A stylized graphic of a road with a dashed yellow center line and solid blue outer lines, curving upwards and to the right against a light green background. The road graphic is set against a dark blue background.

Washington State Road Usage Charge Assessment

Building the Road to Sustainable Funding



Washington State's RUC policy conversation enters
10th year

Washington State's RUC Assessment and Research Path

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 –
Today


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


2023 Washington State Situation Assessment

 **Systems are ready.** After nearly a decade of research and development, Washington can 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 to date will culminate in a comprehensive roadmap for transitioning to RUC. This transition begins with enactment of a small-scale RUC program.

What Is the Problem?

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

Two Cars and Two *Very* Different Fuel Taxes

2009 TOYOTA CAMRY



25 MPG

\$198 State fuel tax paid

2023 TOYOTA CAMRY HYBRID



52 MPG

\$95 State fuel tax paid

Electric Vehicle Adoption Is Accelerating Nationally and in Washington



Washington ranks **2nd** **nationally** (behind California) in EV market share



11% of new vehicles registered in 2022 in Washington were electric or plug-in hybrid electric vehicles (PHEVs)

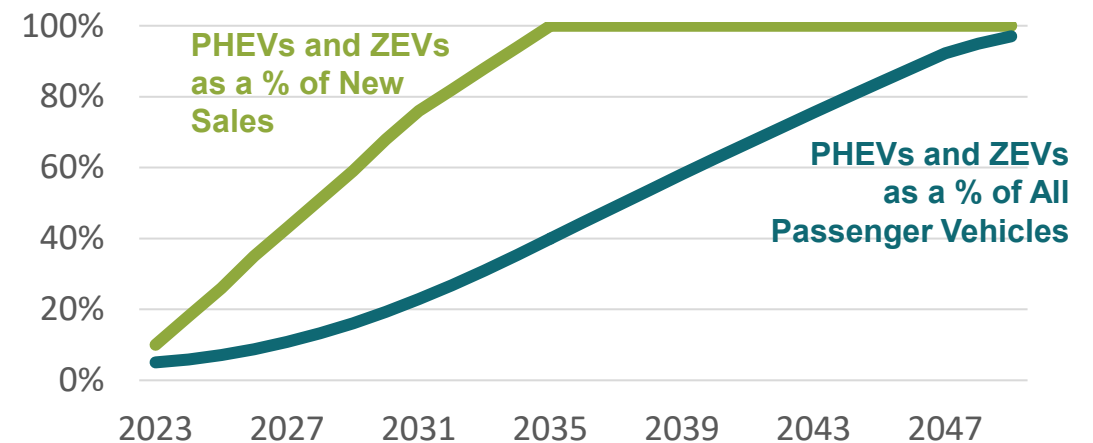


In 2023, **1 in 5 new cars** sold is an EV or PHEV

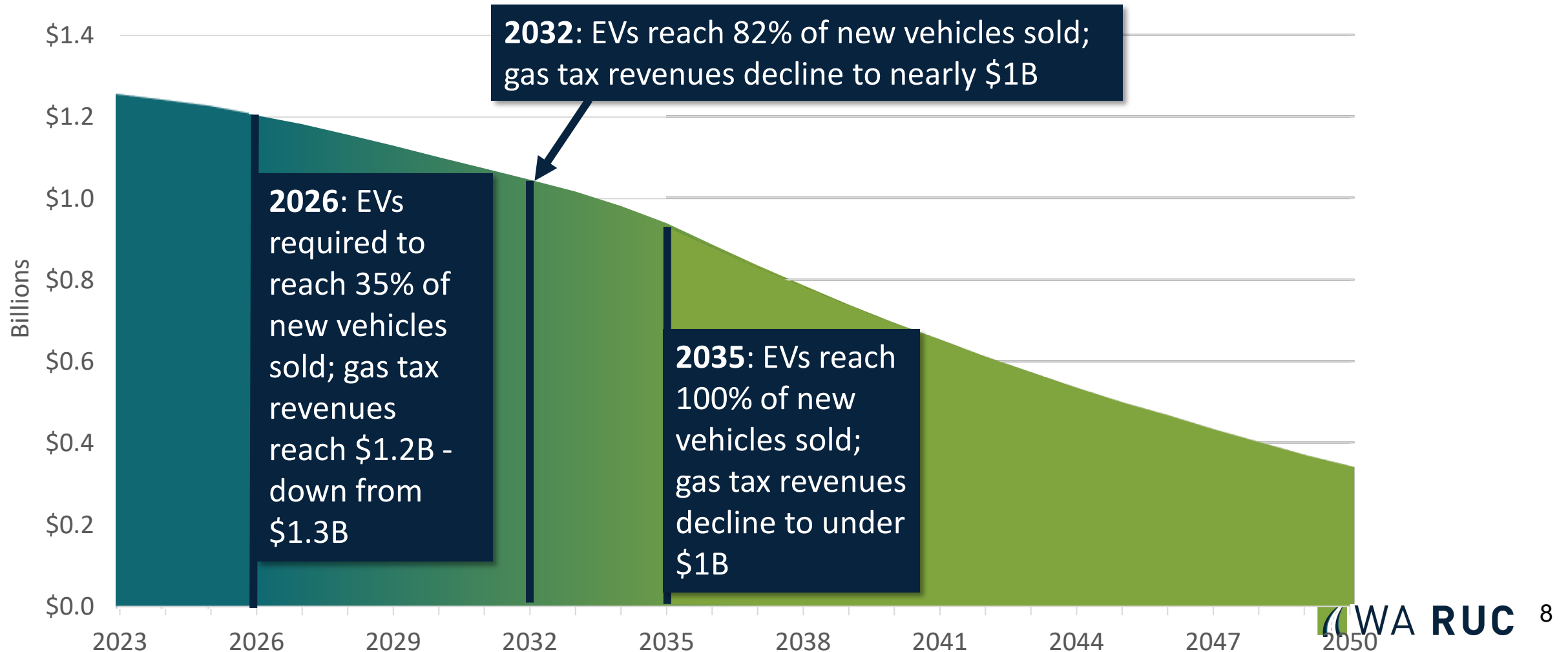


In 2030, target for ban on sale of **new** internal combustion vehicles

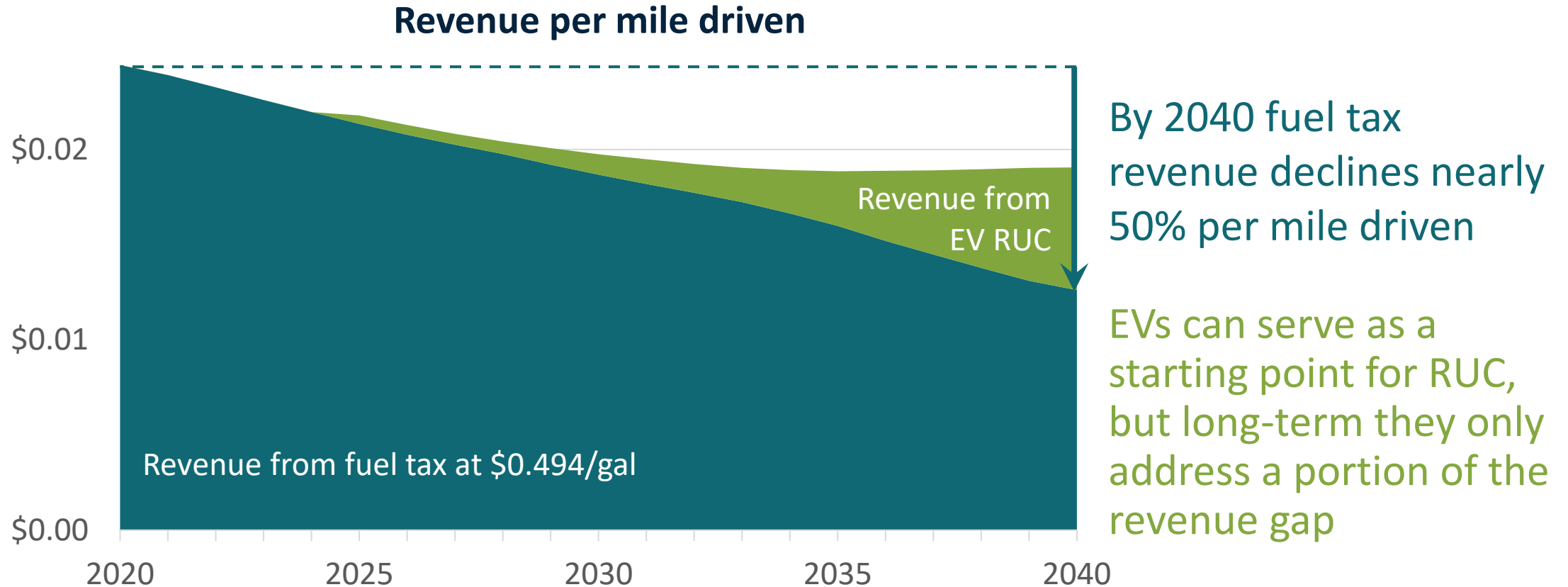
Washington adheres to California's requirement that 100% of new vehicle sales by 2035 be EVs or PHEVs. It will take another 20+ years for the entire on-road fleet to reach 100% EV or PHEV



