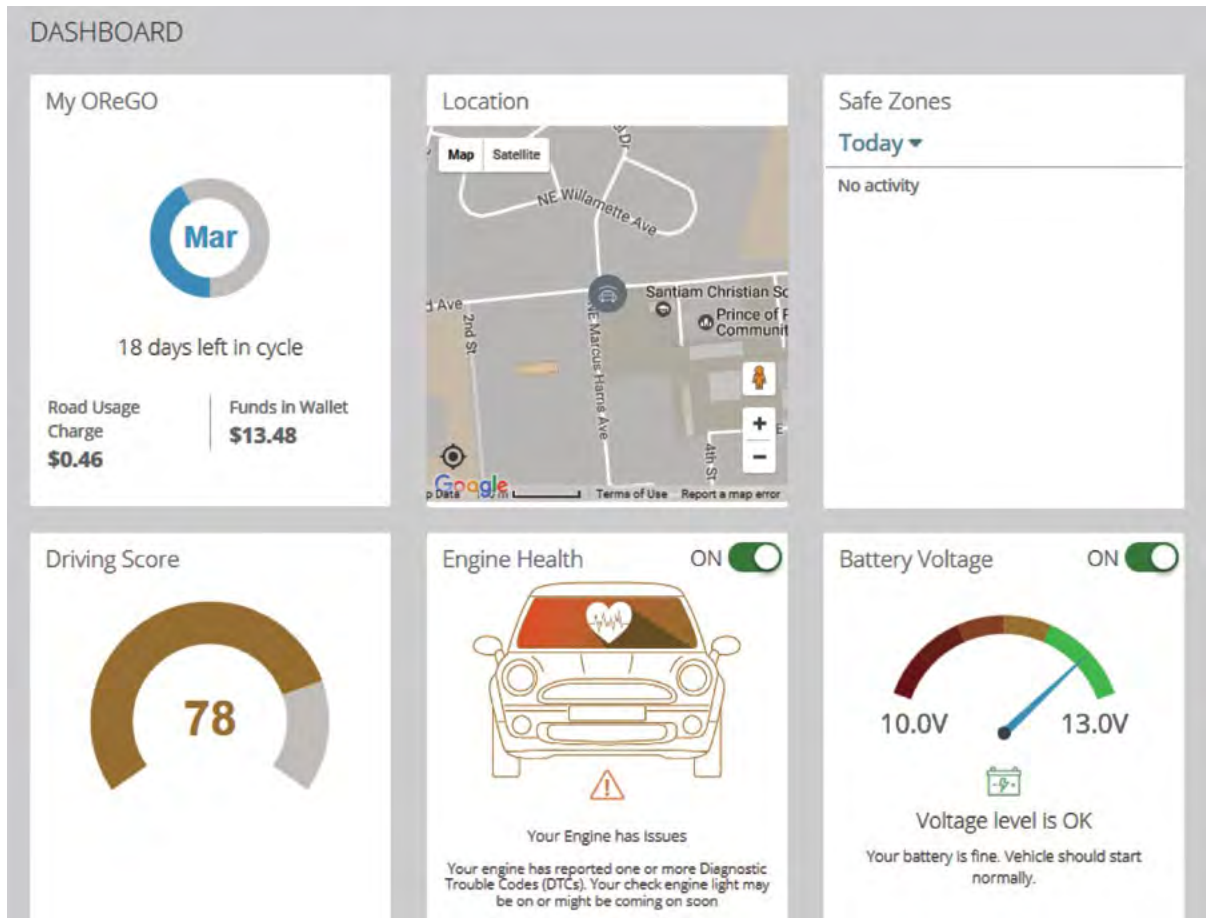
If the program became mandatory, there are current aspects of the program that would need to be fine-tuned, including: operational costs, device technology, enforcement, user experience, and equity and perception.

EFFECTIVE PARTNERSHIPS WITH THE PRIVATE SECTOR

Collaborating with the private sector to administer this tax improved the system in three main ways: offering value added services, providing choices for volunteers, and introducing innovation and competition into the system.

VALUE-ADDED SERVICES

Senate Bill 810 allows account managers to offer various business opportunities alongside road usage charge administration. This enables account managers to compete based on distinguishing features. Account managers Azuga, emovis and Verizon Telematics offered value added services, such as geo-fencing, car insurance partnerships, engine diagnostics, and more. These value-added services provided incentives for volunteers to enroll in the program.



Above is a snapshot of Azuga's dashboard. In addition to RUC, volunteers can see engine diagnostics, battery health, and more.

CREATING CHOICES

ODOT conducted outreach and held multiple focus groups before the OReGO program launched. The two previous pilots, in conjunction with these early outreach activities, confirmed that people desire choices within a tax system. ODOT learned that through the creation of an open market, volunteers have the ability to choose their account managers, devices, value-added services, billing options, and more. Having choices allows volunteers to control their own tax experience. In a mandatory program, providing choices may make paying per mile more acceptable to many taxpayers.

INNOVATION AND COMPETITION

The account managers involved in Oregon's road usage charge program see potential for the program to expand beyond a tax collection system. They see revenue potential in the creation of a new market where additional services are offered. Account managers are also actively researching new technology, which will increase taxpayer choices.

A government-only administered option would not have provided the extra services, volunteer choices, or innovation that the private sector brought to the program. ODOT's decision to partner with the private sector fostered innovation in this first of its kind tax program.

DEVELOPMENT OF A TECHNOLOGY-AGNOSTIC SYSTEM

The system established by Senate Bill 810 and executed in account manager contracts is designed to allow Oregon to experiment with different technologies in a test environment. If account managers want to implement a different mileage collection and reporting technology, they are allowed to do so at any time in the volunteer program, provided it meets ODOT's requirements.

In anticipation that technology would evolve throughout the life of the program, ODOT created a flexible and technology-agnostic backend system. The purpose of the Road Usage Charge Administration System (RUCAS) is to receive and house aggregated mileage and fuel consumption information from account managers to allow ODOT to administer the program. No matter what technology option is used, RUCAS can receive and work with the data, provided the data is in a format specified by ODOT.

TAX REPLACEMENT IS POSSIBLE

Volunteers paying the road usage charge receive a credit back to their accounts for state fuels tax used to travel taxed miles. In order to accomplish this, the system had to read volunteer vehicles' fuel consumption and credit the tax paid against miles driven. This demonstrates that the program can be a replacement for state fuels tax rather than an additional tax. Further, counting actual miles driven allows for a tax collection system based on actual use. With the road usage charge, regardless of the vehicle's fuels efficiency, vehicle owners pay for the road in direct proportion to their use of it.

BUILDING NATIONAL MOMENTUM

Developing a volunteer road usage charge program in Oregon created national momentum and energy to look beyond fuels tax as a major source of transportation funding. Oregon took the lead in road usage charging, and it did not go unnoticed. It inspired discussion with other states to explore their own options for paying per mile rather than per gallon. This

could result in a sustainable per mile funding mechanism regionally or nationally as per mile programs become more common.

Below is a brief list of what other states and entities are doing.

California (Project Cost: \$10 million)

California enacted Senate Bill 1077 (2014), authorizing the development and evaluation of a pilot program to assess the potential for mileage-based revenue collection for California's roads and highways as an alternative to the gas tax system. The pilot launched July 2016 and operated until March 2017 with over 5,000 vehicles participating. The pilot program was implemented by the California State Transportation Agency and a final report based its results is expected to be released in July 2017. California is also participating in the initial planning of a regional pilot program through the RUC West STSFA grant, which could set the stage for a future interoperable system demonstration.

Washington (Project Cost: \$7 million)

Washington will begin its own pilot in Fall 2017. The 2,000 volunteer pilot will last a year for the public to "test-drive" a per-mile charge system. A 25-member Steering Committee (which includes eight legislators) guides the work and makes policy and design recommendations to the Washington Transportation Task Force, Governor, and legislature. To date, the Steering Committee has completed a feasibility assessment and a business case evaluation; developed policy parameters for a future RUC system; developed formal Concept of Operations documents; and recommended a statewide public demonstration project to test four separate methods of mileage reporting. Washington will help California and Oregon develop requirements for a regional interoperable RUC system through the RUC West STSFA grant.

RUC West (Project Cost: \$3 million for pilot setup)

RUC West is collecting requirements to launch a western, regional interoperable RUC system as part of its \$3 million STSFA grant. This project will set the stage for a regional system and pilot by defining the system (Phase 1A) and developing essential regional pilot project

plans (Phase 1B) to prepare for implementation. Demonstration activities (Phase 2) would be the subject of a future grant application. RUC West is a voluntary coalition of 14 western state departments of transportation that are committed to collaborative research and development of a new funding method for transportation infrastructure based on drivers' actual road usage. Formed in 2013, RUC West has funded 14 projects to test the feasibility of RUC systems.

Hawaii (Project Cost: \$8 million)

Hawaii secured a \$4 million grant from the Federal Highway Administration to conduct a three-year demonstration project that will test a RUC system. The first phase of the pilot will launch in 2017 with manual reporting. The project builds on existing state infrastructure that collects odometer readings annually through existing periodic motor vehicle inspections. The second phase will test different methods of reporting mileage, such as using smartphones or other technologies that are placed inside vehicles. Hawaii will also explore different payment methods.

Minnesota (Project Cost: \$7 million)

Minnesota's Department of Transportation tested a road usage charge system in 2011-12. The test relied on volunteer participants measuring their mileage with GPS-enabled smartphones. Data was collected and participants paid fee rates based on both the location and the time of day of travel.

Nevada (Project Cost: \$3.3 million)

Nevada conducted a mileage-based-fee study in 2012. Forty participants used a pay-at-the-pump system that did not rely on the collection of vehicle location data.

Colorado (Project Cost: \$720,000)

Colorado launched a 115 vehicle RUC pilot in November 2016. The pilot will provide a platform for the state's legislators and transportation officials to make informed decisions as to the feasibility of this innovative infrastructure financing program. The Colorado pilot is expected to end in April 2017, with the final report in July 2017. Colorado will also help

Washington, Oregon, and California develop requirements for a regional interoperable RUC system through the RUC West STSFA grant.

I-95 Corridor Coalition

The coalition conducted research on the administration of mileage-based user fees in a multi-state environment in two phases. Phase I, completed in November 2010, focused on the institutional and administrative requirements of a multi-state mileage-based system, as well as legal and regulatory issues that would need to be addressed in order to adopt such a system. Phase II began in December 2010 and studied actual operating environments and current conditions in three adjoining states.

Federal Grants

In 2015 Congress passed the Fixing America's Surface Transportation (FAST) Act to fund federal highway, transit, and safety programs through 2020. The legislation created the Surface Transportation System Funding Alternatives (STSFA) program to research alternative transportation funding. Below is a list of recipients of the STSFA grant.

Entity	Description	Requested Amount/Total Project Cost
California (Caltrans)	Pay at the pump/charging station	\$750,000/ \$1,527,000
Delaware (I-95 CC)	Device based mileage-based user fee	\$1,490,000/ \$2,980,000
Hawaii (HDOT)	Collection based on manual & automated odometer readings at safety inspection stations	\$6,500,000/ \$19,000,000
Minnesota (MnDOT)	Use of mobility as a service to collect revenue	Range of \$300,000 to \$500,000/ \$1,000,000
Missouri (MoDOT)	Implement a new registration fee schedule based on estimated miles per gallon	\$1,000,000/ \$2,000,000

Entity	Description	Requested Amount/Total Project Cost
Oregon (ODOT)	Improvements to Oregon's existing road usage charge program	\$2,100,000/ \$4,200,000
RUC West	Define a regional system to promote and establish RUC consistency, interoperability and compatibility through western US.	\$1,500,000/ \$3,258,750
Washington (WSDOT)	Testing elements of interoperability; piloting three mileage based methods and one time-based method using 2,000 drivers	\$7,497,000/ \$16,08,834

ODOT learned it is critical to have engaged supporters beyond its state boundaries. This is because administrative costs will be lower once there is a critical mass of RUC payers participating, as account managers and state systems realize economies of scale.

OPERATIONAL COST AND REVENUE GENERATION

According to industry standards, most tax programs have a goal of keeping administrative costs around ten percent of revenue collected. Because of the small and voluntary nature of the program, and because ODOT had to invest to build the program, this is not the case in this phase of the road usage charge program.

OReGO was designed to be revenue neutral, and the RUC rate of 1.5 cents a mile was set to the fuel efficiency of a 20 MPG vehicle, the most common type of vehicle fuel efficiency at the time. The program has so far been true to its purpose, and has collected little revenue by design. The first year the program generated \$842.77 in net revenue. The figure includes revenue from both CAMs and the OAM, from the July 1, 2015 to June 30, 2016. It also

includes refunds given to volunteers. The only reason the program has a positive balance is because there are slightly more vehicles in the program that get more than 20 MPG, than there are vehicles that get less than 20 MPG.

If fuels tax credits were not refunded to vehicles that received less than 20 MPG, and if more RUC payers were introduced into the system, then the program would begin to generate actual revenue.

There is no comparable RUC system in the nation that ODOT can use to develop reliable cost estimates. Further, it is difficult to use ODOT's existing cost models—ranging from fuels tax to DMV registration fees—to estimate the costs of a RUC system. As a result, ODOT developed a financial model that allows the user to input variable policy choices (i.e. number of vehicles, MPG caps, and so on) in order to derive costs of a RUC system. Estimating RUC system costs must be based on informed judgment, guided by experience, and should acknowledge a certain amount of uncertainty. As OReGO continues to operate and completes STSFA grant projects, more refined cost information will become available.

Common cost drivers include:

- » number of vehicles or user accounts;
- » vehicle miles reported and allocated;
- » amount of non-compliance; and
- » number of participating entities (account managers).

If the program ever became mandatory, it would be important to explore opportunities to reduce administrative costs for ODOT's road usage charge system. Potential options to reduce future administrative costs could include:

- » **Removing subsidies for account managers.** Currently, the biggest budget expense for the program is account manager compensation. Reducing or eliminating these subsidies will be a delicate balance for ODOT as it tries to maintain account manager interest while decreasing operational costs. It can do this by encouraging the private sector to expand its technology portfolio and grow its revenue-generating value-added services. ODOT could also reconstruct account manager contracts to reward lower operating costs; or shift the cost of account manager services to the taxpayer.



- » **Offering a flat annual usage charge to decrease compliance costs.** Taxpayers could be switched to a flat annual usage charge when they are not compliant or their vehicles are not compatible with the current system.
- » **Reducing duplicate touchpoints between the taxpayer and government.** ODOT can look for opportunities to coordinate with existing tax touchpoints such as those at ODOT's Driver and Motor Vehicle Services Division (DMV).
- » **Further mirroring compliance and tax administration practices and policies that are already occurring in ODOT, such as Fuels Tax, DMV and Motor Carrier.**
- » **Working with national standards-setting organizations** (such as those described in chapter 9) to define the format for how vehicle information is received and used by government entities. Having a

common standard of reporting significantly reduces administrative costs.

- » **Working with other states to define and structure a common billing and reporting platform (interoperability).**

MANAGING A TAX PROGRAM AT THE INDIVIDUAL LEVEL

It is easier and more cost-efficient to administer a tax if there are fewer people responsible for collecting and remitting the tax to the state. For example, nearly everyone in the state of Oregon pays fuels tax; however, only motor vehicle dealers, use fuel sellers, and use fuel users (around 900 businesses) are responsible for collecting and remitting the tax to the state. This makes it significantly easier for ODOT to collect taxes and review reports because

only a handful of businesses are reporting and remitting the tax as opposed to every person in Oregon that pays the state fuels tax. It also makes the program much more cost efficient. There is a positive correlation between the number of accounts to administer and the costs of the program: the more accounts, the more costly the program. For the road usage charge program, the tax is administered at the individual level, which increases the number of taxpayers that must be monitored.

Potential options to resolve this include:

- » Leveraging relationships with other divisions of ODOT that have individual accounts, such as DMV or Motor Carrier, and mirroring or using their business processes and IT systems.
- » Leveraging relationships with other state agencies that have vehicle inspection as a core business, such as the Department of Environmental Quality. This will allow government to collect data once, and thereafter share it, and would reduce the amount of times government has to interact with the taxpayer.
- » Waiting for technology to advance to provide functionality that will allow account managers to manage a system that is very easy to enforce. This will move the RUC tax responsibility from the volunteer to the account manager, which would substantially decrease the amount of individual accounts ODOT has to touch.
- » Limiting future enrollees to fuel-efficient vehicles for whom a road usage charge would capture the most amount of additional revenue.

MAINTAINING ACCOUNT MANAGER INTEREST

Until the system becomes mandatory, which could allow an influx of vehicles into the market, ODOT will have to maintain account managers through either compensation or the assurance of a growing market. This will be a difficult balancing act: compensating account managers decreases revenue, which is the main purpose of the road usage charge.

To mitigate this, ODOT could encourage account managers to develop revenue-generating value-added services that would increase their revenue and public demand, making them less

dependent on ODOT compensation. ODOT can also continue to work collaboratively with account managers to refine system design, requirements and contracts to help account managers more efficiently manage the program and grow their business.

TECHNOLOGY

DEVICE DOES NOT WORK IN ALL VEHICLES

The current mileage reporting technology does not work in vehicles without an OBD-II port, which was not standard in vehicles until 1996 (2006 for diesel vehicles). It also has difficulty working in electric and plug-in hybrid vehicles, alternative fueled vehicles, vehicles with installed fuel conversion kits, and some larger diesel vehicles. The port is also subject to malfunction in any vehicle, and other companies are using the port, such as insurance companies.

As the program moves forward, the self-installed device cannot be the only way to calculate a per-mile charge because not all vehicles can participate. ODOT is actively working on testing new technologies, such as embedded telematics, to provide more options. Also, implementing a flat annual usage charge option, or a manual reporting system, will accommodate vehicles that are not compatible with the device or any other technology.

CALCULATING FUEL CONSUMPTION (AND FUELS TAX CREDITS)

The device can read fuel consumption from some vehicles. If the device cannot accurately report fuel consumption, the account manager uses the combined EPA city/highway rating for that vehicle. Either the direct reading of fuel consumption, or the use of the EPA value, provides account managers with the amount of gallons consumed for a specified number of miles traveled, which in turn is used to estimate how much the volunteer paid in state fuel taxes at the pump. Note that the actual amount of fuels tax paid at the pump is unknown. Ideally, the fuels tax credit would be based on the actual tax paid at the pump. ODOT encourages account managers to develop technologies that can capture more accurate fuel consumption data.

TAX-EXEMPT ROAD USAGE IS NOT DIFFERENTIATED

Currently, device technology does not detect the difference between taxable road use and tax-exempt road use, such as non-public roads, which includes off-road and private roads, or vehicle use on tribal land by tribal members. ODOT remains open to allowing commercial account managers to automatically differentiate non-public road mileage within Oregon through location/global positioning system technologies and refrain from taxing those miles. Two problems currently exist. Oregon has conflicting definitions on what constitutes a non-public road. Further, thus far commercial account managers have not developed sufficiently detailed maps and rules to distinguish miles as taxable or non-taxable within the boundaries of the state of Oregon. Because of these two issues account managers must charge for all miles driven in the state.

The RUC payer can apply for a refund directly with ODOT for any miles traveled on non-public roads within Oregon by keeping logs detailing the dates of travel and the odometer readings that show when the vehicle entered and left non-public roads. ODOT has no method to validate claims submitted on a refund form; rather it assumes that if a RUC payer made the effort to complete the form, the payer must be entitled to the refund. This exactly mirrors fuels tax refunds. Drivers that drive on non-public roads log their miles, and submit a paper form to the Fuels Tax Group for a fuels tax refund.

As technology advances over time, the account managers should be better able to distinguish non-public road use. Further, ODOT could work on developing rules that would define public roads for the purposes of the OReGO program. Until then, ODOT will continue to administer road usage charge refunds manually.

FUELS TAX IS NOT APPLIED OR IS MISAPPLIED TO FUEL USED

There are several instances where fuels tax is either not applied or misapplied to the fuel. This could be problematic if fuels tax is calculated and credited. This includes B20, a type of bio-diesel fuel that is not taxed. It also includes registered use fuel users, which, through the use of an emblem, are able to acquire tax-exempt fuel and use it to travel taxable miles.

ODOT will continue to partner with Fuels Tax Group to identify use fuel users that are also RUC payers. Enrolled use fuel users would not be able to obtain fuel tax refunds from Fuels Tax Group while obtaining fuels tax credits from their account manager.

Lastly, fuel tax can be misapplied when RUC payers purchase fuels in other states with either lower or higher state fuel tax rates but receive refunds based on the Oregon fuel tax rate. For RUC payers that pay fuel tax rates in other states, ODOT could work with other states to administer a regional or national program that might expedite the adoption of RUC, which could in turn lead to apportioning RUC among states and assessing fuels tax credits based on state fuel tax rates.

MISSED MILEAGE - MONITORING DEVICE ACCURACY

It is crucial for a road usage charge program to accurately capture and collect a per-mile fee for all tax liable miles. Missed mileage occurs when reporting technology is unable to report mileage either due to a device problem or removal of the device. Missed miles can interfere with accurate revenue collection.

During ODOT's initial road usage charge pilot, staff recognized that gaps in reported mileage data would need to be more thoroughly addressed. However, specific language addressing requirements and business processes was not included in policy documents or in the bill that eventually led to implementation of the OReGO program.

OReGO's current system uses devices; however, the technology presents challenges. For example, if the device is not plugged in or does not operate properly for any reason (such as low voltage in the vehicle), the device may not record and report some or all of the miles traveled. The operational trial tested devices for each account manager in a small number of vehicles and did not detect many issues. However, in the live operational setting, missed mileage reporting appeared to be inaccurate in multiple cases. Because each account manager used a unique method to address missed miles, a simple across-the-board fix was not possible.

OReGO originally assessed road usage charge for missed miles based on a driver's

historic driving data. The program allowed for ten days of missed mileage reporting, on the 11th day and every day thereafter that had missed mileage, the program would apply an average daily miles to the account based on the volunteer's driving record. Volunteers found this confusing. Some even left the program citing it as their reason for leaving. It is important for OReGO to ensure a positive volunteer experience. Maintaining enrollment allows the program to continue collecting meaningful data. Therefore, program staff opted to halt charges for missed mileage in the short-term.

It remains clear that missed mileage issues must be resolved for any future mandatory program. This will need to happen by increasing the device's capacity, or by switching to a new technology altogether. Until that time, program staff have restructured the way missed mileage is identified and managed. Account managers must capture errors such as 'missed' or 'unplugged' miles for every vehicle in the program and report those errors to ODOT. OReGO program staff will continue to analyze missed mileage data to determine feasible ways to address the issue going forward.

Alternative technology may be one important tool in resolving missed mileage issues. A method that can differentiate whether a vehicle is not operating versus a vehicle that isn't reporting would provide much more accurate data. Also, if embedded telematics or another comparable technology became accessible, OReGO could use actual odometer readings to identify unreported miles, which would provide the greatest accuracy possible.

ENFORCEMENT

There is a difference between administering a pilot, such as a volunteer system where people opt in and out, and a mandatory system where people are required to participate. Oregon's current program is a volunteer system. However, if Oregon wants to increase revenue, it would need to transform the current program into a mandatory tax system. In a volunteer program, government's role is to encourage people to volunteer; in a mandatory program, government's role is to ensure that those required to be in the program are notified, enrolled, and correctly paying taxes.

Whenever a new tax system arises, inventive ways to get around the tax system are also born. ODOT learned that it would need backup systems in place when the technology is not available, working or installed. A potential solution would be to create a hybrid system, which would provide taxpayers with other non-technical options outside of the device method.

With the current technology, potential for tax evasion exists in the in the following ways:

- 1. Taxpayers will not sign up for the program.** Members of the public may very well know that they have to pay a supplemental tax; however, they may not want to, and may simply not enroll. ODOT would need enforcement mechanisms to compel enrollment.
- 2. Taxpayers will not install their devices.** Once a taxpayer signs up with an account manager, the device is shipped to him/her. It is expected that the taxpayer will self-install the device upon its receipt. However, the taxpayer will have little incentive to install the device in a timely manner. Indeed, it is anticipated that some will wait until a penalty or enforcement policy is levied.
- 3. Taxpayers will take devices out of the vehicles.** When this happens, no error code or problem alert is sent to the account manager. In fact, the account manager may not know there is an issue until the device is re-installed into the vehicle. There are legitimate reasons to remove a device (like for car repairs), but there must be incentives to only do so when needed. If a device is disconnected or frequently not working, the RUC payer could be switched to a flat annual usage charge method or be assessed penalties.
- 4. Taxpayers will not pay:** In a volunteer system, delinquent or non-payers are simply removed from the program. This cannot occur in a mandatory system. Rather, as in all mandatory tax systems, penalties and interest will need to be actively assigned and applied to such cases.

Pairing devices with another non-technical option, such as the flat annual usage charge, may be the only way to actively avoid the tax administration hurdles identified above.



USER EXPERIENCE

LIMITED MILEAGE REPORTING OPTIONS

The current account managers only offer volunteers a mileage-reporting solution that they must install in their enrolled vehicle. This limitation may prevent people from entering the current volunteer program or a future mandatory program if their vehicle cannot accept the device or if the port is being used for other purposes. Taxpayers may also resist having to install a device. And devices, as standalone items, can easily be removed and lost, disappear or incur damages. Devices can be expensive, and it takes time to receive a new device.

ODOT learned it would need to offer more technical options, such as embedded telematics, which do not require device installation by the taxpayer. ODOT will continue to encourage account managers to add other technologies to their offerings through the STSFA grant. Indeed, the majority of the funds for the STSFA grant will go toward researching other technology options.

REQUIRING CREDIT CARDS

The current system requires that volunteers have a credit card to pay the road usage charge. The capability to accept cash and checks requires account managers to meet more Oregon State Treasury security requirements.

ODOT could pay for the ODOT Account Manager (OAM) to have the capability to accept cash and checks. ODOT could also administer a flat annual usage charge option that would allow the RUC payer to pay the tax in person (such as when they register their vehicles) or via postal mail.

REQUIRING ONLINE ACCESS

Currently, all account manager systems are dependent on volunteers having online access, which allows them to set up, view, manage, and pay their accounts; however, not all Oregonians have access to the internet. To make the program more equitable, ODOT could administer a flat annual usage charge or a manual reporting option that could operate via in-person transaction.

EQUITY AND PERCEPTION

In a road usage charge program, each driver pays the same amount for the miles driven, meaning each driver pays his or her fair share based on actual usage. Despite the basic fairness of charging each person for their use, surveys consistently reveal a strong public perception that rural, low income, and fuel efficient vehicle drivers pay an unfair amount in the OReGO program. They also reveal that some drivers of fuel efficient vehicles feel they would be penalized if they must pay a mileage-based usage fee, while others support road usage charging as a reasonable way they can begin to pay their fair share.

RURAL, URBAN, AND LOW-INCOME

Studies show that rural drivers typically drive further per trip than their urban counterparts, but they are more likely to combine trips while urban drivers take many short trips. In the end, rural drivers typically drive slightly more than urban drivers, but they already pay fuels tax on those miles.

In the fuels tax system, drivers of low fuel efficient vehicles pay more per mile toward transportation system maintenance than their counterparts. Many rural drivers own less fuel efficient vehicles and thus bear a greater share of the burden.

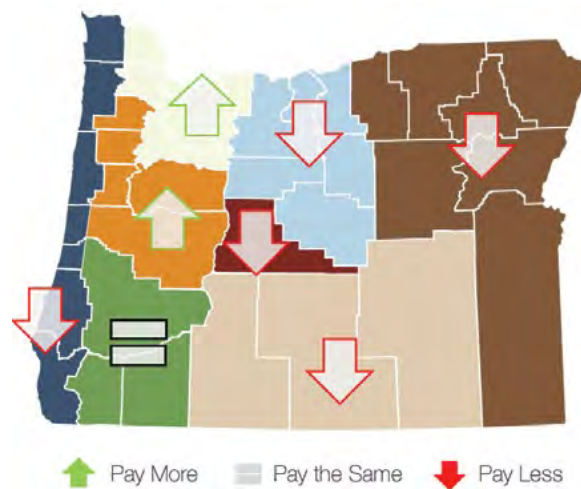
A recent study that specifically targeted projected effects of road usage charging statewide indicated that rural Oregonians as a whole would benefit from a road usage charge system.¹ In order to find out how a per-mile charge would affect real Oregonians based on their vehicles and driving patterns, Oregon State University researchers surveyed more than 40,000 Oregonians. They were able to estimate the monetary impact of a road usage charge on different groups, including rural and urban regions and low income individuals.

Results show that statewide, on average, households will pay about the same—five cents more on average per day—under a road usage charge system than under the current fuel tax system. Interestingly, the increase for rural regions is less than the statewide average, while those in more urban areas will pay slightly more

than the statewide average. This is because rural drivers on average drive lower fuel efficiency vehicles than those in urban areas, who are more likely to drive more fuel efficient vehicles.

While fuel efficiency of vehicles did not vary by income levels at a statewide level, the study did find that higher income households drive much more than lower income households—62.84 miles per day for the highest income Oregon households, versus 25.44 miles per day for the lowest income households. Consequently, higher income households would pay more under a road usage charge. What's more, because fuel efficiency did not vary significantly by income level, a RUC would not disadvantage low income individuals compared to today.

The study found that mostly urban, high income households would be affected by applying a per-mile charge to only high MPG and/or new vehicles. Thus, applying a road usage charge to new or more fuel-efficient vehicles and letting the rest continue to pay Oregon's fuel tax would produce a less regressive structure than the current fuels tax system.



There is a common misconception that rural drivers will be penalized by adoption of a road usage charge. The map above reflects a 2016 analysis done by Oregon State University about the impact of a road usage charge on households statewide.

1 McCullen, Wang, Ke, et al. *Road Usage Charge Economic Analysis, Final Report*. Oregon State University. April 2006.

FUEL EFFICIENT VEHICLES

Some people are concerned that a road usage charge may discourage highly fuel efficient vehicle purchases. These drivers pay more in a road usage charge program compared to the current fuels tax program, but that offset is only one aspect of the driver's total cost of vehicle ownership. And, those drivers still reap multiple benefits.

- » At 12,000 miles driven per year, a Prius driver's fuel cost is around \$800.00 lower than an F-150 driver's cost, yet the Prius driver would only pay around \$100.00 more in road usage charge as an OReGO volunteer than they pay now in the fuels tax system. As a result, people will still have a strong monetary incentive to buy a fuel efficient vehicle. Shifting vehicles to a RUC will have only a minimal impact on per-mile cost. A 2016 Prius that gets 56 mpg would pay 5.4 cents per mile in combined fuel and tax under a RUC and 4.5 cents per mile under a fuels tax—still well below the 12.5 cents per mile an F-150 will pay in either system.
- » Poor road maintenance increases vehicle maintenance costs and other costs for all drivers who use the roads. See ODOT's Rough Roads Ahead report on the MyOReGO website: www.MyOReGO.org/research.

In the fuels tax system, drivers of less fuel efficient vehicles pay more to drive the same number of miles.

15 MPG	» 100 miles ÷ 15 MPG × 30¢ = \$2.00 » 1.5¢ per mile × 100 miles = \$1.50
35 MPG	» 100 miles ÷ 35 MPG × 30¢ = \$0.85 » 1.5¢ per mile × 100 miles = \$1.50
55 MPG	» 100 miles ÷ 55 MPG × 30¢ = \$0.54 » 1.5¢ per mile × 100 miles = \$1.50
Electric	» No fuel used, no tax paid. = \$0.00 » 1.5¢ per mile × 100 miles = \$1.50





8

PUBLIC AND VOLUNTEER OPINION

Creating and maintaining public interest and support in transportation and road usage charge is vital to the growth of the concept. The OReGO program actively engages the public and volunteers to gauge current knowledge, inform the discussion when appropriate, and provide statistical feedback on the program's operations. From these discussions and surveys, ODOT has refined its program and outreach strategies.

PUBLIC SURVEYS

PRR, the public relations firm that created and guided the outreach program prior to the launch of the OReGO program, conducted two statewide public opinion surveys. The first survey was conducted in fall 2014 and provided a baseline of public opinion upon which ODOT wanted to improve. The follow-up survey was conducted in June 2016, nearly one year after the OReGO program launched. It was important to ODOT that survey participants demographically represented Oregon. Both surveys asked identical questions to measure growth in the following areas:

- » **Awareness** of current road usage charge or pay per mile concepts, Senate Bill 810, road usage charging advantages for Oregon, and how a road usage charging works.
- » **Acceptance** (for/against) of a road usage charge program replacing state fuels tax in the future. This included measuring likelihood to volunteer and support a road usage charge program as well as fairness.

- » **Favorability** towards road usage charging messages.

2014 SURVEY - CREATING THE BASELINE²

From October 2nd through 5th, 2014, DHM Research, in coordination with PRR, conducted a telephone survey of 400 residents in Oregon. The survey took an average of 10 minutes to administer. The sample size was sufficient to assess opinions generally and allowed a review by multiple subgroups including age, gender, and other demographics. Residents were contacted randomly from a list of landline and cell phone numbers. For a representative sample, quotas were set by age, gender, and area in the state. The data was also weighted to match the census profile of the population for each region.

Finding #1: People don't know what they don't know.

- » More than half of the respondents (60%) did not know they were paying 49 cents per gallon in combined state and federal fuels taxes, which suggests that it will be challenging to demonstrate how road usage charging will differ.
- » Many did not understand how current state and federal fuel taxes are used to fund transportation or where road usage charging revenue will go.
- » Many thought there must be a better way to pay for roads – close to half of the respondents were more of supportive of

tolls on specific highways and bridges where improvements were being made or increasing the vehicle registration fee. Some (38%) even supported raising the current state fuels tax.

- » Many did not know what is involved to fund transportation, but they DID know they wanted better roads. Slightly more than half (53%) of Oregonians were unconcerned about decreasing revenue from fuels tax, while also indicating that maintaining roads and highways is their highest priority.

Finding #2: There are myths to unravel.

The survey showed that misconceptions and inaccurate beliefs about road usage charging are common across the state. Some of the common topics the survey highlighted are:

- » Some believe the program is unfair to rural Oregonians, low income drivers, and/or people who drive long distances. Some believe a flat fee or increase in fuels taxes would be more fair. However, research shows that drivers in different parts of the state pay about equal amounts as one another in a road usage charge program.
- » Some believe the technology will invade their privacy. Almost two thirds (62%) of media articles used the word “tracking” in their stories, and one out of six respondents named privacy concerns as a main reason they did not support road usage charging. Many people don’t realize that there are non-GPS options available and that ODOT does not receive location information from account managers.
- » Some believe the program is too complicated and/or costly to operate. One out of six respondents named this as a reason they did not support the program.
- » Some believe they will be double-taxed. Others simply don’t trust government to manage their data and/or their tax dollars responsibly.
- » Some believe the program is a deterrent for drivers of hybrid and other fuel efficient vehicles.

Finding #3: Information + Experience = Acceptance

The findings from this comprehensive research showed that, with just a little information and two-way conversation, people’s acceptance of road usage charging turned from negativity to acceptance.

- » Unfamiliarity coincided with minimal support for a road usage charge program. Half (53%) of Oregonians were unfamiliar with the concept and few (25-35%) indicated support for a road usage charge program.
- » Providing education and messaging on the benefits of road usage charging may significantly change people’s minds and increase their support for the program.
- » When the survey was completed, 67% of all media stories were neutral. Keeping media representatives informed is a major anchor in OReGO’s outreach strategy.

DISSENTER FOCUS GROUP³

Alongside the 2014 public survey, PRR conducted focus groups with people who self-identified as road usage charge dissenters. The overall goal of the dissenter focus groups was to further ODOT’s understanding of why people oppose a road usage charge program.

The focus groups took place in mid-August 2014. Two groups (Portland and La Grande) had eight participants each, and in Medford there were nine participants, for a grand total of 25 across the three groups. In each group, the number of men and women was nearly equal. It is important to note that for all three groups, individuals were screened such that only those who responded “less fair” to “Do you believe paying a road usage tax on the total miles you drive would be more fair, less fair, or about the same as paying a tax on gasoline?” were invited to the focus group discussions.

Understanding Dissenters

PRR identified that opponents do not support road usage charging, but do prefer a notion of “choice” for reporting mileage. As a group, opponents were not convinced to support road usage charging in Oregon by the end of the

3 PRR Comprehensive Research Report, 2014



dissenter focus group. The greatest support for a road usage charge came from participants who seemed to clearly understand the negative repercussions associated with continued reliance on fuel taxes. Participants indicated strong support for the notion that Oregon drivers should have a choice when it comes to mileage reporting, although there was no clear pattern of preference on how to collect mileage data.

Similar to all residents, maintaining roads is important to opponents: Participants placed a high value on Oregon's state roads and highways, particularly for their regular maintenance and upkeep.

Opponents prefer other funding alternatives to road usage charging: Many participants preferred using existing and familiar funding structures, such as vehicle and license registration fees or an increased fuel tax.

Opponents have an overall distrust in the government: Participants voiced high suspicion, distrust, and lack of confidence in government. This included lack of confidence that government can competently implement the plan; lack of confidence that the tax funds generated will be used judiciously and appropriately; and distrust that the fuels tax will be refunded or removed.

