RUC and Toll

Washington State Transportation Commission
Maureen Bock
ODOT Strategic Priorities
## ODOT Strategic Priorities

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>METRIC</th>
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<tbody>
<tr>
<td>1. Increase workforce diversity</td>
<td>End of 2023, materially increase the hiring &amp; retention of minorities, women, and people who live with disabilities</td>
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<td>2. Implement a social equity engagement toolkit</td>
<td>End of 2023, one hundred percent of ODOT projects will apply ODOT’s Social Equity Engagement Toolkit</td>
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<td>3. Reduce our carbon footprint</td>
<td>End of 2023, begin to reduce greenhouse gas emissions from ODOT activities</td>
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<td>4. Electrify Oregon’s transportation system</td>
<td>End of 2023, triple the number of electric vehicles on Oregon’s roads End of 2025, expand statewide electric vehicle charging infrastructure by ten percent</td>
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<td>5. Improve access to active &amp; public transportation</td>
<td>End of 2023, increase the percentage of agency funding dedicated to projects and programs that improve equitable access to walking, biking and transit</td>
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<td>6. Reduce congestion in Portland region</td>
<td>By 2023, begin making investments in the Portland region to reduce congestion as defined by the average number of hours per day a driver experiences congestion</td>
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<td>7. More dollars to BIPOC and Women Owned Businesses</td>
<td>By 2023, increase the total dollars given BIPOC and women owned businesses annually</td>
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<td>8. Implement transformative technologies</td>
<td>End of 2023, will make advancements in projects that bring transformative technology to Oregon’s Transportation System</td>
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<td>9. Implement Large-scale Road Usage Charging</td>
<td>By 2023, complete identified critical actions to advance large-scale Road Usage Charge capacity by 2026</td>
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<td>10. Achieve sufficient funding</td>
<td>By the end of 2025, increase total funding for all modes of Oregon’s transportation system</td>
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Our transportation funding system is old. Really old.
Fuel taxes are unsustainable
Why is the current funding model unsustainable?

1. Declining purchasing power.
2. Increased fuel efficiency.
3. More people. More VMT.
In 1993, Oregon could build this road.

In 2021, Oregon can only build this road with the same money.
Fuel efficiency is increasing.

Ex: Monthly fuel-tax paid for 1,000 Miles Driven

- Electric Car: $0
- Hybrid (45-55 MPG): $7
- Average Efficiency (15-25 MPG): $18
- Low Efficiency (5-15 MPG): $36
Impact of Fuel Efficiency Inflation on Motor Fuels Tax Revenue

Cumulative Impact of $1.7 Billion through 2029

Motor Fuels Tax Revenue

Estimated Motor Fuels Tax Revenue Assuming Constant Fuel Efficiency
RUC Model: **Pay for what you use.**

Ex: Monthly RUC paid for 1,000 Miles Driven

- **$18** for Electric Car (45-55 MPG)
- **$18** for Hybrid (45-55 MPG)
- **$18** for Average Efficiency (15-25 MPG)
- **Not eligible** for Low Efficiency (5-15 MPG)
A road usage charge is a return to the “user pays” approach.

Drive more. Pay more.

Drive less. Pay less.
How it works:

1. **Vehicle Mileage/Other Data**
   - Mileage reporting device collects and transmits mileage and fuel consumption data to Account Manager.

2. **Invoice**
   - Account Manager performs transaction processing and sends invoice to vehicle owner.

3. **Payment**
   - Vehicle owner makes RUC payment.

4. **RUC Transfer**
   - Account Manager transfers RUC to State with associated reports (e.g., aggregated data).

5. **Oversight Functions**
   - State provides certification, auditing, and oversight of Account Manager.
Open Architecture is essential
2016

Conducted MBUF Pilot Legislation for Voluntary MBUF Program MBUF Studies through Multistate Consortium

States across the country are exploring RUC.
States across the country are exploring RUC.
In 2021 alone, 13 states have introduced RUC legislation.
Most drivers don’t know how roads are funded or that there is a funding issue.

- 27% were surprised they pay a fuel tax
- 56% pay more or less than thought

- Example: 70% of New Jersey residents think funding is increasing or staying the same
Rural drivers may save with RUC.

- Minimal change for most households
- On average, rural households will pay 1.9-6.3% less and urban households will pay 0.3-1.4% more
You can’t solve the funding problem by simply taxing trucks.
Trucks are heavy users - and payers

- Regional taxes
- Federal fuel tax
- State fuel tax
- Heavy vehicle use tax
- Registration fees
- Permits
- Other state and local taxes
- Tire tax
- Tolls
- Federal excise tax
- Weight distance tax (NY, NM, OR, KY)
Highway Cost Allocation Study

Purpose

- Determine the share each class of road users should pay based on their respective share of costs
- Recommend adjustments to existing tax rates and fees

See Oregon Constitution, Article IX, Section 3a (3). Oregon voters ratified the principle of cost responsibility in the November 1999 special election.
RUC vs Fuel Taxes: Equity

1. Each class of vehicle pays its share based on respective share of costs
2. Those in similar economic circumstances face a similar tax burden
3. Fair access to transportation services – rural/suburban/urban; other communities
Electric vehicle owners want to help pay for roads, too.