Gas Tax Revenues Will Decline Rapidly as Zero Emissions Mandates Are Implemented

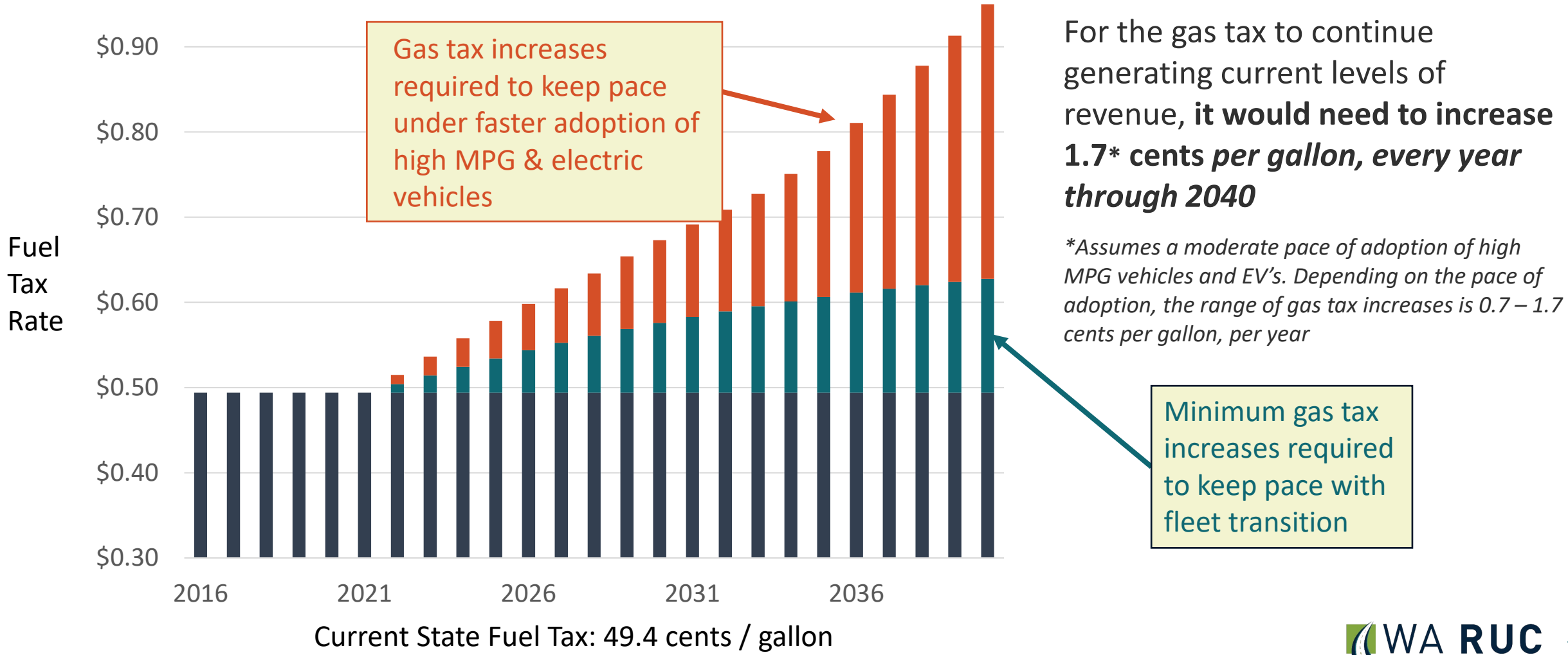


Vehicle Fuel Economy Trends Undermine Transportation Revenue



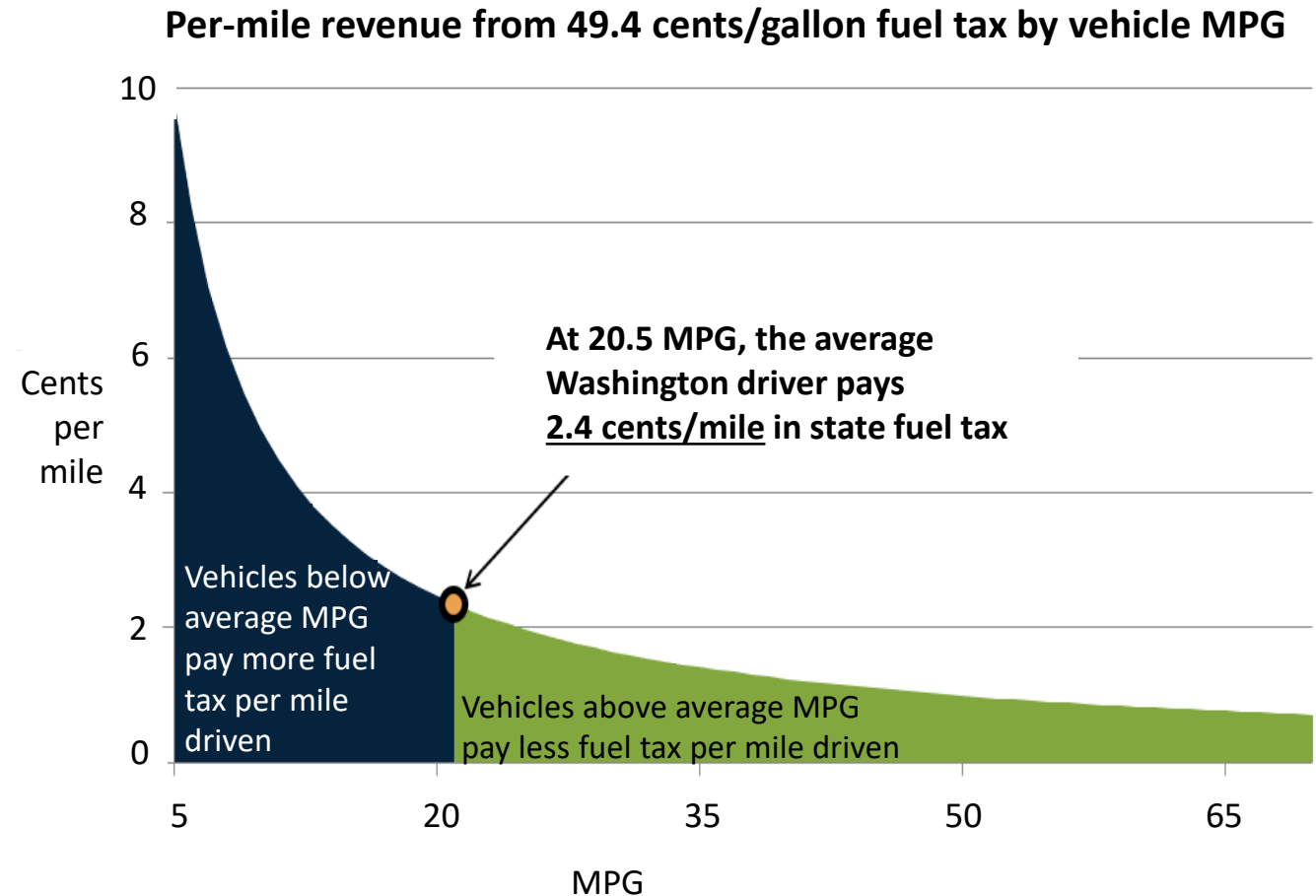
NOTE: Chart assumes 27% of vehicles are electric by 2040, and the remaining 73% of gasoline and hybrid vehicles average 28.7 miles per gallon.

Preserving Current Gas Tax Revenue Levels Require Frequent Rate Increases



Taxing Gallons Has Fairness and Equity Challenges

- The gas tax is fair because it is based on a simple principle: user pays, user benefits
- As vehicles become more fuel efficient and alternative fuels emerge, this principle is shifting to a “some users pay/all users benefit”
- RUC returns us to the user pay, user benefits principle



Why Road Usage Charging Makes Sense



RUC builds the road to sustainable funding for
transportation

Why Road Usage Charging?



RUC is the only viable usage-based alternative funding source to the gas tax.

By connecting contributions to consumption, RUC preserves the user-pay paradigm that the gas tax embodied and that underpinned transportation funding in Washington and nationally



RUC provides sufficient revenue to sustain the state's long-term funding needs.

The state can generate revenue equivalent to today's gasoline tax at a rate of 2.4 cents per mile, which is less than 5% of the cost of owning and operating most vehicles



RUC implementation can be simple, enforceable, and secure.

By offering drivers choice for how they report their miles, RUC mileage collection methods are convenient, accessible, and low cost to administer for the state, while safeguarding sensitive private data



RUC harmonizes climate, equity and transportation funding.

By replacing the gas tax, transportation funding needs no longer need to rely on fossil fuel consumption



Task forces, commissions, and study committees in Washington and nationally have repeatedly pointed to road usage charging as a top choice for future transportation funding

- National Surface Transportation Policy & Revenue Study Commission, 2007
- Connecting Washington Task Force, 2011
- Washington Joint Transportation Committee Statewide Transportation Needs Assessment, 2020
- Transportation Commission Alternative Transportation Funding Sources, 2022

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



What Are Other States Doing to Advance RUC?