Opponents are concerned about perceived unfairness: Participants were concerned that changing to a tax based on miles driven runs counter to efforts to promote fuel efficient vehicles. They voiced a general sentiment that drivers should pay their fair share for road usage, regardless of vehicle type. For some, this included bicycles.

Opponents are concerned the system will be complicated: Many participants assumed that implementation of road usage charge program will be complicated and costly, to the point where the costs would exceed any increased revenues.

Dissenters Value Transportation Funding

Participants placed high priority on finding long-term, sufficient, and stable ways to fund transportation.

- » Oregon's roads and highways are valued, and many participants emphasized that they are well maintained and in good condition compared to other states.
- » Participants value Oregon's scenery, great views, bike lanes, and the absence of tolls.
- » Most participants seemed to be fairly well informed about current sources of funding for Oregon's roads, with many mentioning one or more of the following: taxes (in general), fuels tax, vehicle registration, and federal funds and grants.

Opponents prefer alternatives where all users pay the same fee. Participants were asked to discuss what they thought were the best ways to fund transportation projects in Oregon. Overall, a system under which users pay the same fee was most appealing for funding transportation (e.g. vehicle or license flat annual usage charge), particularly for Medford and La Grande participants. For Portland participants, paying for use and the damage caused by use was most appealing. Even though participants also preferred funding sources that support the concept behind road usage charging (paying for use and damage), the vast majority of participants reacted negatively to road usage charging in Oregon.

Opponents have no clear preference for reporting mileage. Participants were provided a description of the proposed mileage reporting options for the Oregon Road Usage Charge Program and asked to discuss their likes and dislikes of each option. There is no clear pattern of preference for mileage reporting, with all options receiving nearly the same preference ranking from participants. Review of preference on a group-by-group basis, however, did show some differences:

- » **Medford:** Most preference for basic (non-GPS) plan; nearly equal second place rankings for smartphone and advanced (GPS-enabled) plans.
- » **Portland:** Clear but equal preference for smartphone or advanced plans, rather than the basic plan.

- » **La Grande:** Equally high preference rankings for smartphone and basic, and somewhat less preference for the advanced plan.

Opponents want to pay for use, but not from road usage charging. Opponents were continuously unconvinced that road usage charging in Oregon was a good funding alternative, even though they supported the idea of individuals paying for use and damage caused to roads.

Top Concerns

Across the focus groups, it was clear that the top concerns of participants are:

- » Privacy invasion and data being used inappropriately;
- » The plan and mileage recording infringing on personal freedom;
- » Distrust in government, including concerns about whether the data will only be used for reporting mileage; and,
- » Implementation of the program being too complex.

Support for road usage charging throughout the focus groups was most likely to come from individuals who acknowledged that Oregon needs to come up with a new way of funding infrastructure.

STATEWIDE LISTENING TOUR

In addition to the survey, PRR and ODOT Communications conducted a statewide listening tour from October 20th through 27th, 2014. The tour included seven stops in all five ODOT Regions. The purpose of the statewide listening tour was to conduct directed outreach in communities throughout the state of Oregon in order to educate community leaders, legislators, media, and the general public about the road usage charge program. The tour also served as an opportunity for ODOT to gain feedback on the messaging and branding of the program through one-on-one interviews and focus groups. Specifically, the statewide listening tour sought to:

- » Educate stakeholders about the RUC volunteer program across the state through presentations, facilitated small group discussions, and one-on-one interviews.
- » Collect input and feedback on branding

and naming options for the RUC program through focus groups carried out in three stops on the listening tour.

- » Contribute to our comprehensive research on Oregonians' perceptions and responses to messaging regarding the RUC program.
- » Provide legislators with a comprehensive understanding of public opinions about the RUC program that allows them to respond to constituent questions and feedback concerning the program.

The tours included presentations, facilitated small group discussions, one-on-one interviews, media briefings, and focus groups. The key findings of the statewide listening tour were:

- » Almost three-fourths (74%) of respondents indicated they thought road usage charge seemed like a fair way to fund transportation improvements in Oregon.
- » More than half (55%) of respondents indicated the presentation was helpful to improving their understanding of the road usage charge.
- » PRIOR to the presentation, only 35 percent of respondents were supportive of implementing a mileage-based road usage charge program in Oregon (25% were neutral). AFTER the presentation, 55 percent of respondents were supportive of implementing a mileage-based road usage charge (20% increase).

2016 SURVEY - ANALYZING GROWTH⁴

In 2016, a follow-up survey was conducted online with 650 Oregon residents. The goal was to establish if the public opinion needle moved after a year of OReGO operation and outreach. The sample of respondents proportionally represented the entire state, including rural and urban areas. The entirety of this report can be found in *Appendix E, PRR Statewide Survey June 2016*.

The survey provided the following key findings:

There is STILL limited understanding of how transportation is funded. Similar to findings in 2014, almost two-thirds of the respondents (64%) did not know they were paying 49 cents per gallon in fuels tax (combined state and federal), whereas 60 percent did not know this in 2014.

One in two (50%) thought this amount was more than what they were paying, few (3%) thought it was less, and one in ten (11%) were entirely unaware that they were paying a fuels tax at all.

Transportation Funding Options. Similar to the results in 2014, respondents were not particularly supportive of any alternative funding options. However, they were most supportive of tolls on specific highways and bridges where improvements are being made (43%), increasing the vehicle registration fee (36%), or increasing the fuels tax (35%). Additionally, some were in favor of implementing a vehicle sales tax (32%) or road usage charge for miles driven within Oregon (31%).

The main concern regarding a road usage charge continues to be unfairness for rural drivers. Similar to the 2014 survey, nearly half of respondents (46%) believed that one of the biggest drawbacks was that a road usage charge program penalizes people in rural areas. There was also a 9 percent increase since 2014 of concern that RUC would not properly track those who cross state lines frequently (43%). Bigger reported drawbacks in 2016 than in 2014 were perceptions that the road usage charging is just another way Oregon can tax more people (27%) and that it penalizes people who buy fuel efficient vehicles (20%).

Both familiarity and support for RUC being a fair funding option increased. Up 10 percent from 2014 and statistically significant, there was an increase in respondents that are somewhat familiar or not at all familiar with the concept of a road usage charge. Up 19 percent from 2014 and also statistically significant, over half of the respondents (56%) somewhat agreed or strongly agreed that a mileage-based system for transportation funding is fair. Actual support for a road usage charge program in Oregon was relatively similar to 2014. While few respondents (18%, increase of 3%) were strongly supportive of a road usage charge program in Oregon, over two-fifths (44%) were neutral to strongly supportive.

Messages regarding fuel efficient vehicles not paying their fair share are more convincing. Participants were shown several possible reasons for supporting a road usage charge program and



were asked to rate how convincing each reason was. Up 8 percent and statistically significant, nearly half of all respondents (45%) were convinced by statements regarding how driving more fuel efficient vehicles would reduce their tax burden, but still impact or put wear on the roads. Similar to 2014, the next most convincing messages had to do with the unfairness of flat fees, fuels tax being unfair to those who can't afford fuel-efficient vehicles, and each motorist paying his or her fair share with road usage charges.

More Oregonians agree that a road usage charge seems like a fair way to fund transportation improvements. At the end of the survey, respondents were again asked about the fairness of a road usage charge program in Oregon. Up 9 percent from 2014 and statistically significant, one-third of respondents (32%) agreed that road usage charges seem like a fair way to fund transportation improvements in Oregon, while a similar number (33%) felt that the road usage charge seemed unfair (down 17% and also statistically significant). One in four (26%) were indifferent about a road usage charge.

There is limited awareness of the OReGO program and volunteer opportunities. Nearly three-quarters of respondents (71%)

had not heard of the OReGO program, nor of its enrollment opportunities. One in five had heard of the program (19%) and were aware of the enrollment opportunities (17%), while very few (3%) had already enrolled to volunteer. Roughly one in ten were unsure if they had heard of the OReGO program (10%) and its enrollment opportunities (7%).

Account manager features are mildly interesting enough to motivate them to consider volunteering for OReGO.

Respondents were asked about which services would make them more or less interested in volunteering for the OReGO program. Among the services that respondents found most interesting were: being able to review detailed information about their vehicle if the check engine light comes on (23%), receiving alerts if their vehicle moves without their permission (19%), and the ability to monitor fuel usage costs relative to their driving habits (12%).

The survey highlights room for improvement. The OReGO program was awarded a federal grant to perform outreach activities in 2017. The details of this plan are in chapter 9, Path Forward.

VOLUNTEER SURVEYS

Alongside PRR's surveys of the public, the program contracted with Public Knowledge to analyze volunteers' experiences in the OReGO program. ODOT wanted to ensure processes for enrolling, installing devices, and managing accounts and payment met volunteer expectations. More than that, ODOT wanted to see if experience in the program changed the public perceptions outlined in PRR's research. The question was essentially: Were people more in favor of road usage charge once they actually tried the experience?

Public Knowledge conducted two surveys, one in December 2015, and another in January 2017, which were sent to every past and present volunteer. It is important to note that ODOT also sends monthly exit surveys to all volunteers that have unenrolled from the program during the prior month. From the Public Knowledge volunteer surveys and the exit surveys, ODOT has collected valuable feedback that has changed the program for the better and continues to shape how ODOT delivers the road usage charge concept.

2015 VOLUNTEER SURVEY

In December 2015, Public Knowledge conducted a survey amongst current and exited volunteers of the OReGO program. The purpose of the initial survey was to analyze the volunteer experience: pre-registration, registration, participation, and overall. The OReGO team wanted to ensure the process was straightforward, easy, and transparent.

The results of the survey indicate volunteer experience objectives were met:

Ninety five percent of volunteers understand the purpose for the program. Over 90 percent indicated that signing up was simple and straightforward. Seventy three percent clearly understood options available to them. Seventy percent indicated information made available prior to registering was useful. Sixty three percent of volunteers found the online dashboard to be helpful. Over 90 percent of volunteers were able to install and activate their mileage reporting device themselves.

Mileage statements provided by the account manager were clear and accurate.

Sixty seven percent of respondents report the mileage statements are clear and accurate. Twenty percent of respondents had not yet received one.



Mileage statements and invoicing are possible areas for improvement. Only 33 percent of volunteers knew what to do after receiving an invoice, indicating that actions required of volunteers could be clearer.

Because of the last finding, the OReGO program changed the language in the email that was sent along with the account statement.

2017 VOLUNTEER SURVEY

Public Knowledge conducted the second survey in January 2017. This second survey combined some questions from PRR public survey with those of the December 2015 volunteer survey. The reasons for this were two-fold: to see if volunteer experiences improved compared to last year's results, and to determine if volunteer opinions of road usage charging were better or worse than the public's. The report in its entirety can be found in *Appendix B, Public Knowledge Volunteer Survey 2017*.

OReGO volunteers support road usage charges. Participation in OReGO increased volunteers' support for a RUC to fund the costs of building and maintaining Oregon's roads and bridges. The majority (69%) of volunteer survey respondents support the concept of a RUC (paying per mile driven), compared to less than a third (31%) of those responding to the statewide public perception survey. After having participated in OReGO, almost half (48%) of respondents are more supportive of a RUC than before they volunteered.

While there is overall support for the concept, several respondents did not think RUC alone would solve all transportation funding challenges. Some respondents noted that "there is no single fix." Others thought the devices were susceptible to tampering and worried that if the program were expanded, people would cheat the system.

The OReGO volunteer experience is positive. Respondents to the 2017 Public Knowledge Volunteer Survey generally agree that most aspects of the program are going well, consistent with the 2015 survey. Respondents noted the following aspects of the program as positive: signing up for the program, getting answers to questions, using the website, and installing and activating their devices. Virtually all respondents to the 2017 survey (96%) are largely

satisfied with their experience as a volunteer, and about the same portion are satisfied with their interactions with OReGO and account manager staff. The majority (62%) of volunteer survey respondents use the online dashboard feature and find it useful. Overall, there are few issues with devices. Those who do have issues get the help they need. The purpose of OReGO and a RUC is clear to volunteers.

Volunteers support RUC and believe it is fair. Compared to the general public, a higher percentage of OReGO volunteers believe that a RUC is a fair way to fund transportation in Oregon. One third of respondents to the public perception survey think a RUC is "unfair" versus only 8 percent of OReGO volunteer survey respondents. Participation in OReGO may increase people's support for RUC over other sources of transportation funding. Compared to other options, a majority (69%) of OReGO volunteer survey respondents prefer a RUC over other potential sources of transportation funding.

Volunteers worry about rural drivers paying too much and out of state drivers not paying enough. Respondents to the OReGO volunteer survey and those responding to the statewide public perception survey agree that the two greatest potential drawbacks to a RUC are penalizing rural drivers who drive longer distances, and tracking out of state drivers that use Oregon roads. Volunteer respondents were also concerned about penalizing drivers of fuel efficient vehicles, while the respondents to the public perception survey also expressed concern that RUC was just another way to tax people more.

Volunteers have limited concern about privacy. OReGO volunteers who responded to the survey are not overly concerned with privacy, while those responding to the statewide public perception survey are more concerned. Almost half of those responding to the OReGO volunteer survey (47%) indicate they are "not at all concerned," while less than 10 percent report being "very concerned." The majority of general public respondents indicate that they are very or moderately concerned about privacy, but only 17 percent of them cited it as a significant drawback to road usage charging. Only a small percentage (14%) of volunteer respondents viewed privacy concerns as a drawback to the program.

Volunteers want more data, automation, and integration. Volunteers do recommend some improvements for OReGO. They recommend additional detail on their account statements, more data availability through the online “dashboard” and smartphone “apps.” They request an option to pay their RUC automatically and integration with insurance companies that also use devices.

The OReGO program is responding to volunteer feedback with plans to research technology options, including data integration with insurance companies, with the federal grant money it was awarded in December 2016. The program also plans on sending monthly, instead of quarterly, updates to volunteers starting in February 2017 and will be conducting further research with the funds from the federal grant.

VOLUNTEER EXIT SURVEYS

The OReGO program team sends exit survey requests to all volunteers who leave the program or change account managers. This collective feedback helps to guide process improvements and identify areas where important changes are needed. It also helps the team identify cases that need individual review to ensure complete follow-through with volunteers and account managers. The ultimate goal is to determine why each volunteer left the program.

Approximately 34 percent of exiting volunteers did not indicate a reason for removing their vehicles from the program in the first year of operations. Of the remaining exits, 22 percent were simply changing vehicles. For the rest of the remaining exits, the most common remaining reasons were issues with the device’s compatibility with the vehicle (4.63%) and repurposing of the OBD-II port (4.17% usually to join an auto insurance discount program). This suggests that offering technology options beyond the device for data collection will be significant if the program is expanded in the future. Security concerns and fuel efficiency disincentives were rarely cited as reasons for leaving the program.

Because the biggest reported reason volunteers leave the program is the device, ODOT’s highest priority is researching new technology outside of the RUC device: this includes “bring your own device” (ODOT pulls data from multiple companies), odometer imagery and embedded telematics.

Some highlights are that more than half of the volunteers (56.7%) enrolled to see how it worked. Another significant number (28.4%) wanted to pay their fair share. In addition, 71 percent would support the adoption of a RUC for highly efficient vehicles. The survey also collected comments, and some examples are:

- » *We should all pay our fair share for road maintenance.*
- » *It is time for a different system for funding our highways.*
- » *I believe this is a very fair way to pay for upkeep on roads.*
- » *My support has to do with the realities that we’re going to need to find an alternate way to fund road improvements as technology progresses.*

This type of feedback is encouraging and helps the program team keep focus on its ultimate goal—getting transportation funding back to the user pay principle.



9

PATH FORWARD

The OReGO program has been in operation for over a year. With it, ODOT has successfully proved that charging per mile, instead of per gallon, is possible. Experience building a complete road usage charge system—one that obtains verifiable data and collects real tax payments, and thereafter provides a stable operational environment—provides ODOT the expertise and confidence needed to shift its focus to creating an expandable program.

The path forward for ODOT's road usage charge program has several different, yet equally exciting, tracks: proposed mandatory legislation, the STSFA grant award and its associated projects, and RUC West regional pilot participation.

PROPOSED LEGISLATION

The Road User Fee Task Force initiated proposals that led to the introduction of House Bill 2464 in late 2016. This bill was the product of multiple years of discussions and examining road usage charge programs in multiple jurisdictions. The bill specifically builds on the findings and lessons learned in previous ODOT pilots and the successful implementation of the OReGO program. The bill amends the current road usage charge program in the following ways:

- » Eliminates the numerical cap on the number of vehicles eligible to participate in the road usage charge program pilot.
- » Allows ODOT to establish rules to allow purchasers of vehicles to file an application for the road usage charge program at

the point of sale. This must be operative two years after the bill is enacted.

- » Mandatory entry into road usage charge program after January 1, 2025. Owners or lessees of vehicles will be required to enter the road usage charge program if the vehicle is (1) model year 2026 or later, (2) weighs less than 10,000 pounds, (3) has estimated EPA rating of at least 20 MPG.
- » Clarifies that participants pay the state fuels tax or the RUC but not both. The fuels tax paid at the pump is treated as a prepayment of the RUC, and the state fuel tax credit is applied as the fuel is used. If the vehicle's fuels tax credits exceed road usage charge, the owner will not be refunded the difference.
- » After credits are issued and retention of amounts to reimburse ODOT for administering the RUC program, RUC money shall be deposited in State Highway Fund (according to already established statutory formula: 50% ODOT, 30% Counties, 20% Cities).

OReGO program staff are prepared to provide information and advice, in conjunction with RUFTF, as this bill proceeds throughout the 2017 legislative session.

STSFA GRANT

Momentum to research alternative transportation funding is building around the nation. In early 2016, the federal government announced the Fixing America's Surface Transportation (FAST) Act, Surface Transportation System Funding Alternatives (STSFA) Program. This program will

provide \$95 million in grants over five years to demonstrate user-based alternative revenue mechanisms that utilize a user fee structure to maintain the long-term solvency of the Highway Trust Fund. The objectives of the program are:

- » to test the design, acceptance, and implementation of two or more future user-based alternative mechanisms;
- » to improve the functionality of the user-based alternative revenue mechanisms;
- » to conduct outreach to increase public awareness regarding the need for alternative funding sources for surface transportation programs and to provide information on possible approaches;
- » to provide recommendations regarding adoption and implementation of user-based alternative revenue mechanisms; and
- » to minimize the administrative cost of any potential user-based alternative revenue mechanisms.

ODOT was awarded \$2.1 million to enhance its current program in preparation for a possible future mandate. It was the only applicant that is using STSFA grant funds to enhance an already functioning and existing system. To meet the 50 percent match requirement for the grant, the department will leverage funds that are already budgeted for the program. The total budget for ODOT's STSFA projects is \$4.2 million. ODOT will use the grant money to:

- » expand technology options for reporting mileage and fuel data;
- » improve account manager and device entrance into and exit from the RUC market;
- » research manual reporting and data sharing;
- » conduct outreach to further increase public awareness;
- » research compliance for account managers and volunteers; and
- » explore interoperability and other opportunities to expand RUC nationwide by hosting a forum in fall 2017.

These activities will prepare the state for program expansion. In addition, it is testing other technologies and methods of operations that will help other states, as well as the nation.

The ultimate goal of ODOT's STSFA projects is to transition OReGO from a functional road usage

charge program to a viable one—it furthers the vision of generating RUC revenues to help bridge the growing gap between fuels tax collection and transportation infrastructure needs.

EXPANDING TECHNOLOGY

Senate Bill 810 (Appendix F) was composed with enough flexibility to allow the road usage charge market to evolve. Account managers are permitted to offer different technology options, business models, and value-added services to their volunteers in order to stay agile in the marketplace. All of OReGO's current account managers offer devices that install in the on-board diagnostic (OBD-II) port of each enrolled vehicle. The program is built to be technology-agnostic, so it can accept data from different sources. So far, the device is the only technology option in the OReGO RUC market.

The devices have several issues. First, the mileage and fuel consumption data reported by the device may not be accurate. The OBD-II ports were not designed to capture and interpret data for the purposes of administering a road usage charge; they were designed to help mechanics with car diagnostics and to report emissions-related data. As a result, data streams have to be re-worked to interpret useful RUC information, such as fuel consumption and mileage. Second, many vehicles cannot use the devices. Devices do not work in vehicles that do not have an OBD-II port, which was not a standard in vehicles until 1996 (2006 for diesel vehicles). They also have difficulty working in electric vehicles, alternative fueled vehicles, and vehicles with installed fuel conversion kits. Third, device installation will be hard to enforce in a mandatory tax program. Some taxpayers will not plug them in, or, once plugged in, will take them out. And, fourth, there is a palatable political and psychological barrier to plugging a device into a vehicle: it feels invasive to many.

For these reasons, the OReGO program is looking outside of devices and toward other technology options. ODOT will partner with existing account managers to develop, test, and implement additional technologies. Oregon is particularly interested in exploring technologies similar to those that have been, or will be, tested by other state pilots, particularly those in California and Washington. This will enhance OReGO's viability and significantly increase interoperability opportunities.

Embedded Telematics

Currently, some vehicles have installed computers that can measure mileage and fuel consumption. This data can be sent directly to the account manager for transaction processing. This is very attractive as a RUC option because vehicle owners do not have to install a device, it is more difficult to tamper with a vehicle's onboard system than a separate device, and the information coming from a vehicle's embedded telematics is more accurate than data coming from a self-installed device. Further, RUC could easily be coupled with other services that embedded telematics provide. The requirements and internal system of the current RUC program is designed to be technology-agnostic, which means it can accommodate this type of data reporting.

However, embedded telematics development is in relative infancy, and the OReGO program is aware of the challenges that will need to be surmounted in order to use this technology. Some of the data reported by embedded telematics differs by manufacturer. Auto manufacturers and governments will need to agree on standardization requirements. Auto manufacturers may also be reluctant to make the information available to others, especially governments. Further, embedded telematics data is not fully-secure and, like

the device, the systems have proven to be hackable. It is important to note that the security of the information is the liability of the auto manufacturer, not ODOT, but it may be a drawback to adopting the technology.

A recent study by Texas A&M estimates that 59 percent of the usage-based insurance market (for example, the Progressive Snapshot™) will use embedded vehicle telematics in the next two to five years. This shows a significant movement away from the device as the primary technology to administer these services. Because of the reliability of the data, the OReGO program is anticipating being able to add embedded vehicle telematics as a technology option for the program. The program intends to pursue this option for the STSFA grant.

Data Aggregation

Companies are getting data from vehicles using many reliable methods, such as fleet management equipment, insurance systems, devices, and embedded telematics. All of this information is stored and available for aggregation. The program refers to this option as the “bring your own device,” or “bring your own data” option. If mileage and fuel data is being collected from a vehicle by an entity—either by car maintenance companies, vehicle services (such as OnStar™), devices, or other equipment—



the program could use this data to administer a RUC. Being able to accept data from a wide array of sources will greatly expand user choices.

There will, however, be challenges to implementing data aggregation. Indeed, the problems are many because the possibilities are numerous and seemingly endless. Because data aggregators use many methods for collecting information, certifying the data source and the accuracy of the data from so many sources could prove difficult for ODOT. Further, data aggregators are not account managers;

thus, ODOT would have to further develop its systems or partner with account managers to accept non-synthesized data, calculate the tax due, and invoice the RUC payer.

However, the STSFA grant will provide ODOT with an opportunity to learn more about data aggregation technology. ODOT is currently working with its existing account managers to provide technology-expansion options, and ODOT expects that at least one data aggregation source may be among the proposals.



Fuel Station Technology / Pump Connectivity

Like its 2006-2007 pilot predecessor, the program could re-introduce pump connectivity as a technology option. In short, the mileage data would be transferred from the vehicle to the pump at the time of fueling, and RUC taxes would be deducted from fuels tax, allowing RUC payers to pay a total, aggregated bill after they are done fueling. This option is appealing because it is incredibly easy and effortless for the RUC payer.

However, this technology could be complex and capital intensive, as fueling stations would have to upgrade point of sale systems. Further, vehicles would need to have technology that could communicate to the pump, such as a device, sticker, or chip. In addition, this technology could not be applied to electric vehicles that do not fuel at the pump and largely charge at home. For these reasons, the OReGO program will not be researching this technology option with the STSFA grant. It is important to note that California will be researching this technology with its STSFA grant as it too looks for options other than the device.

Cell Phone Odometer Readings

Instead of manually reporting odometer readings, RUC payers could use their cell phones to take pictures of their odometer readings and submit them to an account manager. The technology has methods to verify the date and time of the picture as well as the vehicle that is being reported. Also, RUC payers do not have to install anything in their vehicles to participate in the program. This technology is already in use in the California and Colorado pilots. One of OReGO's existing account managers, Azuga, is the one administering this option. It would be very easy for Oregon to adopt this technology.

There is one major drawback: pictures of odometer readings have nothing to do with fuel consumption. As a result, the program would have to apply fuel tax credits based on the EPA rating of the vehicle, not on actual fuel consumption, and the EPA rating can vary dramatically from the actual MPG of the vehicle. Further, because only total miles are reported, out of state miles are unknown and would be taxed.

The OReGO program is open to exploring this technology with account managers with the STSFA grant.

MARKET CYCLE

Market evolution will inevitably include account manager and technology changes. The hallmark of Oregon's RUC program is the concept and enforcement of an open market, where account managers and technology can come and go with as little disruption as possible to the RUC payer. The program must be agile and react efficiently and effectively to market transitions. This will include streamlining certification and processes for market entrance and exit, which would reduce negative business and consumer impacts and enhance the benefits of an agile system.

In order to effectively manage the market cycle, ODOT must:

- » Align requirements for market entrance and exit with existing standards, such as national certification requirements, as well as state procurement laws and policies.
- » Continue to refine and streamline the OReGO certification process to reduce barriers to entry.
- » Define processes for volunteer notification and transition when marketplace changes occur.
- » Refine processes and audit/review documentation for account manager exit.

Since the award of the STSFA grant, ODOT has already begun work on effectively managing market cycles.

MANUAL REPORTING

OReGO enrollees must have internet access to enroll in OReGO and manage their accounts with the account managers, and they must also have a vehicle that can accept the device. Instead of using technology to report vehicle miles traveled, ODOT could have vehicle owners manually submit their odometer readings. As an example, at the time of vehicle registration, a DMV employee could check odometer readings. The DMV employee would then calculate the charge based on mileage driven during the two years between registrations. The fee would be due along with the registration, or the RUC program could establish payment options. In the Portland metropolitan region and the Rogue Valley, odometer readings could also take place at the time of vehicle emissions testing. ODOT would apply a rate for every mile driven. This method could credit back fuel usage based on the EPA rating of the vehicle and the miles

driven. To accommodate Oregonians with limited access to technology and those with no desire to use it, ODOT will research manual, non-technical reporting with the STSFA grant.

FLAT ANNUAL USAGE CHARGE

In the context of road usage charging, a flat annual usage charge system would be a substitute for the actual road usage charge, which is an amount charged for each taxable mile driven. Indeed, a flat annual usage charge option will be a necessary component in any sort of mandatory road usage charge legislation for the following reasons:

Consumer Choice/Convenience: Not all drivers will want to report data from their vehicle or otherwise participate in the program. With a flat annual usage charge system, the consumer can opt to pay the flat annual usage charge, and not have to register with an account manager and report data.

Compliance: If taxpayers are non-compliant with the account manager system—for example, they do not register with an account manager, fail to pay, or frequently tamper with technology—they can be transferred into the flat annual usage charge system. If a taxpayer is still non-compliant in a flat annual usage charge system, penalties could be applied. Mirroring already established compliance tools could result in administrative cost savings.

Technical Incompatibility: Not all vehicles, even new ones, will be able to transfer data in a usable format to account manager and ODOT systems. For example, the device, the current technology to administer the RUC, cannot capture data from some electric vehicles. Even if data collection expands to include telematics, pump connectivity or cell phone triangulation, it is rational to assume that not all vehicles will be able to “talk” to a given technology. ODOT could administer a flat annual usage charge in case a participant’s vehicle is incompatible with RUC technology.

Ease at Point of Purchase: Having the option of a flat annual usage charge eases the point of purchase / registration options to allow the consumer to have time to research and enroll with the account manager and method (GPS, non-GPS etc.) that best fits the consumer needs.

Administrative Cost Reduction: Collecting a flat annual usage charge will reduce administrative

costs. This is because it has the potential to limit the number of times a RUC payer needs to interact with the program and could be a relatively low cost enforcement mechanism. ODOT already has an established touchpoint with all vehicle owners when they title and register their vehicles. ODOT could collect the flat annual usage charge at that time.

DATA SHARING

Partnering with other government entities that capture the same data points as the OReGO system would streamline internal processes and participants’ experiences. Using the STSFA grant, ODOT would like to partner with the following:

ODOT, Transportation Development Division (ODOT TDD): Federal legislation requires each metropolitan planning organization to develop a transportation plan. The plan must provide valid forecasts of future transportation demand using travel demand models based on regional household travel survey data. The RUC data set is similar to that already collected through household surveys. ODOT wants to recruit RUC volunteers who will allow account managers to anonymously collect travel behavior data along with basic household demographic information. Account managers would report that data to ODOT with personally identifiable information removed. This would allow ODOT to use RUC systems to generate travel data for modeling and analytics on a trial basis. This could reduce ODOT’s overall data collection costs and provide a more robust data set to run travel demand models.

Department of Environmental Quality (DEQ): DEQ is tasked with monitoring emissions from vehicles in certain areas, such as the Portland metro area and Medford. The devices used in the OReGO program could be used for remote emissions testing using the devices, which could increase participation in OReGO and decrease costs for both ODOT and DEQ. It would have the benefit of reducing congestion at emission testing sites because people would not have to drive to them and wait in line until their vehicles can be tested.

Coordination between OReGO and other government services will also greatly enhance interoperability opportunities as ODOT further refines its system for data sharing.



INCREASE PUBLIC AWARENESS

After conducting two surveys and a statewide listening tour, PRR identified concerns that Oregonians hold about road usage charging, including the privacy and security of their travel data. Some also believe that the program unfairly targets rural drivers and punishes drivers of fuel efficient vehicles (see *Appendix E, PRR Public Survey 2016*). ODOT has worked hard to assuage public concerns by creating a system that is secure, safe, and equitable. The agency will continue to address these complex issues over time.

Moving forward, it will be important for ODOT to partner with the public. OReGO will need acceptance from a majority of Oregonians to create a strong, revenue-generating program. Oregon is still learning more about public concerns and motivators, which continues to help guide public education about both road usage charging and transportation system funding.

One goal for this round of the STSFA grant is to increase public awareness about the road usage charge program and address public concerns about data security and equity.

ODOT will do this through the following activities, which will begin summer 2017.

Map the path to acceptance

- » Conduct surveys and focus groups statewide to assess localized opinions of OReGO, the road charge concept in general, and sustainable transportation funding alternatives. This will include identifying differences in demographic and geographic perceptions of road charging, and ascertaining the character of objections and identifying points of support.
- » Conduct a statewide research and education tour that addresses populations' key equity and insight demographics: urban and rural, affluent and low-income, education, age, etc.
- » Use key findings and communications tools from the 2015 launch and test proposed messages and communication tools among Oregonians for their relevance and impact.
- » With deeper understanding of perceived issues and benefits as well as the cognitive process to gain acceptance, map the process and report recommendations for education.

Design the education program

- » Use the recommendations to re-tool OReGO's communications media (website, social media, blog, email lists, presentations, etc.) to educate Oregonians about road usage charging and sustainable transportation funding in a way that is personally relevant and compelling.
- » Develop new, interactive education media (e.g. videos, online modules, games and apps) that engage a diverse range of learning styles to frame problems of transportation funding and how road charging plays a part in a sustainable future.
- » Identify and train OReGO representatives and speakers for statewide outreach.

Implement the program

- » Launch the new and improved communications tools.
- » Promote the education program statewide through earned and paid media.
- » Offer education modules and speakers to local organizations, conferences, employers, etc.

The project proposed above will use research results to increase public awareness of the program and its impact on urban and rural populations. It would also help ODOT assuage public concerns around topics like privacy and security of travel data and whether road usage charging discourages fuel efficient vehicle purchases. The research will allow ODOT to refine its messages and improve the tools it uses to deliver these messages. It will also serve as a template for future communication efforts.

EVALUATE COMPLIANCE MECHANISMS

Currently the compliance mechanisms to ensure that account managers perform well reside in contracts, which are diligently monitored by the program. The compliance mechanism for RUC payers is removal from the voluntary program, except in the case of fraud, where the statutory penalty is a Class A traffic violation.

Evolving RUC into a more robust tax program that aligns with the American Institute of Certified Public Accountants' ten principles of good tax policy requires compliance mechanisms that minimize noncompliance. Those options must strike a balance between the desired level of compliance and the costs of enforcement and intrusion. This project proposes to evaluate

enforcement mechanisms including their implementation, effectiveness, and cost. It also includes analyzing ways RUC payers and account managers might evade payment and devising enforcement protocols to address those gaps. Some models of enforcement already exist in other areas of ODOT, and costs could be lowered to the extent the program can align to existing processes.

EXPLORE INTEROPERABILITY

OReGO is a fully-functioning system that demonstrates the viability of using third parties to collect road usage charges. Interoperability with other states is vital to the future of road usage charging. Obstacles to interoperability include a lack of common statutes, business requirements and technical standards among state systems. These obstacles create barriers for new account managers to enter the market and provide services.

The OReGO program will host a RUC Forum in September 2017 in Salem. The Forum will allow states, vendors, consultants, and others to evaluate interoperability barriers and create strategies to overcome them. ODOT's continued participation in the RUC West will support this work.

CREATING A VIABLE TAX PROGRAM

As the OReGO program evolves, it is important to not lose sight of what it ultimately is—a tax system. To help guide project work and to focus efforts, the team routinely refers to the American Institute of Certified Public Accountants' framework of ten guiding principles of good tax policy. All projects, activities, and processes are selected and worked according to their ability to help OReGO get closer to realizing these principles.

Each principle is described below, followed by an analysis of the OReGO program as currently structured.

Equity and fairness. *Similarly situated taxpayers should be taxed similarly. This includes horizontal equity (taxpayers with equal ability to pay should pay the same amount of taxes) and vertical equity (taxpayers with a greater ability to pay should pay more taxes). Note: Equity*

is best measured by considering a range of taxes paid, not by looking just at a single tax.

Because equity is best measured by considering a range of taxes paid, and not by looking just at a single tax, it is important to consider all the vehicle-related taxes paid by a registered owner. The vehicle-related base taxes are the fees collected by the Driver and Motor Vehicle (DMV) Services Division. These include title, registration, and license plate fees. The variable fee on top of the base tax is the road usage charge, which is based solely on miles driven.

The road usage charge is similar to the model through which entities pay for utilities with a base fee that allows access to the utilities and an additional fee for usage. While a certain amount of usage is typically part of the base fee, usage fees are generally determined by amounts used over the base and may be adjusted for times of day or the type of customer (residential, industrial, commercial). Essentially, the vehicle registration fees are the base fees that allow access; road usage charges are based on usage. At this time, they are not adjusted for time of day or location, which could be used for congestion pricing. The charges could also be adjusted for vehicle type with different mileage categories paying different amounts.

The road usage charge is not considered fully equitable in regard to taxpayers' ability to pay at this time, but it is fully equitable in regard to taxpayers paying in direct proportion to their use of the roads, like a utility. It is a step closer to achieving horizontal and vertical equity than the current fuels tax system. With fuels tax, drivers of low MPG vehicles pay more for their road use than drivers of fuel-efficient vehicles. Fuel-efficient vehicles (electric and hybrid) are typically new vehicles with higher prices than vehicles on the secondary market, so drivers of these vehicles are typically higher income.

Certainty. *Tax rules should clearly specify when and how a tax is to be paid and how the amount will be determined. Certainty may be viewed as the level of confidence a person has that a tax is being calculated correctly.*

The road usage charge program has clear rules about how the amount is determined. The road usage charge is generally applied daily, but the timing of tax collection is dependent on the account manager's business model. In some cases, the account manager may require

prepayment with accounts being adjusted daily; in other cases, the taxpayer is billed on some other predetermined frequency (monthly or quarterly). The use of account managers to collect and remit the tax on behalf of the RUC payer separates the RUC payer from questions of when and how the tax is paid to the taxing entity.

The program could achieve better accuracy of data from which tax is calculated. For this reason, the program is looking to expand technology options, which may provide much more accurate information than the self-installed device.

Convenience of payment. *A tax should be due at a time or in a manner most likely to be convenient to the taxpayer. Convenience helps ensure compliance. The appropriate payment mechanism depends on the amount of the liability and how easy (or difficult) it is to collect. Those applying this principle should focus on whether to collect the tax from a manufacturer, wholesaler, retailer or customer.*

The road usage charge is collected from individual motorists by third party account managers and then remitted by the account managers to ODOT. The commercial account managers serve as the payers' agents and pay the tax to the agency based on taxable miles driven during the reporting period. The ODOT account manager (OAM) serves as ODOT's agents and pays the tax to the agency based on the taxable miles already paid by the volunteer.

The road usage charges for each RUC payer tend to be small amounts, in part because of the fuel tax credit; thus, the liability would never be large. The commercial account managers are responsible for collecting RUC payments to reimburse themselves for the payments made on behalf of the RUC payers to ODOT.

