



# WASHINGTON STATE ROAD USAGE CHARGE ASSESSMENT

# WHAT IS THE PROBLEM?

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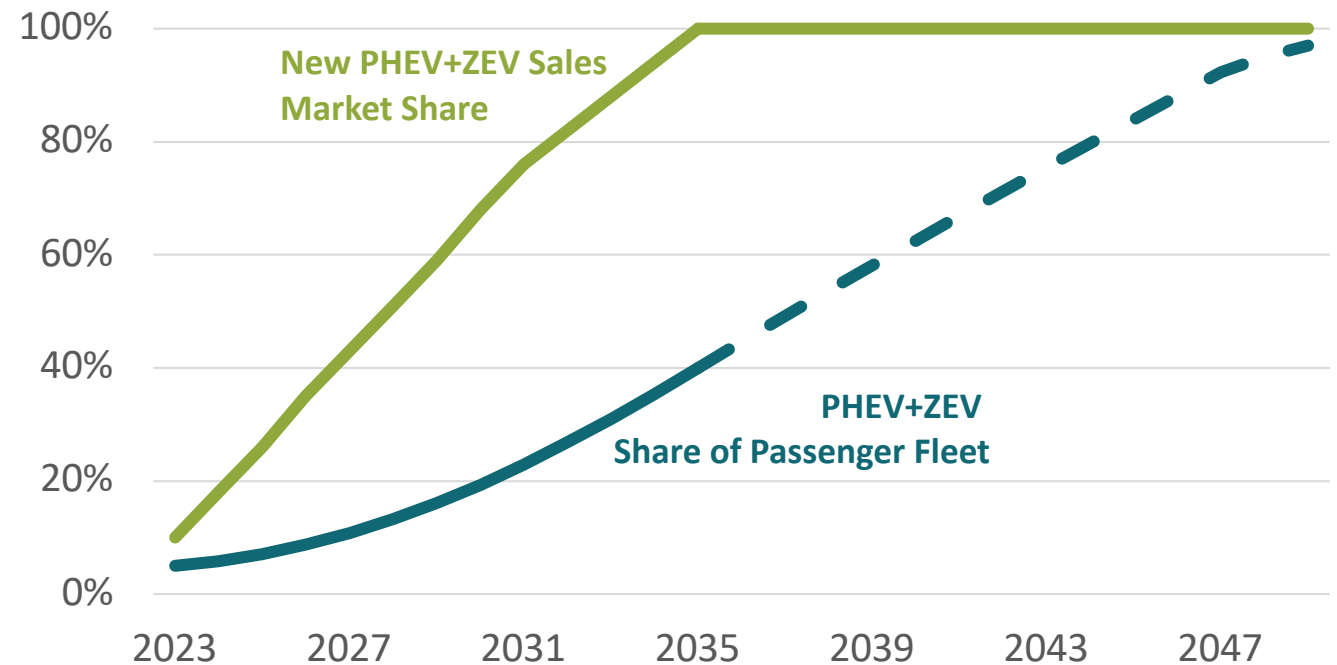
**Taxing fuel is no longer a reliable,  
equitable source of funding**

# ELECTRIC VEHICLE ADOPTION IS ACCELERATING NATIONALLY AND IN WASHINGTON

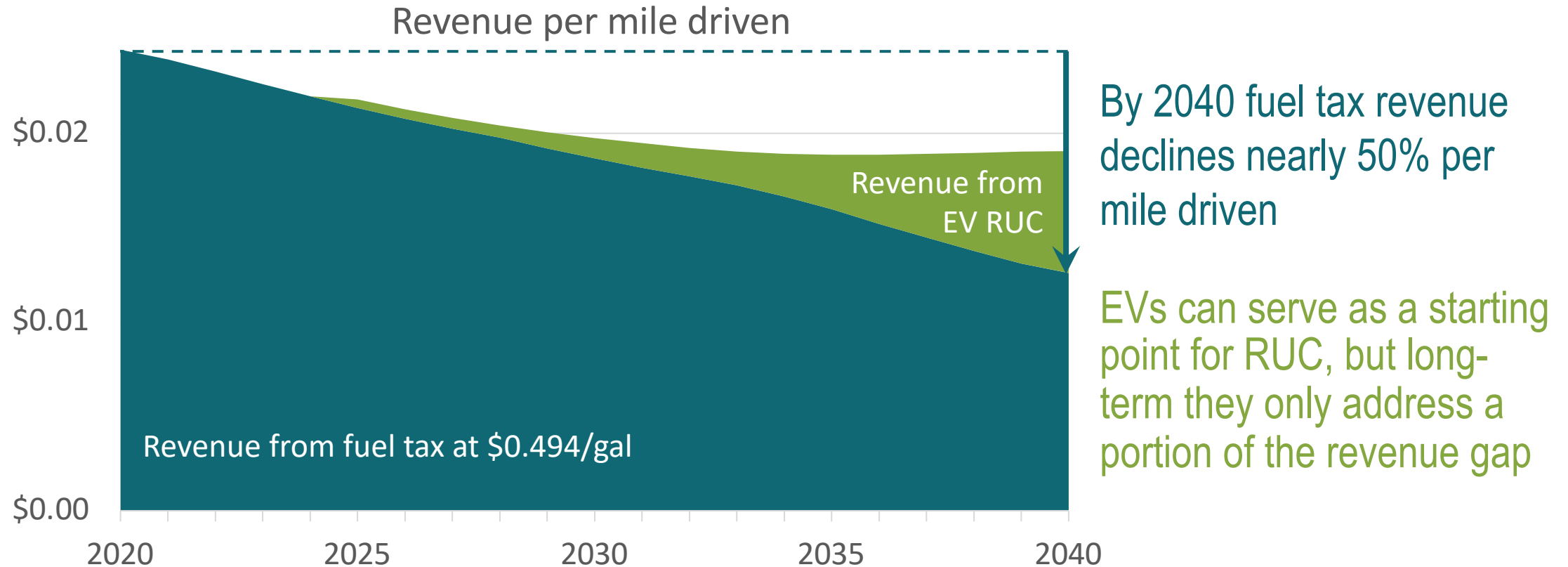
Washington ranks 2<sup>nd</sup> nationally (behind California) in EV market share:

- ✓ **11%** of new vehicles registered to date in 2022 in Washington are electric or plug-in hybrid electric
- ✓ As of July 2022, Washington has over **100,000** registered EVs and PHEVs, about 1.5% of the passenger vehicle fleet

*Washington adheres to California's zero-emission vehicle mandate which calls for all new sales by 2035 to be zero-emission*

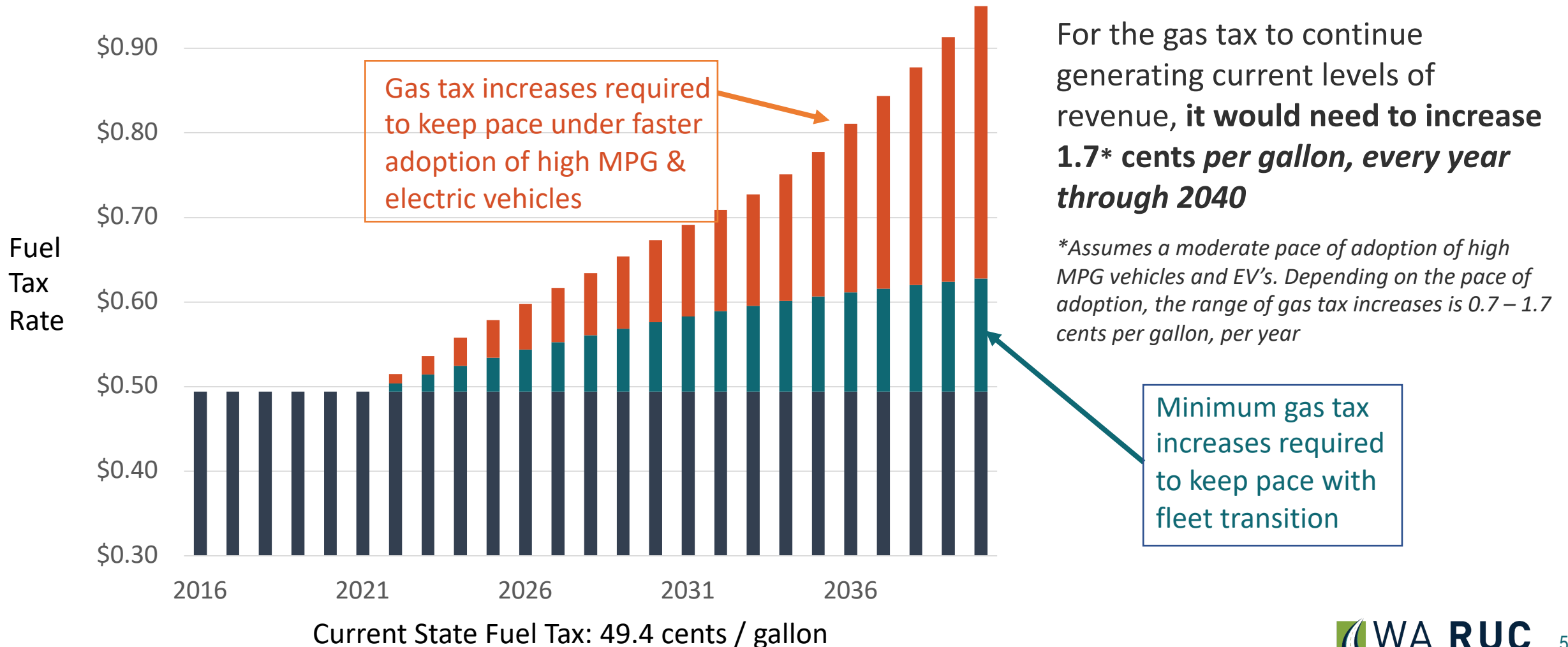


# FUEL ECONOMY TRENDS UNDERMINE TRANSPORTATION REVENUE



*NOTE: Chart assumes 27% of vehicles are electric by 2040, and the remaining 73% of gasoline and hybrid vehicles average 28.7 miles per gallon.*

# PRESERVING CURRENT REVENUE LEVELS OF THE GAS TAX WILL REQUIRE FREQUENT INCREASES



# A TALE OF TWO CARS

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## 2009 TOYOTA CAMRY



**25 MPG**

**\$198 State fuel tax paid**

## 2019 TOYOTA CAMRY HYBRID



**52 MPG**

**\$95 State fuel tax paid**

# BUILDING THE ROAD TO SUSTAINABLE FUNDING



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**Washington State's RUC policy conversation enters  
10<sup>th</sup> year**

# WASHINGTON'S PATH TO A RUC PROGRAM

## 2012 – 2015

### INITIAL ASSESSMENT & CONCEPT DEVELOPMENT

- 2012 Legislature directs Commission to conduct RUC Assessment
- Convened Steering Committee
- Crafted Guiding Principles
- Determined feasibility
- Developed operational concepts
- Conducted business case analysis
- Designed pilot alternatives

## 2016 – 2020

### PILOT TESTING & POLICY ANALYSIS

- Conducted statewide pilot test with 2,000+ drivers
- Tested multiple mileage reporting methods
- Demonstrated interoperability with OR, ID, BC
- Conducted widespread public outreach
- Addressed 10+ policy issues through analysis and alternatives
- Issued recommendations

## 2021 – Present

### SYSTEM READINESS & CONTINUED RESEARCH

- Legislative proposals emerge
- Updating financial analysis
- Assessing equity impacts and conducting statewide outreach
- Exploring service options and operational innovation
- Developing cost reduction strategies
- Designing mini-pilot tests for emerging concepts