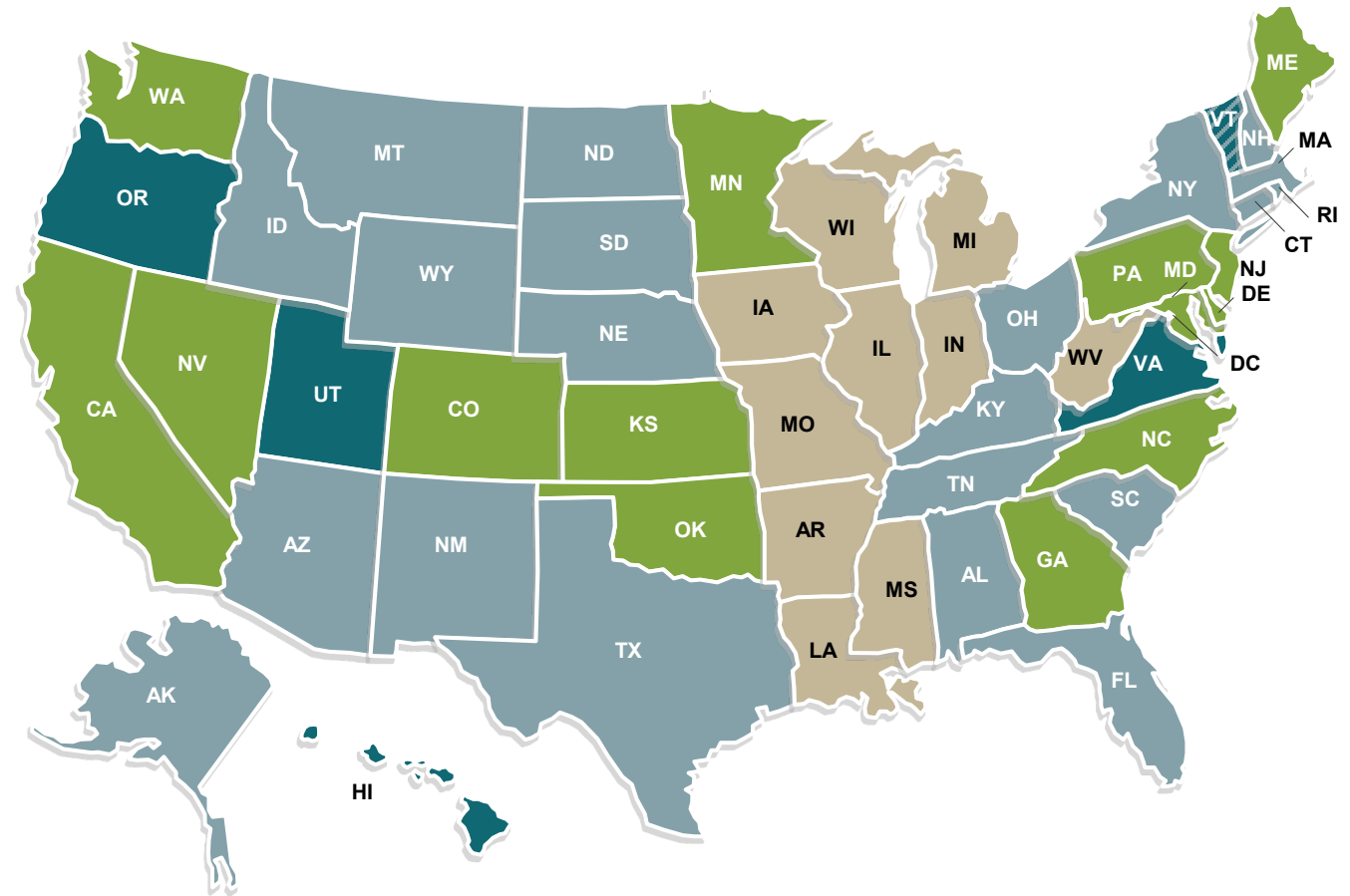


Alternatives exploration, research, outreach, pilot testing, and policy development

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, and **Hawaii** will begin collections in 2025



4 Enacted programs **14** Pilots/demonstrations **22** Research

How Could a RUC System Work for Washington?



Research and testing provide answers

Washington's RUC Pilot Project



Year-long, statewide test of Washington-designed RUC system for **2,000** test-drivers



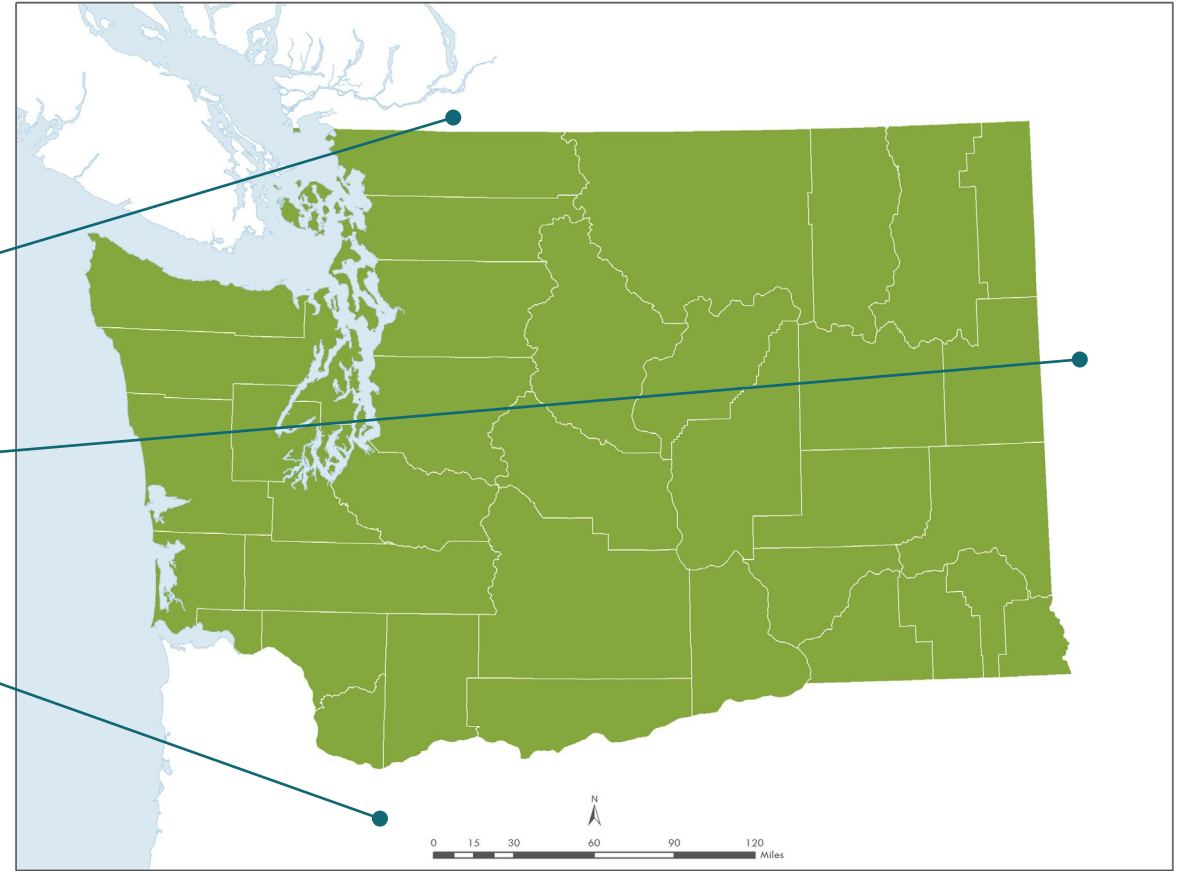
Cross-border testing:

- City of Surrey, BC
- Idaho Transportation Department
- Oregon Department of Transportation



Key partners:

Seattle Electric Vehicle Association
and Plug-in America



Mileage Reporting Methods: Drivers Get To Choose



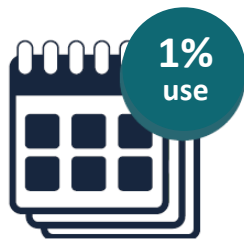
Odometer Reading

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



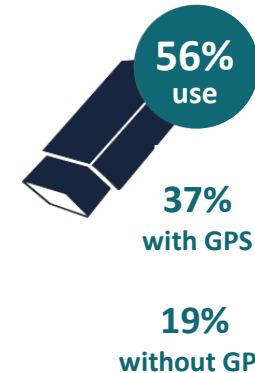
MileMapper Smartphone App

- 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



How Can Privacy Be Protected?