At this time, RUC payers can only pay online with a debit or credit card. ODOT is researching manual reporting and flat annual usage charge options, which will broaden payment methods to cash and checks. Further, the program is exploring data sharing and telematics, which will bundle the RUC fee with other services that taxpayers voluntarily use and increase taxpayer convenience.

Economy of calculation. *The costs to collect a tax should be kept to a minimum for both the government and the taxpayer.*

In the case of the voluntary road usage charge program, the current costs to collect the tax from the account managers is quite high compared to other agency revenue streams. In part, that is because the department is paying the account managers to perform several functions, including order fulfillment (supplying the mileage reporting devices), volunteer enrollment, transaction processing, account management and reporting. In addition, the fixed costs of administration are spread over a very small number of taxpayers. Given the pilot nature of the program and the small number of vehicles that can participate, it is difficult to achieve economies of scale that drive down costs.

For the sake of comparison, the fuels tax program is the most cost effective of the department's revenue programs because it collects large amounts of revenue from a relatively small number of taxpayers. This is quite different from the other revenue programs that collect relatively small amounts of revenue from a much larger number of taxpayers. The road usage charge program collects relatively small amounts of revenue from a small number of taxpayers, and these small amounts are then aggregated by the account managers who remit the tax on behalf of those taxpayers.

One way to achieve economy is to make all account managers liable for the tax on behalf of RUC payers. This is the intended structure that exists with the commercial account managers in the current RUC program. This would be similar to the model for taxing gasoline. Gasoline taxes are not paid directly to the government by the taxpayer. Instead, a company collects that tax from the taxpayer and remits and reports that tax to the government on behalf of all users of the gallons that were sold. This keeps the tax amount the same, but greatly reduces the number of people or entities that have to coordinate with the government to report and remit taxes.

Simplicity. *Taxpayers should be able to understand the rules and comply with them correctly and in a cost-efficient manner. A simple tax system better enables taxpayers to understand the tax consequences of their actual and planned transactions, reduces errors, and increases respect for that system.*

As currently implemented, the road usage charge system is relatively simple: it taxes 1.5 cents per vehicle miles traveled. The most confusing part for many volunteers is the amount of the fuels tax credit and how it is calculated.



RUC payers can comply correctly in a cost-efficient manner because the account managers are actually calculating the tax and credits, then filing and remitting the tax on the RUC payer's behalf. This also lowers the cost for the agency. If RUC payers were expected to comply individually without the account manager, it would not be cost-efficient for either the RUC payers or the agency.

Neutrality. *The tax law's effect on a taxpayer's decision whether or how to carry out a particular transaction should be kept to a minimum. A tax system's primary purpose is to raise revenue, not change behavior.*

It is difficult to determine if the road usage charge will change behavior, such as influencing whether RUC payers drive fewer miles or purchase less fuel-efficient vehicles.

On balance, the road usage charge is unlikely to change behavior in any meaningful way because the charge would be a very small portion of the total cost of vehicle ownership or even the marginal cost of driving additional miles. If it serves as the base for other fees, such as those for driving in congested areas, then it is more likely to be perceived as a tax that changes behavior.

Economic growth and efficiency. *A tax system should not impede productivity but should be aligned with the taxing jurisdiction's economic goals. The system should not favor one industry or type of investment at the expense of others.*

The department is seeking to capture revenue from fuel efficient passenger vehicles that are not contributing to maintenance of the transportation system commensurate with their use of it. The state requires a highway cost allocation study to determine whether different classes of vehicles are paying their proportionate share.

The department clearly has an economic goal of optimizing revenue from all sources. The current revenue streams are not indexed to the cost of materials. This has eroded the ability of the department to maintain transportation infrastructure. The increase of fuel-efficient vehicles in the fleet would decrease the revenue stream from fuel taxes over time. Road usage charges are a way to increase revenue from vehicle drivers that are currently paying less than the average motorist pays.

Transparency and visibility. *Taxpayers should know that a tax exists, and how and when it is imposed on them and others. Taxpayers should be able to easily determine the true cost of transactions and when a tax is being assessed or paid, and on whom.*

Because the road usage charge is a new way to pay for the transportation system, it lacks visibility. This will hopefully be remedied by increased educational efforts and information sharing. Currently, it is not necessary for taxpayers to know the tax exists because it is a volunteer system, and people have to know about it before they volunteer for it. Should the road usage charge become mandatory in any fashion, ODOT and the state would have to significantly increase education efforts.

For participants in the program, there is an increased awareness of gas taxes and road use charges paid as well as improved context for the actual cost of these taxes as evidenced by the volunteer survey completed in January 2017 (*Appendix B, Public Knowledge Volunteer Survey 2017*).

Minimum tax gap. *A tax should be structured to minimize noncompliance. The tax gap is the amount of tax owed less the amount collected. To gain an acceptable level of compliance, rules are needed. However, a balance must be struck between the desired level of compliance and the tax system's costs of enforcement and level of intrusiveness.*

The current program has minimal enforcement, which may be appropriate for a voluntary tax pilot program. For a mandatory program, there should be an analysis of the costs to enforce compared to the revenue. In addition, it would be useful to analyze the ways in which RUC payers might evade and devise enforcement protocols to address those. For example, providing the department with authority to assess increased penalties and interest for not reporting, paying, or returning a device, along with appropriate penalty waivers, would be necessary. These models of enforcement already exist in other areas of ODOT, which would result in reduced cost to the extent the department can align to existing processes.

Appropriate government revenues. *A tax system should enable the government to determine how much tax revenue it likely will*



collect and when—that is, the system should have some level of predictability and reliability.

In the current model, the tax reports and payments are due on a quarterly basis. The commercial account managers pay the department for all taxable miles driven; the ODOT Account Manager pays on taxable miles that have already been paid by the volunteer.

A robust model that takes into consideration the fuel efficiency of all vehicles in the state, vehicle classes, revenue from fuel taxes compared to potential revenue from RUC, and other factors outlined in the Highway Cost Allocation Study might provide a starting point to determine which vehicles to enroll in RUC to increase revenue.

USING THE VOLUNTEER PROGRAM AS A TEST GROUP

The current volunteer program consists of Oregonians that are eager to try new ideas that might benefit their state. Many of them are passionate about paying their fair share for maintaining roads and bridges, while others are simply curious about what Oregon might do next. A strong majority of volunteers may be willing to participate in new pilots featuring different technology, such as embedded telematics or cell phone imagery. Some exciting technology that could really help further the RUC concept

is not in full development yet, and it would be necessary to have a small group pilot these technologies as they move forward. It would be important for Oregon to test these technologies to ascertain if they are viable, translate into a seamless experience for the volunteer and decrease the cost of administration for ODOT. Once a pilot is deemed technically viable, and if the legislature decides to advance into a mandatory realm, the collection of actual money can be added and tested before deployment.

HELP DEVELOP NATIONAL STANDARDS

Oregon is at the tip of the spear nationally when it comes to the road usage charge. However, it must partner with other states to push the standardization of data that is collected from vehicles. As the connected vehicle market grows, more companies are entering the market with their unique systems. ODOT and other states should continue to be at the forefront to request how the data is aggregated and reported.

There are several partnerships ODOT could engage in to help develop national data standards and ensure the furtherance of the road usage charge concept. They are:

Association	Description	Nexus to ODOT/OReGO
Society of Automotive Engineers (SAE) http://standards.sae.org/automotive/	Association of scientists, engineers & practitioners involved in advancing vehicle and system knowledge. Involved in setting standards to ensure safety & quality in automotive design, including fuel consumption and diagnostic connectivity for all vehicles, including electric and hybrids.	The current technology used to report mileage for OReGO uses the on-board diagnostic port (OBD-II) and relies on the standards set for that port. OBD-III is currently under development. This addresses the need to stay current with emerging technologies and keeps OReGO up to speed with standards development. FHWA is a participant in SAE to help develop cybersecurity standards for V2V (Vehicle to Vehicle connectivity) and V2I (Vehicle to Infrastructure connectivity). See: http://www.nxtbook.com/nxtbooks/sae/15gvstds07/
American National Standards Institute (ANSI) http://ansi.org/	ANSI oversees the creation, promulgation and use of thousands of norms and guidelines that directly affect businesses in nearly every sector, including insurance and telecommunications.	The RUC concept and possible future work heavily involves electric vehicles. ANSI has a standards panel on electric vehicles and associated infrastructure, which is engaged in standardization of data to enable the deployment of EVs. See this publication for future work to be coordinated with SAE. http://publicaa.ansi.org/sites/apdl/evsp/ANSI_EVSP_Roadmap_May_2013.pdf
OmniAir http://omniair.org/	OmniAir is a consortium that advocates for the development and promotion of certification for the Intelligent Transportation industry (ITS). Members are experts in ITS, telematics and tolling technology.	OmniAir is trying to promote certification across ITS, including electronic payment. OmniAir Certification Services conducted certification testing for dedicated short-range communications (DSRC) used to ensure safe V2V AND V2I communication. OReGO can leverage existing standards, certification processes, and development platforms to evolve OReGO vendor requirements and certification. See: https://www.its.dot.gov/index.htm
Institute of Electrical and Electronics Engineers https://www.ieee.org/index.html	IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity. It provides a wide range of quality publications and standards that make the exchange of technical knowledge and information possible among technology professionals.	IEEE has been involved in analyzing the reliability of dedicated short-range communications (DSRC) and dealing with privacy issues in data mining, which is applicable to the protection of personally identifiable information, such as what is collected in the OReGO program.

Association	Description	Nexus to ODOT/OReGO
<p>American Association of State Highway and Transportation Officials (AASHTO) http://www.transportation.org/Pages/Default.aspx</p>	<p>AASHTO works toward furthering an integrated, efficient and innovative transportation system. It supports the development of transportation solutions.</p>	<p>AASHTO has a number of committees related to finance, including a subcommittee on transportation finance policy, which addresses issues related to funding and financing. AASHTO has an interest in identifying revenue mechanisms that would be sustainable. Having more state highway and transportation officials understand the concepts of RUC could help grow RUC programs throughout the US and lead to interoperability between states.</p>
<p>Federation of Tax Administrators, Motor Fuels Section http://www.taxadmin.org/fta/mf/</p>	<p>FTA (Motor Fuels) strives to improve the quality of state tax administration through research, information exchange, and intergovernmental coordination. FTA serves as a source of information and expertise for state administrators and others on state tax agencies and systems as well as issues generally affecting tax policy and administration.</p>	<p>FTA has been instrumental in setting data standards for tax administration programs, such as motor fuel, which allows data exchange among states. For example, FTA developed standard product codes, and product characteristics, for use in fuels tax reporting. This allows fuel to be tracked through the distribution chain including where it may gain volume due to blending additives. It also identified transaction type codes for the modes by which fuels are transported, which further enables auditing and reduces evasion. FTA members include IRS, which collects federal fuels tax as well as fuels tax administrators from every state. FTA could be instrumental in identifying enforcement mechanisms for RUC, particularly when it becomes interoperable with other states.</p>
<p>RUC West https://www.rucwest.org/</p>	<p>Founded by ODOT and Washington State DOT, RUC West is voluntary coalition of state Departments of Transportation. Currently, RUC West consists of 14 member states.</p>	<p>The RUC West member states are committed to collaborative research and development of a potential new transportation funding method that would collect a road usage charge from drivers based on actual road usage.</p> <p>The Consortium’s vision is to develop road usage charge systems that:</p> <ul style="list-style-type: none"> » Are open systems to foster competition in the market for providing RUC services; » Allow for motorist choice in how a road usage charge would be assessed and paid; » Are compatible with readily-available and affordable consumer products and technologies (such as smartphones, in-vehicle navigation systems, and other data-dependent vehicle technologies); and » Are designed to achieve the primary purpose of collecting taxes to fund roadway maintenance and improvements.

Association	Description	Nexus to ODOT/OReGO
American Association of Motor Vehicle Administrators (AAMVA) http://www.aamva.org/	This association is a tax-exempt, nonprofit organization developing model programs in motor vehicle administration, law enforcement and highway safety.	AAMVA could aid ODOT in standardizing data nationwide and promoting the need for a road usage charge. It can also help develop streamlined processes for compliance.

RUC WEST REGIONAL PILOT

The survival of RUC in Oregon is clearly dependent on the adoption of RUC in other states, particularly those that border it. Senate Bill 810, Section 29, authorizes ODOT to work with other state departments of transportation on road usage charging.

Oregon is a very active member in RUC West, a voluntary coalition of 14 western state departments of transportation that are committed to collaborative research and development of a new funding method for transportation infrastructure based on drivers' actual road usage. The goal is to build public sector organizational capacity for and expertise in RUC systems and address the associated policy, administration, and technology issues. RUC West also provides a collaborative forum to share information and best practices, discuss issues, observe and learn from other public agencies that are at different stages of testing and implementation, and facilitate joint research.

The collaborative nature of RUC West, coupled with institutional knowledge of and investment in RUC, make it the prime coalition to define a regional system to promote and establish RUC consistency, interoperability, and compatibility throughout the western United States. RUC West applied for, and was granted, a STSFA federal grant. The project resulting from the grant will set the stage for a regional system and pilot test by defining a concept of common operations and system requirements, and developing essential regional pilot project plans to prepare for implementation.

Before interoperability can be realized, requirements from the participating states must be gathered and analyzed. Each state is different: public fund statutes, RUC policies,

strategies, and administrative and technical solutions are variable across the states. At the same time, certain consistencies and commonalities will be necessary (e.g., basic technologies and associated standards, providing economies of scale for the private sector, policies regarding travel in other states) to most effectively enable a multi-state approach. The vision is to define a regional system that embraces the following attributes:

- » Allows a per-mile charge rate that can be variable by state;
- » Creates an open-system architecture - different account managers and technologies can come and go in the RUC market;
- » Provides technology choices for participants - such as telematics, devices, cell phone imagery, etc.;
- » Allows for interoperability - seamless transfer of data and money between states;
- » Fosters administrative costs reductions and economies of scale; and,
- » Does not preclude congestion pricing.

These attributes would provide the flexibility needed to accommodate each state's institutional and operational environment, while providing enough structure so systems can exchange data and money.

The overall project amount is \$3.2 million, with the federal grant providing half and the eleven participating states providing the other half. The regional project is scheduled to begin in April 2017 and last until August 2018.

Oregon and California plan to launch a functional regional pilot with the next iteration of STSFA grant. Creating a viable pilot will help build the ever-growing momentum around road usage charging in Oregon and around the nation.



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CONCLUSION

Oregon Department of Transportation is enthusiastic about the future of road usage charging.

RUC will tie transportation funding back to the user pays principle, which is foundational in Oregon. RUC moves us closer to a future where Oregonians pay for transportation based on their actual use of the road, instead of the fuel efficiency of their vehicle.

Fuels tax revenue is not keeping pace with general price inflation and the growing demand on Oregon's transportation system. Further, it is becoming increasingly illogical to tie transportation funding to the outdated concept that fuel use equals road use. Fuels tax is an early twentieth century funding model, and though it has worked so well for so long, its weaknesses become more visible as transportation evolves. It is simply not sustainable.

From its previous two pilots, and the current OReGO program, ODOT has learned that it is possible to charge people per mile driven instead of per gallon consumed. It works. It is also possible to have fuels tax and road usage charge work side by side. The two funding models can coexist, resulting in a rather seamless experience for the driver.

Public opinion has also moved since Oregon started its first pilot in 2006. According to the 2016 public survey, more Oregonians agree that a road usage charge seems like a fair way to fund transportation. The survey also revealed that since the explosive adoption of smartphones, people are less concerned about privacy and data security. Those concerns have morphed into apprehension about how the program will affect rural and out-of-state drivers. Of greater

concern to the program is that people are largely uninformed about how transportation is currently funded. It will be difficult for people to compare road usage charge to fuels tax, if people do not know that fuels tax exists.

These communication challenges are ever present, and the OReGO program plans to address them through a robust education strategy that will be implemented with the federal grant. The OReGO program will also assuage these concerns by offering a solid, convenient, and positive volunteer experience. Of the people that have volunteered, 96 percent have reported that they are largely satisfied with their OReGO experience.

Like any concept in its infancy, RUC will need to evolve in order to become a viable funding option for passenger vehicles. The technology that currently supports the program, the self-installed device, cannot support a mandatory tax program. Fuel consumption data reported from the device is not always accurate, and the device is too easily removed to be in force in a mandatory environment. The device would need to be coupled with a flat annual usage charge if a mandatory tax system was launched. Further, the OReGO program will be researching new technologies with its recently awarded federal grant—such as embedded vehicle telematics and cell phone imagery—that can complement, and perhaps eventually replace the device.

The OReGO program learned that effective RUC systems are coupled with the private industry. The private sector injects innovation and agility. Most importantly, it provides consumer choice, making RUC more than just a tax program, but a small part of a driver's transportation experience.

ODOT will continue to work with its sister states to promote RUC regionally and nationwide. Momentum is incredibly important and useful. Through this energy, ODOT hopes to help create national standards that will reduce administrative costs and infuse agility and resiliency into the RUC marketplace.

A sincere thank you to all that are interested in our journey. Please do not hesitate to contact the OReGO program with questions, concerns, or thoughts.

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ACKNOWLEDGMENTS

Oregon is the first state in the country to develop and operate a fully functioning road usage charge program. Scores of people have worked tirelessly to make this possible, and the purpose of this section of the booklet is to thank them. It took a lot of creativity and subject matter expertise to successfully launch the OReGO program, and it takes a lot of skill to continue to hone operations while exploring new ways to better deliver the concept. We feel privileged to have developed this program alongside such insightful, visionary, and grounded people.

First and foremost, we would like to thank the Road User Fee Task Force, led by former Chair Vicki Berger, which provided thoughtful and valuable oversight throughout project work and program implementation. We are grateful for their guidance and continued support of the road usage charging concept with the Oregon Legislature.

Matt Garrett, ODOT's director, guided the work of the project team and described them as the "tip of the spear" on a no fail mission to deliver by July 1, 2015. Director Garrett was a great support to the team and helped them successfully deliver the project and launch the program. His leadership and confidence continue to support and inspire.

Gina Salang was the former RUC Operations Manager charged with delivering RUC's mission. We adamantly believe that the project would not have been delivered under any other project manager. Gina is a one-of-a-kind leader who truly drove success as she fearlessly plunged us into the hectic world of project management and delivery. She was a commander that was right in the trenches with

her team. She led, enabled, and motivated us to do more than we thought was possible.

We would also like to thank the two managers that devotedly worked alongside Gina: Steve Ross, who returned from retirement to work as a contractor in the role of IT Manager, and Maureen Bock who came back to ODOT to lead the business team as the Business Implementation Manager. These two managers inspired the team, working tirelessly right beside them. Their contributions were instrumental to the team's ability to deliver the project on time and under budget. Their broad knowledge of their respective fields and their attention to detail contributed to an effective and successful launch on July 1. Maureen continues to lead the OReGO program, and we are energized by her vision, energy, and passion for the concept.

Jim Whitty devoted substantial time and effort to developing the previous two pilots, upon which much of OReGO is based. He shared his energized vision with everyone: the Road User Fee Task Force, legislators, industry groups and others. As a result of his determination and hard work, the legislature passed Senate Bill 810 in 2013, and the work of building a functioning program began. His passion for this concept truly propelled it toward success, and his energy is still felt by many.

We would also like to thank the executive team, who gave generously of their time and effort and helped provide direction and resources to remove obstacles. Specifically, the team would like to thank Clyde Saiki, who was the executive sponsor, and the rest of the executive board, which included Travis Brouwer, Kurtis Danka, Tom Fuller, and Tom McClellan. Travis

Brouwer is the current executive sponsor, and his efforts and support are vital to continued program delivery. The team would also like to thank ODOT Government Relations Leah Horner and Joanna Robert, and ODOT Economic's Section Daniel Porter and Jack Svadlenak for their support and guidance.

The project team itself was largely responsible for successfully delivering a functional road usage charge program. It included a great team of IT professionals: Chuck Larsen, Markell Moffett, Leslie Ems-Walker, Chris Howell, Jim Leamon, Cliff Boley, Jon Reimer, and Laurie Hall. They drafted use cases, refined requirements, led certification, and managed technical architecture. Chuck and Markell were instrumental during the project, and helped the team stay focused on delivery.

The project team also had an equally talented team of business professionals that joined from throughout the agency including Jim Atkins, Jenny Erickson, April Austin-Chevrier, Carley Francis, Peter Alotta, and Michelle Godfrey. The business team developed OARs, helped write policy, drove project schedule and budget, wrote processes and procedures to administer the program, and used multiple forms of outreach to engage the public and key stakeholders. Some of these team members continue to manage ongoing operations and outreach.

The team could not have been successful without the generosity of former Director of Motor Carrier, Gregg Dal Ponte, who allowed key staff to suspend participation in other projects so they could focus on OReGO. We would also like to thank IT management, namely Kurtis Danka, Ron Winterrowd and Terry Molyneaux, who lent vital resources and suspended their own work to support the OReGO effort.

We would also like to thank the subject matter experts on the RUC steering committee. The committee consisted ODOT employees: Ron Winterrowd, Doug Kleeb, Joe Bonawitz, Sven Johnson, David Eyerly, Terry Molyneaux and Tom Fuller. Members generously gave their time and effort, and their subject matter expertise made the OReGO program better and more complete.

Insights and questions from oversight entities were vital to successful project delivery. The project had effective oversight from the Office of the State Chief Information Officer led by analyst Ed Arabas, and from the Legislative Fiscal Office, led by Sean McSpaden. We would

like to thank these two gentlemen for their keen insights and help with project delivery.

Public Knowledge LLC provided independent quality assurance services. They evaluated the project's performance, issues and risks. We would like to thank Melissa Davis, Adam Brown, Amy Pearson, and Tracy Oulman who spent many hours with everyone involved, asking tough questions and leaving no stone unturned while evaluating the project. Public Knowledge introduced us to the concept of minimum viable product to focus the project team. This was a crucial step toward the team's ability to deliver this project on such a tight timeline.

We are also grateful for the benefit of having the public relations firm PRR on board. PRR conducted surveys and developed the OReGO website and brand. Colleen Gants lead the PRR team that worked with ODOT's Tom Fuller and Michelle Godfrey to deliver the communications agenda of informing, educating, and driving acceptance of the OReGO program.

Of course, we must also thank our comrades in the trenches, the account managers Azuga, Verizon Telematics, and emovis (formerly Sanef). The deadlines and work demands were not easy, but they delivered working systems on time. We entered uncharted waters together and ran across some challenges that required close coordination. As the program evolves, we look forward to continuing the relationships we developed with them.

It goes without saying that we could not have launched, or continued to operate, without our invaluable partnership with Driver and Motor Vehicle Services Division. Tom McClellan, DMV Administrator, has been an insightful leader, providing us with support and guidance as we interfaced with his programs.

Many more hands touched OReGO's creation and implementation, including the volunteers who stepped up to join a new program and help ODOT prove that road usage charging is a feasible way for Oregon to fund the transportation system. We remain grateful for all who support the program and who help us test and refine processes so we can improve as the concept moves forward.

Kathryn Jones
Salem, OR
February 2017





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DEFINITIONS

Acronym	Definition
RUC	Road Usage Charge. A charge that is applied to every mile a driver drives.
RUFTF	Road User Fee Task Force. A legislative body that created and supported the RUC pilots and program in Oregon.
ODOT	Oregon Department of Transportation
OReGO Program	The OReGO program is the Oregon road usage charge volunteer program that was launched on July 1, 2015 and is still in operation.
OBD-II Port	Onboard Diagnostic, Generation II port, is a port that is in every vehicle that is model year 1996 and above (or 2006 for diesel vehicles). A device is self-installed into the port to collect data to administer the RUC program.
Passenger Vehicle	A passenger vehicle, also referred to as a light duty vehicle, is designed and used to transport people and has a registration weight of 10,000 pounds or less. Passenger vehicles are the only class of vehicles that are eligible to participate in the RUC program.
STSFA grant	Fixing America's Surface Transportation (FAST) Act, Surface Transportation System Funding Alternatives (STSFA), is a federal grant that was awarded to ODOT to improve its existing RUC program and system.
RUCAS	Road Usage Charge Administration System is ODOT's internal system that helps administer the OReGO program.
DMV	Driver and Motor Vehicle Services Division
EPA	Environmental Protection Agency. The RUC program uses a vehicle's combined EPA rating to calculate fuel tax credits when fuel consumption cannot be read directly from the vehicle.
DEQ	Oregon Department of Environmental Quality
DAS	Oregon Department of Administrative Services
LFO	Oregon Legislative Fiscal Office
OAM	ODOT Account Manager
CAM	Commercial Account Manager



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APPENDIX

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A. OREGO YEAR END



ONE YEAR ANNIVERSARY

Selected data from OReGO's first year of operations.
Information is from 7/1/2015 to 6/30/2016

OReGO

1,025

TOTAL ACTIVE VEHICLES PARTICIPATING

5
MILLION

TOTAL MILES DRIVEN IN OREGON

244,281
GALLONS

TOTAL FUEL CONSUMED IN OREGON

Vehicle Program MPG Counts

Under 17	255
17 to <22	358
22 and Above	412

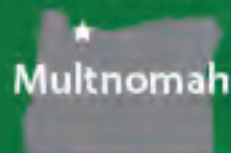
Average EPA Rating of Vehicles
23.4 MPG

TOP VEHICLES ENROLLED

Ford F-150
Toyota Prius
Subaru Outback
Toyota Tacoma
Ford F-250



COUNTY WITH MOST ENROLLMENTS



Multnomah

MOST MILES DRIVEN IN ONE WEEK

1,544



A MAJORITY OF VOLUNTEERS RATED THEIR EXPERIENCE AS GOOD OR EXCELLENT

90%

Said signing up was simple and straightforward.

90%

Installed and activated the mileage reporting device by themselves.

B. Public Knowledge Volunteer Survey 2017

Oregon Department of Transportation OReGO Program

Volunteer Satisfaction and Program Improvement Report

January 12, 2017

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1 – Executive Summary

OReGO volunteers support road usage charges

Based on feedback from volunteers via the 2016 OReGO Volunteer Satisfaction Survey, the OReGO program works well. ODOT’s OReGO program has been running successfully since July 2015. Volunteers believe OReGO is effective and are generally satisfied with the program. OReGO volunteers support the concept of a RUC. Almost half are more supportive of a RUC after participating in OReGO.

The OReGO volunteer experience is positive

Volunteers report OReGO is going well for them including signing up for the program, getting answers to questions, using the website, and installing and activating mileage reporting devices (MRDs). Volunteers are satisfied with their experience, and satisfied with their interactions with OReGO and account manager staff. Most volunteers are not having issues with their MRDs and those who do have issues get the help they need.

Volunteers worry about rural drivers paying too much and out of state drivers not paying enough

Volunteers generally believe road usage charging is fair and prefer it to other funding means. However, they do indicate that the greatest potential drawbacks to a RUC are penalizing rural drivers who may drive longer distances, tracking out of state drivers that use Oregon roads, and penalizing fuel-efficient vehicles.

Volunteers want more communication, data, automation, and integration

OReGO volunteers are not very concerned with privacy. Almost half indicate they are not concerned at all, while 14% do view privacy concerns as a drawback to the program.

Volunteers do recommend some improvements for OReGO. They suggest increasing public awareness about road usage charging and current per gallon fuel taxes. They recommend increased communication about the OReGO program overall, additional detail on their account statements, more data availability through the online “dashboard” and smart phone “apps”, and in new ways too. They request an option to pay their RUC automatically and integration with insurance companies that also use MRDs.

Additional details can be found below in this report.

2 – Introduction

OReGO is a volunteer-based road usage charge (RUC) revenue program within the Oregon Department of Transportation (ODOT), in which participants pay 1.5 cents per mile driven on public roads. States across the nation are facing decreasing revenue from fuel taxes and increasing construction costs. As vehicles become more efficient, less revenue is generated through a fuels tax for road and bridge construction and maintenance. In Oregon, lawmakers have taken steps to explore an innovative RUC funding model to augment declining resources collected through the current fuels tax funding model. Under the RUC model, charges are based on the number of miles a vehicle is driven rather than the number of gallons of fuel purchased. OReGO launched as an operational RUC program on July 1, 2015 for up to 5,000 vehicles.

More than 1,200 vehicles are currently or have previously participated in the OReGO program. Founding legislation (SB 810) limited the number of program vehicles to a maximum of 5,000. This report is an independent assessment of OReGO program effectiveness from the volunteer perspective, an evaluation of volunteer satisfaction, and includes proposed opportunities for program improvement.

2.1 Summary

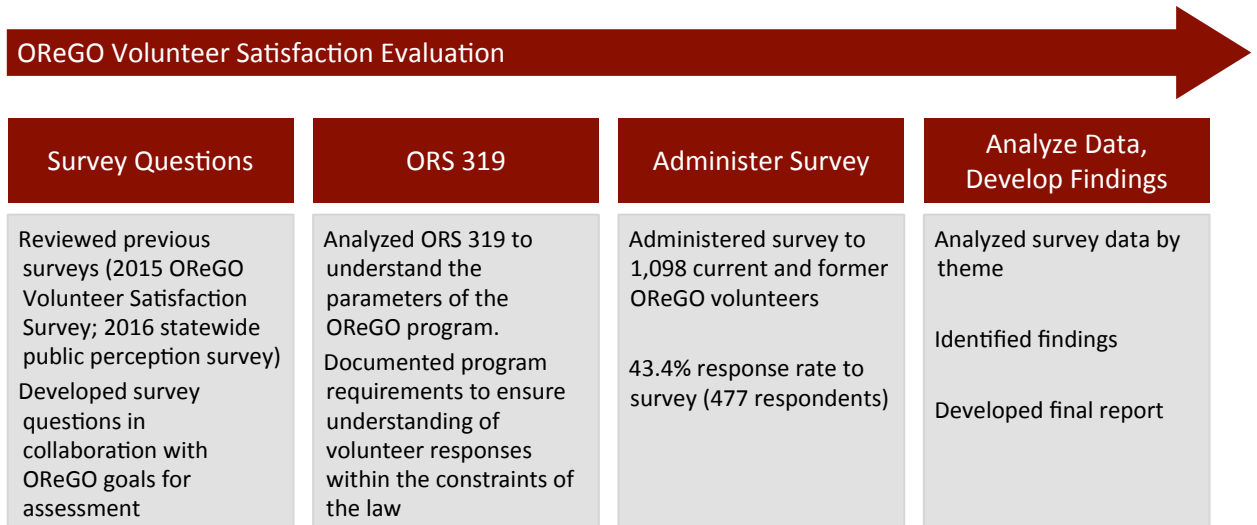
The majority of OReGO Volunteer Satisfaction Survey respondents support the concept of a RUC, and report that OReGO is running smoothly. They do recommend OReGO consider improvements including increasing public awareness and increasing communication. Communication recommendations include increasing communication, improving communication, and adding new communication features on topics such as the program overall, volunteer account statements, and volunteer driving habits or statistics.

2.2 Evaluation Approach & Methodology

This report is one of a two-part independent evaluation effort conducted by Public Knowledge, LLC, (PK) to assess the effectiveness of the OReGO program after 18 months of operation. Its counterpart is an evaluation of Account Manager satisfaction and perspectives. Both efforts were undertaken in December 2016.

The approach to the Volunteer Satisfaction Report is summarized in the graphic below.

Figure 2.1 OReGO Evaluation Methodology: Volunteer Satisfaction



Surveys

PK developed the 2016 OReGO Volunteer Satisfaction Survey to gather volunteer opinions, perspectives, and suggestions for improving the OReGO program. The 2016 OReGO Volunteer Satisfaction Survey includes questions that overlapped questions from prior OReGO related surveys, including:

- October 2015 - OReGO Volunteer Satisfaction Survey** developed by PK during a previous engagement.
- June 2016 - Statewide Survey Mid-Pilot Update**, a public perception survey completed by contractor PRR. This survey asked a sample of Oregonians (not necessarily OReGO volunteers) their opinions and awareness of RUC. We refer to this survey as the “2016 statewide public perception survey” throughout this report.

Some overlapping questions were included in the 2016 OReGO Volunteer Satisfaction Survey to facilitate a comparison of responses between the general public and OReGO volunteers. ODOT is interested in comparing how OReGO volunteer perspectives may have changed over time, and how volunteer perspectives about a RUC compare to non-volunteers’ perspectives. To that end, this report compares some results of PK’s 2016

OReGO Volunteer Satisfaction survey to questions from the other two surveys. The 2016 survey questions and results can be found Section 5 of this report.

The 2016 OReGO Volunteer Satisfaction survey was distributed to 1,098 current and former OReGO volunteers. The survey response rate was 43.4%, with 477 volunteers participating in the survey.

43.4% of survey recipients responded

3 – Key Findings

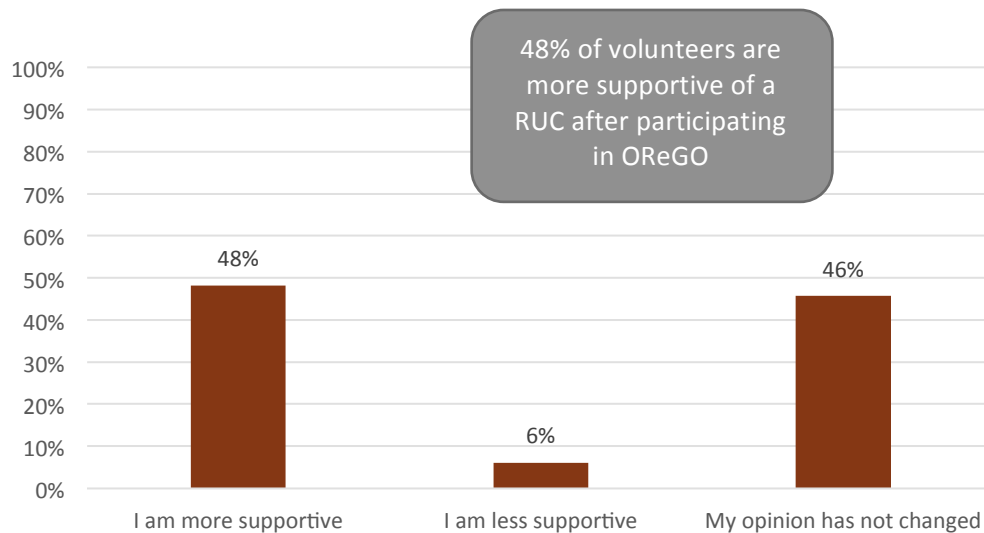
Key findings from analysis of the 2016 OReGO Volunteer Satisfaction Survey results are presented in this section. Where applicable, results are compared with the 2015 OReGO Volunteer Satisfaction Survey and the 2016 statewide public perception survey. Survey questions and responses can be found in Section 5 of this report.¹

3.1 Volunteer Satisfaction Findings

Concept

Participation in OReGO increased volunteers’ support for a RUC (paying per mile driven) to fund the costs of building and maintaining Oregon’s roads and bridges. The majority (69%) of volunteer survey respondents support the concept of a RUC (paying per mile driven), compared to less than a third (31%) of those responding to the statewide public perception survey. After having participated in OReGO, almost half (48%) of respondents are more supportive of a RUC than before they volunteered (see Figure 3.1).

Figure 3.1 - Survey Question 24: How has your participation in OReGO impacted your level of support for a road usage charge?



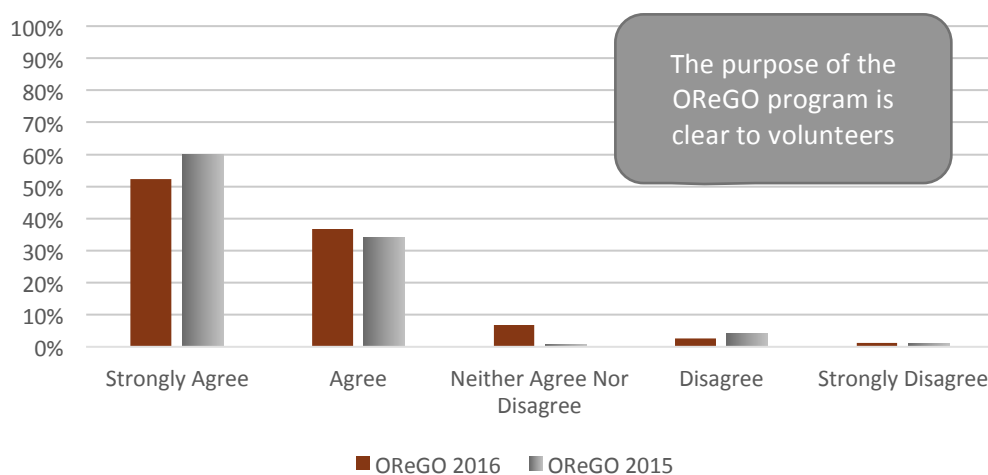
¹ In the graph legends throughout this report, “OReGO 2016” means 2016 OReGO Volunteer Survey Respondents, “OReGO 2015” means 2015 OReGO Volunteer Survey Respondents, and “Statewide Public Perception Survey Respondents” means respondents of the June 2016 public perception survey.

However, while there is overall support for the concept, several respondents did not think RUC alone would solve all transportation funding challenges. Some respondents noted that “there is no single fix.” Others thought that the mileage reporting devices (MRDs) were susceptible to tampering and worried that if the program were expanded, people would cheat the system.