*State funded*

*Federally funded*



# 2022 SITUATION ASSESSMENT

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- ✓ **Systems are ready:**

After nearly a decade of research and development, Washington has the ability to implement a small-scale RUC program

- ✓ **Privacy can be protected:**

Offering non-GPS approaches and privacy protections in law are key. The only additional data needed to implement RUC is a periodic odometer reading

- ✓ **RUC harmonizes transportation funding and climate policy objectives:**

RUC enables us to sustain usage-based funding without continuing to rely heavily on fossil fuel consumption and emissions

- ✓ **RUC offers savings for low-income drivers:**

The lowest-income vehicle owners in Washington pay the most in gas taxes because they tend to own older, less fuel-efficient vehicles. RUC can shift the tax burden to be more equitable

- ✓ **Further research and testing reduces costs and improves user experience:**

Research completed in 2021, along with mini-pilots coming in 2022, will culminate in a comprehensive roadmap for transitioning to RUC. This transition begins with enactment of a small-scale RUC program as early as 2023

# WHAT ARE WASHINGTON AND OTHER STATES DOING TO ADVANCE RUC?



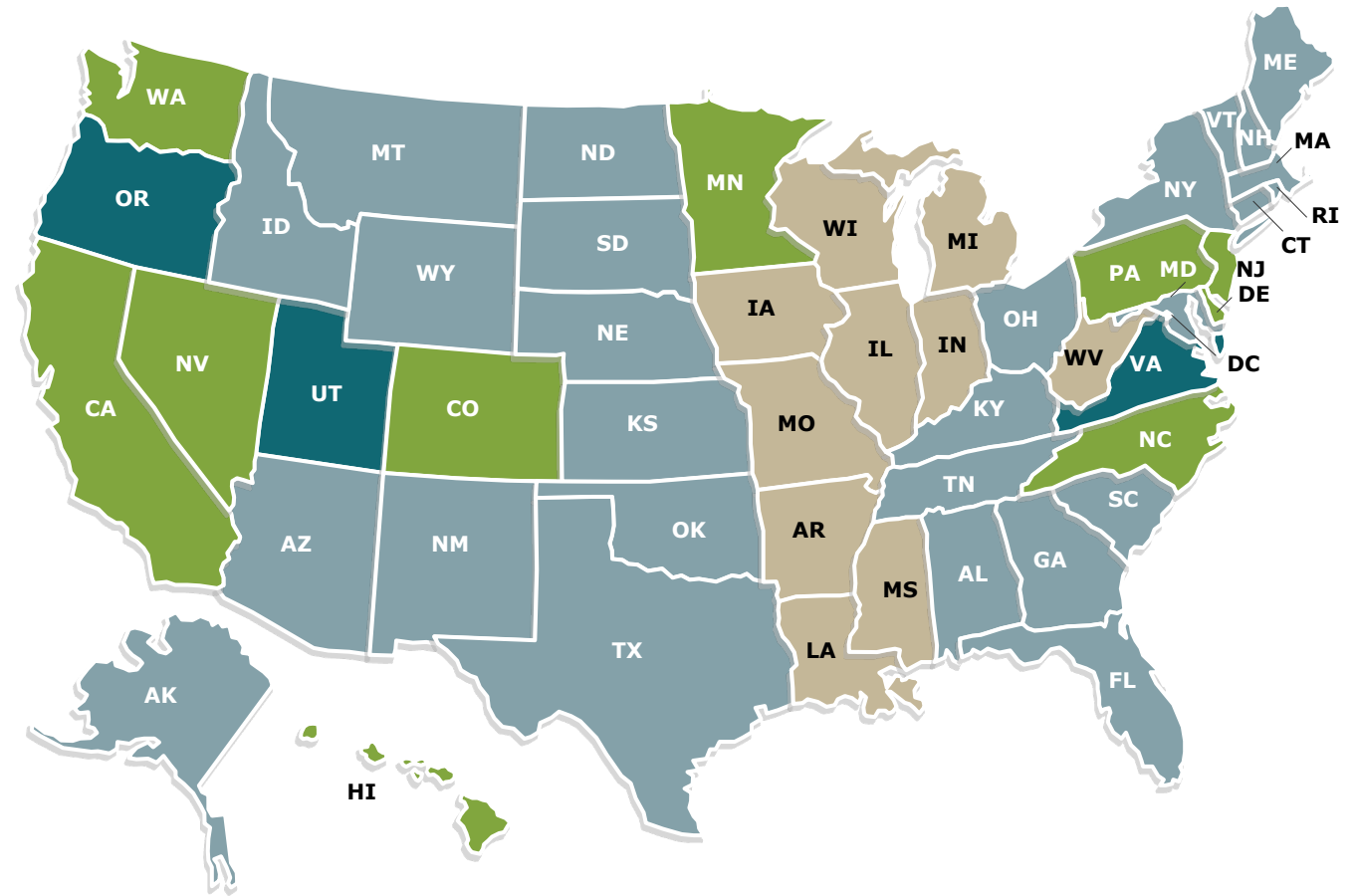
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**Alternatives exploration, research, outreach,  
pilot testing, and policy development**

# ROAD USAGE CHARGE ACTIVITIES NATIONALLY

A **road usage charge (RUC)** is a per-mile charge. Drivers would pay for roads based on actual miles driven, instead of paying based on gallons of gas consumed

**Oregon, Utah, and Virginia** have enacted RUC programs and are collecting per-mile charges from drivers



**3** Enacted programs   **10** Pilots/demonstrations   **27** Research

# LEGISLATIVE DIRECTION TO WSTC

**2012 Legislative Mandate:** Assess RUC's suitability as a sustainable, long-term revenue source that could replace the current state gas tax