Through system design, including user choice,
and legal protections

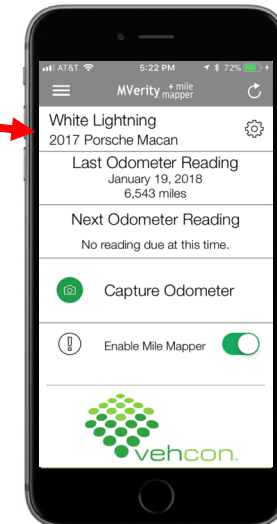
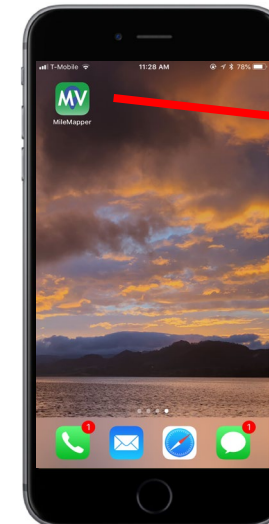
RUC Does Not Require GPS Technology, and Privacy Protection Measures Are Available

- 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



1 2 3 4 5



How Will RUC Impact Rural and Low-Income Drivers?



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

Lower-income Households Pay More to Use the Roads Under the Gas Tax

\$0.025 in fuel taxes per mile



Household
Income
<\$50K



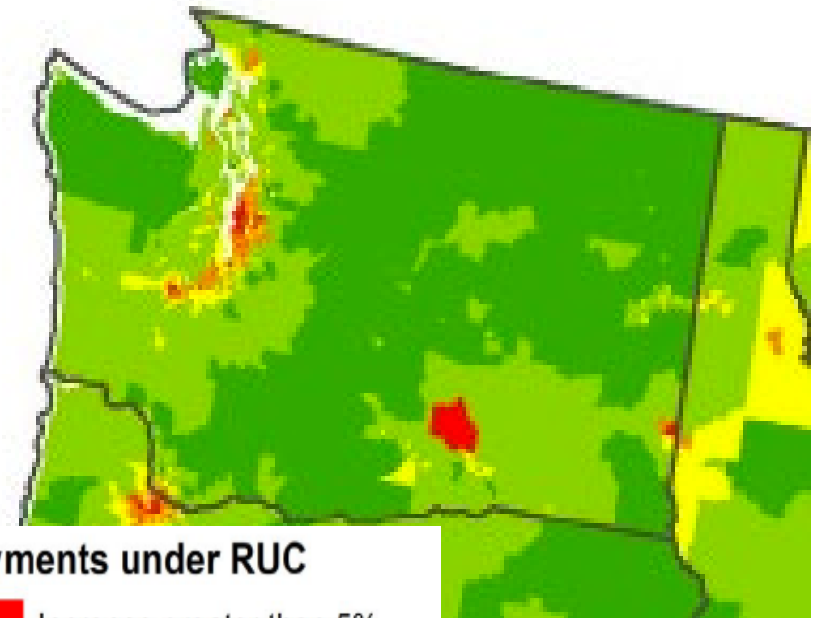
\$0.022 in fuel taxes per mile

Household
Income
≥\$150K



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 today
- 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)