Program

Respondents to the 2016 OReGO Volunteer Satisfaction Survey generally agree that most aspects of the program are going well, consistent with the 2015 survey. Respondents noted the following aspects of the program as positive: signing up for the program, getting answers to questions, using the website, and installing and activating their MRDs. Virtually all respondents to the 2016 survey (96%) are largely satisfied with their experience as a volunteer, and about the same portion are satisfied with their interactions with OReGO and account manager (AM) staff. The majority (62%) of volunteer survey respondents use the online dashboard feature and find it useful. Overall, there are few issues with MRDs. Those who do have issues get the help they need. The purpose of OReGO and a RUC is clear to volunteers, and there is little difference between results of the 2015 and 2016 surveys (see Figure 3.2).

Figure 3.2 - Survey Question 7: It was clear that the purpose of the OReGO program is to provide a method to fund the ongoing maintenance of Oregon’s roads and bridges.



Concerns

Volunteer survey respondents did raise concerns, including how the state would track and collect revenue from out of state drivers should a RUC be implemented statewide, whether RUC was fair to rural drivers, privacy, and others. These concerns are discussed in greater detail in Section 3.2 below.

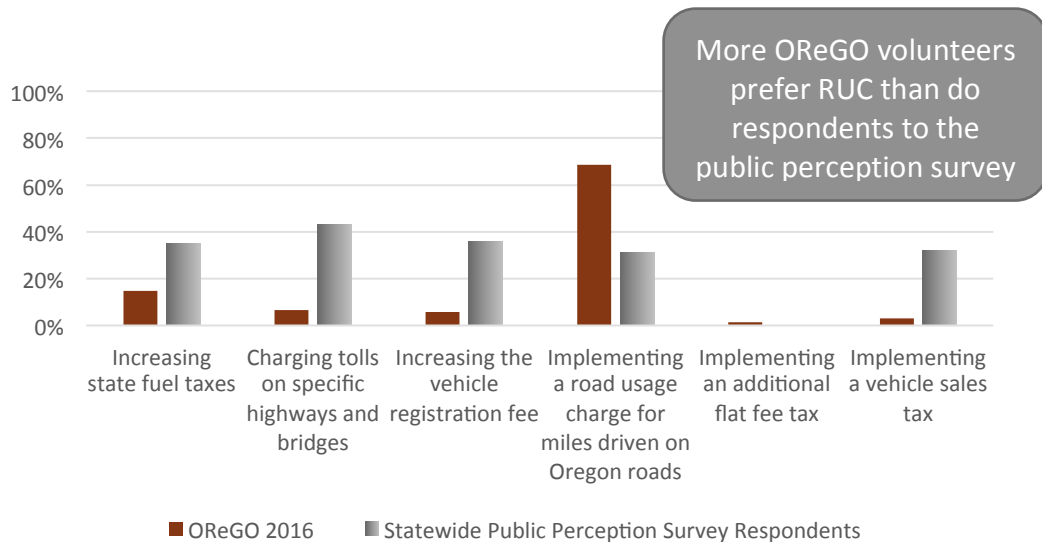
3.2 Perspectives on OReGO: Volunteers and General Public

PK analyzed the results of this 2016 OReGO Volunteer Satisfaction Survey and compared them to results of the statewide public perception survey conducted in June 2016. Notable differences in results between people responding to the volunteer survey and those responding to the public perception survey are described below.

Support and fairness – Compared to the general public, a higher percentage of OReGO volunteers believe that a RUC is a fair way to fund transportation in Oregon. One third of respondents to the public perception survey think a RUC is “unfair” versus only 8% of OReGO volunteer survey respondents.

Participation in OReGO may increase people’s support for RUC over other sources of transportation funding. Compared to other options, a majority (69%) of OReGO volunteer survey respondents prefer a RUC over other potential sources of transportation funding. Respondents to the statewide public perception survey preferred tolls, increased vehicle registration fees, increased fuel taxes, and a vehicle sales tax over a RUC. (See Figure 3.3.)

Figure 3.3 – Survey Question 2: Which of these options do you support most as a way to ensure adequate funding for transportation system maintenance in Oregon?



Drawbacks – Respondents to the OReGO volunteer survey and those responding to the

[The State] “would have to find a way to charge out of state vehicles using Oregon roads”

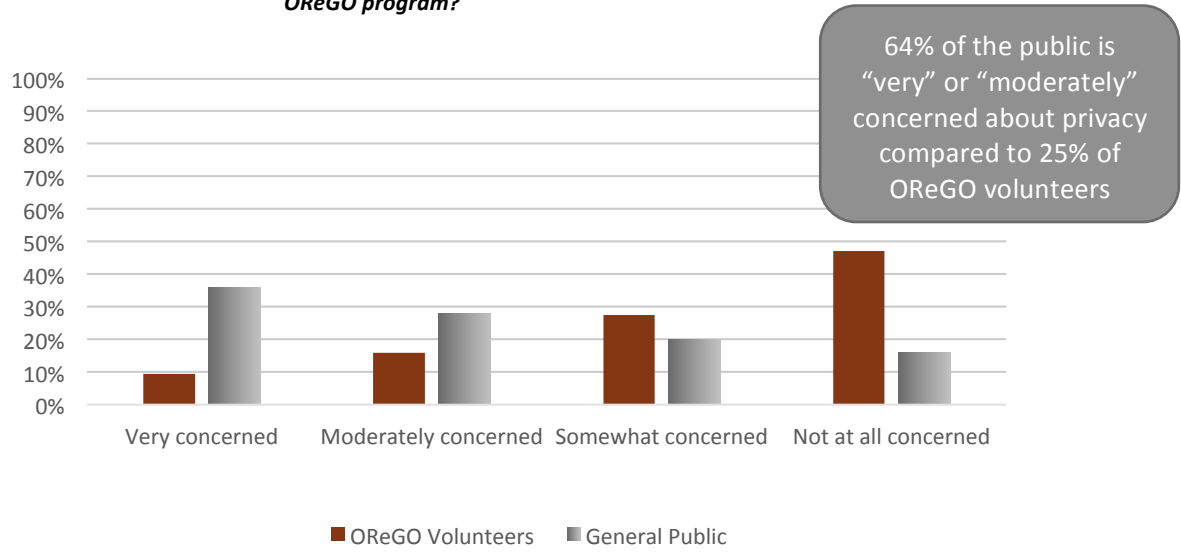
-OReGO Volunteer

statewide public perception survey agree that the two greatest potential drawbacks to a RUC are penalizing rural drivers who drive longer distances, and tracking out of state drivers that use Oregon roads. Volunteer respondents were also concerned about penalizing drivers of fuel-efficient vehicles, while the respondents to the public perception survey also expressed concern that RUC was

just another way to tax people more.

Privacy concerns – OReGO volunteers who responded to the survey are not overly concerned with privacy, while those responding to the statewide public perception survey are more concerned. Almost half of those responding to the OReGO volunteer survey (47%) indicate they are “not at all concerned,” while less than 10% report being “very concerned” (see Figure 3.4). The majority of general public respondents indicate that they are very or moderately concerned about privacy, but only 17% of them cited it as a significant drawback to road usage charging. Only a small percentage (14%) of volunteer respondents viewed privacy concerns as a drawback to the program.

Figure 3.4 – Survey Question 5: *How concerned are you about privacy and the security of data collected by OReGO program?*



4 – Improvements

In addition to volunteer survey respondents reporting many aspects of OReGO going well, potential areas for improvement were also identified. These areas are explained below.

Increase public awareness

Participants highlighted the lack of public awareness, understanding, and support of a RUC as an opportunity for improvement. This was also apparent in the general public (non-volunteer) survey. OReGO volunteers want to see ODOT conduct education and outreach about the benefits of RUC to the public and to allay concerns about potential drawbacks, such as an impact on rural drivers or penalizing

“The public needs to better understand the consequences of staying with the current funding model and the benefits of the OReGO model.”

-OReGO Volunteer

fuel efficient vehicles. For example, if studies have been done to examine the impacts of a RUC on rural drivers, communicate the results. If impacts will be perceived as negative, educate Oregonians about ways to reduce, eliminate, or mitigate the negative impacts.

Additional education about RUC and fuel taxes may improve the public perception about RUC fairness. Such messages could highlight whether all road user fees are earmarked for transportation maintenance and construction projects. Messaging could include how the fee structure would affect various types of vehicles. As one volunteer noted, “The public needs to better understand the consequences of staying with the current funding model and the benefits of the OReGO model.”

Increase communication

Survey respondents want to see more communication and better, clearer communication from ODOT and AMs in several areas:

- **Overall program information** – Several respondents indicated that they wanted to know how the OReGO program is going, where the program is going, and would appreciate a monthly summary of program information. In addition, some respondents expressed confusion over who their payments were to and whether they

were paying road usage fees to AMs or ODOT. ODOT may want to consider sending OReGO participants a monthly or quarterly email with the number of participants, revenue generated, revenue generated in comparison to the gas tax, and other pertinent data points for volunteers. Including an easy way to unsubscribe could help avoid overwhelming any volunteers that aren't interested in the additional information.

- **Account summaries** – Some volunteers indicate they want more information on their account summaries. Respondents have interest in additional data, such as access to older data and the ability to run reports about their driving history, as well as information on how their bill or credit is calculated. ODOT may want to review what information is available on this topic, whether volunteers have adequate access to it, whether volunteers know it is available to them, and whether more is needed.
- **Dashboard and smartphone app functionality** – Volunteers suggest adding features to the dashboard and smartphone app such as the ability to view the number of miles driven during a certain time period and options to view and download older data.

“I would like the dashboard to tell me total miles driven per selected time period”

-OReGO Volunteer
- **Additional communication features** – Respondents suggest several additional communications features to enhance their experience. Examples include an option to receive emails highlighting bad driving habits and how driving habits impact participants' costs, and an option for volunteers to report when a vehicle will be out of service due to a car crash or vacation, in order to prevent the AM from thinking the MRD had been unplugged.

Change dashboard time zone

Some respondents noted that trip summaries and account information on their dashboard is recorded in Greenwich Mean Time (GMT) rather than Oregon's local Pacific Time, which made it difficult to check the accuracy of trips taken and other information.

Integrate with insurance companies

Several respondents want to see OReGO interact or integrate with their auto insurance companies, which are using MRDs to track mileage and driving habits. The MRDs use the same data port, making participation in both programs difficult. Although the statutes protect volunteer data and privacy, ORS 319.915(F) allows ODOT to share personal information with entities approved to receive the information by the vehicle owner or lessee. This could allow ODOT to partner with insurance companies for those volunteers who would like that option.

Automate payments

Several respondents want the ability to set up automatic debit or credit card payments with their AM so they don't have to make regular manual payments.

"I don't want to have to deal with writing occasional checks (or cashing them)"

-OReGO Volunteer

Add congestion pricing

Some respondents suggested creating a congestion surcharge to the fee-per-mile rate for driving during peak hours on specific highways. Congestion pricing is not currently allowed under ORS 319.885, which sets the metered road usage charge at 1.5 cents per mile. However, this is something ODOT or legislators may want to consider in the future.

Additional potential opportunities for improvement came out of feedback on specific topics in the survey. These include:

- **Mileage Reporting Devices** – A small number of respondents indicate they had issues with MRDs draining their car battery. From the survey data it is not possible to confirm this issue or determine how common it was. If ODOT has not done so already, it may want to confirm the issue, determine how common the issue may be, identify a solution, and educate volunteers about the fix.
- **GPS-enabled MRDs** – Many volunteers appear not to remember whether their MRD is GPS enabled, care whether their MRD is GPS enabled, or understand the difference between GPS and non-GPS options. Forty-one percent of respondents

indicated that either GPS functionality did not factor into their decision-making or they didn't recall which type of MRD they chose. Some respondents who provided optional comments to the question appeared to interpret GPS as "navigation system" rather than "MRD with location based functionality". ODOT may want to explore educating or reminding volunteers about the types of MRDs and explore using a term other than GPS, such as "location enabled."

"Don't remember what I'm using" [GPS or non-GPS]

"Unsure what the GPS option is"

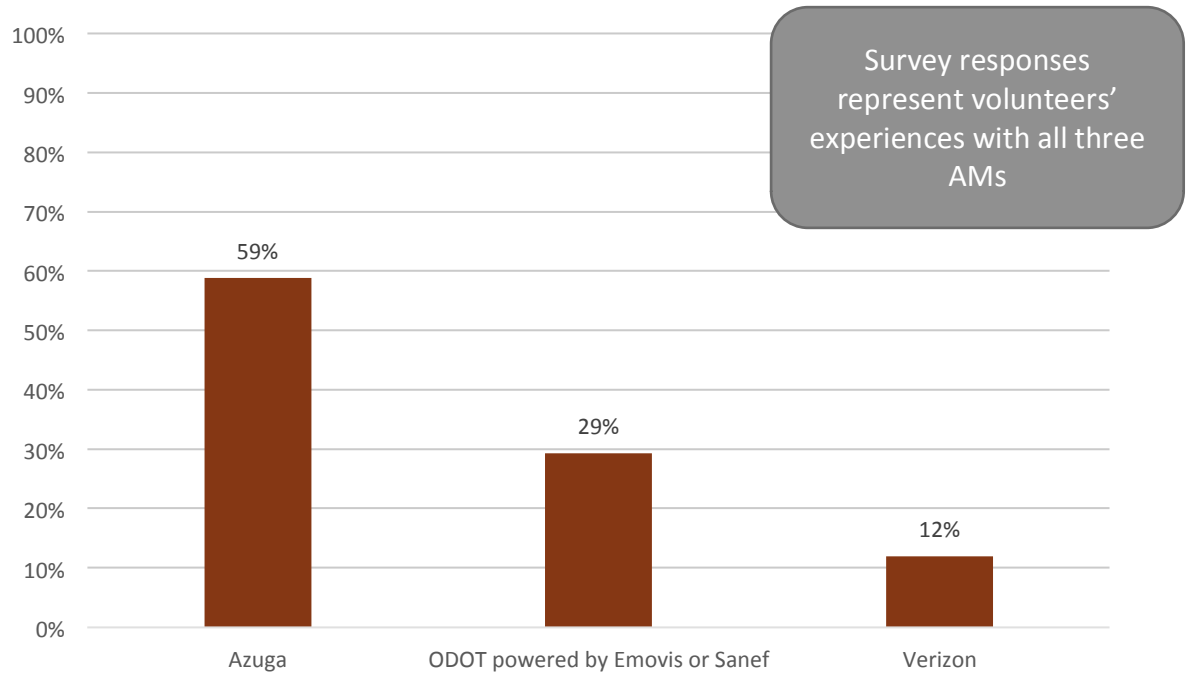
-OReGO Volunteers

5 – Survey Results

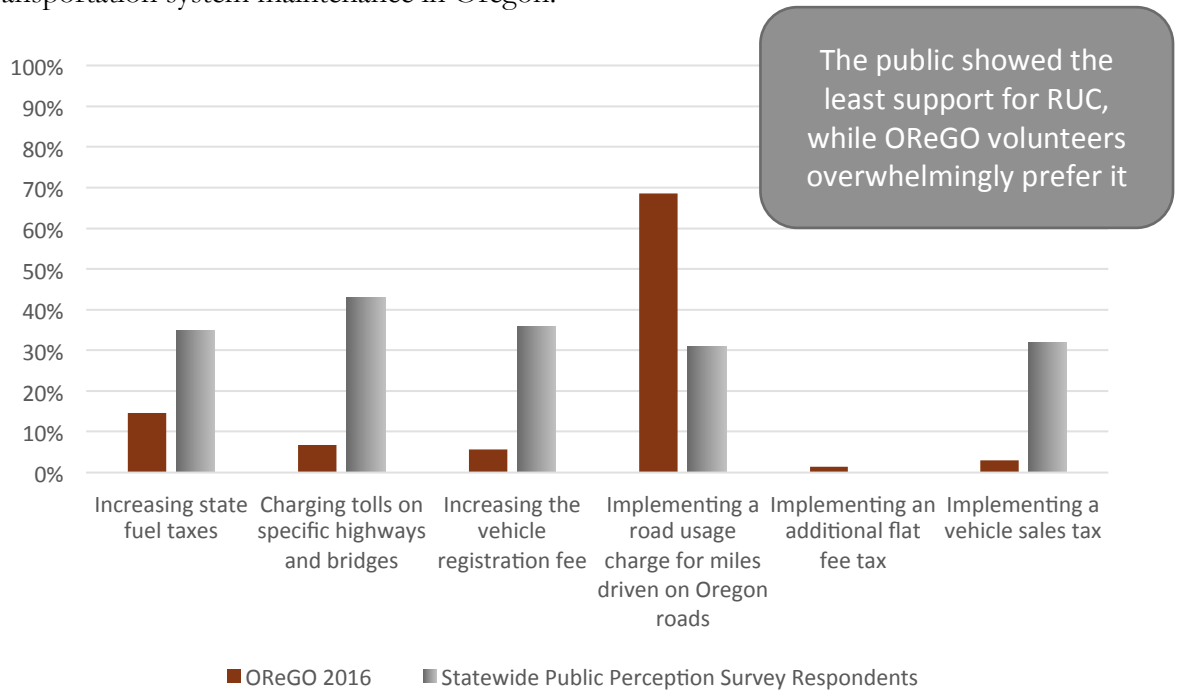
The December 2016 Volunteer Satisfaction survey was sent to 1,098 current and former OReGO volunteers. There were 477 responses for a response rate of 43.4%. The results of the survey are included in the following pages. Questions 2, 4, 5, and 6 are compared to the statewide public perception survey from June 2016, which asked a demographically representative sample of Oregonians (not necessarily OReGO volunteers) their opinions and awareness of RUC. This allows OReGO volunteer opinions to be compared to the opinions of Oregonians in general. Questions 7-18 are compared to the 2015 OReGO Volunteer Satisfaction survey conducted by PK. This provides a way to see how volunteer opinions may have changed over time. The remaining questions were unique to this December 2016 OReGO Volunteer Satisfaction survey.²

² In the graph legends, “OReGO 2016” means 2016 OReGO Volunteer Survey Respondents, “OReGO 2015” means 2015 OReGO Volunteer Survey Respondents, and “Statewide Public Perception Survey Respondents” means respondents of the June 2016 public perception survey.

1. Your responses in this survey are based primarily on your experience with which Account Manager?

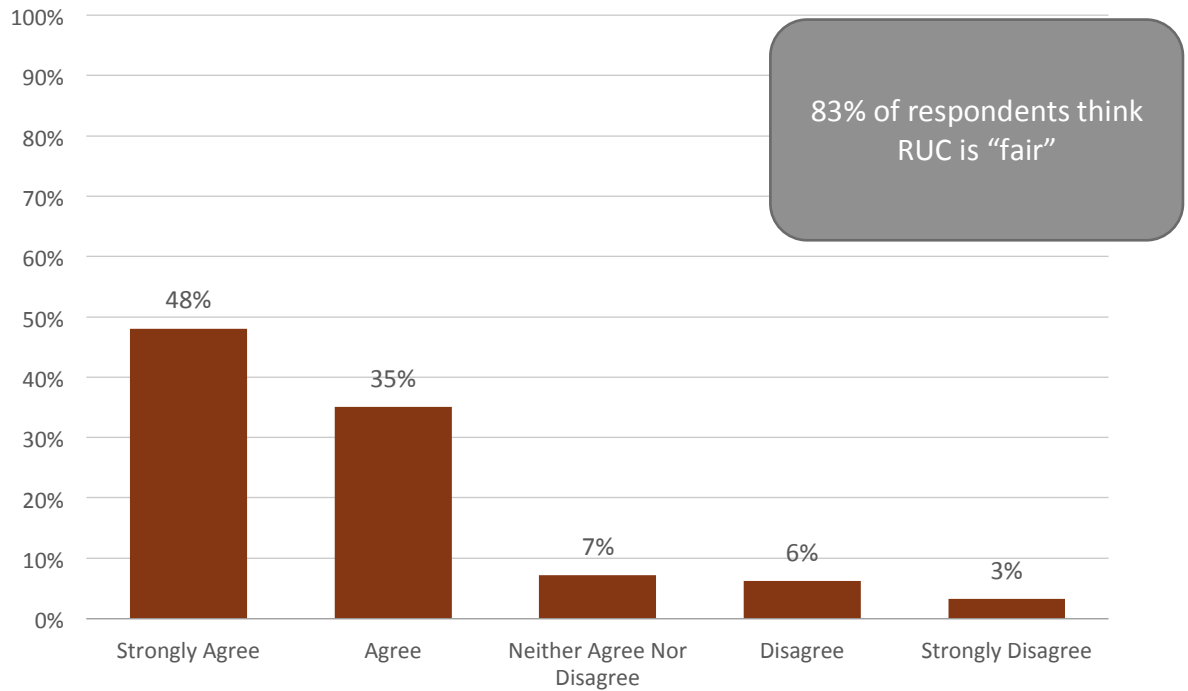


2. Which of these options do you support most as a way to ensure adequate funding for transportation system maintenance in Oregon?³

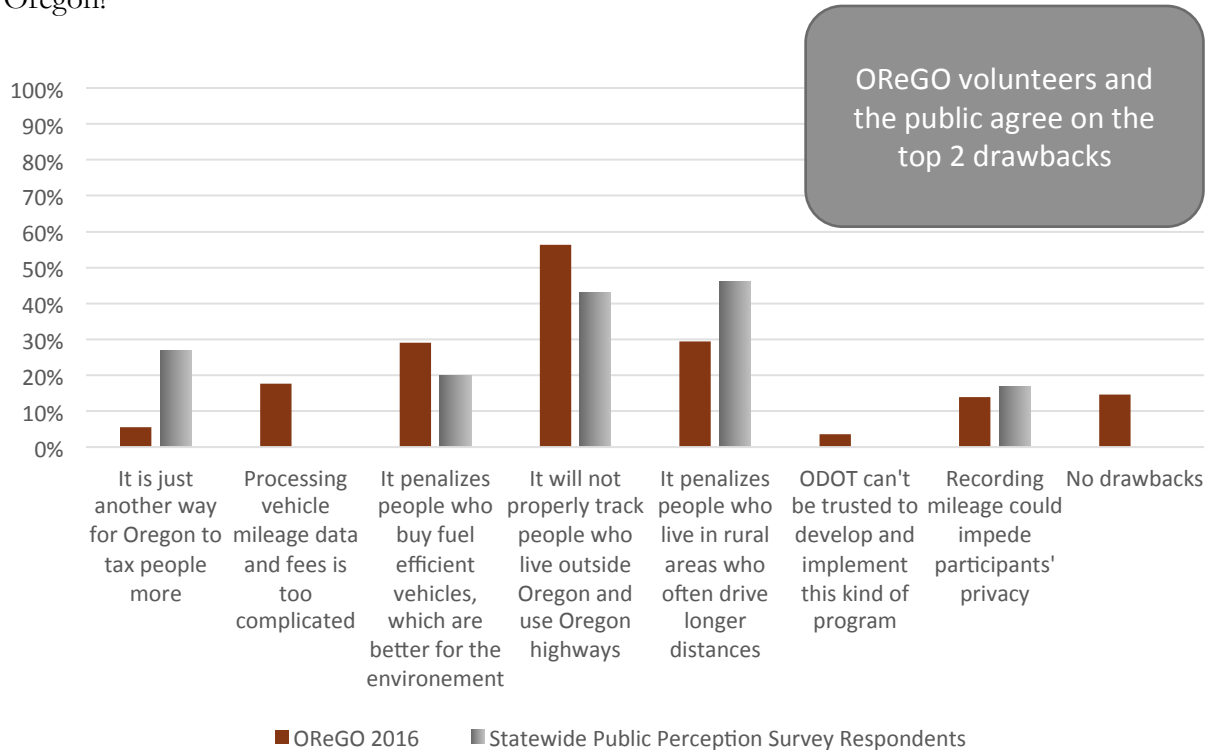


³ 2016 statewide public perception survey asked "What is your level of support for each of the following ways Oregon can increase funding for transportation improvements?" It allowed for multiple answers, resulting in answers totaling more than 100%.

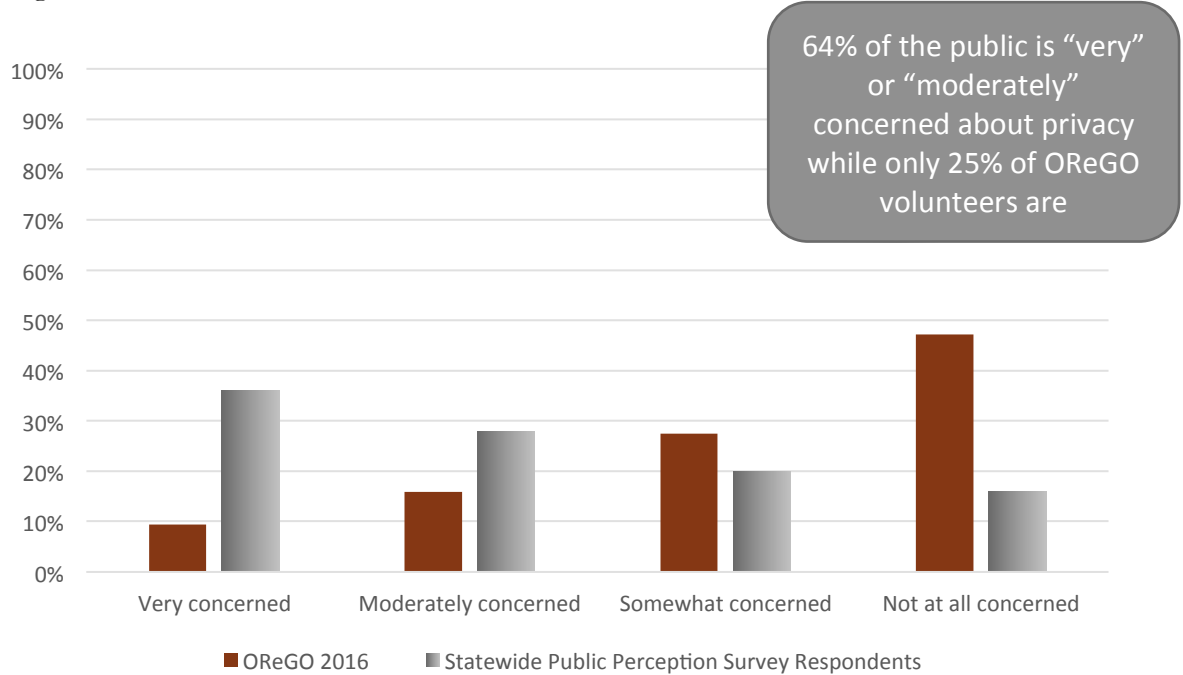
3. Funding Oregon’s transportation system with a mileage based road usage charge is a “fair” funding method.



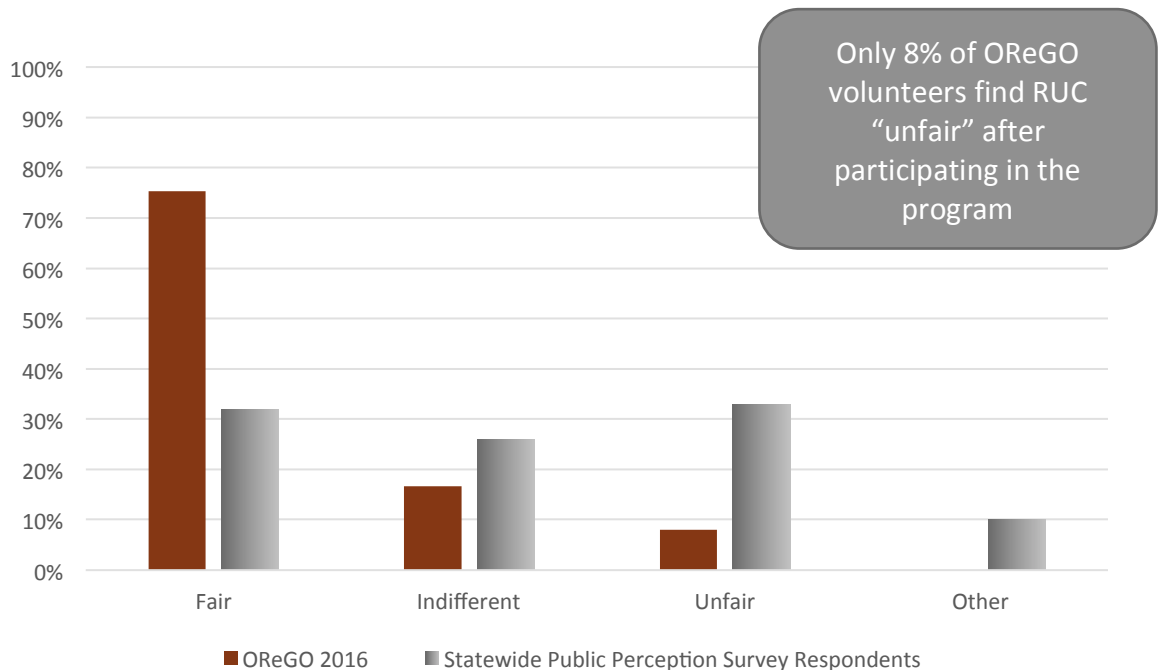
4. What do you think are the TOP TWO drawbacks (if any) to a road usage program in Oregon?



5. How concerned are you about privacy and the security of data collected by the OReGO program?

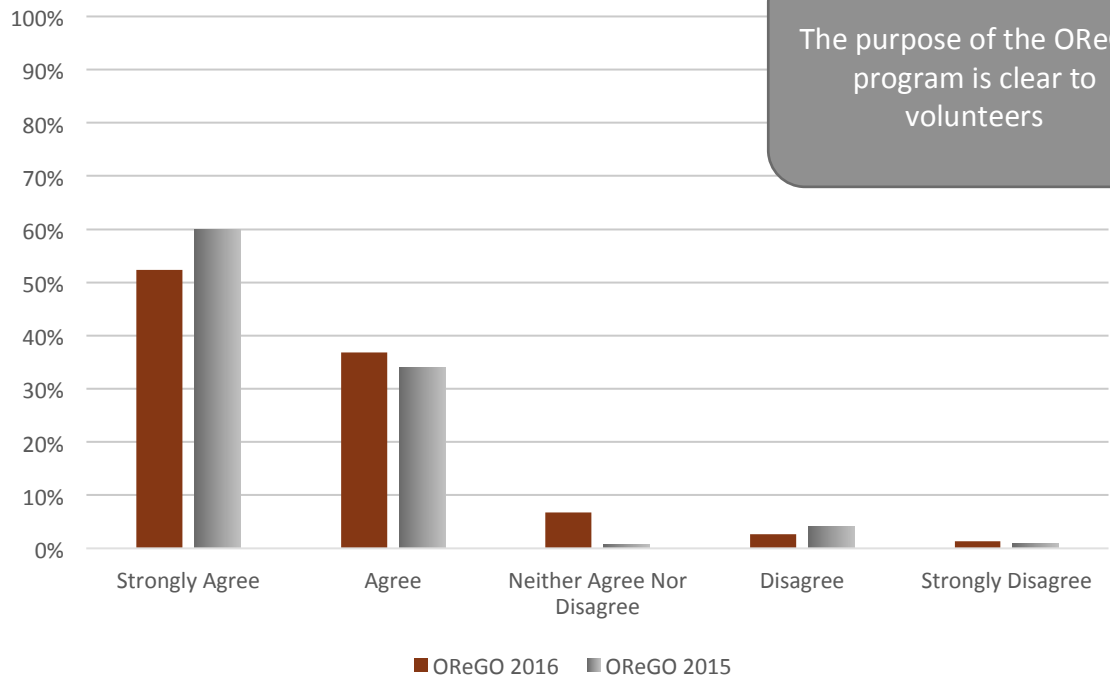


6. Now that you have participated in road usage charging, which statement about road usage charging in Oregon is closest to your point of view:⁴

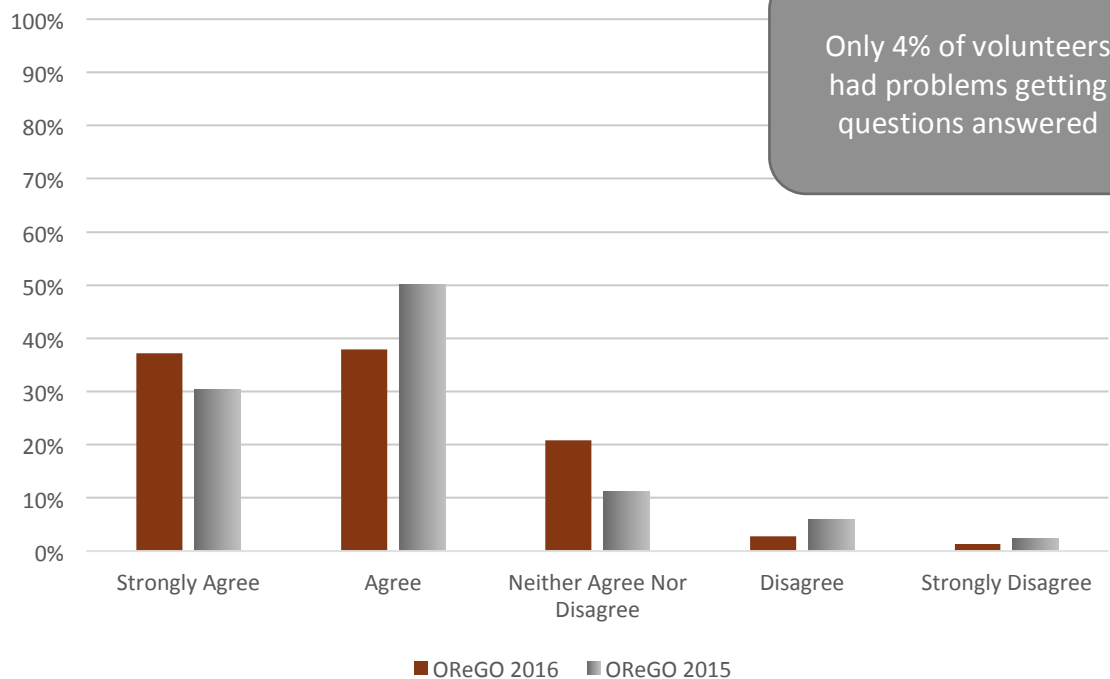


⁴ The 2016 statewide public perception survey asked, "Which ONE statement comes closest to your point of view about road usage charging?" with the same options as this survey: Road usage charging seems like a fair way to fund transportation improvements in Oregon (Fair), I am indifferent about road usage charging (Indifferent), Road usage charging seems like an unfair way to fund transportation system improvements in Oregon (Unfair).

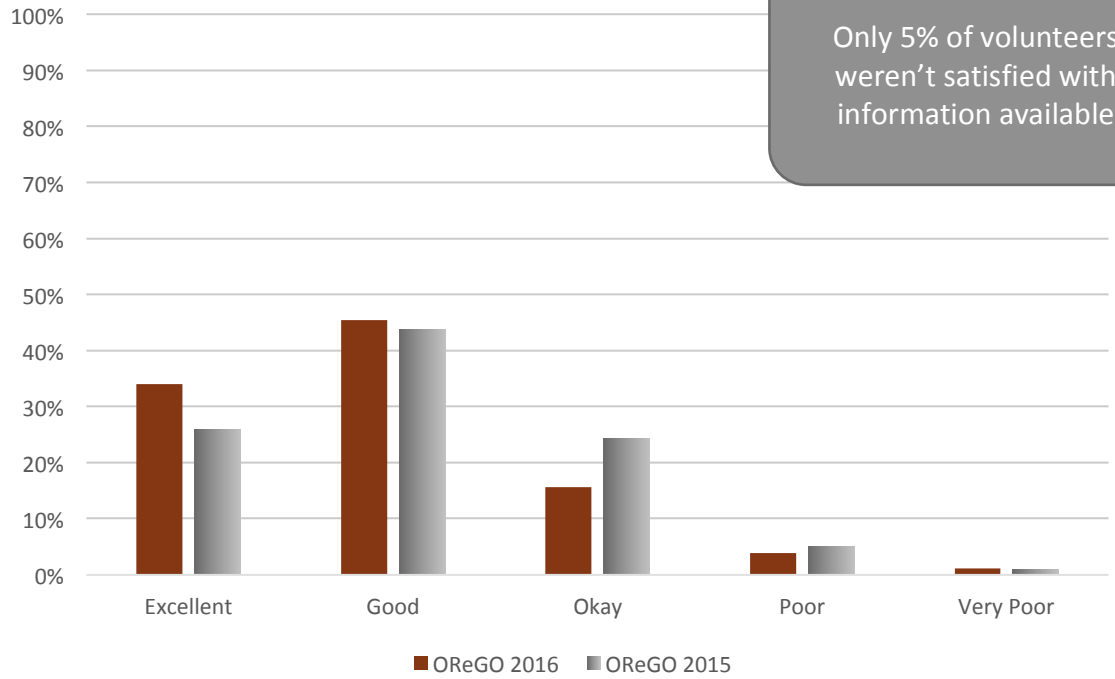
7. It was clear that the purpose of the OReGO program is to provide a method to fund the ongoing maintenance of Oregon's roads and bridges.