## High-level parameters:

- ▶ During a transition period of moving from the gas tax to a road usage charge, *drivers would owe one or the other, but not both*
- ▶ To compare the gas tax against a road usage charge, analyze and test a per-mile rate that is equivalent to the state's 49.4 cent/gallon gas tax
  - *State Gas Tax 49.4 ÷ 20 mpg (state average) = **2.4 cents / mile***
- ▶ Provide drivers' a choice for how their vehicle mileage is collected, reported and paid



# HOW COULD A RUC SYSTEM WORK FOR WASHINGTON?

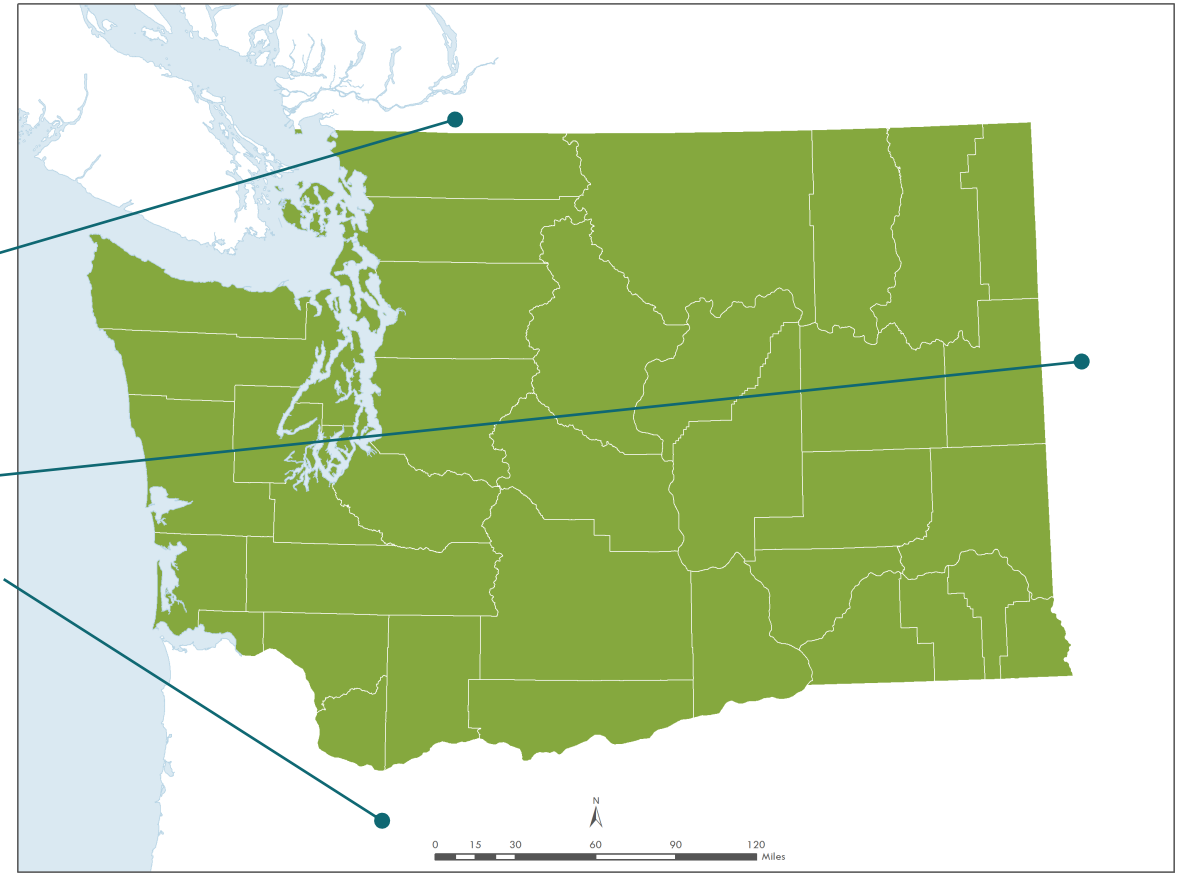


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**Research and testing provide answers**

# WASHINGTON'S RUC PILOT PROJECT

- **Year-long**, statewide test of Washington-designed RUC system for **2,000** test-drivers
- **Cross-border testing:**
  - City of Surrey, BC
  - Idaho Transportation Department
  - Oregon Department of Transportation
- **Additional partners:** Seattle Electric Vehicle Association and Plug-in America




# MILEAGE REPORTING METHODS: DRIVERS GET TO CHOOSE




**ODOMETER READING**

- Post-pay for miles reported quarterly
- Report miles either electronically or in person




**MILEMAPPER SMARTPHONE APP**

- Records miles using a smartphone
- Works with all vehicles
- Navigational GPS can be turned on/off
- Available only on iPhone iOS



**MILEAGE PERMIT**

- Pre-select a block of miles (1,000, 5,000, 10,000)
- Report odometer either electronically or in person every three months
- Obtain additional miles as needed to keep mileage permit valid



**PLUG-IN DEVICES (WITH OR WITHOUT GPS)**

- Automated mileage meter with GPS and non-GPS options
- Plugs into OBD-II ports in vehicles 1996 or newer
- GPS-enabled devices automatically deduct out-of-state miles

LOW-TECH

HIGH-TECH

# HOW CAN PRIVACY BE PROTECTED?

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**Through system design, including user choice,  
and legal protections**



# RUC DOES NOT REQUIRE GPS TECHNOLOGY, AND PRIVACY PROTECTION MEASURES ARE AVAILABLE

The only new piece of information needed for RUC that the state Department of Licensing does not already collect is total miles driven

Drivers would decide how to report their miles, including whether to use location services

Any mileage reporting method that uses location services is strictly for the convenience of the driver (e.g., to automatically deduct out-of-state and off-road miles)

RUC enabling law can include provisions to protect privacy, drawing on the Commission's model policy