Payments under RUC



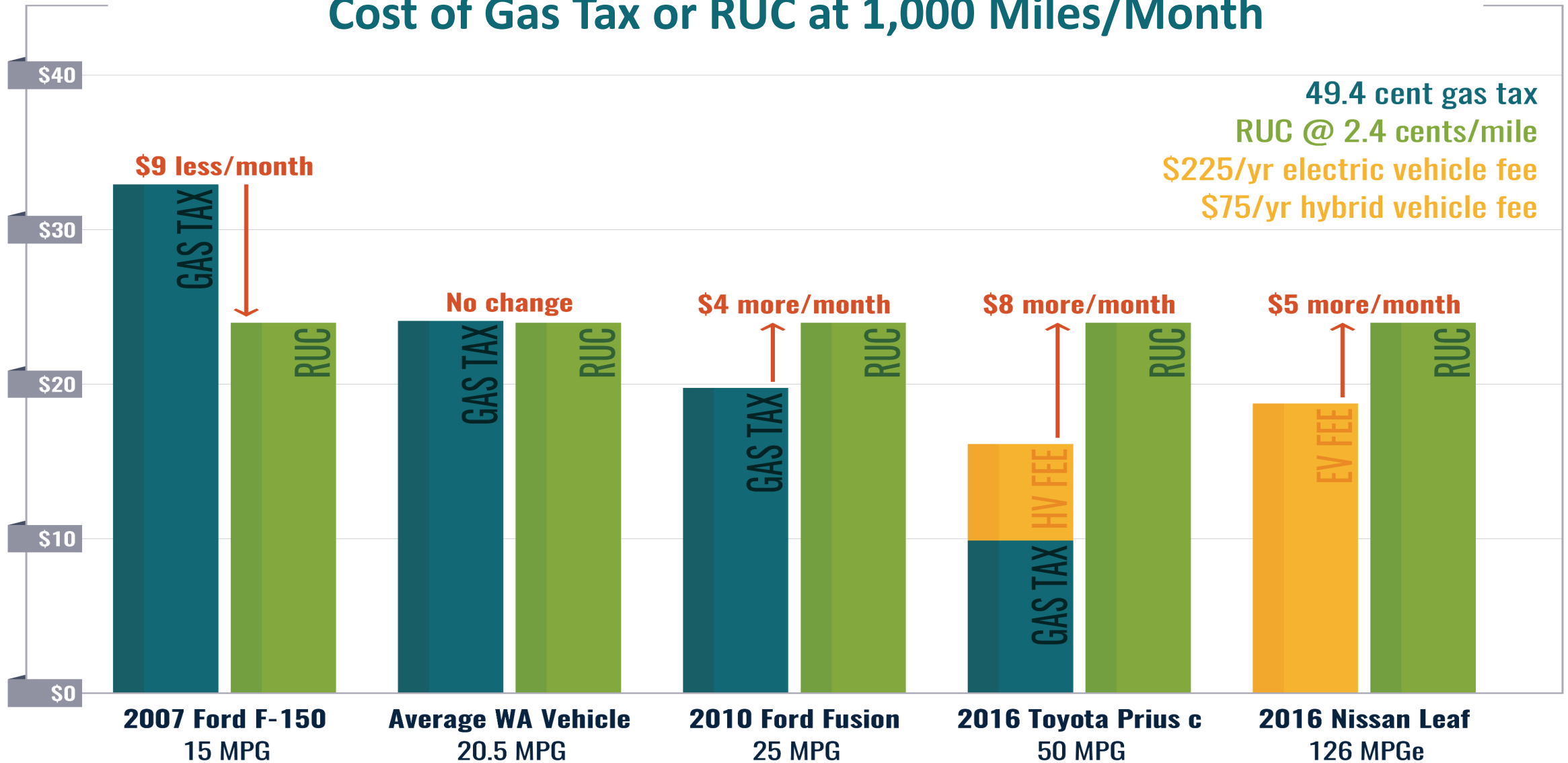
Source: RUC America

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



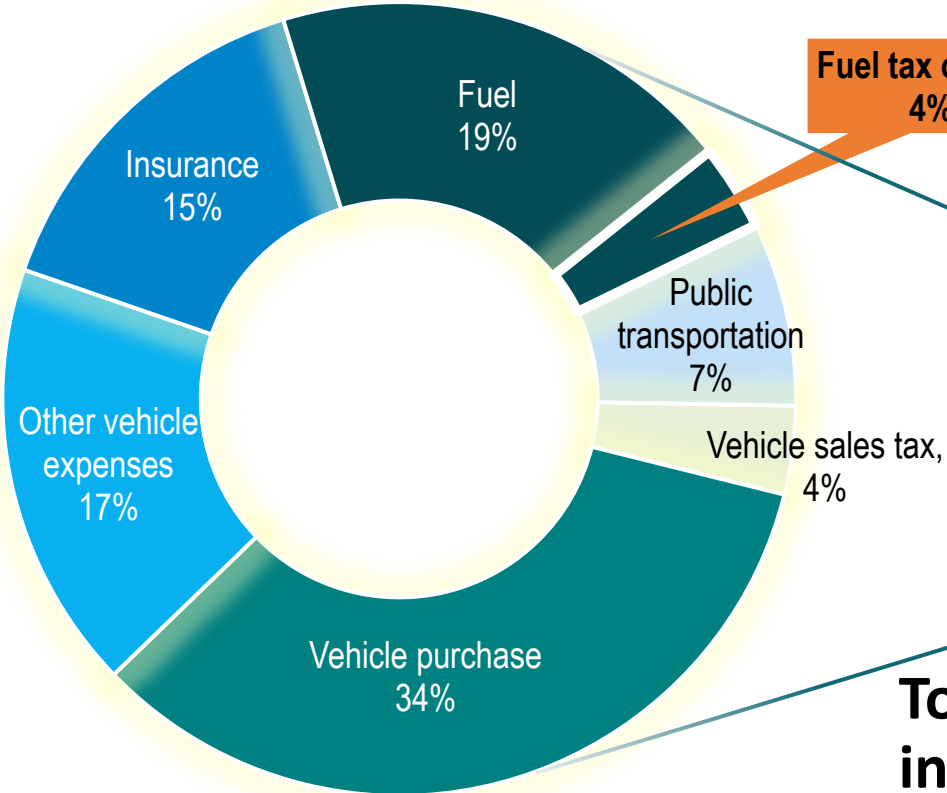
Cost of Gas Tax or RUC at 1,000 Miles/Month



What you drive will determine the cost impact of RUC:

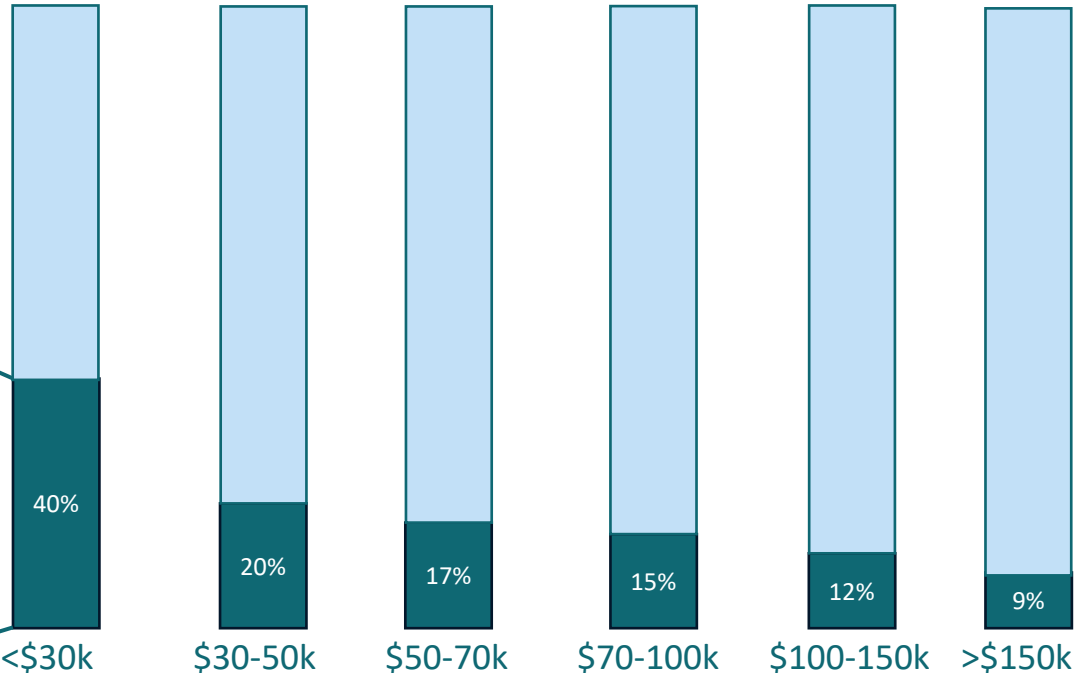
- Less fuel efficient vehicles will see a decrease in the amount of taxes paid
- More fuel efficient vehicles will see an increase in the amount of taxes paid
- The total effect is that all drivers pay the same rate to use the roads—regardless of their vehicle’s MPG

Transportation Taxes Are a Relatively Small Proportion of Household Costs



Fuel tax or RUC
4%

Transportation as a percent of household expenditures, by income level



Today's fuel tax represents only 4% of low-income household expenditures but will increase as fuel taxes increase. With RUC, targeted discounts can be offered