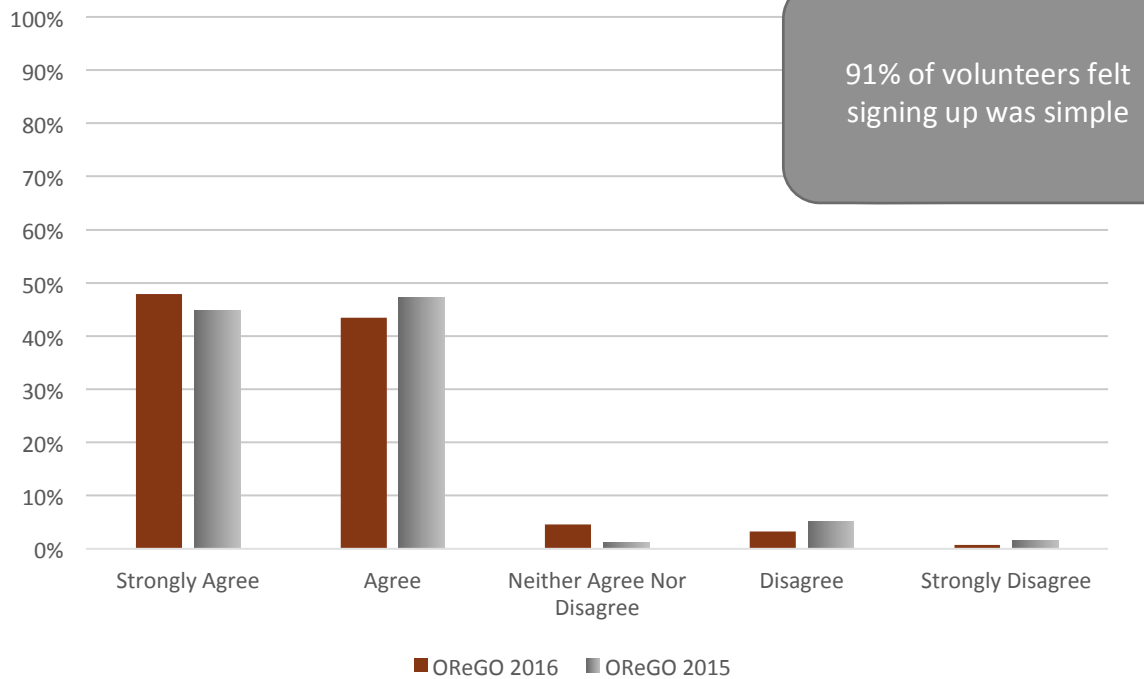
8. I was able to get clear answers to any questions I had about OReGO.



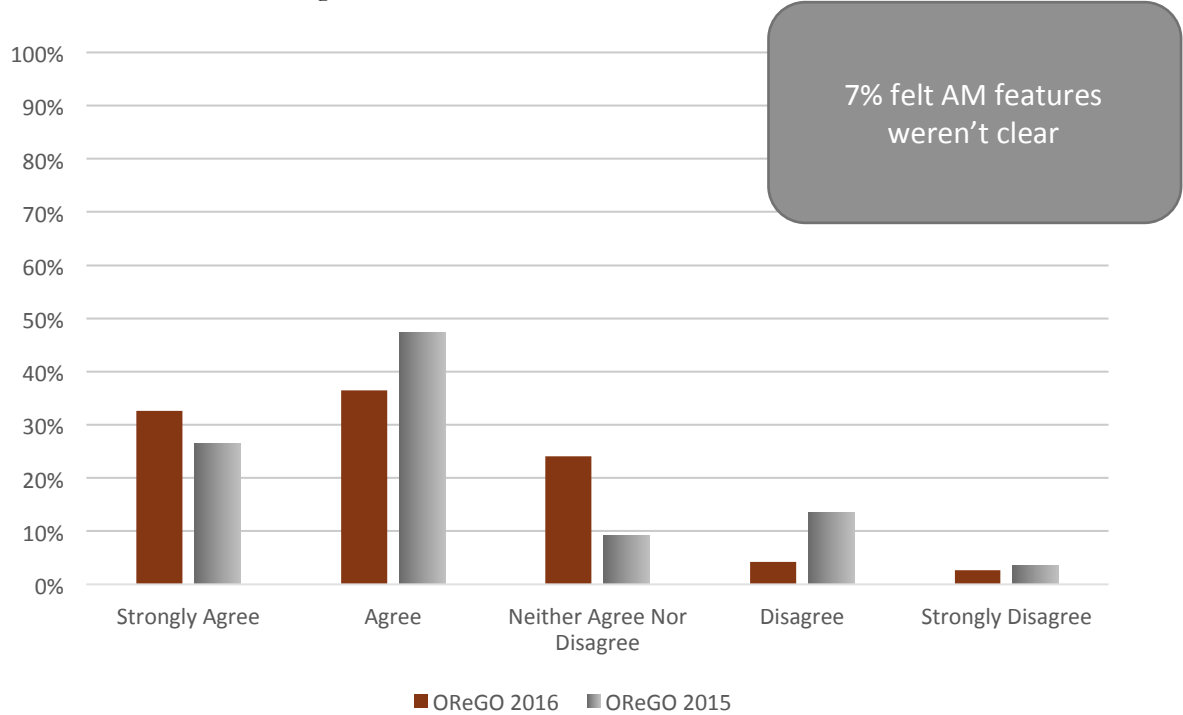
9. Overall, how would you rate the usefulness of information made available to you about the registration process before you registered?



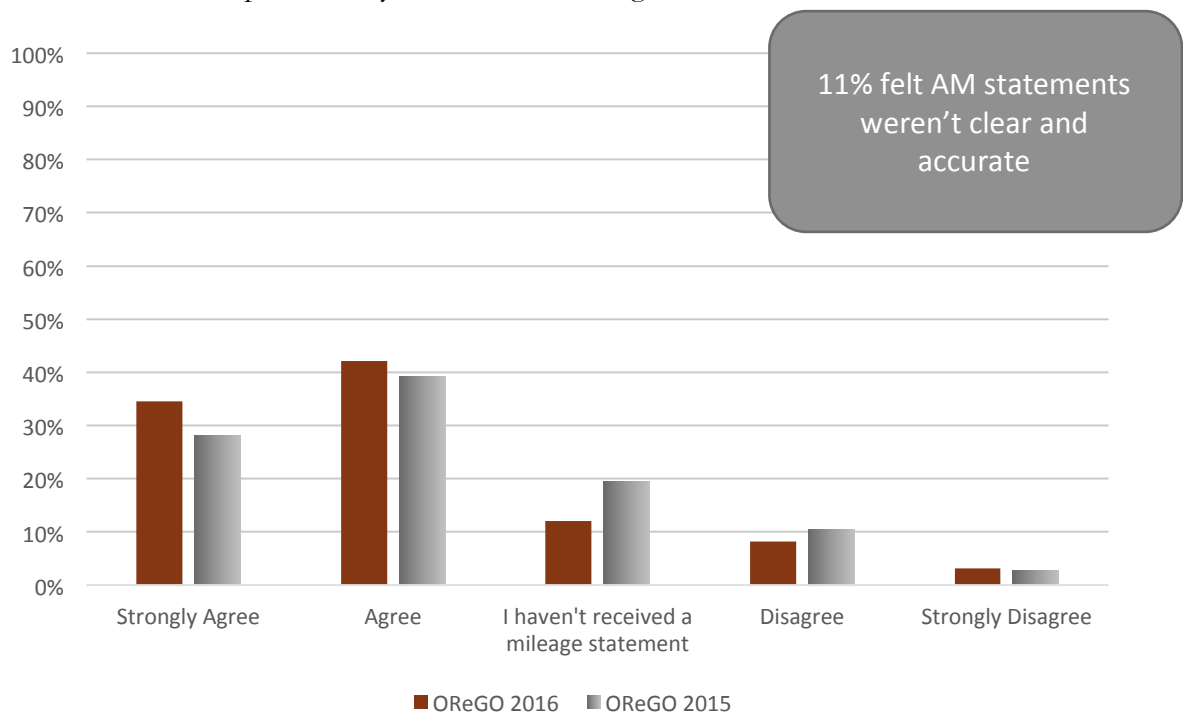
10. Signing up to be an OReGO volunteer was a simple and straightforward process.



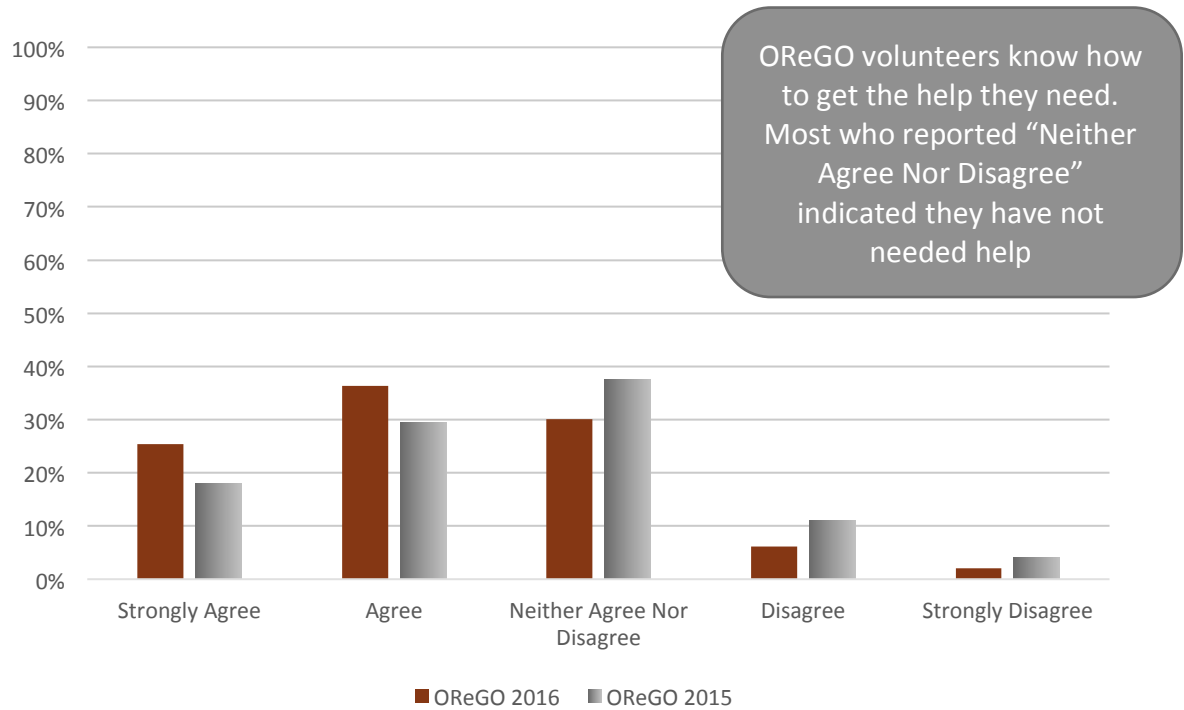
11. The features and benefits offered by each Account Manager were clear to me before I selected an Account Manager.



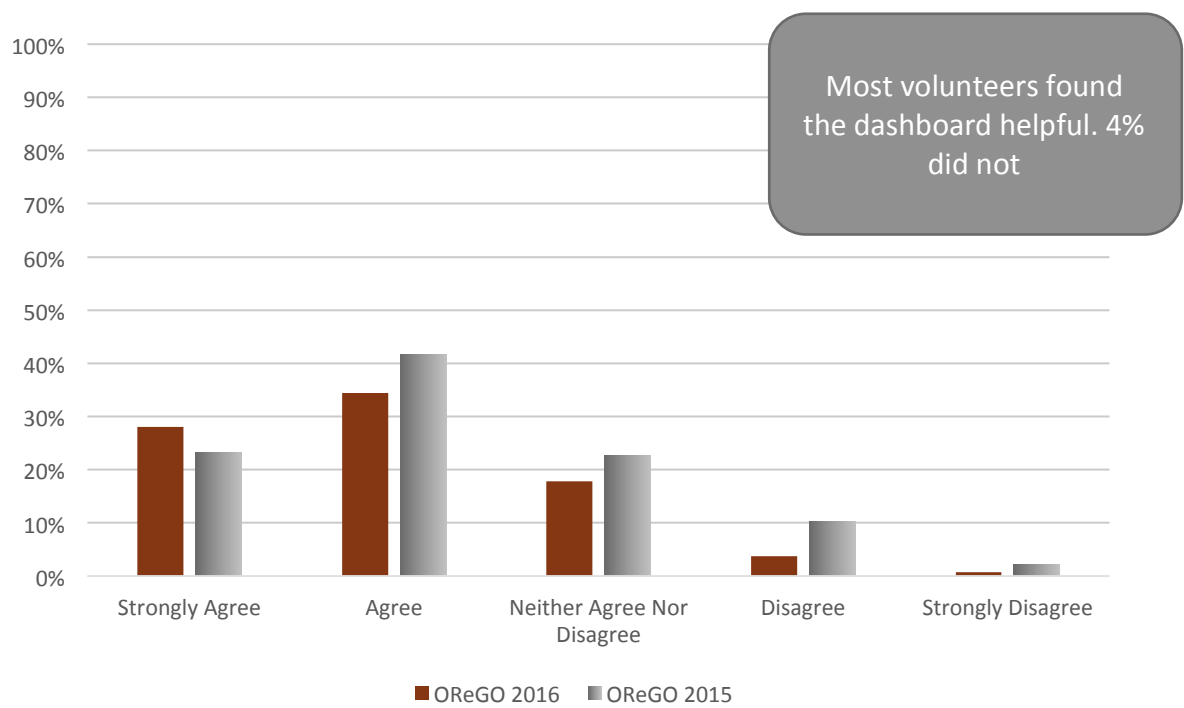
12. Account statements provided by the Account Manager were clear and accurate.



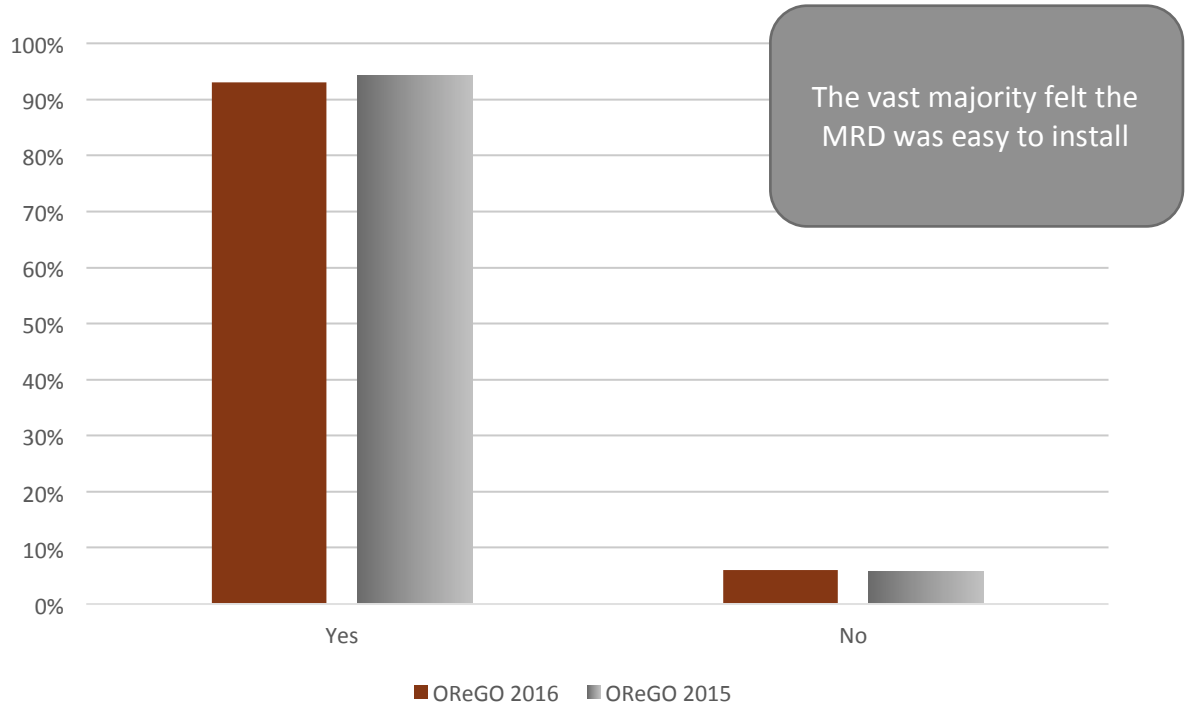
13. If I had questions about a statement or invoice, it was clear to me how to get help.



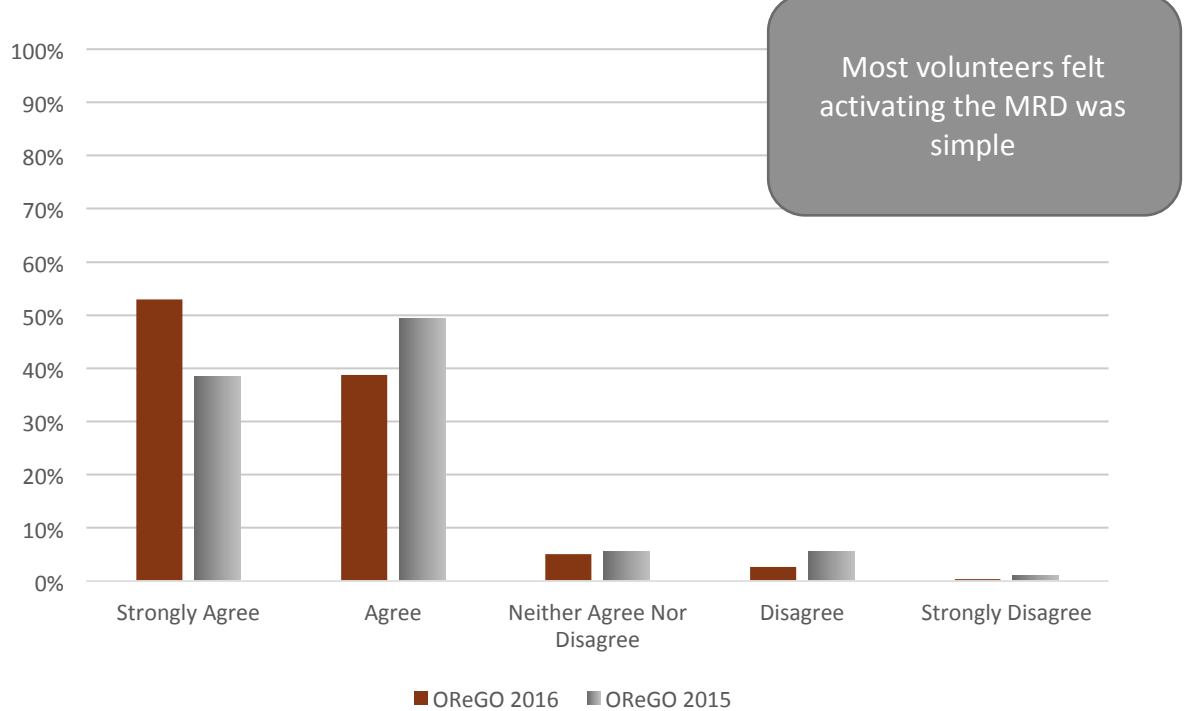
14. I found the online dashboard to be helpful as I monitored my account.



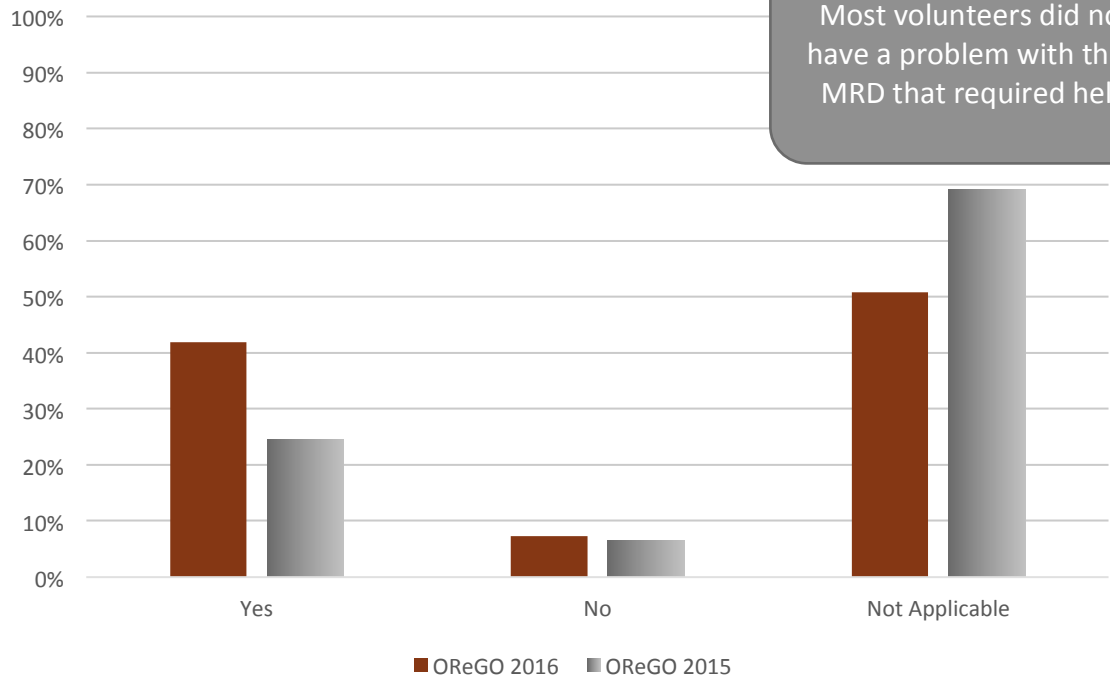
15. I was able to easily install my mileage reporting device (MRD) on my own.



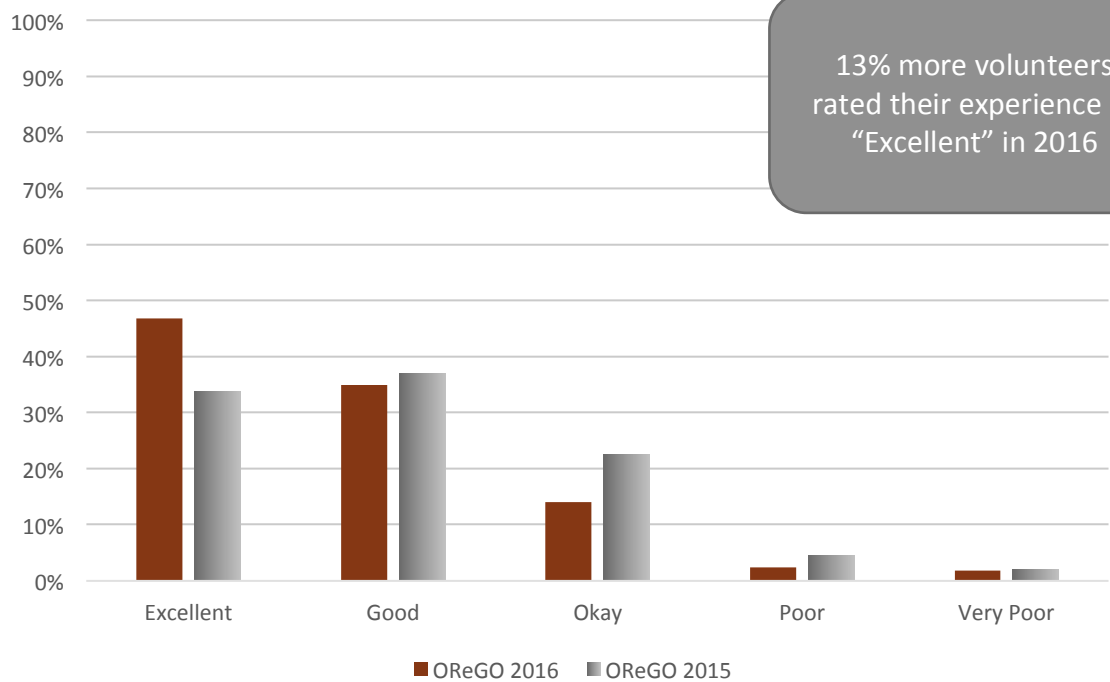
16. Activating my MRD was simple and straightforward.



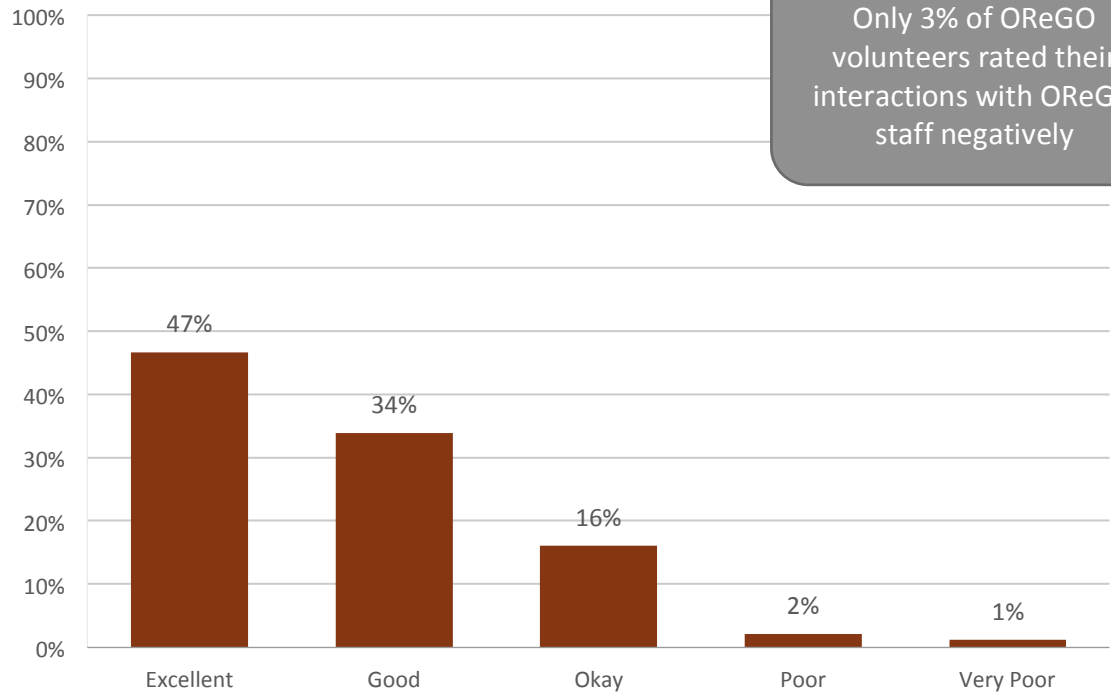
17. If needed, were you able to quickly get help to resolve any problems that you encountered with your MRD?



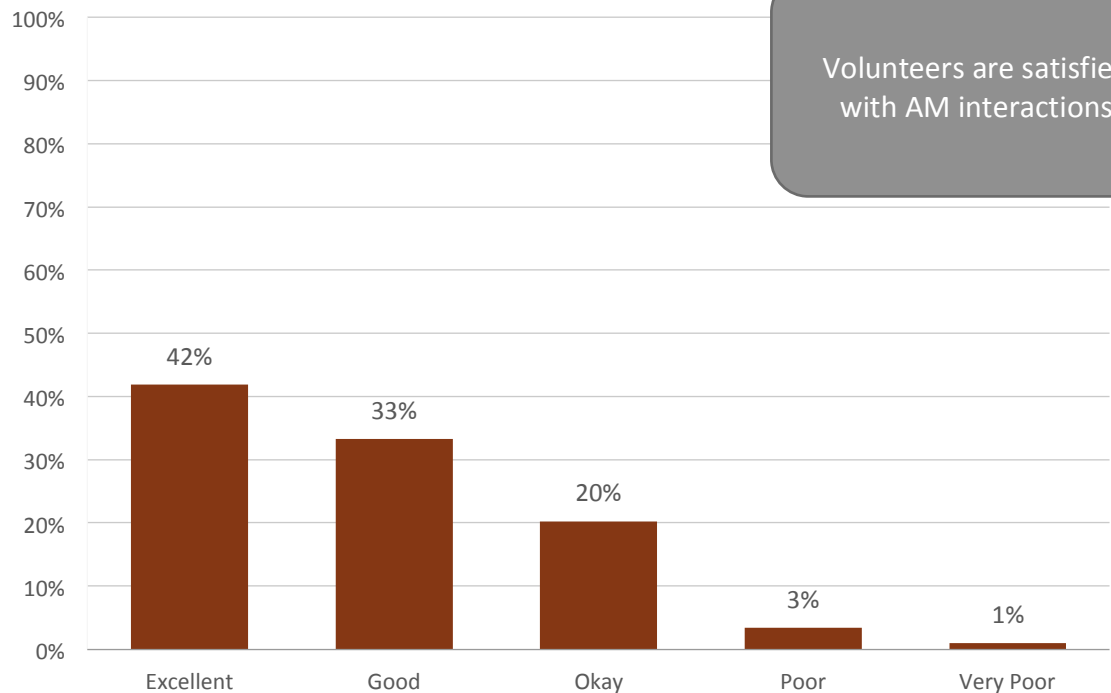
18. How would you rate your experience as an OReGO Volunteer?



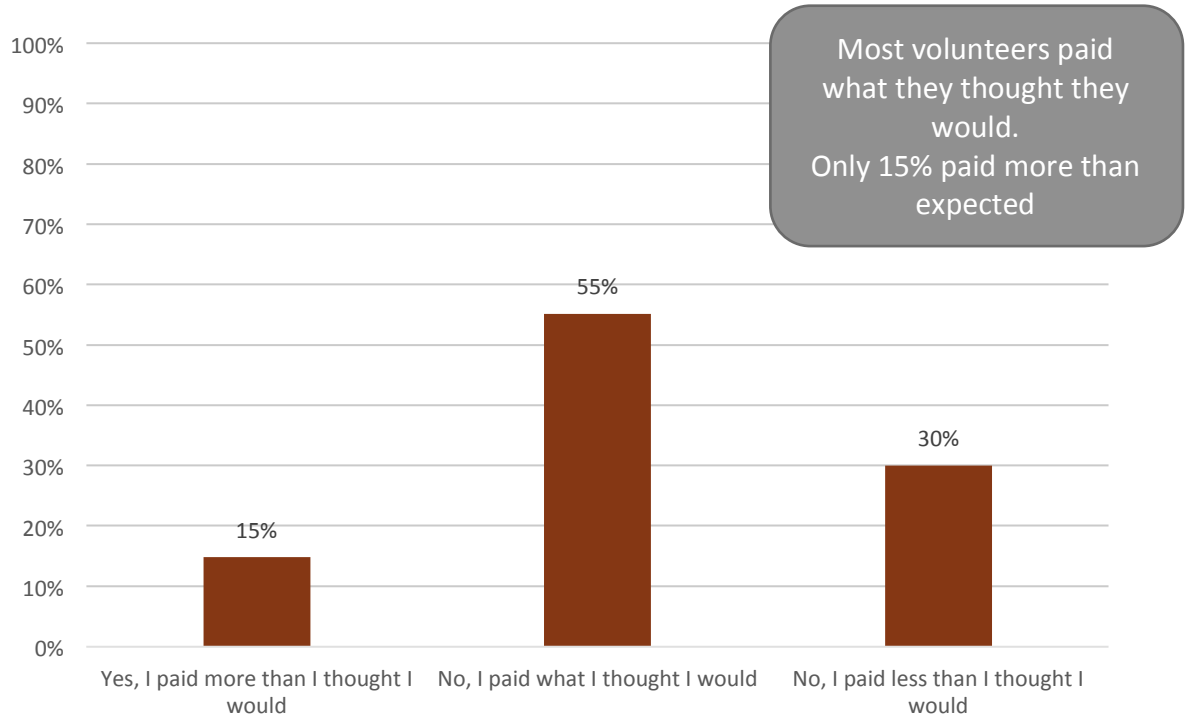
19. How would you rate the quality of your interactions with ODOT OReGO program staff?



20. How would you rate the quality of your interactions with Account Manager staff?



21. Did you pay more than you envisioned?



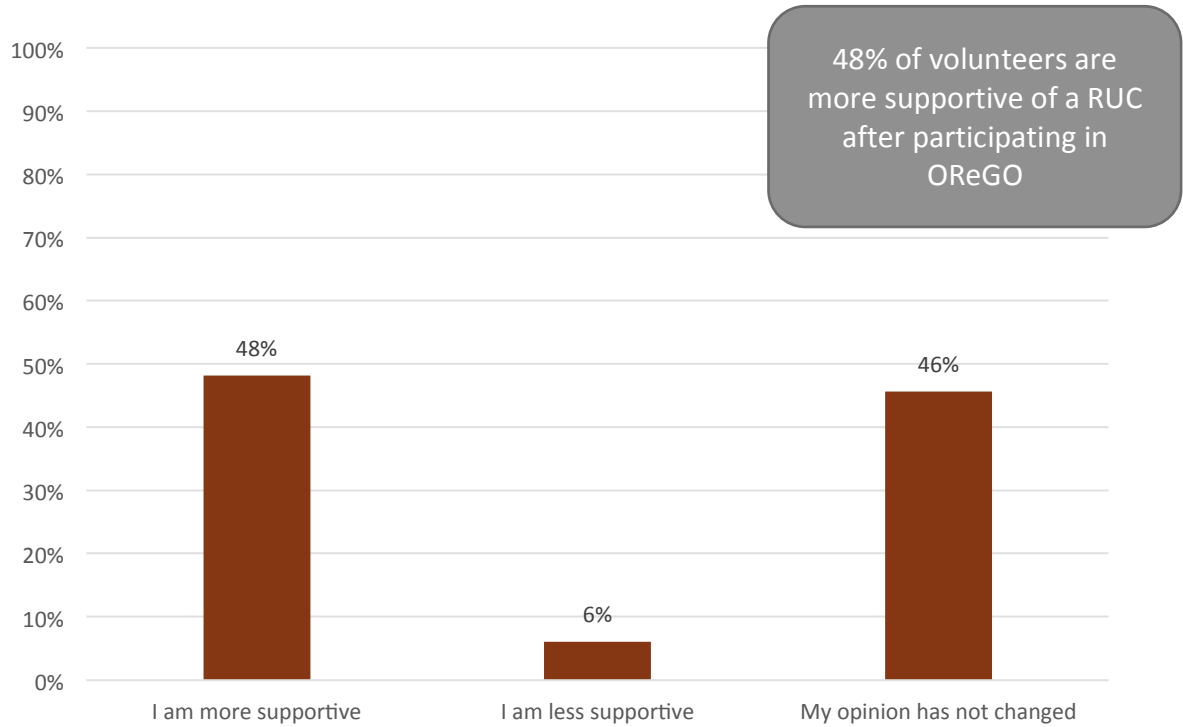
22. What single change to OReGO would most improve your OReGO experience?

Text answers summarized in Section 4 above.

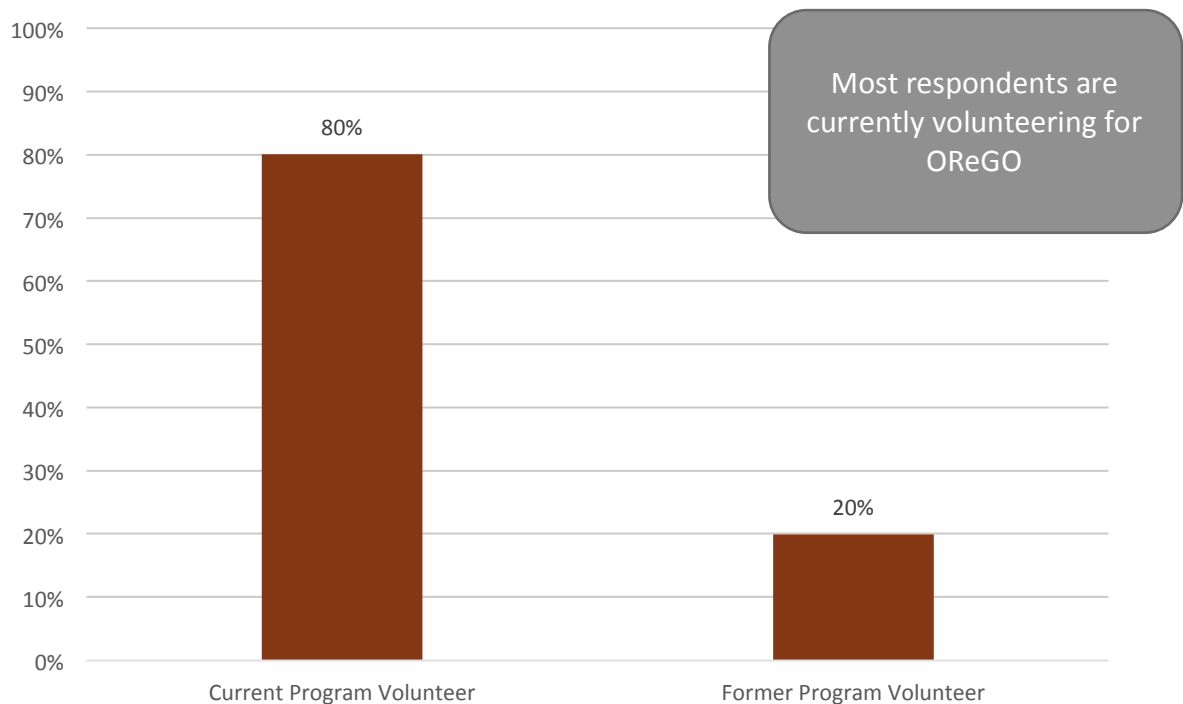
23. What other changes should be made to improve OReGO?