**4 mileage reporting options require no location information**



# HOW WILL RUC IMPACT RURAL AND LOW-INCOME DRIVERS?

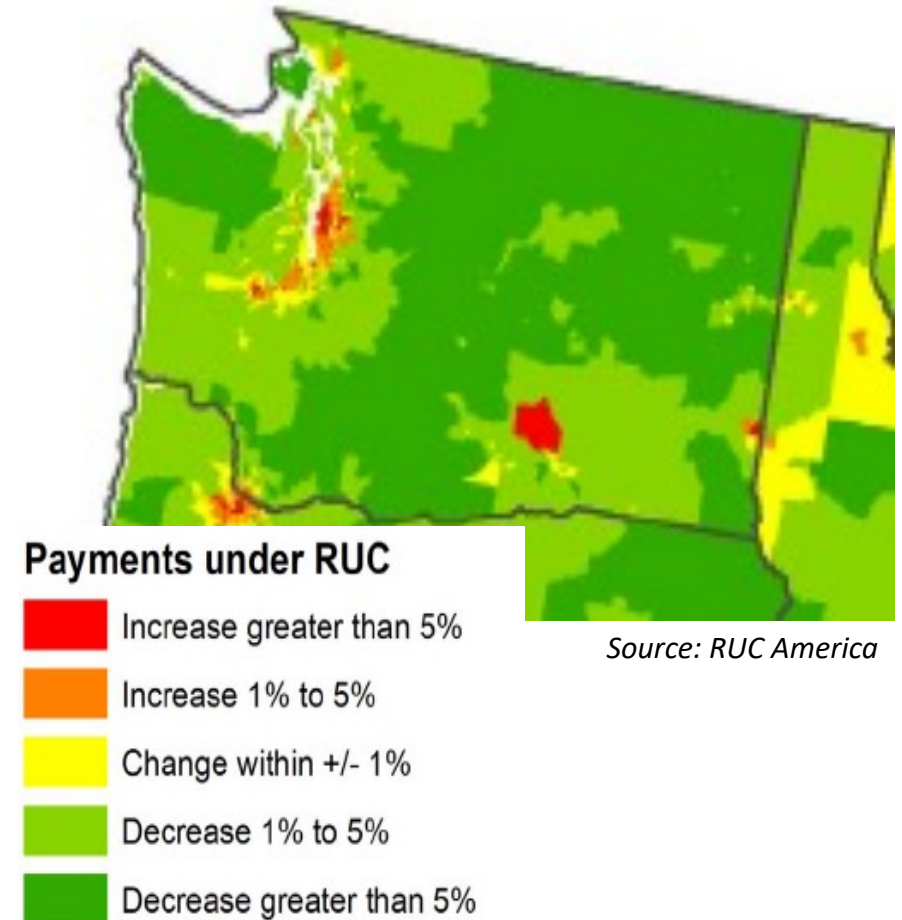


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**What you drive, not how far you drive,  
determines the impact of RUC relative to gas  
taxes**

# ON AVERAGE, RURAL AND LOW-INCOME DRIVERS WILL PAY LESS UNDER RUC THAN THE GAS TAX

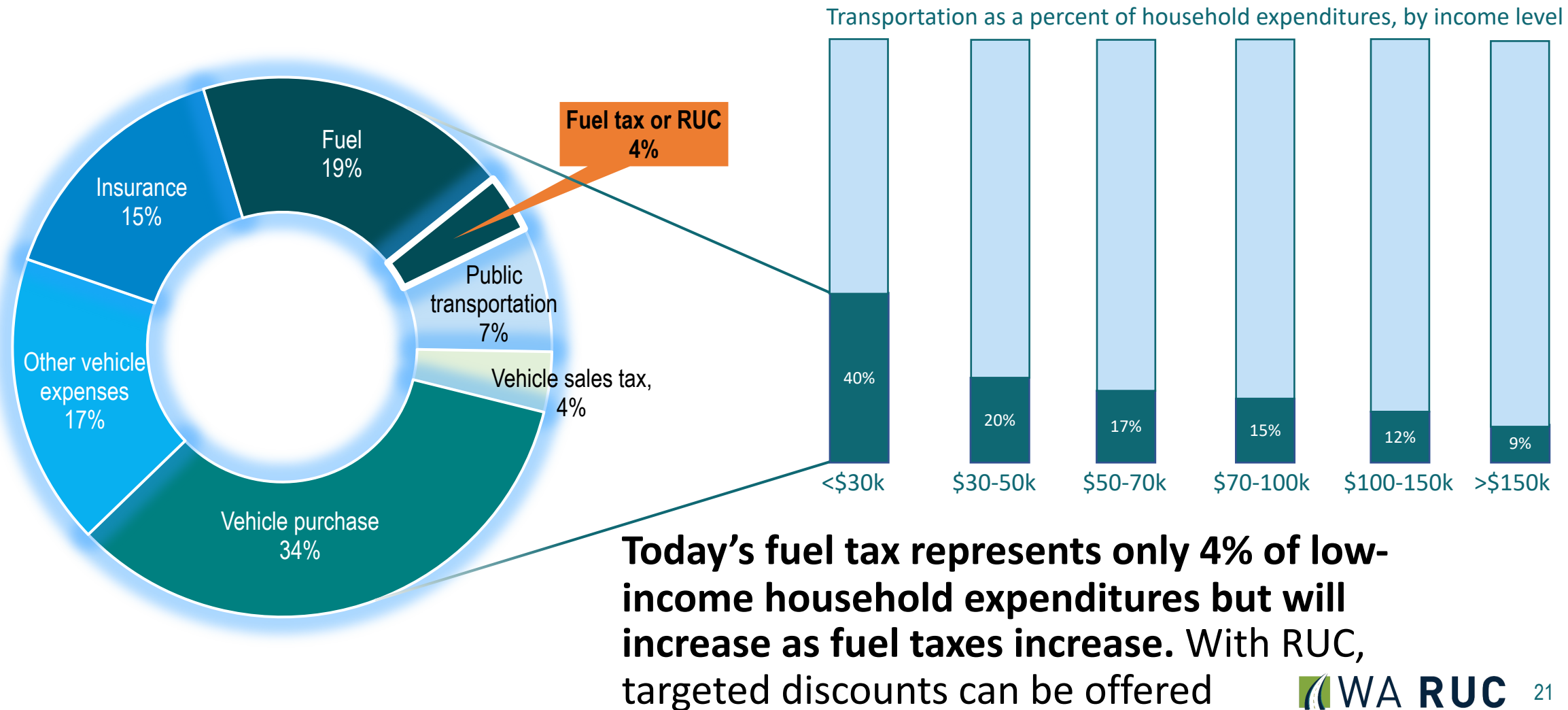
- Rural & lower income households tend to drive lower MPG vehicles and therefore pay disproportionately more for roads under the gas tax
- Rural households would save under a RUC compared to the gas tax, on average around \$25 per year savings
- The average low-income household would also save a modest amount, compared to the gas tax (<\$10 per year savings)