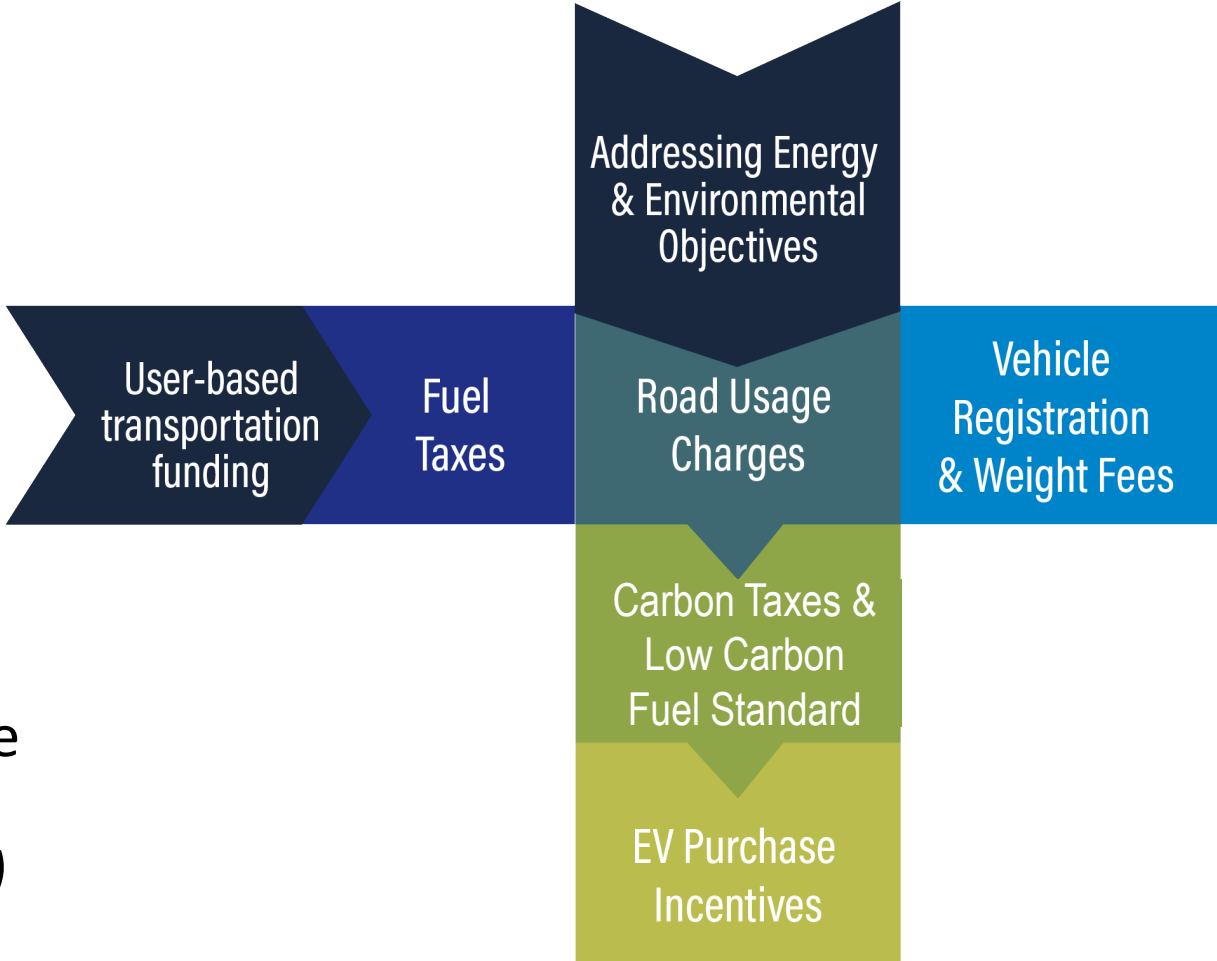
How Will RUC Influence Plug-in Electric Vehicle (PEV) Adoption?