Text answers summarized in Section 4 above.

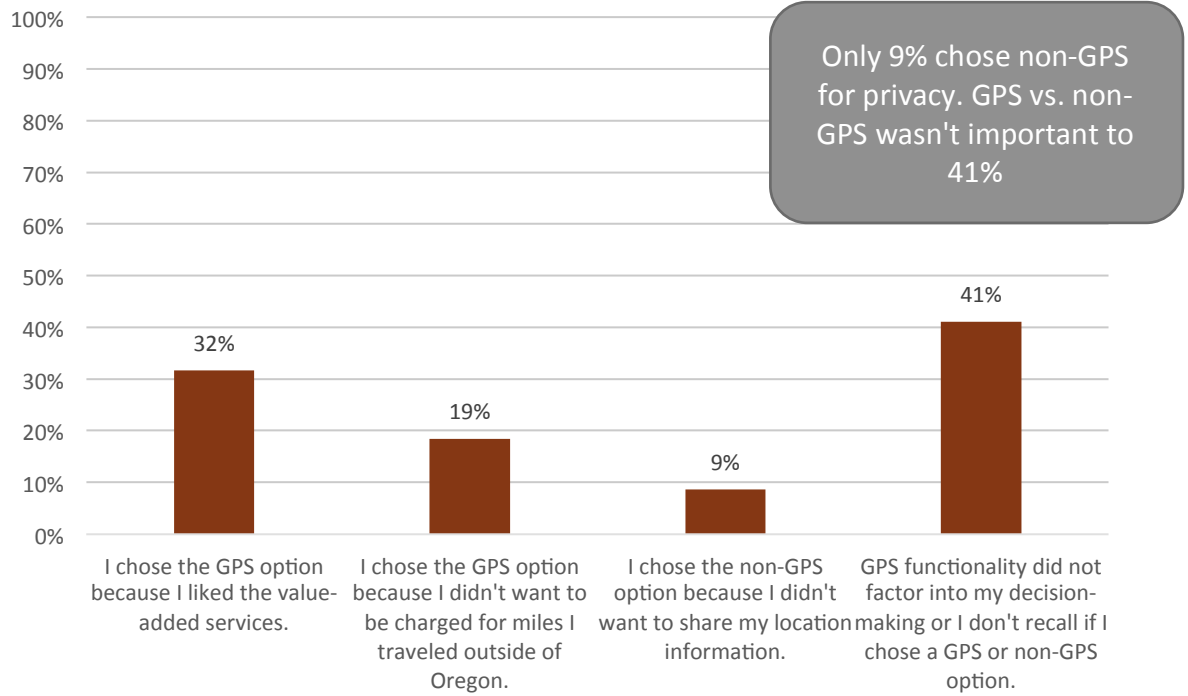
24. How has your participation in OReGO impacted your level of support for a road usage charge?



25. Your participation in the OReGO program is best described as:



26. How did you choose between a GPS and a non-GPS option?



C. Public Knowledge Account Manager Evaluation 2017

Oregon Department of Transportation OReGO Program

Account Manager Satisfaction and Program Improvement Report

January 12, 2017

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1 – Executive Summary

Account Managers are satisfied with their ODOT partnership and impressed with OReGO staff

Based on feedback from the Account Managers (AMs), the OReGO program should keep doing what it has been doing, with a few adjustments to tighten processes. ODOT’s OReGO program has been running successfully since July 2015. AMs believe OReGO is effective and are generally satisfied with the program. AMs indicate the OReGO program exceeds their expectations in many ways, and cite the following as contributing to program success: a positive relationship with OReGO staff, good communication, and engaged staff. Interviewees say ODOT sets clear expectations about what AMs must deliver, but allows freedom in how AMs meet those expectations.

ODOT has set itself apart from other RUC pilot programs by being “hands on” and requiring volunteers to pay real money

AMs believe the OReGO program is unique from RUC pilots in other states in that program staff are “hands on” with both technology and business operations. ODOT staff are well-versed in all elements of the program and have been able to help AMs through various issues. OReGO also requires volunteers to pay real money for charges incurred. Interviewees believe that while this may reduce the number of people who volunteer to participate in the program, it increases the effectiveness of the program and better prepares both ODOT and AMs for a potential larger future iteration of a RUC in Oregon.

Account Managers recommend automating more OReGO processes and clarifying enforcement policies as possible improvements

AMs note that both they and ODOT use several time consuming manual processes that could be automated. One area AMs cited is providing an automated interface between AMs and DMV, which would speed up the registration process and get volunteers on board quickly while they are excited about participating. AMs believe that tightening up enforcement policies and processes is critical for program expansion. Moving forward, policies for monitoring, oversight, and enforcement should be defined, both for ODOT and AMs.

Increasing participant numbers is crucial to maintain the necessary public/private partnership long term

AMs indicated that higher numbers of program participants is a critical success factor for OReGO and RUC in general. The current number of participants is costly for AMs, and makes it difficult for AMs to meet the high standards set by the program. Interviewees offered multiple suggestions for increasing the number of volunteers. However, this issue would be addressed should a RUC program become mandatory, state or region-wide. Investing in marketing and incentives for a voluntary program that is currently working well and satisfying participants (see Volunteer Satisfaction and Improvement Report) may not add significant value at this time.

Increasing public acceptance of RUC is key to ensuring OReGO's future, and the future of RUC

As AMs look to the future of road usage charging, they imagine increasing political support, increasing public acceptance, and continued technology improvements. Funding construction and maintenance of public roads and bridges with a road usage charge involves a significant and visible change for Oregonians and public acceptance will be key to its success.

2 – Introduction

OReGO is a volunteer-based road usage charge (RUC) revenue program within the Oregon Department of Transportation (ODOT), in which participants pay 1.5 cents per mile driven on public roads. States across the nation are facing decreasing revenue from fuel taxes and increasing construction costs. As vehicles become more efficient, less revenue is generated through a fuels tax for road and bridge construction and maintenance. In Oregon, lawmakers have taken steps to explore an innovative RUC funding model to augment declining resources collected through the current fuels tax funding model. Under the RUC model, charges are based on the number of miles a vehicle is driven rather than the number of gallons of fuel purchased. OReGO launched as an operational RUC program on July 1, 2015 for up to 5,000 vehicles.

OReGO partners with private sector Account Managers (AMs) to collect and manage data on miles driven and collect revenue from participants. This report is an independent assessment of OReGO program effectiveness from the AM perspective, an evaluation of AM satisfaction, and includes proposed opportunities for program improvement.

2.1 Conclusion Summary

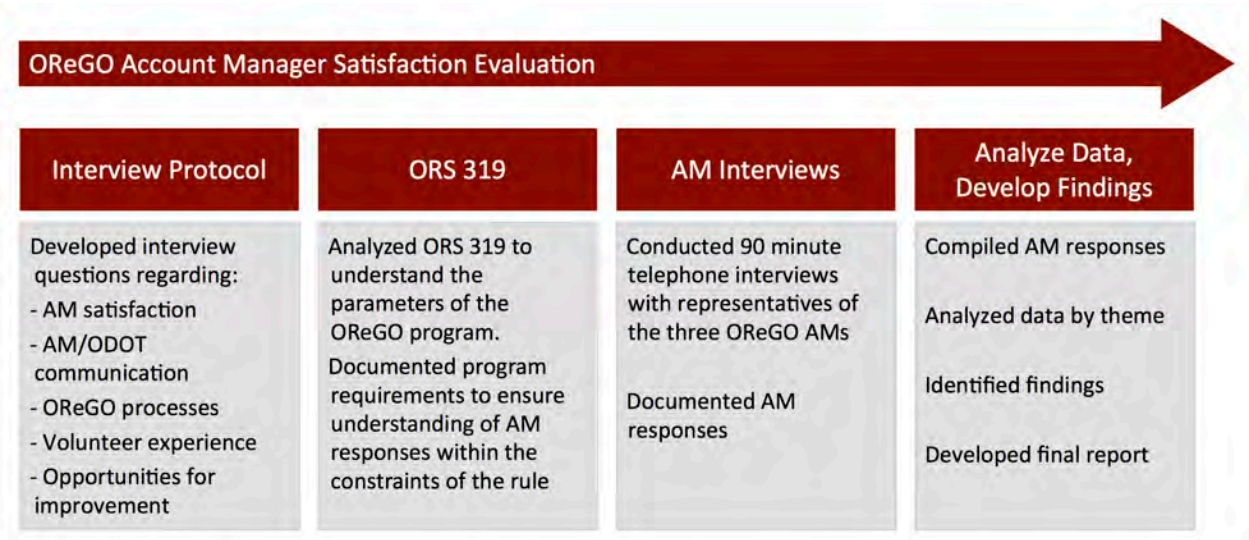
AMs agree that the OReGO program is working well from the perspective of technical and operational feasibility. The AMs are satisfied with the quality of their interaction and partnership with ODOT. Two key areas for improvement to the volunteer program are to automate manual processes and tighten up policies and procedures for enforcement. Other suggestions for improvement largely focus on program expansion.

2.2 Evaluation Approach & Methodology

This report is one of a two-part independent evaluation effort conducted by Public Knowledge, LLC, (PK) to assess the effectiveness of the OReGO program after 18 months of operation. Its counterpart is an evaluation of volunteer satisfaction and perspectives. Both efforts were undertaken in December 2016.

The approach to the Account Manager Satisfaction Report is summarized in the graphic below.

Figure 2.1 OReGO Evaluation Methodology: Account Manager Satisfaction



PK's findings, based on AM interview data, are presented in two parts:

1. **OReGO Today (section 3)** – Findings and suggestions regarding the current volunteer program.
2. **OReGO Tomorrow (section 4)** – Findings and suggestions regarding a future OReGO program that would be expanded state, region, or nation wide.

The information in this report is based on the perspectives of AMs interviewed during the evaluation process.

3 – OReGO Today

From the perspective of operational and technical feasibility, OReGO works well and continues to improve. AMs agree, based on their experience with the program to date, that ODOT is capable of running a statewide RUC program, and running it well. ODOT embraced a hands-on approach with the OReGO program, including frequent communication and feedback with AMs. As a result, OReGO staff members are knowledgeable about program operations, needs, and challenges.

3.1 OReGO Effectiveness

This section is divided into areas that work well according to AMs, and areas identified for improvement.

3.1.1 Areas that Work Well

AMs cited several effective aspects of the OReGO program, including:

- **Program Support** – ODOT has taken a thoughtful approach to development and implementation of OReGO. OReGO staff members are invested in the program. They learned about the concept of a RUC and researched different approaches and opportunities for RUC programs. AMs report that ODOT staff have the skills and resources to support both the program and the volunteers. OReGO staff have participated in the program, supported operations, and searched for and resolved glitches. According to AMs, OReGO staffing, resources, level of staff involvement, and overall support from ODOT have contributed to program effectiveness.
- **Volunteer Payments** – AMs indicate that while other states are piloting a RUC, OReGO is the only RUC program in the country that charges volunteers real money. Although OReGO’s revenue-generating potential is constrained by the number of volunteers participating, the program provides ODOT and AMs the opportunity to

“If this program goes mandatory Oregon knows all the pitfalls so they will know how to run the program well. Other states are more hands off.”
-Account Manager

operate and fine-tune a real program that includes collecting, tracking, and submitting tax dollars. It also provides volunteers with a legitimate RUC experience. According to AMs, requiring volunteers to actually pay the RUC incurred increases the effectiveness of OReGO as a pilot.

- **Program Requirements**

- **SSAE 16 SOC 2 Type 1 Audit** – AMs agree that the SOC 2 Audit is an effective way to ensure proper financial management of state revenues. They reported that the SSAE 16 audit touches every aspect of the operation, including financial processes, privacy, and security of the program. The AMs also noted that the audits require additional effort, and are time consuming, expensive, and harder for smaller companies that may not yet have in place all the policies included under the audit. However, some AMs note that their company did benefit from further developing and following the additional policies.
- **Service Level Agreements (SLAs) and Reporting** – AMs indicate that SLAs are tough, but fair and effective. When SLAs are not met, AMs lose “points” that can result in decreased revenue for their company. AMs indicate they have fewer volunteers than they initially expected. Because SLAs are based on percentage of service met or not met, having fewer volunteers means the targets are harder to meet than AMs expected. In other words, the fewer the volunteers, the bigger the percentage impact of missing one phone call from a volunteer. Consequently, AMs may have lower service percentages than they expected.

3.1.2 Areas that Could Be Improved

AMs viewed the following component as a potential area for improvement:

- **Enforcement** – Enforcement for OReGO is minimal, undefined, and not currently effective. Statutes and rules governing the program state that a person who intentionally makes a false statement in a report or refund request commits a Class A

violation (ORS 319.940(4)). However, there are no regulations outlining who is responsible for monitoring and penalizing violations. There is little guidance for how AMs (or ODOT) can or should investigate or enforce potentially fraudulent behavior. If a volunteer's MRD data suggests it is unplugged, the AM will remind the volunteer to plug it back in. A mechanism to determine if the unplugging was a mistake (e.g. bumped device getting out of the vehicle) or an attempt at fraud has not been established, nor has enforcement authority or an enforcement mechanism to address fraud. AMs indicate that any lost revenue is minimal in this volunteer program, but fraud can be expected to increase in a mandatory program.

3.2 Account Manager Satisfaction

This section is divided into areas of satisfaction for AMs and areas identified for improvement.

3.2.1 Areas of AM Satisfaction

Overall, AMs are satisfied with their experience with OReGO. Specific topics AMs raised related to satisfaction with the program include:

- **Communication with OReGO staff** – AMs report the communication and their relationships with OReGO staff as the most positive aspects of their participation in the program. They cited trust, shared objectives, and mutual understanding of each other's needs as positive factors contributing to their satisfaction. Due to ODOT's hands-on involvement with OReGO, communication is "very positive" and "has been no issue at all."
- **Issue resolution** – AMs report that when a problem or issue arises, they are able to get resolution quickly. AMs indicate that OReGO staff are "very responsive" and issues are handled promptly via phone, email, or weekly meetings. Initial responses to inquiries are within one business day, with follow-up as needed. OReGO roles and responsibilities are clear and AMs know who to contact in order to resolve problems and obtain information.

- **Autonomy** – AMs appreciate that ODOT is clear about what they need from AMs, yet allows AMs flexibility in how to best meet those needs. OReGO staff does not micromanage AM activities but does stay involved. This allows OReGO staff to understand how AMs work, the challenges they are having, and also potential opportunities AMs may have missed. AMs report that ODOT’s desire to engage in a successful public-private partnership serves OReGO well. For example, ODOT has allowed AMs to develop their own processes, develop participant invoices, and to “own” the relationship and interactions with their volunteers.

3.2.2 Opportunities to Improve AM Satisfaction

- **Quantity of volunteers** – The current number of volunteers in the OReGO program is lower than expected. As a result, AMs receive less revenue than predicted. It costs AMs more to manage volunteer accounts than they earn by contracting with ODOT to do so, thereby reducing AM satisfaction.

“The level of effort it takes to build and administer this program will need a much larger base of customers to make it financially viable.”
-Account Manager

3.3 Potential Volunteer Program Improvements

On the whole, AMs are satisfied with OReGO, its operations, processes, and the high standards ODOT has developed for the program. AMs did suggest actions that both AMs and ODOT could take to improve the volunteer program, regardless of whether policymakers adopt a state or region-wide RUC:

- **Automate processes** – While some OReGO processes are currently automated, there are manual processes for some repetitive actions, such as quarterly tax filings and quarterly or monthly invoicing. AMs indicate this is particularly true for AM processes but also for some ODOT processes. Automating as many manual processes as possible would increase efficiency and AM satisfaction.
- **Integrate with the Driver and Motor Vehicle Services Division (DMV)** – DMV holds the records for vehicles in Oregon, and OReGO staff is responsible for

confirming vehicle details when a volunteer applies to participate in OReGO. AMs suggest that tighter data integration between AMs and DMV would speed up the application process by allowing quicker verification of owner and vehicle status. It could also help with enforcement. Currently, AMs have no direct access to DMV. After a volunteer fills out an application with an AM, ODOT staff verifies the vehicle details with DMV. AMs suggest building an automated interface directly between AMs and DMV. Instantaneous verification would speed up the registration process and could increase participation by allowing registration to occur in moments when a potential volunteer's interest is piqued. Registration could even occur in person – face to face at a counter, outreach event, or a booth at a public event.

“The length of time it takes a volunteer to sign up before they get to see results. Anytime you get excited about something you want instant feedback on how does it work, what does it look like.”
-Account Manager

- **Develop an approach to monitoring and oversight** – As previously mentioned, enforcement for OReGO is undefined. AMs suggest developing processes for enforcement with clear roles for AMs, ODOT, and any other groups involved. It should include what role AMs and others will perform and under what circumstances. AMs suggest this would be an important part of any expansion of OReGO into a mandatory rather than volunteer program.
- **Develop a process to transition volunteers from one AM to another** – When volunteers enroll in OReGO, they choose an AM to manage their account and create an account with that AM. If an AM leaves the program or if a volunteer wants to switch AMs, volunteers must start over by exiting the program and re-registering with a new AM. Many volunteers have been willing to do this. However, as the program continues, and especially if it expands, ODOT should consider having processes, procedures, and systems in place that allow volunteers to switch between AMs without re-registering. This would improve service to volunteers by saving

them the time and effort of re-registering, especially when the change is not at the volunteer's request (i.e. an AM leaves the program).

- **Increase the number of volunteers** – As previously noted, AMs report that having more volunteers would increase their satisfaction by increasing their income. Having fewer volunteers than they predicted has resulted in costs to the AMs. Investing in increasing volunteers in a program that is working well, satisfying participants (see Volunteer Satisfaction and Improvement Report), and legislatively limited to 5,000 vehicles may not add significant value at this time, particularly since AMs suggested that a multistate mandatory program would provide an effective market size long term. Nevertheless, AMs had several suggestions for increasing volunteer numbers, including:
 - Increase awareness of OReGO by investing in marketing, advertising, and recruitment of volunteers. Conduct research to understand what motivates people to volunteer to participate in OReGO and tailor outreach based on these motivations.
 - Provide incentives to OReGO volunteers, such as a RUC credit. Alternatively, ODOT could recruit sponsors to provide incentives or rewards in exchange for showing drivers advertisements.
 - Shift the tone of outreach from: “transportation funding *might* change in Oregon” to “funding *will* change and this is your opportunity to weigh in on that policy development.”
 - Create opportunities for civic engagement focused on transportation spending. Conduct budgeting exercises allowing people to weigh in on transportation priorities and demonstrate how a RUC supports road maintenance, bridges, and other transportation projects.

4 – OReGO Tomorrow

As discussed in Section 3, OReGO is working well as a volunteer-based RUC program. It is effective and AMs are satisfied with their partnership with ODOT. The OReGO of the future is likely to be a statewide or region-wide RUC, which presents different opportunities and challenges. AMs are enthusiastic about the potential of road usage charging. They believe that it is scalable and that it can work. During interviews, AMs indicated that the mechanics of the system work and prove that a RUC is a viable way to collect revenue. They believe the technology barrier is falling, as telematics become increasingly common on new vehicles.

Telematics is the process of transmitting data from or to a vehicle through an onboard telecommunication device

This section includes perspectives and suggestions from AMs for an expanded OReGO in the future.

4.1 Challenges and Potential Improvements for Tomorrow's OReGO

ODOT is on the front-end of an innovative revenue program using modern technology and helping consumers adapt to new trends in transportation funding. As telematics and vehicle to vehicle communication continue to improve, AMs see RUC as a viable source of state revenue, but with challenges to overcome. AMs discussed these challenges and potential improvements for a future OReGO. These include:

- **Alignment with nearby states** – A voluntary program is too small to generate significant revenue. A statewide program would increase volume, but present difficulties collecting RUC revenue from out-of-state drivers. AMs believe that a RUC needs to be mandatory and multi-state in order to generate sufficient revenue, both for the state and for private AMs. One AM noted that the level of effort required for an AM to administer such a program would need a much larger customer base to be financially viable – potentially hundreds of thousands of participants. Coordinating with other states could also help ensure that out-of-state drivers who use Oregon's roads and bridges contribute to their maintenance.

- **Engage telematics service providers** – Telematics is becoming increasingly common and technology is evolving. Road usage charging has significant overlap already with telematics data, pipeline, and technology. AMs recommend getting telematics service providers involved in road usage charging in Oregon to take advantage of this overlap for any future RUC.
- **Build public acceptance** – AMs believe that public acceptance is the biggest risk to the success of a mandatory RUC. Though public acceptance is slowly growing, AMs noted that people will be wary of government agencies tracking their location and

“Public acceptance of RUC is growing slowly. Like with any technology.”

-Account Manager

movement, despite the fact that services that monitor location are widely used and accepted on smartphones and other devices already.

Additionally, unlike the nearly invisible gas tax, which is built into the cost-per-gallon that drivers pay when they purchase fuel, RUC is a tax that

users will see. It will necessitate some action on the part of the driver, such as writing a check, logging into an account, monitoring a device, or other actions. ODOT should consider ways in which it can streamline the collection of road usage fees to minimize the time and effort for drivers.

As AMs look to the future of road usage charging, they imagine increasing political support, increasing public acceptance, and continued technology improvements. Some envision the increasing technology of telematics and vehicle to vehicle standards increasing data availability, increasing market demand for that data, and more valuable services offered to the public based on this data. As these services improve and demand for them grows, it could dramatically increase public acceptance of a RUC and location based data, similar to what we have seen with apps and GPS enabled services in the smart phone market. AMs believe a larger suite of services will make the concept more palatable because people will be getting something in return for providing their information.

Appendix A – Interview Questions

The questions below were used to guide account manager interviews.

Introductory Questions

1. Introduce meeting participants, roles, how long working with OReGO.
2. Please describe your team’s functional relationship with OReGO.
3. Why did you get involved in the RUC marketplace?

Account Manager Satisfaction with OReGO

4. What is going well with the program?
5. What would you say is the single most positive aspect of your participation in OReGO?
6. What pain points or challenges do you experience?
7. What would you say is the single most challenging aspect of your participation in OReGO?
8. What could be done to improve these areas?

AM-ODOT Relations and Communication

Resolution of Problems

9. When a problem or issue arises, are you able to gain resolution quickly?
10. Any examples or care to expand further?
11. Do you know who to contact at OReGO to resolve issues?
12. Are they readily available, or respond to your inquiry in a timely manner?

Communication

13. Are weekly meetings with OReGO useful? Why or why not?
14. Do you receive regular communication and updates from OReGO?

OReGO Processes

15. What are your experiences working with OReGO on the following processes:
 - a. Invoicing
 - b. Websites (OReGO and AM)
 - c. Interaction with Volunteers
 - d. Mileage Reporting Device (MRD)
 - e. Audit
 - f. Certification
 - g. SLA Agreements and Reporting
 - h. Issue (or Bug) resolution
 - i. Others

OReGO Program Effectiveness

16. Do you believe OReGO is achieving its objectives?
17. Based on your experience, what risks do you see to OReGO's success?
18. Based on your interaction with volunteers, do you believe people understand and are excited about their participation in the program? Why or why not?

Volunteer Experience

19. How satisfied do you think volunteers are with the OReGO experience?
20. Where are the pain points?
21. What could OReGO do differently to improve the experience for volunteers?
22. What could OReGO do to help AMs improve the experience for volunteers?
23. Do you have ideas for adding more volunteers to the program?
24. What stands in the way of these improvements?

Opportunities for Improvement

25. What other aspects of OReGO would you improve?
26. What opportunities do you see with RUC?
27. Where do you see the RUC market in 10 years?

Wrap Up

28. Any last thoughts, suggestions, or things we should know for our evaluation of the program?

D. Info@Risk Technical Evaluation Summary 2016



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**SECURITY ASSESSMENT
OF
OREGON ROAD USAGE CHARGE PROGRAM
SPECIFICATIONS
FOR THE
RCP AND MILEAGE COLLECTION SUBSYSTEM**

JANUARY 2017

Prepared by:
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Notice: This document is extracted from the main report it differs from the executive summary contained in the full report only in acronym usage.

Executive Summary

Purpose

Info@Risk was contracted to provide an independent security based assessment of business, system, and interface requirements for the Oregon Road Usage Charge Mileage Collection and Road Usage Charge Processing Subsystems with recommendations for refining requirements for future certification of account managers.

Compliance Requirements

Oregon Road Usage Charge Program (RUCP) information security compliance requirements include:

- Oregon Administrative Rule 731-090-0010(1) Road Usage Charge Program Confidentiality
- Oregon Department of Transportation Policy No: ADM 07-11 Information Asset Classification
- Oregon Statewide Information Security Standards
- Oregon Revised Statue 8 § 319.900 et seq. Per-mile Road Usage Charge
- Oregon Revised Statue 14 § 646A.600 et seq. Oregon Consumer Identity Theft Protection Act
- Payment Card Industry (PCI) Digital Security Standard (DSS)

Fulfillment of security objectives indicated by the above compliance sets are the basis for recommendations offered in the assessment.

Scope

The specific elements included in the assessment of requirements are the following:

- Mileage Collection Subsystem
- Road Usage Charge Processing Subsystem including access by Road Usage Charge Administration and Road Usage Charge Payers
- Communication between Mileage Collection and Road Usage Charge Processing
- Communication between Account Management and Road Usage Charge Administration Subsystem
- Communication within subsystems

Recommendations

Recommendations are intended to not conflict with the RUCP open architecture standards mandate. Recommendations for additional requirements, in descending order of priority are as follows:

1. Recommend additional specifications of Mileage Reporting Device (MRD) for least functionality
 - a. Currently there are no program specifications restricting the physical connection to the vehicle diagnostic port by a MRD. Recommend adding a specification requiring physical MRDs connect using the minimum physical connection required for operation.
 - b. Currently there are no program specifications restricting the logical connection to the vehicle electronic control unit (ECU) by a MRD. Recommend adding a specification requiring basic MRDs communication with the ECU be restricted to the minimum required for operation.
 - c. Functionality limits should be independently confirmed by penetration testing assuming complete compromise of communication channel and MRD configuration interface.
2. Recommend delaying utilization of integrated vehicle telematics for RUCP purposes until a security certification process is available to provide non-technical means for assuring cybersecurity of vehicle telematics.
3. Recommend additional requirements for transmission security for Level 3 information.
 - a. Increased detail of requirements for transmission security of Transmission Control Protocol/Internet Protocol (TCP/IP) communication in accordance with National Institute of Standards and Technology guidance.
 - b. Specify TCP/IP for transmission between MRD and an external data collection component.
4. Recommend minimum encryption required for Level 3 data at rest be specified as Advanced Encryption Standard (AES) 256-bit in accordance with statewide information security standards best practices rather than the 128-bit minimum requirement.
5. Recommend use of PCI mechanisms for assurance of PCI DSS compliance rather than a requirement-by-requirement based approach.
6. Recommend RUCP application process include identity proofing above identity assurance level 1 consisting of at least knowledge based verification to mitigate the threat of unauthorized issuance.
7. Recommend that the specification for basic MRDs forbidding hardware designed primarily to determine location also include switchable MRDs in basic mode.

Conclusion

The current standards and requirements for the RUCP Mileage Collection and RCP Subsystems are quite thorough with a natural emphasis on operational requirements. In general, recommendations provided by this report call for additional specificity needed for information security assurance.

E. PRR Public Survey 2016

STATEWIDE SURVEY MID-PILOT UPDATE JUNE 2016

Executive Summary and Results



2016 Statewide Online Survey

Executive Summary

Purpose and Methodology

As part of the Oregon Road Usage Charge Program Communication and Research Plan, we conducted a statewide, demographically representative baseline telephone survey in the fall of 2014, followed up by a mid-pilot survey in June 2016. The survey goals included measuring:

- **Awareness** of current road usage charge or pay per mile concepts, Senate Bill 810, road usage charging advantages for Oregon, and how road usage charging works.
- **Acceptance** (for/against) of a Road Usage Charge Program in Oregon replacing the fuels tax in the future, likelihood to volunteer, likelihood to support a road usage charge program, and perceptions of fairness.
- **Favorability** of opinions about road usage charging messages.

In order to meet these research goals Davis, Hibbitts & Midghall, Inc. (DHM Research) conducted a telephone survey in 2014. The objective of this first telephone survey was to establish a baseline of acceptance and knowledge regarding the concept of a road usage charge program. The survey also assessed general opinions on the existing fuels tax.

In June of 2016, PRR, Inc. conducted a follow-up survey *online* with Oregon residents. The objective of this second survey was to measure changes in acceptance and knowledge of the Road Usage Charge Program, OReGO.

Research Design: In the first two week of June 2016, PRR, Inc. conducted an online survey of 650 residents in Oregon using ResearchNow® panelists. The survey took an average of 8-10 minutes to complete. The sample size is sufficient to assess opinions of the general population, and allows a review by multiple subgroups including age, gender, and other demographics.

In gathering responses, a variety of quality control measures were employed, including questionnaire pre-testing and validations. For a representative sample of Oregon, quotas were established for each of the five regions. The data is also weighted to match the census profile of the population for age and gender. In the report, results may add up to 99% or 101% due to rounding.

Statement of Limitations: Any sampling of opinions or attitudes is subject to a margin of error. The margin of error is a standard statistical calculation that represents differences between the sample and total population at a confidence interval, or probability, calculated to be 95%. This means that there is a 95% probability that the sample taken for this study would fall within the stated margins of error if compared with the results achieved from surveying the entire population. Also, only differences with correlations $>.15$ are reported. For a sample size of 650, the margin of error for each question is +/- 3.84% at the 95% confidence level.

2016 Statewide Online Survey

Executive Summary: Key Findings

There is **STILL** limited understanding of how transportation is funded.

- Similar to findings in 2014, almost two-thirds of the respondents (64%) **did not know** they were paying 49 cents per gallon in fuels tax (combined state and federal), whereas 60% did not know this in 2014. One in two (50%) thought this amount was more than what they were paying, few (3%) thought it was less, and one in ten (11%) were entirely **unaware** that they were paying a fuels tax at all.
- Similar to the results in 2014, respondents were not particularly supportive of any alternative funding options. However, they were most supportive of tolls on specific highways and bridges where improvements are being made (43%), increasing the vehicle registration fee (36%), or increasing the fuels tax (35%).
- Additionally, implementing a vehicle sales tax (32%) or road usage charge for miles driven within Oregon (31%) were supported by about one-third of respondents.

Both familiarity and support for RUC being a fair funding option increased.

- Up 10% from 2014 and statistically significant, there was an increase in respondents that are somewhat familiar or not at all familiar with the concept of a road usage charge.
- Up 19% from 2014 and also statistically significant, over half of the respondents (56%) somewhat to strongly agreed that a mileage-based system for transportation funding is fair.
- Actual support for a road usage charge program in Oregon was relatively similar to 2014. While few respondents (18%, increase of 3%) were strongly supportive of a road usage charge program in Oregon, over two-fifths (44%) were neutral to strongly supportive.

The main concern regarding a road usage charge continues to be unfairness for rural drivers.

- Similar to the 2014 survey, nearly half of respondents (46%) believed that one of the biggest drawbacks was that a road usage charge program penalizes people in rural areas. There was also a 9% increase since 2014 of concern that RUC would not properly track those who cross state lines frequently (43%).
- Bigger reported drawbacks in 2016 than in 2014 were that road usage charging is just another way Oregon can tax more people (27%) and that it penalizes people who buy fuel efficient vehicles (20%).
- Concern for privacy has significantly decreased (by 12%). In 2014 privacy was a bigger concern for respondents (29%), but in 2016 only 17% of respondents indicated privacy as a major drawback.
- Even though not indicated as a high of a drawback as in 2014, two-thirds of respondents (64%) in 2016 still reported feeling very concerned or moderately concerned over the privacy and security of their data in the OReGO program.

Messages about fuel efficient vehicles not paying their fair share for impact on the roads are more convincing than in 2014.

- Up 8% and statistically significant, nearly half of all respondents (45%) were convinced by statements regarding how driving more fuel efficient vehicles will reduce their tax burden, but still impact or put wear on the roads.

2016 Statewide Online Survey

Executive Summary: Key Findings

More Oregonians agree that a road usage charge seems like a fair way to fund transportation improvements.

- Up 9% from 2014 and statistically significant, one-third of respondents (32%) agreed that road usage charges seem like a fair way to fund transportation improvements in Oregon, while a similar number (33%) felt that the road usage charge seemed unfair (down 17% and also statistically significant).

There is limited awareness of the OReGO program and volunteer opportunities.

- Nearly three-quarters of respondents (71%) had not heard of the OReGO program.

There is limited familiarity with mileage reporting managers and their features.

- Three-quarters of the respondents (76%) were not at all familiar with the several secure mileage reporting options that are administered by private-sector partners called account managers. Roughly the same number of respondents were also not at all familiar with the option of reporting mileage via GPS (76%) or non-GPS (74%).
- Seven in ten (73%) were not at all familiar with the safeguards that are in place to keep their information private and secure.
- Over three-quarters (77%) were not aware that ODOT does not receive location data from devices that track mileage using GPS.
- Eight in ten (80%) respondents were not at all familiar with the pre-pay and post-pay options for mileage driven, while two-thirds (67%) were not aware of the tax credits available to volunteers in order to offset the fuels tax they pay at the pump.

Account Manager features are mildly interesting enough for respondents to consider volunteering for OReGO.

- Among the services that respondents found most interesting were: being able to review detailed information about their vehicle if the check engine light comes on (23%), receiving alerts if their vehicle moves without their permission (19%), and the ability to monitor fuel usage costs relative to their driving habits (12%).
- The **least** interesting services were: earning badges for good driving behavior and the ability to compete with friends and family (62%), using a 2MyCar guide smart phone app to find their car (47%), and the ability to review their carbon footprint (43%).

Few are likely to volunteer for OReGO.

- Just over two-thirds of respondents (39%) were neutral to very likely to enroll in the OReGO program, while few (15%) were likely to very likely.

There are no significant regional differences.

- Respondents in region 5 were slightly more convinced that RUC is a good idea because residents with high efficiency vehicles will have to pay their fair share.
- Respondents in region 4 and 5 were slightly more indifferent (neither fair or unfair) to RUC being implemented in Oregon.

2016 Statewide Online Survey

Demographic profile of the survey respondents (weighted)*

Region

Region 1 – 43%
Region 2 – 31%
Region 3 – 14%
Region 4 – 8%
Region 5 – 4%

Age

18 to 24 – 12%
25 to 34 – 18%
35 to 54 – 33%
55 to 64 – 17%
65 and over – 20%

Income

Below \$25,000 – 17%
\$25,000 to \$50,000– 22%
\$50,000 to \$75,000 – 22%
\$75,000 to \$100,000 – 12%
\$100,000 to \$150,000 – 14%
\$150,000 and over – 6%

Gender

Male - 44%
Female - 56%

Race

Black/African American – 1%
White/Caucasian – 88%
American Indian or Alaska Native – 1%
Asian/Pacific Islander – 5%
Hispanic/Latino – 2%
Other race or combination – 1%

* As stated in the methodology section, the data is weighted to match the census profile of population for each age and gender.

2016 Statewide Online Survey

Vehicle characteristics and driving behaviors of survey respondents (weighted)*

Own or lease Vehicle– 87%

Hybrid/Electric Vehicle – 10%

Days a Week on Oregon Highways/Freeways

None– 6%

1 day – 2%

2 days– 5%

3 days – 10%

4 days – 11%

5 or more days – 66%

Typical Miles per Day

Less than 5 – 14%

5 to 10 miles – 23%

11 to 15 miles – 20%

16 to 25 miles – 22%

26 to 50 miles – 18%

Over 50 miles – 5%

Average Mileage of Most Used Vehicle

Under 20 mpg– 15%

20 to 27 mpg– 46%

28 to 35 mpg – 23%

35 or more mpg – 8%

Don't know – 8%

Percentage of Miles in Oregon

100% – 79%

76% to 99%– 13%

50 to 75%– 3%

25 to 49%– 2%

Less than 25%– 3%

* As stated in the methodology section, the data is weighted to match the census profile of population for age and gender.