“Plug In America” supports the eventual development of a road usage charge program.”

- 48% of OReGO participants are hybrid / electric vehicle owners
- OReGO supporters are more likely to drive hybrid or electric vehicles.
Technological Innovation – Project Highlight

**Connected Vehicle Ecosystem**

- Transportation systems are becoming information systems
- Roadways are influenced by digital messages, not just physical infrastructure
- Connectivity improves safety and mobility
- Data supports RUC
- OEMs changing business models
Connected Vehicle Ecosystem

IoT/Edge
Connected devices, systems & facilities

Cloud Analytics
Data processing, analytics & storage

Open Ecosystem
Open development environment for 3rd party partners to deliver services & apps
Connected Vehicle Ecosystem

V2X VEHICLE-TO-EVERYTHING

V2I → V2I
V2I

V2P

DIRECT COMMUNICATIONS
• USES DSRC/C-V2X
• OPERATES IN THE ITS BAND (5.9 GHz)

V2V

V2N VEHICLE-TO-NETWORK

V2N → V2N
V2N

V2N

NETWORK COMMUNICATIONS
• LTE/5G FOR V2N
• OPERATES IN LICENSED CELLULAR SPECTRUM AND OVER THE INTERNET
RUC & Tolls
Local Funding

Oregon’s Local Option Pilot

Area Boundary Pricing: Time-of-day road charge pricing within Portland Metro area

Layer-Area Pricing Sub-Pilot: Time-of-day road charge pricing in two overlapping areas (Portland and Multnomah County)

Corridor Pricing Sub-Pilot: Time-of-day road charge pricing on specific highway corridors (Portland Metro area)
The challenge

Oregon faces an annual $510 million shortfall in its ability to adequately maintain a state of good repair on bridges and pavement.

By 2040, Portland-metro households will spend an average of 69 hours each year stuck in congestion without new investments in transportation.
Assumptions

- We cannot build our way out of congestion
- You pay for what you use
- Congestion pricing improves reliability
- Your toll rate will not be a surprise
- A region-wide approach is supported by stakeholders
Oregon Toll Program

GOALS

Managing congestion  Raising revenue to fund projects that reduce congestion

The term 'tolling' is an industry term that reflects various types of tolls, including terms such as:
Variable rate, congestion pricing, dynamic pricing, flat/fixed rate, managed lanes

Benefits Include

- Managing congestion
- Raising revenue for transportation improvements
- Increasing system reliability
- Supporting State climate goals by reducing traffic pollution
Project Elements

- Bicycle and Pedestrian Improvements
- Public Transportation Improvements
- Safety Enhancements
- Seismic Bridge Enhancements
- Congestion Management
- Toll Revenue Funds Investments

Core Project
Regional Mobility Pricing Project
I-205 Toll Project

I-5 Rose Quarter Improvement Project
Interstate Bridge Replacement Program
OR 217 Auxiliary Lanes Project
Oregon Toll Program
I-205 Improvements Project
I-5 Boone Bridge and Seismic Improvements Project
## Implementing Actions

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ACTIONS</th>
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<tr>
<td>2021</td>
<td>Implement a manual reporting option</td>
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<td>2021</td>
<td>Continue outreach to build public awareness about the need for sustainable funding &amp; increase OReGO enrollment</td>
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<td>2023</td>
<td>Streamline point of sale enrollment at auto dealerships</td>
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<td>2023</td>
<td>Deploy a connected vehicle ecosystem that supports large-scale RUC implementation</td>
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Dealership engagement – point of sale enrollment
Work Plan – 2022 through 2025

2021-2022
• Implement manual reporting
• Collaborate on CVE (ongoing)
• Finalize local pricing pilot
• Start point of sale enrollment

2022-2023
• Conduct dealer education
• Conduct point of sale enrollment pilot
• Complete medium duty study (RUFTF)
• Continue public education

2023-2024
• Evaluate blockchain for clearinghouse
• Prepare for CVE-RUC pilot
• Evaluate payment options for cash preferred payers
• Evaluate new technology/update requirements

2024-2025
• Identify gaps & address
• Implement point of sale enrollment
• Conduct public education
• Prepare to integrate with tolling
• Work on interoperability with other states
The world is changing.

Transportation funding should too.

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