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

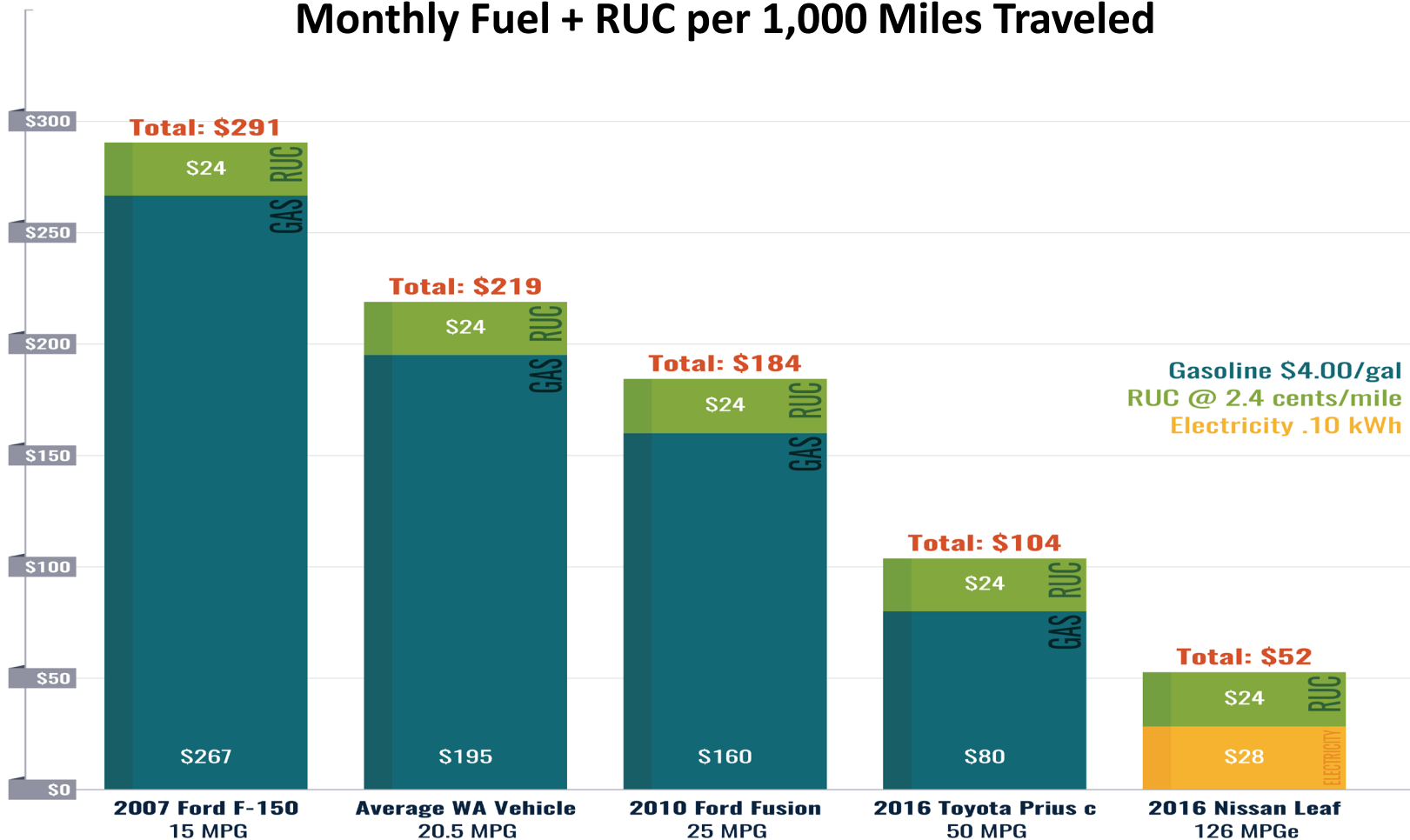
RUC Harmonizes Funding & Climate Goals

- Removes the need to rely on the consumption of fossil fuels to fund our transportation system
- Provides sustainable funding for infrastructure that will be used increasingly by high-fuel efficient/alternatively fueled vehicles
- Policymakers offer RUC as an alternative to current flat registration fees for EVs and hybrids (*\$225 and \$75 respectively*)



EVs Maintain Overall Operating Cost Advantage in a RUC System

Monthly Fuel + RUC per 1,000 Miles Traveled



➤ 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

How Can The System Avoid Double Taxing Drivers?



Fuel taxes are a pre-payment toward RUC

The Pilot Showed Leaving the Fuel Tax in Place Enables a Smooth Transition to RUC

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



2023 Simulation of RUC Enrollment



Driver's experience signing up for RUC for the first time, experiencing the process and impacts to them personally

Simulating RUC Enrollment and Payment

Objectives



User Experience

Validate design from user experience research and **gauge user perceptions and preferences.**



Cost Reduction

Measure **scalability, cost, and performance** of prototype features.



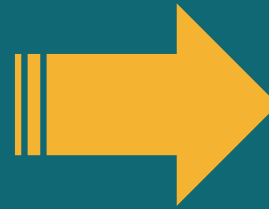
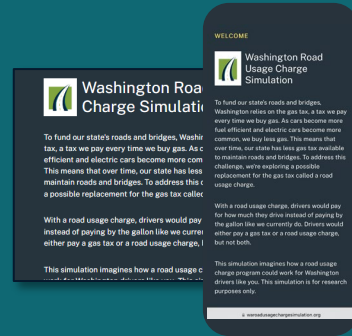
Equity

Incorporate equity through prototype design.

Overview