# LOWER INCOME HOUSEHOLDS PAY MORE IN FUEL TAXES TODAY - WILL SEE REDUCTIONS UNDER RUC

Census tract average household income	Census tract average MPG	Fuel tax per 10,000 miles driven	RUC per 10,000 miles driven	Change under RUC
Less than \$50k	20.0	\$247	\$240	↓ \$7
\$50-75k	20.1	\$246	\$240	↓ \$6
\$75-100k	20.5	\$241	\$240	↓ \$1
\$100-150k	21.4	\$231	\$240	↑ \$9
Over \$150k	22.6	\$219	\$240	↑ \$21

# TRANSPORTATION TAXES ARE A RELATIVELY SMALL PROPORTION OF HOUSEHOLD COSTS



# HOW WILL RUC INFLUENCE PLUG-IN ELECTRIC VEHICLE (PEV) ADOPTION?

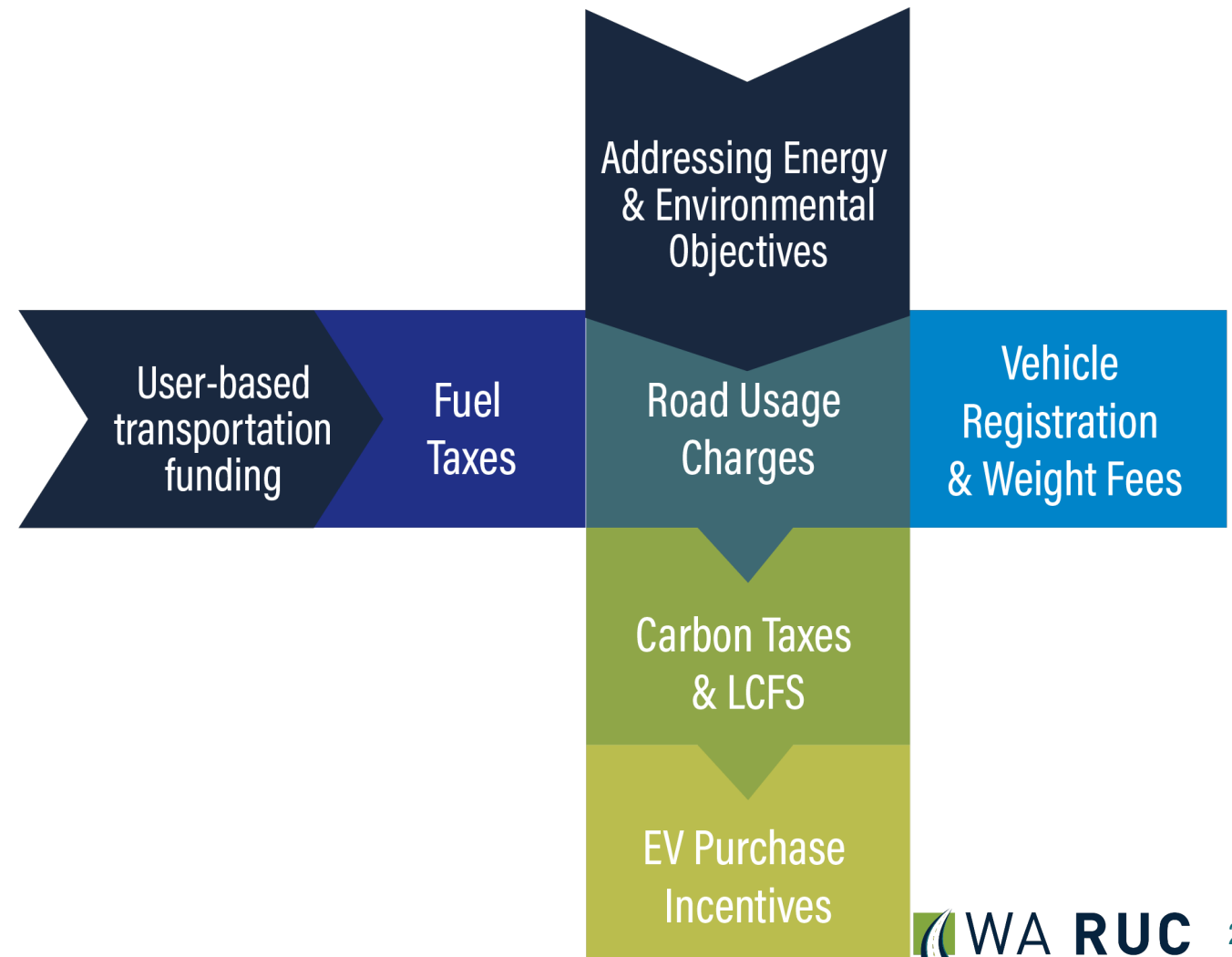


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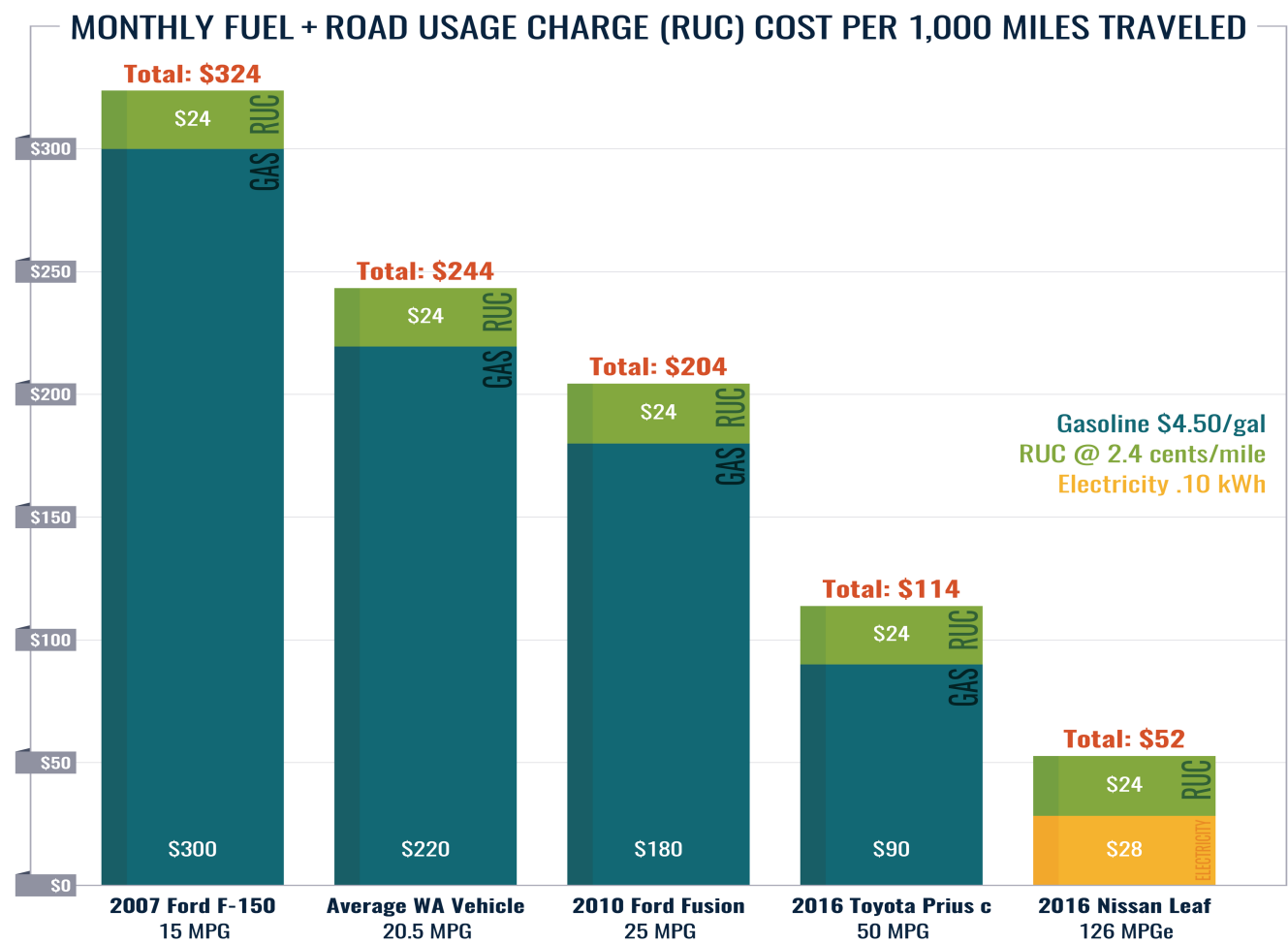
**RUC holds most PEVs harmless, but rates can be discounted to reward PEV owners**

# RUC HARMONIZES CLIMATE & ROAD FUNDING POLICIES

- **High fixed costs of ownership remain the biggest barrier to EV adoption**, a problem compounded by the flat registration fee
- **RUC allows policymakers to reward EV mileage** by offering RUC as an alternative to a flat fee (\$225 in WA. State), and/or with a reduced introductory per-mile rate
- **RUC provides funding for critical transportation infrastructure that will be used increasingly by EVs** in the future as the fleet transitions away from fossil fuels



# EVs MAINTAIN OVERALL OPERATING COST ADVANTAGE IN A RUC SYSTEM



EV drivers maintain a significant operating cost advantage under RUC, compared to gas-powered vehicles, given fuel costs remain a significant cost

Under a future RUC System, participating EV’s would not pay the current \$225 EV annual registration fee

While RUC does result in drivers of fuel efficient vehicles paying a little more in taxes for transportation as compared to the gas tax, the overall cost advantage of owning a fuel efficient, hybrid, or EV remains significant.

For example, under RUC, owners of a Prius will pay \$210 dollars per month less than the Ford pickup truck driver.