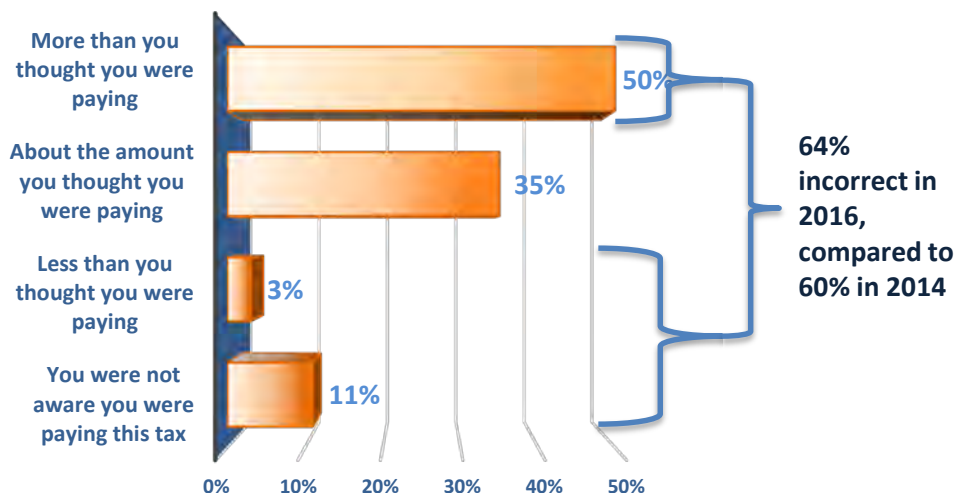
2016 Statewide Online Survey

There is STILL limited understanding of how transportation is funded

Participants read a short explanation of the current state and federal fuels tax currently paid in Oregon was provided to respondents and were then asked if they had previously thought they were paying more, less, or about the same amount. Respondents were also asked about alternative methods for funding transportation improvements. The wording for this question was slightly different in the online version, but the concept to measure respondents' awareness of how much fuels tax they pay is the same.

- Almost two-thirds of the respondents (64%) did not know they were paying 49 cents per gallon in fuels tax (combined state and federal). One in two (50%) thought this amount was more than what they were paying, very few (3%) thought it was less, and one in ten (11%) were **unaware** that they were paying a state fuels tax.
- Respondents were not particularly supportive of any alternative funding options. However, they were most supportive of tolls on specific highways and bridges where improvements are being made (43%), increasing the vehicle registration fee (36%), or increasing the fuels tax (35%). Additionally, implementing a vehicle sales tax (32%) or road usage charge for miles driven within Oregon (31%) were supported by one-third of respondents.*

Awareness of Paying a Fuels Tax of 49 cents per gallon is...



Very similar to findings in 2014 and not statistically different.

- There is a significant increase in respondents thinking the current fuels tax is **more** than they thought, but this could be explained by the change in wording of the question from 2014 to 2016.
- However the number of respondents that were incorrect on how much fuels tax they pay overall is similar to 2014 findings.

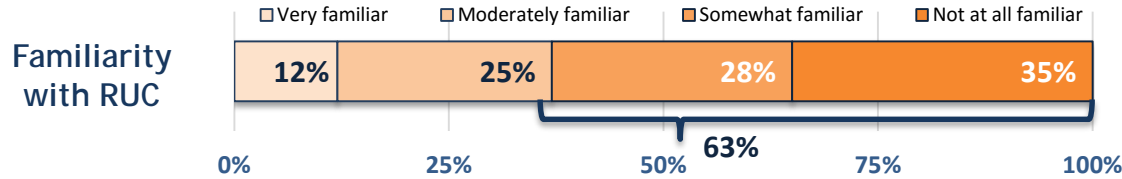
* Rated 3, 4, or 5 on a scale of 1 to 5, where 5 is Very Supportive.

2016 Statewide Online Survey

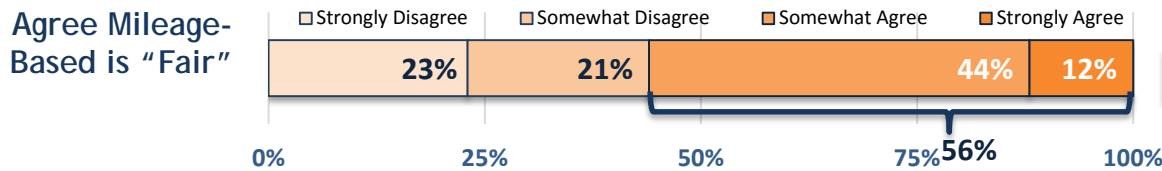
Both familiarity and support for RUC being a fair funding option increased.

The survey then asked how familiar respondents were with the concept of a road usage charge, provided an explanation about the concept, asked if they thought a road usage charge program was a “fair” method to fund transportation, and finally asked how much they would be willing to support this program in Oregon.

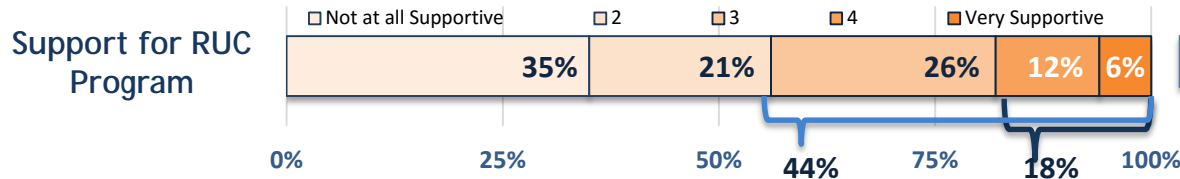
- Three in five (63%) were *somewhat familiar* or *not at all familiar* with the concept of a road usage charge. Male respondents and those that own a high efficiency vehicle were slightly more familiar.
- Over half of the respondents (56%) *somewhat to strongly agreed* that a mileage-based system for transportation funding is fair. While few respondents (18%) were strongly supportive of a road usage charge program in Oregon, over two-fifths (44%) were neutral to strongly supportive.
- Respondents that were more concerned about privacy were less likely to agree RUC is fair or support a RUC program in Oregon.



Statistically Significant Increase
 63% Familiar with RUC in 2016
 53% Familiar with RUC in 2014



Statistically Significant Increase
 56% Agree RUC is “Fair” in 2016
 37% Agree RUC is “Fair” in 2014



NO Significant Increase in Support for RUC since 2014

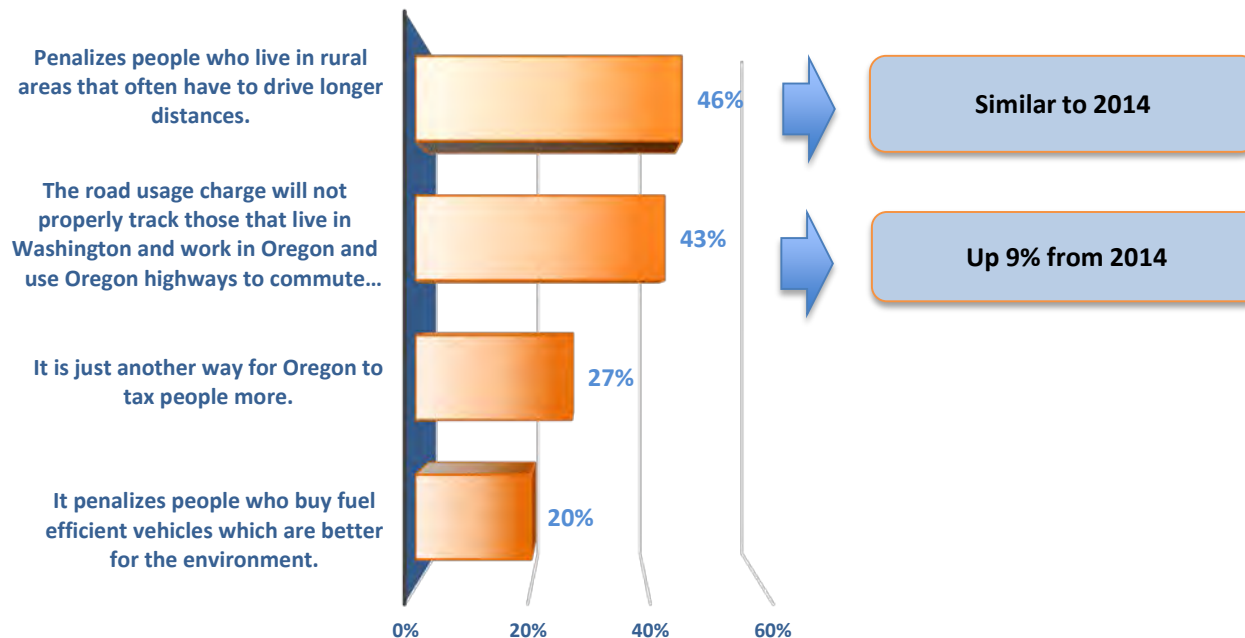
2016 Statewide Online Survey

The main concern regarding a road usage charge is unfairness for rural drivers.

Respondents were asked if they felt there were any major drawbacks to a road usage charge program in Oregon.

- Similar to the 2014 survey, nearly half of respondents (46%) believed that one of the biggest drawbacks was that a road usage charge program penalizes people in rural areas that often have to drive longer distances. There was also a 9% increase since 2014 in fear that RUC would not properly track those who cross state lines frequently (43%). Concern also increased that RUC is just another way Oregon can tax more people (27%) and that it penalizes people who buy fuel efficient vehicles (20%).
- Concern for privacy has significantly decreased (by 12%). In 2014 privacy was a bigger drawback for respondents (29%), but only 17% of respondents indicated privacy as a major drawback in 2016.

Most Indicated Drawbacks to Road Usage Charging



2016 Statewide Online Survey

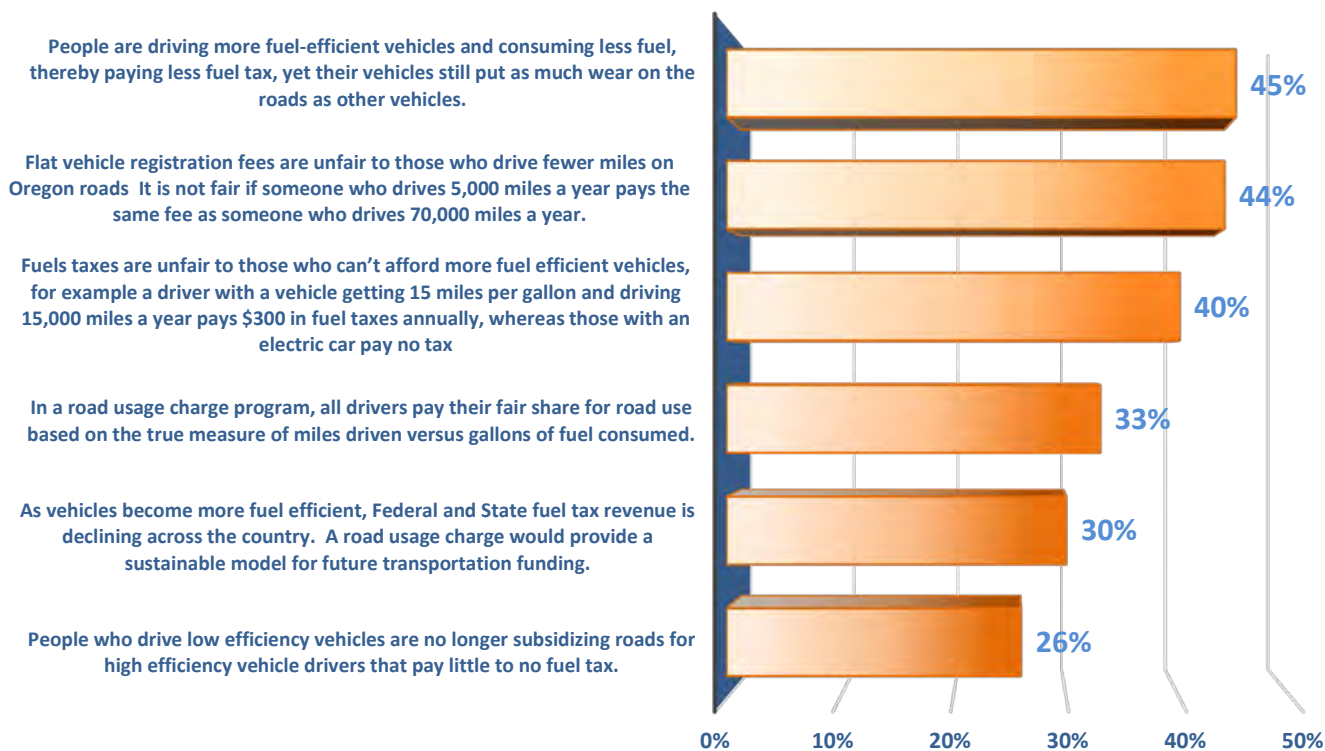
Messages regarding fuel efficient vehicles not paying their fair share are more convincing.

Participants were shown several possible reasons for supporting a road usage charge program and were asked to rate how convincing each reason was.

- Up 8% and statistically significant, nearly half of all respondents (45%) were convinced by statements regarding how driving more fuel efficient vehicles would reduce their tax burden, but still impact or put wear on the roads.
- Similar to 2014, the next most convincing messages had to do with the unfairness of flat fees, fuels tax being unfair to those who can't afford fuel-efficient vehicles, and each motorist paying their fair share with road usage charges.

Statements Rated as MOST Convincing to Support Road Usage Charging

Rated 4 or 5 on a scale of 1 to 5, where 5 is Very Convincing)



8% Statistically Significant Increase from 2014

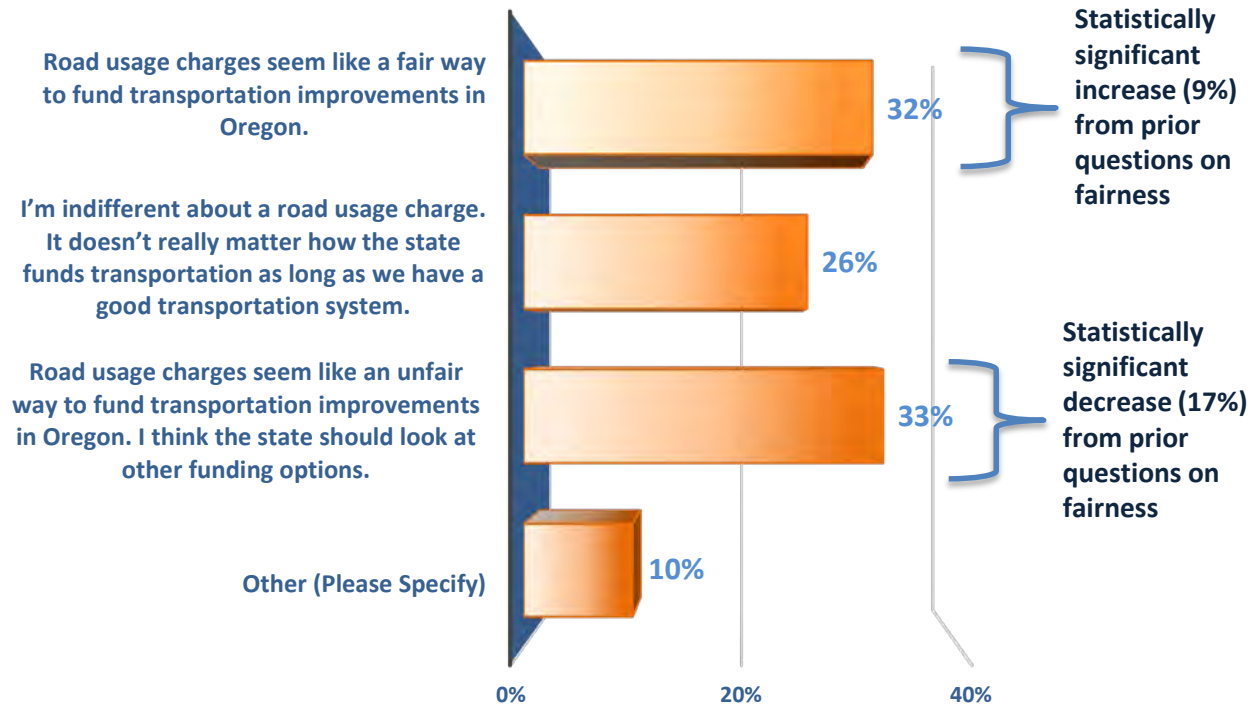
2016 Statewide Online Survey

More Oregonians agree that a road usage charge seems like a fair way to fund transportation improvements.

At the end of the survey, respondents were *again* asked about the fairness of a road usage charge program in Oregon.

- Up 9% from 2014 and statistically significant, one-third of respondents (32%) agreed that road usage charges seem like a fair way to fund transportation improvements in Oregon, while a similar number (33%) felt that the road usage charge seemed unfair (down 17% and also statistically significant). One in four (26%) were indifferent about a road usage charge..

Which ONE Statement Comes Closest to your Point of View Regarding Road Usage Charging?



Those who were more concerned about privacy were more likely to indicate that RUC seems unfair.

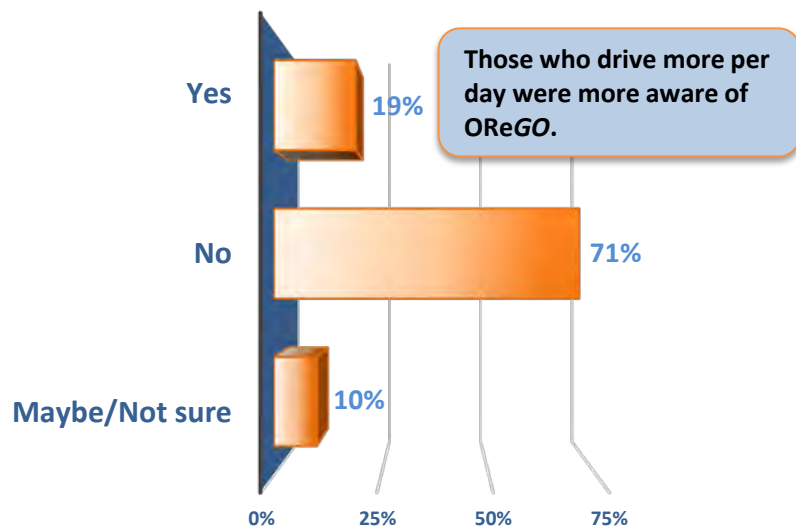
2016 Statewide Online Survey

There is limited awareness of the OReGO program and volunteer opportunities.

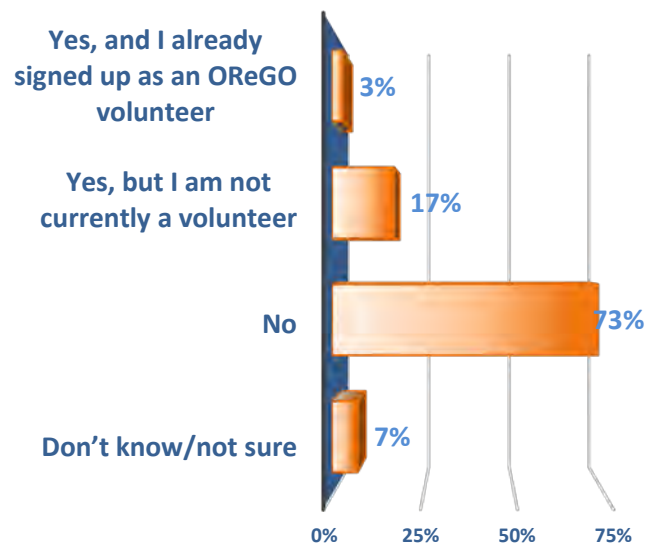
Respondents were informed that Oregon is the first state in the U.S. to adopt a road usage charge program, called OReGO. They were asked if they had heard of the program prior to the survey and whether or not they were aware the opportunities of enrolling in the program.

- Nearly three-quarters of respondents (71%) had not heard of the OReGO program, nor of its enrollment opportunities. One in five had heard of the program (19%) and were aware of the enrollment opportunities (17%), while very few (3%) had already signed as a volunteer.
- Roughly one in ten were unsure if they had heard of the OReGO program (10%) and its enrollment opportunities (7%).

Have Heard of the OReGO RUC Program



Awareness of OReGO Volunteer Opportunities

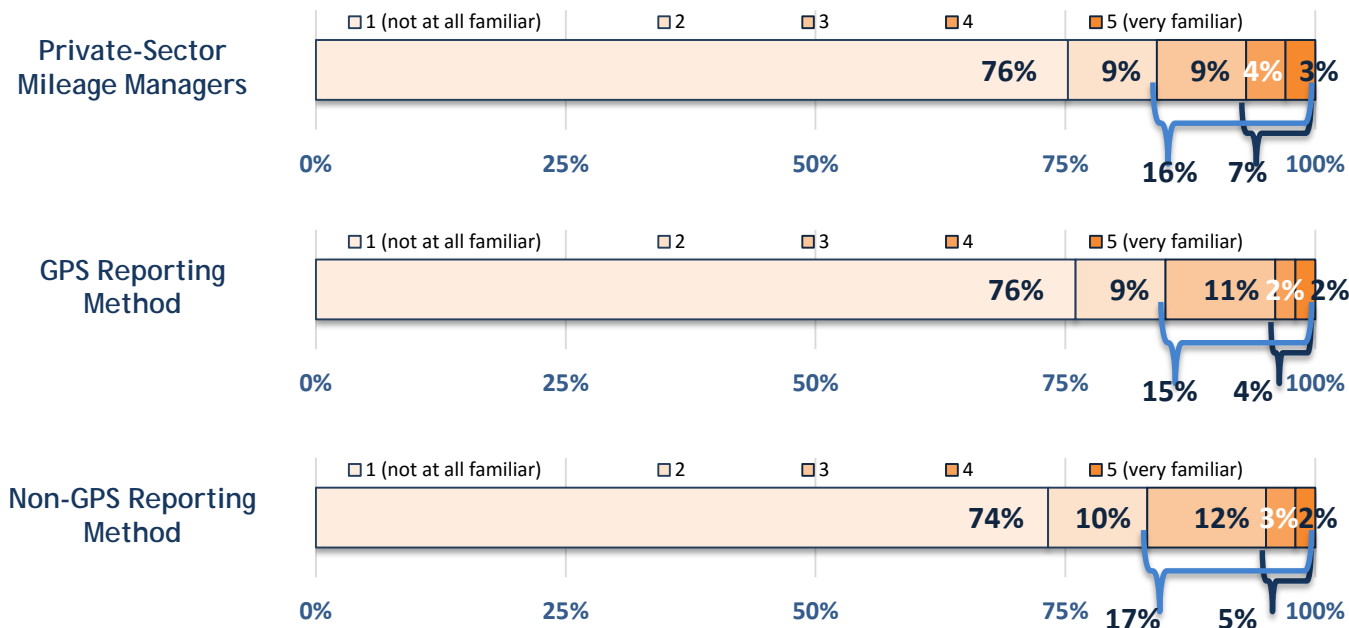


2016 Statewide Online Survey

There is limited familiarity with mileage reporting managers and their features.

The survey asked how familiar respondents were with a variety of account manager features of the OReGO road usage program.

- Three-quarters of the respondents (76%) were *not at all familiar* with the several secure mileage reporting options that are administered by private-sector partners called account managers. Roughly the same number of respondents were also *not at all familiar* with the option of reporting mileage via GPS (76%) or non-GPS (74%) devices.



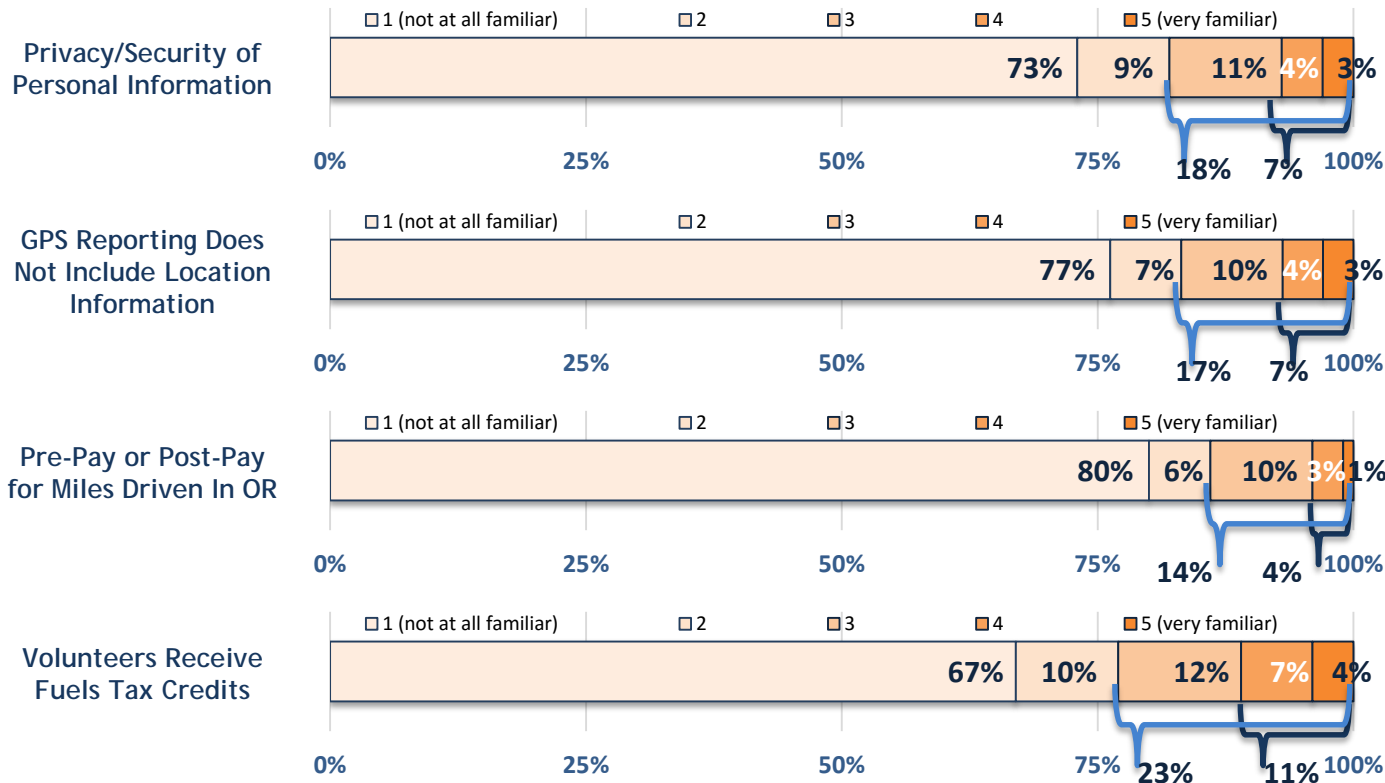
Generally respondents age 18-34 or those that own HEVs were more likely to be familiar with these features.

2016 Statewide Online Survey

There is limited familiarity with mileage reporting managers and their features.

The survey asked how familiar respondents were with a variety of account manager features of the OReGO road usage program.

- Seven in ten (73%) are *not at all familiar* with the safeguards that are in place to keep their information private and secure.
- Over three-quarters (77%) are not aware that ODOT does not receive location data from devices that track mileage using GPS.
- Eight in ten (80%) respondents were *not at all familiar* with the pre-pay and post-pay options for mileage driven, while two-thirds (67%) are not aware that volunteers receive a fuel tax credit applied to their RUC balance.



Generally respondents age 18-34 or those that own HEVs were more likely to be familiar with these features.

2016 Statewide Online Survey

Account manager features are mildly interesting enough to consider volunteering for OReGO.

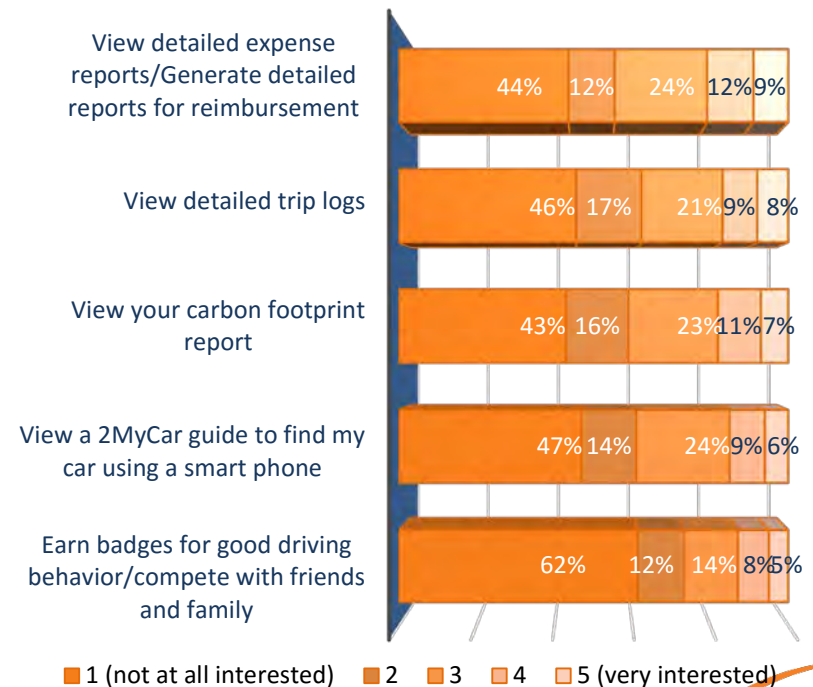
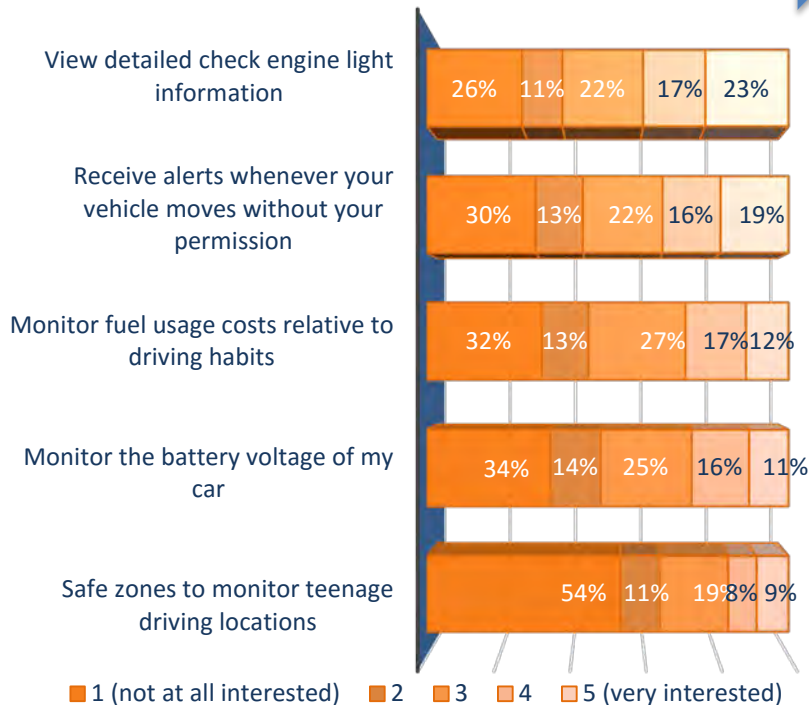
Respondents were asked about which services would make them more or less interested in volunteering for the OReGO program.

- Among the services that respondents found most interesting were: being able to review detailed information about their vehicle if the check engine light comes on (23%), receiving alerts if their vehicle moves with out their permission (19%), and the ability to monitor fuel usage costs relative to the their driving habits (12%).
- The **least** interesting services were: earning badges for good driving behavior and the ability to compete with friends and family (62%), using a 2MyCar guide smart phone app to find their car (47%), and the ability to review their carbon footprint (43%).

Which Services Would Make You More or Less Interested in Volunteering?



Which Services Would Make You More or Less Interested in Volunteering?

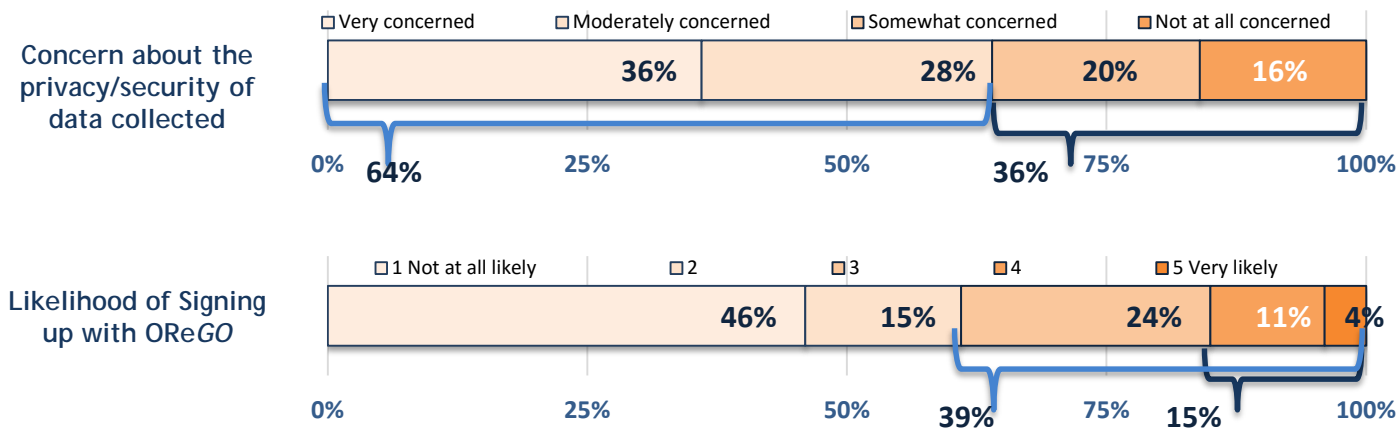


2016 Statewide Online Survey

Privacy and security are still a concern and few are likely to volunteer.

Lastly the survey asked respondents about their privacy concerns and how likely they would be to volunteer and sign up for OReGO.

- Two-thirds of respondents (64%) reported feeling *very concerned* or *moderately concerned* over the privacy and security of their data.
- Four in ten (39%) were *neutral*, *somewhat likely*, or *very likely* to enroll in the OReGO program.



Respondents that are more concerned about privacy are the least likely to volunteer for OReGO.

F. Senate Bill 810

Enrolled
Senate Bill 810

Sponsored by Senator HANSELL; Senators BEYER, GEORGE, JOHNSON, KRUSE, MONROE, STARR, THOMSEN, WINTERS

CHAPTER

AN ACT

Relating to transportation; creating new provisions; amending ORS 271.310, 305.410, 319.280, 319.550, 319.665, 319.831, 366.505, 367.802, 367.804 and 367.806; limiting expenditures; and prescribing an effective date.

Be It Enacted by the People of the State of Oregon:

DEFINITIONS

SECTION 1. Sections 2 to 15 of this 2013 Act are added to and made a part of ORS chapter 319.

SECTION 2. As used in sections 2 to 15 of this 2013 Act:

- (1) "Highway" has the meaning given that term in ORS 801.305.
- (2) "Lessee" means a person that leases a motor vehicle that is required to be registered in Oregon.
- (3)(a) "Motor vehicle" has the meaning given that term in ORS 801.360.
- (b) "Motor vehicle" does not mean a motor vehicle designed to travel with fewer than four wheels in contact with the ground.
- (4) "Registered owner" means a person, other than a vehicle dealer that holds a certificate issued under ORS 822.020, that is required to register a motor vehicle in Oregon.
- (5) "Subject vehicle" means a motor vehicle that is the subject of an application approved pursuant to section 4 of this 2013 Act.

ROAD USAGE CHARGES

SECTION 3. (1)(a) Except as provided in paragraph (b) of this subsection, the registered owner of a subject vehicle shall pay a per-mile road usage charge for metered use by the subject vehicle of the highways in Oregon.

(b) During the term of a lease, the lessee of a subject vehicle shall pay the per-mile road usage charge for metered use by the subject vehicle of the highways in Oregon.

(2) The per-mile road usage charge is 1.5 cents per mile.

SECTION 4. (1) A person wishing to pay the per-mile road usage charge imposed under section 3 of this 2013 Act must apply to the Department of Transportation on a form prescribed by the department.

(2) The department shall approve a valid and complete application submitted under this section if:

(a) The applicant is the registered owner or lessee of a motor vehicle;

(b) The motor vehicle is equipped with a method selected pursuant to section 6 of this 2013 Act for collecting and reporting the metered use by the motor vehicle of the highways in Oregon;

(c) The motor vehicle has a gross vehicle weight rating of 10,000 pounds or less; and

(d) Approval does not cause the number of subject vehicles active in the road usage charge program on the date of approval to exceed 5,000, of which no more than 1,500 may have a rating of less than 17 miles per gallon and no more than 1,500 may have a rating of at least 17 miles per gallon and less than 22 miles per gallon, such ratings to be determined pursuant to a method established by the department.

(3) Approval of an application under this section subjects the applicant to the requirements of section 10 of this 2013 Act until the person ends the person's voluntary participation in the road usage charge program in the manner required under subsection (4) of this section.

(4) A person may end the person's voluntary participation in the road usage charge program at any time by notifying the department, returning the emblem issued under section 15 of this 2013 Act to the department and paying any outstanding amount of road usage charge for metered use by the person's subject vehicle.

REVENUE

SECTION 5. Moneys collected from the road usage charges imposed under section 3 of this 2013 Act shall be deposited in the State Highway Fund and allocated for distribution as follows:

(1) 50 percent to the Department of Transportation.

(2) 30 percent to counties for distribution as provided in ORS 366.762.

(3) 20 percent to cities for distribution as provided in ORS 366.800.

ADMINISTRATION

SECTION 6. (1) As used in this section, "open system" means an integrated system based on common standards and an operating system that has been made public so that components performing the same function can be readily substituted or provided by multiple providers.

(2)(a) The Department of Transportation, in consultation with the Road User Fee Task Force, shall establish the methods for recording and reporting the number of miles that subject vehicles travel on highways.