# HOW CAN THE SYSTEM AVOID DOUBLE TAXING DRIVERS?



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**Fuel taxes are a pre-payment toward RUC**

# THE PILOT SHOWED LEAVING THE FUEL TAX IN PLACE ENABLES A SMOOTH TRANSITION TO RUC

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Treat the fuel tax as a pre-payment or credit towards RUC charges

- The amount of fuel tax a driver pays can be directly measured or estimated using miles driven and EPA fuel economy ratings

Other benefits of leaving the fuel tax in place:

- Enable small, incremental payments (gas tax paid at the pump) toward RUC for gas cars
- Serves as a natural backstop against tax evasion
- Ensures Washington State can meet its legal requirements for outstanding bonds



# 2022 PILOT PREPARATIONS

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**Testing offers opportunities for drivers to experience RUC policy and design choices and tradeoffs**

# Objectives of research

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User Experience

Understand the user experience to enhance RUC program design



Cost Reduction

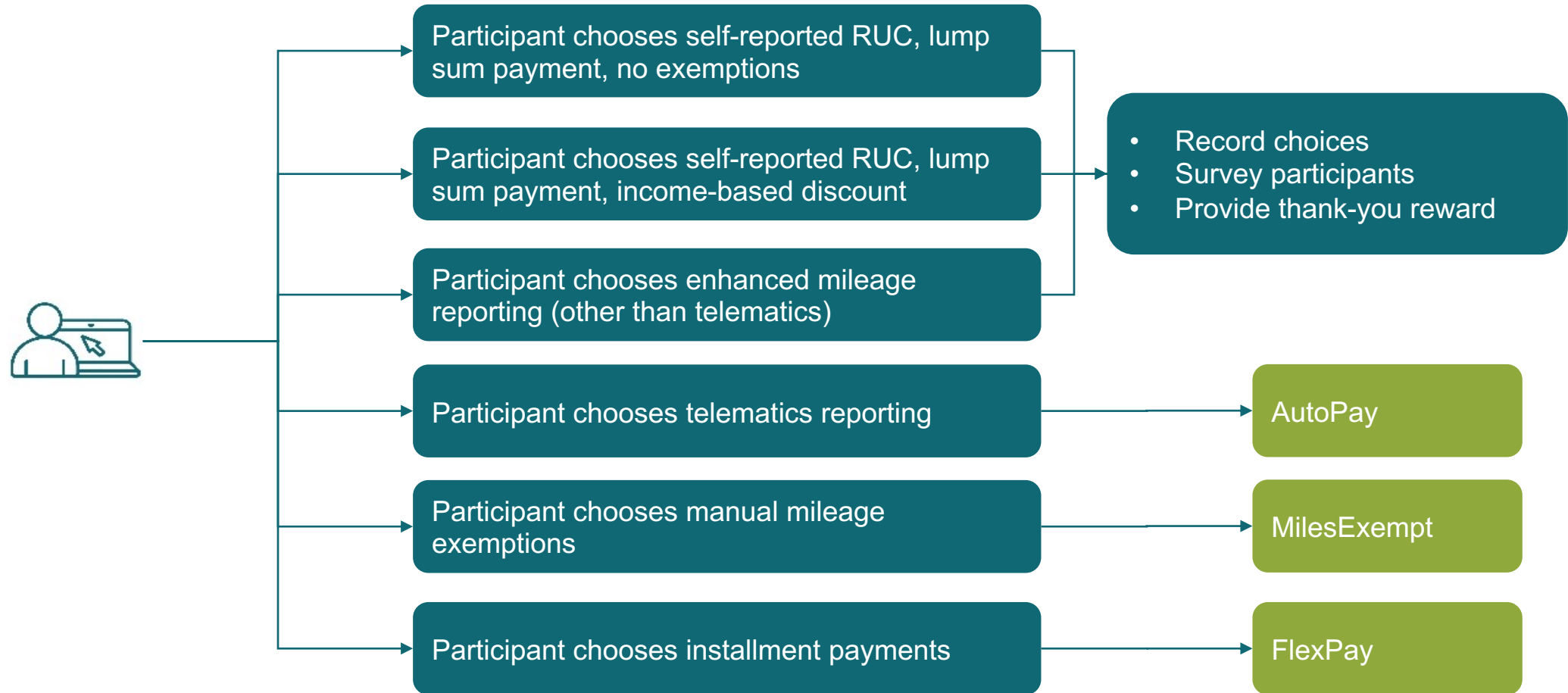
Identify and demonstrate viable approaches to reducing cost of collection



Equity

Incorporate equity through policy and system design

# 2022 Pilot Participant Experience



# SIGN UP TO TAKE PART



<https://tinyurl.com/WA-RUC>

 **Washington State Transportation Commission**  
4d · 🌐

Be a part of the future of transportation funding in our state by participating in research around a road usage charge. Learn more at <https://tinyurl.com/WA-RUC>



**A better way to fund our roads?**  
*Be a part of Washington's transportation future*

Join other Washington drivers >

# LAW-MAKING IN MOTION

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**As research continues, legislative proposals come forward, based upon WSTC Recommendations**

# LEGISLATIVE PROPSALS JUMPSTART DEBATE

Policy choice	HB 2026 (2022)	SB 5444 (2021/22)
<b>What vehicles are subject to RUC?</b>	<ul style="list-style-type: none"> <li>Voluntary: EVs purchased before 2025</li> <li>Mandatory: New EVs in 2025</li> </ul>	<ul style="list-style-type: none"> <li>Voluntary: EVs in 2025</li> <li>Mandatory: All EVs in 2026</li> </ul>
<b>When will other vehicles transition to RUC?</b>	<ul style="list-style-type: none"> <li>2026: PHEVs can opt in</li> <li>2027: Gas cars can opt in</li> </ul>	N/A
<b>What is the per-mile rate?</b>	2.5c/mi, capped at \$225	<ul style="list-style-type: none"> <li>2c/mi introductory rate</li> <li>2.5c/mi in 2029</li> </ul>
<b>What fees are waived for RUC-paying vehicles?</b>	\$225 EV surcharge	\$225 EV surcharge
<b>What mileage reporting methods must DOL offer?</b>	Odometer mileage reporting (may offer other methods)	Multiple mileage reporting methods, at least one non-GPS
<b>What legal privacy protections?</b>	Based on WSTC model policy	Based on WSTC model policy
<b>When is a fleet transition plan due?</b>	2029	2023





**For more information on  
Washington State's RUC Assessment  
visit:**

[www.waroadusagecharge.org](http://www.waroadusagecharge.org)

# CONTACT INFORMATION

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