(b) When taking action under this subsection, the department shall consider:

(A) The accuracy of the data collected;

(B) Privacy options for persons liable for the per-mile road usage charge;

(C) The security of the technology;

(D) The resistance of the technology to tampering;

(E) The ability to audit compliance; and

(F) Other relevant factors that the department deems important.

(c) The department shall establish at least one method of collecting and reporting the number of miles traveled by a subject vehicle that does not use vehicle location technology.

(d)(A) The department shall adopt standards for open system technology used in methods established under this subsection.

(B) In adopting standards pursuant to this paragraph, the department shall collaborate with agencies of the executive department as defined in ORS 174.112 to integrate information systems currently in use or planned for future use.

(3) The department shall provide the persons liable for the per-mile road usage charge the opportunity to select a method from among multiple options for collecting and reporting the metered use by a subject vehicle of the highways in Oregon.

SECTION 7. The Department of Transportation shall provide by rule for the collection of the road usage charges imposed under section 3 of this 2013 Act, including penalties and interest imposed on delinquent charges.

SECTION 8. (1) The Department of Transportation shall establish by rule reporting periods for the road usage charges imposed under section 3 of this 2013 Act.

(2) Reporting periods established under this section may vary according to the facts and circumstances applicable to classes of registered owners, lessees and subject vehicles.

(3) In establishing reporting periods, the department shall consider:

(a) The effort required by registered owners or lessees to report metered use and to pay the per-mile road usage charge;

(b) The amount of the per-mile road usage charge owed;

(c) The cost to the registered owner or lessee of reporting metered use and of paying the per-mile road usage charge;

(d) The administrative cost to the department; and

(e) Other relevant factors that the department deems important.

SECTION 9. (1) As used in this section:

(a) "Certified service provider" means an entity that has entered into an agreement with the Department of Transportation under ORS 367.806 for reporting metered use by a subject vehicle or for administrative services related to the collection of per-mile road usage charges and authorized employees of the entity.

(b) "Personally identifiable information" means any information that identifies or describes a person, including, but not limited to, the person's travel pattern data, per-mile road usage charge account number, address, telephone number, electronic mail address, driver license or identification card number, registration plate number, photograph, recorded images, bank account information and credit card number.

(c) "VIN summary report" means a monthly report by the department or a certified service provider that includes a summary of all vehicle identification numbers of subject vehicles and associated total metered use during the month. The report may not include location information.

(2) Except as provided in subsections (3) and (4) of this section, personally identifiable information used for reporting metered use or for administrative services related to the collection of the per-mile road usage charge imposed under section 3 of this 2013 Act is confidential within the meaning of ORS 192.502 (9)(a) and is a public record exempt from disclosure under ORS 192.410 to 192.505.

(3)(a) The department, a certified service provider or a contractor for a certified service provider may not disclose personally identifiable information used or developed for reporting metered use by a subject vehicle or for administrative services related to the collection of per-mile road usage charges to any person except:

(A) The registered owner or lessee;

(B) A financial institution, for the purpose of collecting per-mile road usage charges owed;

(C) Employees of the department;

(D) A certified service provider;

(E) A contractor for a certified service provider, but only to the extent the contractor provides services directly related to the certified service provider's agreement with the department;

(F) An entity expressly approved to receive the information by the registered owner or lessee of the subject vehicle; or

(G) A police officer pursuant to a valid court order based on probable cause and issued at the request of a federal, state or local law enforcement agency in an authorized criminal investigation involving a person to whom the requested information pertains.

(b) Disclosure under paragraph (a) of this subsection is limited to personally identifiable information necessary to the respective recipient's function under sections 2 to 15 of this 2013 Act.

(4)(a) Not later than 30 days after completion of payment processing, dispute resolution for a single reporting period or a noncompliance investigation, whichever is latest, the department and certified service providers shall destroy records of the location and daily metered use of subject vehicles.

(b) Notwithstanding paragraph (a) of this subsection:

(A) For purposes of traffic management and research, the department and certified service providers may retain, aggregate and use information in the records after removing personally identifiable information.

(B) A certified service provider may retain the records if the registered owner or lessee consents to the retention. Consent under this subparagraph does not entitle the department to obtain or use the records or the information contained in the records.

(C) Monthly summaries of metered use by subject vehicles may be retained in VIN summary reports by the department and certified service providers.

(5) The department, in any agreement with a certified service provider, shall provide for penalties if the certified service provider violates this section.

SECTION 10. (1) On a date determined by the Department of Transportation under section 8 of this 2013 Act, the registered owner or lessee of a subject vehicle shall report the metered use by the subject vehicle, rounded up to the next whole mile, and pay to the department the per-mile road usage charge due under section 3 of this 2013 Act for the reporting period.

(2) Unless a registered owner or lessee presents evidence in a manner approved by the department by rule that the subject vehicle has been driven outside this state, the department shall assume that all metered use reported represents miles driven by the subject vehicle on the highways in Oregon.

REFUNDS AND EXEMPTIONS

SECTION 11. (1) The Department of Transportation shall provide a refund to a registered owner or lessee that has overpaid the per-mile road usage charge imposed under section 3 of this 2013 Act.

(2) The department may provide by rule that the refund under this section be granted as a credit against future per-mile road usage charges incurred by the registered owner or lessee.

SECTION 12. (1) A registered owner or lessee that has paid the per-mile road usage charge imposed under section 3 of this 2013 Act may apply to the Department of Transportation for a refund for metered use of a road, thoroughfare or property in private ownership.

(2) An application for a refund under this section must be submitted to the department within 15 months after the date on which the per-mile road usage charge for which a refund is claimed is paid.

(3) The application required under this section shall be in a form prescribed by the department by rule and must include a signed statement by the applicant indicating the number of miles for which the refund is claimed.

(4) The department may require the applicant for a refund under this section to furnish any information the department considers necessary for processing the application.

SECTION 13. (1) The Department of Transportation may investigate a refund application submitted under section 12 of this 2013 Act and gather and compile such information related to the application as the department considers necessary to safeguard the state and prevent fraudulent practices in connection with tax refunds and tax evasion.

(2) The department may, in order to establish the validity of an application, examine the relevant records of the applicant for such purposes.

(3) If an applicant does not permit the department to examine the relevant records, the applicant waives all rights to the refund to which the application relates.

SECTION 14. (1) A person may not intentionally make a false statement in a report or refund application or when supplying other information required under section 10 or 12 of this 2013 Act.

(2) A person may not intentionally apply for, receive or attempt to receive a refund under section 11 or 12 of this 2013 Act to which the person is not entitled.

(3) A person may not intentionally aid or assist another person to violate any provision of section 10, 11 or 12 of this 2013 Act.

(4) A person who violates any provision of this section commits a Class A violation.

SECTION 15. (1) Upon application on a form prescribed by the Department of Transportation, the department shall issue an emblem to the registered owner of a subject vehicle to show that the use of fuel in the subject vehicle is exempt from taxation under ORS 319.510 to 319.880.

(2) An emblem issued under this section shall be displayed:

(a) In a conspicuous place on the subject vehicle; and

(b) Only upon the subject vehicle with respect to which it is issued.

SECTION 16. ORS 319.550 is amended to read:

319.550. (1) Except as provided in this section, a person may not use fuel in a motor vehicle in this state unless the person holds a valid user's license. [*except that:*]

[(1)] (2) A nonresident may use fuel in a motor vehicle not registered in Oregon for a period not exceeding 30 days without obtaining a user's license or the emblem [*provided in*] issued under ORS 319.600, if, for all fuel used in a motor vehicle in this state, the nonresident pays to a seller, at the time of the sale, the tax provided in ORS 319.530.

[(2)] (3) A user's license is not required for a person who uses fuel in a motor vehicle with a combined weight of 26,000 pounds or less if, for all fuel used in a motor vehicle in this state, the person pays to a seller, at the time of the sale, the tax provided in ORS 319.530.

[(3)] (4)(a) A user's license is not required for a person who uses fuel as described in ORS 319.520 (7) in the vehicles specified in [*subsection (4) of this section*] **this subsection** if the person pays to a seller, at the time of the sale, the tax provided in ORS 319.530.

[(4)] (b) [*Subsection (3) of this section*] **Paragraph (a) of this subsection** applies to the following vehicles:

[(a)] (A) Motor homes as defined in ORS 801.350.

[(b)] (B) Recreational vehicles as defined in ORS 446.003.

(5) A user's license is not required for a person who uses fuel in a motor vehicle:

(a) Metered use by which is subject to the per-mile road usage charge imposed under section 3 of this 2013 Act; and

(b) That also uses fuels subject to ORS 319.510 to 319.880.

SECTION 17. ORS 319.665 is amended to read:

319.665. (1) The seller of fuel for use in a motor vehicle shall collect the tax provided by ORS 319.530 at the time the fuel is sold, unless one of the following situations applies:

(a) The vehicle into which the seller delivers or places the fuel bears a valid permit or user's emblem issued by the Department of Transportation.

(b) The fuel is dispensed at a nonretail facility, in which case the seller shall collect any tax owed at the same time the seller collects the purchase price from the person to whom the fuel was dispensed at the nonretail facility. A seller is not required to collect the tax under this paragraph

from a person who certifies to the seller that the use of the fuel is exempt from the tax imposed under ORS 319.530.

(c) A cardlock card is used for purchase of the fuel at an attended portion of a retail facility equipped with a cardlock card reader, in which case the cardlock card issuer licensed in this state is responsible for collecting and remitting the tax unless the person making the purchase certifies to the seller that the use of the fuel is exempt from the tax imposed under ORS 319.530.

(d) Metered use by the vehicle is subject to the per-mile road usage charge imposed under section 3 of this 2013 Act.

(2) If a cardlock card is used for purchase of fuel at an attended portion of a retail facility equipped with a cardlock card reader, the seller at the retail facility may deduct fuel purchases made with a cardlock card from the seller's retail transactions if the seller provides the department with the following information:

(a) A monthly statement from a cardlock card issuer that details the cardlock card purchases at the retail facility; and

(b) A listing of cardlock card issuers and gallons of fuel purchased at the retail facility by the issuers' customers.

(3) The department shall supply each seller of fuel for use in a motor vehicle with a chart which sets forth the tax imposed on given quantities of fuel.

SECTION 18. ORS 319.831 is amended to read:

319.831. (1) If a user obtains fuel for use in a motor vehicle in this state and pays the use fuel tax on the fuel obtained, the user may apply for a refund of that part of the use fuel tax paid which is applicable to use of the fuel to propel a motor vehicle:

(a) In another state, if the user pays to the other state an additional tax on the same fuel;

(b) Upon any road, thoroughfare or property in private ownership;

(c) Upon any road, thoroughfare or property, other than a state highway, county road or city street, for the removal of forest products, as defined in ORS 321.005, or the products of such forest products converted to a form other than logs at or near the harvesting site, or for the construction or maintenance of the road, thoroughfare or property, pursuant to a written agreement or permit authorizing the use, construction or maintenance of the road, thoroughfare or property, with or by:

(A) An agency of the United States;

(B) The State Board of Forestry;

(C) The State Forester; or

(D) A licensee of an agency named in subparagraph (A), (B) or (C) of this paragraph;

(d) By an agency of the United States or of this state or of any county, city or port of this state on any road, thoroughfare or property, other than a state highway, county road or city street;

(e) By any incorporated city or town of this state;

(f) By any county of this state or by any road assessment district formed under ORS 371.405 to 371.535;

(g) Upon any county road for the removal of forest products as defined in ORS 321.005, or the products of such forest products converted to a form other than logs at or near the harvesting site, if:

(A) Such use upon the county road is pursuant to a written agreement entered into with, or to a permit issued by, the State Board of Forestry, the State Forester or an agency of the United States, authorizing such user to use such road and requiring such user to pay for or to perform the construction or maintenance of the county road;

(B) The board, officer or agency that entered into the agreement or granted the permit, by contract with the county court or board of county commissioners, has assumed the responsibility for the construction or maintenance of such county road; and

(C) Copies of the agreements or permits required by subparagraphs (A) and (B) of this paragraph are filed with the Department of Transportation;

(h) By a school district or education service district of this state or the contractors of a school district or education service district, for those vehicles being used to transport students;

(i) By a rural fire protection district organized under the provisions of ORS chapter 478;
(j) By any district, as defined in ORS chapter 198, that is not otherwise specifically provided for in this section; or

(k) By any state agency, as defined in ORS 240.855.

(L) In metered use subject to the per-mile road usage charge imposed under section 3 of this 2013 Act if the user has paid the charge.

(2) An application for a refund under subsection (1) of this section shall be filed with the department within 15 months after the date the use fuel tax, for which a refund is claimed, is paid.

(3) The application for a refund provided by subsection (1) of this section shall include a signed statement by the applicant indicating the amount of fuel for which a refund is claimed, and the way in which the fuel was used which qualifies the applicant for a refund. If the fuel upon which the refund is claimed was obtained from a seller to whom the use fuel tax was paid, the application shall be supported by the invoices which cover the purchase of the fuel. If the applicant paid the use fuel tax directly to the department, the applicant shall indicate the source of the fuel and the date it was obtained.

(4) The department may require any person who applies for a refund provided by subsection (1) of this section to furnish a statement, under oath, giving the person's occupation, description of the machines or equipment in which the fuel was used, the place where used and such other information as the department may require.

(5) The department may provide by rule that a refund under subsection (1)(L) of this section be granted as a credit against future per-mile road usage charges incurred by the applicant under section 3 of this 2013 Act.

SECTION 19. ORS 319.280 is amended to read:

319.280. (1) Any person who has paid any tax on motor vehicle fuel levied or directed to be paid by ORS 319.010 to 319.430 either directly by the collection of the tax by the vendor from the consumer, or indirectly by adding the amount of the tax to the price of the fuel and paid by the consumer, shall be reimbursed and repaid the amount of such tax paid, except as provided in ORS 319.290 to 319.330, if such person has:

(a) Purchased and used such fuel for the purpose of operating or propelling a stationary gas engine, a tractor or a motor boat, if the motor boat is used for commercial purposes at any time during the period for which the refund is claimed;

(b) Purchased and used such fuel for cleaning or dyeing or other commercial use, except when used in motor vehicles operated upon any highway;

(c) Purchased and exported such fuel from this state, in containers other than fuel supply tanks of motor vehicles, provided that the person:

(A) Exports the motor vehicle fuel from this state to another state, territory or country, not including a federally recognized Indian reservation located wholly or partially within the borders of this state, where the motor vehicle fuel is unloaded; and

(B) Has a valid motor vehicle fuel dealer's license or its equivalent issued by the state, territory or country to which the fuel is exported and where it is unloaded;

(d) Purchased and exported such fuel in the fuel supply tank of a motor vehicle and has used such fuel to operate the vehicle upon the highways of another state, if the user has paid to the other state a similar motor vehicle fuel tax on the same fuel, or has paid any other highway use tax the rate for which is increased because such fuel was not purchased in, and the tax thereon paid, to such state; [or]

(e) Purchased and used such fuel for small engines that are not used to propel motor vehicles on highways, including but not limited to those that power lawn mowers, leaf blowers, chain saws and similar implements[.]; or

(f) Purchased and used such fuel for operating a motor vehicle the metered use of which is subject to the per-mile road usage charge imposed under section 3 of this 2013 Act, if the person has paid the charge.

(2) When a motor vehicle with auxiliary equipment uses fuel and there is no auxiliary motor for such equipment or separate tank for such a motor, a refund may be claimed and allowed as provided by subsection [(4)] (5) of this section, except as otherwise provided by this subsection, without the necessity of furnishing proof of the amount of fuel used in the operation of the auxiliary equipment. The person claiming the refund may present to the Department of Transportation a statement of the claim and be allowed a refund as follows:

(a) For fuel used in pumping aircraft fuel, motor vehicle fuel, fuel or heating oils or other petroleum products by a power take-off unit on a delivery truck, refund shall be allowed claimant for tax paid on fuel purchased at the rate of three-fourths of one gallon for each 1,000 gallons of petroleum products delivered.

(b) For fuel used in operating a power take-off unit on a cement mixer truck or on a garbage truck, claimant shall be allowed a refund of 25 percent of the tax paid on all fuel used in such a truck.

(3) When a person purchases and uses motor vehicle fuel in a vehicle equipped with a power take-off unit, a refund may be claimed for fuel used to operate the power take-off unit provided the vehicle is equipped with a metering device approved by the department and designed to operate only while the vehicle is stationary and the parking brake is engaged; the quantity of fuel measured by the metering device shall be presumed to be the quantity of fuel consumed by the operation of the power take-off unit.

(4)(a) **The department may provide by rule that a refund under subsection (1)(f) of this section be granted as a credit against future per-mile road usage charges incurred by the person under section 3 of this 2013 Act.**

(b)(A) **The department may provide by rule for refund thresholds that are met by aggregating refund amounts or by estimating motor vehicle fuel tax refunds by vehicle type, at the option of the person claiming the refund.**

(B) **If the person claiming the refund opts for an estimated refund based on vehicle type, the requirement under subsection (5) of this section that the person claiming the refund must present original invoices or reasonable facsimiles showing motor vehicle fuel purchases does not apply.**

[(4)] (5) Before any such refund may be granted, the person claiming such refund must present to the department a statement, accompanied by the original invoices, or reasonable facsimiles approved by the department, showing such purchases; provided that in lieu of original invoices or facsimiles, refunds submitted under subsection (1)(d) of this section shall be accompanied by information showing source of the fuel used and evidence of payment of tax to the state in which the fuel was used. The statement shall be made over the signature of the claimant, and shall state the total amount of such fuel for which the claimant is entitled to be reimbursed under subsection (1) of this section. The department upon the presentation of the statement and invoices or facsimiles, or other required documents, shall cause to be repaid to the claimant from the taxes collected on motor vehicle fuel such taxes so paid by the claimant.

PENALTIES

SECTION 20. Section 21 of this 2013 Act is added to and made a part of the Oregon Vehicle Code.

SECTION 21. (1) A person commits the offense of tampering with a vehicle metering system if the person:

(a) **With the intent to defraud, operates a motor vehicle that is subject to the per-mile road usage charge imposed under section 3 of this 2013 Act on a highway knowing that the vehicle metering system is disconnected or nonfunctional.**

(b) **Replaces, disconnects or resets the vehicle metering system of a motor vehicle that is subject to the per-mile road usage charge imposed under section 3 of this 2013 Act with the intent of reducing the metered use recorded by the vehicle metering system.**

(2) This section does not apply to a person who is servicing, repairing or replacing a vehicle metering system.

(3) As used in this section, "vehicle metering system" means a system used to record the metered use by a motor vehicle for the purpose of complying with the reporting requirements under section 10 of this 2013 Act.

(4) Tampering with a vehicle metering system is a Class A traffic violation.

CONFORMING AMENDMENTS

SECTION 22. ORS 366.505 is amended to read:

366.505. (1) The State Highway Fund shall consist of:

(a) All moneys and revenues derived under and by virtue of the sale of bonds, the sale of which is authorized by law and the proceeds thereof to be dedicated to highway purposes.

(b) All moneys and revenues accruing from the licensing of motor vehicles, operators and chauffeurs.

(c) Moneys and revenues derived from any tax levied upon gasoline, distillate, liberty fuel or other volatile and inflammable liquid fuels, except moneys and revenues described in ORS 184.642 (2)(a) that become part of the Department of Transportation Operating Fund.

(d) Moneys and revenues derived from the road usage charges imposed under section 3 of this 2013 Act.

[(d)] (e) Moneys and revenues derived from or made available by the federal government for road construction, maintenance or betterment purposes.

[(e)] (f) All moneys and revenues received from all other sources which by law are allocated or dedicated for highway purposes.

(2) The State Highway Fund shall be deemed and held as a trust fund, separate and distinct from the General Fund, and may be used only for the purposes authorized by law and is continually appropriated for such purposes.

(3) Moneys in the State Highway Fund may be invested as provided in ORS 293.701 to 293.820. All interest earnings on any of the funds designated in subsection (1) of this section shall be placed to the credit of the highway fund.

SECTION 23. ORS 367.802 is amended to read:

367.802. As used in ORS 367.800 to 367.824:

(1) "Agreement" means a written agreement, including but not limited to a contract, for a transportation project that is entered into under ORS 367.806.

(2) "Private entity" means any entity that is not a unit of government, including but not limited to a corporation, partnership, company, nonprofit organization or other legal entity or a natural person.

(3) "Transportation project" or "project" means any proposed or existing undertaking that facilitates:

(a) Any mode of transportation in this state [or that facilitates];

(b) The collection of taxes and fees as an alternative to the motor vehicle fuel taxes imposed under ORS 319.020 and 319.530[.]; or

(c) The collection of the per-mile road usage charge imposed under section 3 of this 2013 Act.

(4) "Unit of government" means any department or agency of the federal government, any state or any agency, office or department of a state, any city, county, district, commission, authority, entity, port or other public corporation organized and existing under statutory law or under a voter-approved charter and any intergovernmental entity created under ORS 190.003 to 190.130, 190.410 to 190.440 or 190.480 to 190.490.

SECTION 24. ORS 367.804 is amended to read:

367.804. (1) The Department of Transportation shall establish the Oregon Innovative Partnerships Program for the planning, acquisition, financing, development, design, construction, recon-

struction, replacement, improvement, maintenance, management, repair, leasing and operation of transportation projects.

(2) The goals of the **Oregon Innovative Partnerships Program** are to:

- (a) Develop an expedited project delivery process;
- (b) Maximize innovation; and
- (c) Develop partnerships with private entities and units of government.

(3) As part of the program established under this section[,]:

(a) The department may:

[(a)] **(A)** Solicit concepts or proposals for transportation projects from private entities and units of government.

[(b)] **(B)** Accept unsolicited concepts or proposals for transportation projects from private entities and units of government.

[(c)] **(C)** Evaluate the concepts or proposals received under this subsection and select potential projects based on the concepts or proposals. The evaluation under this [paragraph] **subparagraph** shall include consultation with any appropriate local government, metropolitan planning organization or area commission on transportation.

[(d)] **(D)** Charge an administrative fee for the evaluation in an amount determined by the department.

(b) The department shall enter into agreements to undertake transportation projects described in ORS 367.806 (2).

(4) Following an evaluation by the department of concepts or proposals [submitted] **the department receives** under subsection (3)(a) of this section, and the selection of potential transportation projects, the department may negotiate and enter into the agreements described in ORS 367.806 for implementing the selected transportation projects.

(5) Except as provided in subsection (6) of this section:

(a) Information related to a transportation project proposed under ORS 367.800 to 367.824, including but not limited to the project's design, management, financing and other details, is exempt from disclosure under ORS 192.410 to 192.505 until:

(A) The department shares the information with a local government, metropolitan planning organization or area commission on transportation under subsection [(3)(c)] **(3)(a)(C)** of this section; or

(B) The department completes its evaluation of the proposed project and has selected the proposal for negotiation of an agreement.

(b) After the department has either shared the information described in paragraph (a) of this subsection with a local government, metropolitan planning organization or area commission on transportation, or has completed its evaluation of the proposed project, the information is subject to disclosure under ORS 192.410 to 192.505.

(6) Sensitive business, commercial or financial information that is not customarily provided to business competitors that is submitted to the department in connection with a transportation project under ORS 367.800 to 367.824 is exempt from disclosure under ORS 192.410 to 192.505 until the information is submitted to the Oregon Transportation Commission in connection with its review and approval of the transportation project under ORS 367.806.

(7) The department may, in connection with the evaluation of concepts or proposals for transportation projects, consider any financing mechanisms, including but not limited to the imposition and collection of franchise fees or user fees and the development or use of other revenue sources.

(8) The department and any other unit of government may expend, out of any funds available for the purpose, such moneys as may be necessary for the evaluation of concepts or proposals for transportation projects and for negotiating agreements for transportation projects under ORS 367.806. The department or other unit of government may employ engineers, consultants or other experts the department or other unit of government determines are needed for the purposes of doing the evaluation and negotiation. Expenses incurred by the department or other unit of government under this subsection prior to the issuance of transportation project revenue bonds or other fi-

nancing shall be paid by the department or other unit of government, as applicable, and charged to the appropriate transportation project. The department or other unit of government shall keep records and accounts showing each amount so charged. Upon the sale of transportation project revenue bonds or upon obtaining other financing for any transportation project, the funds expended by the department or other unit of government under this subsection in connection with the project shall be repaid to the department or the unit of government from the proceeds of the bonds or other financing, as allowed by applicable law.

SECTION 25. ORS 367.806 is amended to read:

367.806. (1) As part of the **Oregon Innovative Partnerships Program** established under ORS 367.804, the Department of Transportation may:

(a) Enter into any agreement or any configuration of agreements relating to transportation projects with any private entity or unit of government or any configuration of private entities and units of government. The subject of agreements entered into under this section may include, but need not be limited to, planning, acquisition, financing, development, design, construction, reconstruction, replacement, improvement, maintenance, management, repair, leasing and operation of transportation projects.

(b) Include in any agreement entered into under this section any financing mechanisms, including but not limited to the imposition and collection of franchise fees or user fees and the development or use of other revenue sources.

(2) As part of the Oregon Innovative Partnerships Program established under ORS 367.804, the department shall enter into agreements to undertake transportation projects the subjects of which include the application of technology standards to determine whether to certify technology, the collection of metered use data, tax processing and account management, as these subjects relate to the operation of a road usage charge system pursuant to sections 2 to 15 of this 2013 Act.

[(2)] (3) The agreements among the public and private sector partners entered into under this section must specify at least the following:

(a) At what point in the transportation project public and private sector partners will enter the project and which partners will assume responsibility for specific project elements;

(b) How the partners will share management of the risks of the project;

(c) How the partners will share the costs of development of the project;

(d) How the partners will allocate financial responsibility for cost overruns;

(e) The penalties for nonperformance;

(f) The incentives for performance;

(g) The accounting and auditing standards to be used to evaluate work on the project; and

(h) Whether the project is consistent with the plan developed by the Oregon Transportation Commission under ORS 184.618 and any applicable regional transportation plans or local transportation system programs and, if not consistent, how and when the project will become consistent with applicable plans and programs.

[(3)] (4) The department may, either separately or in combination with any other unit of government, enter into working agreements, coordination agreements or similar implementation agreements to carry out the joint implementation of any transportation project selected under ORS 367.804.

[(4)] (5) Except for ORS 383.015, 383.017 (1), (2), (3) and (5) and 383.019, the provisions of ORS 383.003 to 383.075 apply to any tollway project entered into under ORS 367.800 to 367.824.

[(5)] (6) The provisions of ORS 279.835 to 279.855 and ORS chapters 279A, 279B and 279C do not apply to concepts or proposals submitted under ORS 367.804, or to agreements entered into under this section, except that if public moneys are used to pay any costs of construction of public works that is part of a project, the provisions of ORS 279C.800 to 279C.870 apply to the public works. In addition, if public moneys are used to pay any costs of construction of public works that is part of a project, the construction contract for the public works must contain provisions that

require the payment of workers under the contract in accordance with ORS 279C.540 and 279C.800 to 279C.870.

[(6)(a)] (7)(a) The department may not enter into an agreement under this section until the agreement is reviewed and approved by the Oregon Transportation Commission.

(b) The department may not enter into, and the commission may not approve, an agreement under this section for the construction of a public improvement as part of a transportation project unless the agreement provides for bonding, financial guarantees, deposits or the posting of other security to secure the payment of laborers, subcontractors and suppliers who perform work or provide materials as part of the project.

(c) Before presenting an agreement to the commission for approval under this subsection, the department must consider whether to implement procedures to promote competition among subcontractors for any subcontracts to be let in connection with the transportation project. As part of its request for approval of the agreement, the department shall report in writing to the commission its conclusions regarding the appropriateness of implementing such procedures.

[(7)(a)] (8)(a) Except as provided in paragraph (b) of this subsection, documents, communications and information developed, exchanged or compiled in the course of negotiating an agreement with a private entity under this section are exempt from disclosure under ORS 192.410 to 192.505.

(b) The documents, communications or information described in paragraph (a) of this subsection are subject to disclosure under ORS 192.410 to 192.505 when the documents, communications or information are submitted to the commission in connection with its review and approval of a transportation project under subsection [(6)] (7) of this section.

[(8)] (9) The terms of a final agreement entered into under this section and the terms of a proposed agreement presented to the commission for review and approval under subsection [(6)] (7) of this section are subject to disclosure under ORS 192.410 to 192.505.

[(9)] (10) As used in this section:

(a) "Public improvement" has the meaning given that term in ORS 279A.010.

(b) "Public works" has the meaning given that term in ORS 279C.800.

SECTION 26. ORS 305.410 is amended to read:

305.410. (1) Subject only to the provisions of ORS 305.445 relating to judicial review by the Supreme Court and to subsection (2) of this section, the tax court shall be the sole, exclusive and final judicial authority for the hearing and determination of all questions of law and fact arising under the tax laws of this state. For the purposes of this section, and except to the extent that they preclude the imposition of other taxes, the following are not tax laws of this state:

(a) ORS chapter 577 relating to Oregon Beef Council contributions.

(b) ORS 576.051 to 576.455 relating to commodity commission assessments.

(c) ORS chapter 477 relating to fire protection assessments.

(d) ORS chapters 731, 732, 733, 734, 737, 742, 743, 743A, 744, 746, 748 and 750 relating to insurance company fees and taxes.

(e) ORS chapter 473 relating to liquor taxes.

(f) ORS chapter 583 relating to milk marketing, production or distribution fees.

(g) ORS chapter 825 relating to motor carrier taxes.

(h) ORS chapter 319 relating to motor vehicle and aircraft fuel taxes **and the road usage charges imposed under section 3 of this 2013 Act.**

(i) ORS title 59 relating to motor vehicle and motor vehicle operators' license fees and ORS title 39 relating to boat licenses.

(j) ORS chapter 578 relating to Oregon Wheat Commission assessments.

(k) ORS chapter 462 relating to racing taxes.

(l) ORS chapter 657 relating to unemployment insurance taxes.

(m) ORS chapter 656 relating to workers' compensation contributions, assessments or fees.

(n) ORS 311.420, 311.425, 311.455, 311.650, 311.655 and ORS chapter 312 relating to foreclosure of real and personal property tax liens.

(o) Sections 15 to 22, 24 and 29, chapter 736, Oregon Laws 2003, relating to long term care facility assessments.

(2) The tax court and the circuit courts shall have concurrent jurisdiction to try actions or suits to determine:

(a) The priority of property tax liens in relation to other liens.

(b) The validity of any deed, conveyance, transfer or assignment of real or personal property under ORS 95.060 and 95.070 (1983 Replacement Part) or 95.200 to 95.310 where the Department of Revenue has or claims a lien or other interest in the property.

(3) Subject only to the provisions of ORS 305.445 relating to judicial review by the Supreme Court, the tax court shall be the sole, exclusive and final judicial authority for the hearing and determination of all questions of law and fact concerning the authorized uses of the proceeds of bonded indebtedness described in section 11 (11)(d), Article XI of the Oregon Constitution.

(4) Except as permitted under section 2, amended Article VII, Oregon Constitution, this section and ORS 305.445, no person shall contest, in any action, suit or proceeding in the circuit court or any other court, any matter within the jurisdiction of the tax court.

TECHNICAL PROVISIONS

SECTION 27. (1) Sections 3 to 5, 10 to 15 and 21 of this 2013 Act and the amendments to ORS 319.280, 319.550, 319.665, 319.831 and 366.505 by sections 16 to 19 and 22 of this 2013 Act become operative on July 1, 2015.

(2) The Department of Transportation may take any action before the operative date specified in subsection (1) of this section that is necessary to enable the department to exercise, on and after the operative date specified in subsection (1) of this section, all the duties, functions and powers conferred on the department by sections 2 to 15 and 21 of this 2013 Act and the amendments to ORS 319.280, 319.550, 319.665, 319.831 and 366.505 by sections 16 to 19 and 22 of this 2013 Act.

SECTION 28. The unit captions used in this 2013 Act are provided only for the convenience of the reader and do not become part of the statutory law of this state or express any legislative intent in the enactment of this 2013 Act.

MULTIJURISDICTIONAL AGREEMENTS

SECTION 29. The Department of Transportation may enter into agreements with other state departments of transportation, the federal government and Canadian provinces for the purposes of:

(1) Conducting joint research relating to road usage charges and development programs on a multistate basis;

(2) Furthering the development and operation of single state or multistate road usage charge pilot programs;

(3) Sharing costs incurred in conducting the research described in subsection (1) of this section; and

(4) Developing a program for stakeholder outreach and communications with respect to road usage charges.

SECTION 30. For the biennium beginning July 1, 2013, expenditures by the Department of Transportation from funds received from other states, the federal government, Canadian provinces or the government of Canada for the purposes described in section 29 of this 2013 Act are not limited.

EXPENDITURE LIMITATION

SECTION 31. Notwithstanding any other law limiting expenditures, the limitation on expenditures established by section 3 (7), chapter 556, Oregon Laws 2013 (Enrolled Senate Bill 5544), for the biennium beginning July 1, 2013, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts and federal funds received as reimbursement from the United States Department of Transportation, but excluding lottery funds and federal funds not described in this section, collected or received by the Department of Transportation, is increased by \$2,828,339 for the road usage charge program established by sections 2 to 15 of this 2013 Act.

RAIL PROXIMATE REAL PROPERTY TRANSFERS

SECTION 32. ORS 271.310 is amended to read:

271.310. (1) Except as provided in subsection (2) of this section and subject to subsection (3) of this section, whenever any political subdivision possesses or controls real property not needed for public use, or whenever the public interest may be furthered, a political subdivision may sell, exchange, convey or lease for any period not exceeding 99 years all or any part of the political subdivision's interest in the property to a governmental body or private individual or corporation. The consideration for the transfer or lease may be cash or real property, or both.

(2) If the ownership, right or title of the political subdivision to any real property set apart by deed, will or otherwise for a burial ground or cemetery, or for the purpose of interring the remains of deceased persons, is limited or qualified or the use of the real property is restricted, whether by dedication or otherwise, the political subdivision may, after the county court or governing body thereof has first declared by resolution that the real property is not needed for public use, or that the sale, exchange, conveyance or lease of the real property will further the public interest, file a complaint in the circuit court for the county in which the real property is located against all persons claiming any right, title or interest in the real property, whether the interest be contingent, conditional or otherwise, for authority to sell, exchange, convey or lease all or any part of the real property. The resolution is prima facie evidence that the real property is not needed for public use, or that the sale, exchange, conveyance or lease will further the public interest. The action shall be commenced and prosecuted to final determination in the same manner as an action not triable by right to a jury. The complaint shall contain a description of the real property, a statement of the nature of the restriction, qualification or limitations, and a statement that the defendants claim some interest therein. The court shall make such judgment as it shall deem proper, taking into consideration the limitation, qualifications or restrictions, the resolution, and all other matters pertinent thereto. Neither costs nor disbursements may be recovered against any defendant.

(3)(a) At least 30 days before listing or placing real property for sale, exchange or conveyance, a political subdivision shall notify the Department of Transportation of its intent to sell, exchange or convey the real property if the real property is within 100 feet of a railroad right of way or is within 500 feet of an at-grade rail crossing.

(b) The department shall share the advance notice with private providers of rail service that might be interested in obtaining the real property to facilitate the current delivery or future expansion of rail service. Notwithstanding the benefit of receiving advance notice, a private provider of rail service may not obtain or enter into negotiations to obtain the real property until the political subdivision offers the real property for sale, exchange, conveyance or lease to the general public. As used in this paragraph, "general public" includes private providers of rail service.

(c) Paragraph (a) of this subsection does not apply:

(A) To light rail corridors and any other rail corridors excluded by rule of the department;

(B) If the proposed sale, exchange or conveyance of the real property is to a provider of rail service; or

(C) To the proposed sale, exchange or conveyance of easements.

(d) The department shall adopt rules to implement this subsection. The rules may include provisions that:

(A) Identify rail corridors within which a political subdivision is not required to provide notice of intention to sell, exchange or convey real property within 100 feet of a railroad right of way or within 500 feet of an at-grade rail crossing.

(B) Establish a process for providing advance notice to private providers of rail service.

(4) Unless the governing body of a political subdivision determines under subsection (1) of this section that the public interest may be furthered, real property needed for public use by any political subdivision owning or controlling the property may not be sold, exchanged, conveyed or leased under the authority of ORS 271.300 to 271.360, except that it may be exchanged for property that is of equal or superior useful value for public use. Any such property not immediately needed for public use may be leased if, in the discretion of the governing body having control of the property, the property will not be needed for public use within the period of the lease.

(5) The authority to lease property granted by this section includes authority to lease property not owned or controlled by the political subdivision at the time of entering into the lease. A lease under this subsection shall be conditioned upon the subsequent acquisition of the interest covered by the lease.

EFFECTIVE DATE

SECTION 33. This 2013 Act takes effect on the 91st day after the date on which the 2013 regular session of the Seventy-seventh Legislative Assembly adjourns sine die.

Passed by Senate July 6, 2013

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Robert Taylor, Secretary of Senate

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Peter Courtney, President of Senate

Passed by House July 7, 2013

.....
Tina Kotek, Speaker of House

Received by Governor:

.....M.,....., 2013

Approved:

.....M.,....., 2013

.....
John Kitzhaber, Governor

Filed in Office of Secretary of State:

.....M.,....., 2013

.....
Kate Brown, Secretary of State