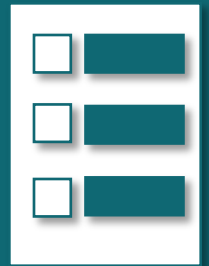
SIMULATION

Participants engage with an online simulated RUC payment platform

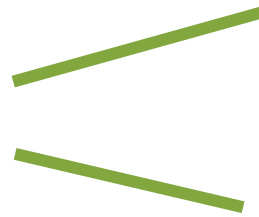


SURVEY

Simulator participants provide feedback on their experiences and opinions



1,145
participants

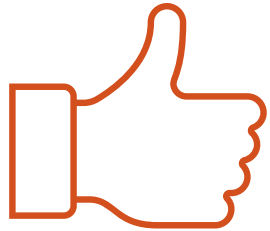


492 from organic recruitment

653 from statewide panel

- Focus of this presentation
- Responses weighted for a representative sample

Simulator Effectiveness



70%

were satisfied or very satisfied with the RUC payment and reporting process

- *Democrats: 79% satisfied*
- *Independents: 71% satisfied*
- *Republicans: 53% satisfied*



85%

said no steps were difficult to complete



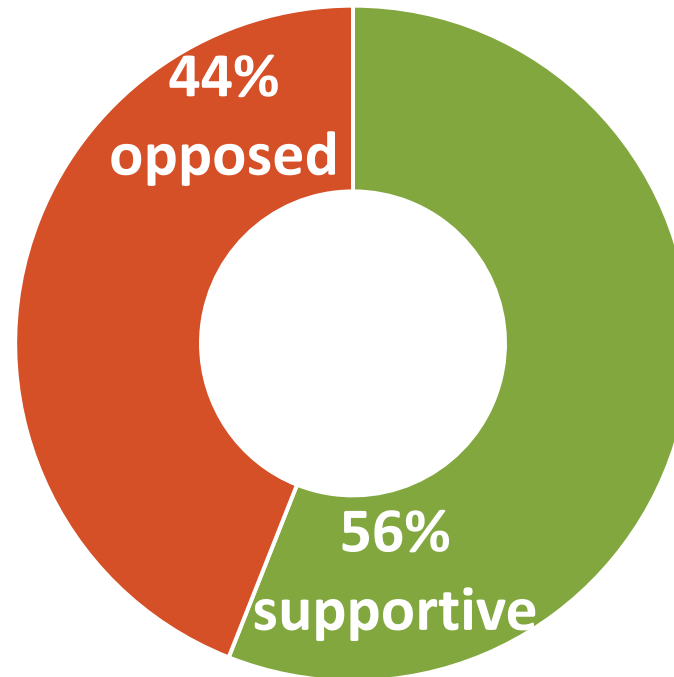
56%

reported taking ≤5 mins to complete

Support for RUC

After experiencing the Simulator, respondents support transitioning from a gas tax to a RUC by a margin of 56-44.

All respondents (weighted n = 649)

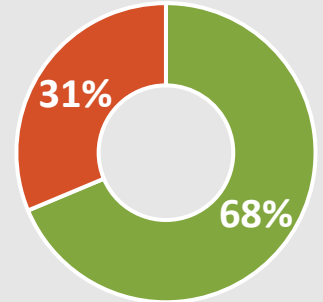


Survey question: How supportive are you of transitioning from funding roads through the state gas tax based on gallons purchased to a road usage charge based on miles driven?

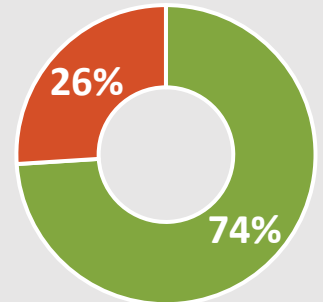
Disaggregation by Self-Identified Political Party

Independents support RUC at the highest rate, with Democrats closely following. Republicans have the lowest support for RUC.

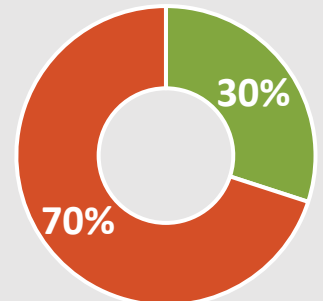
Democrats (weighted n = 367)



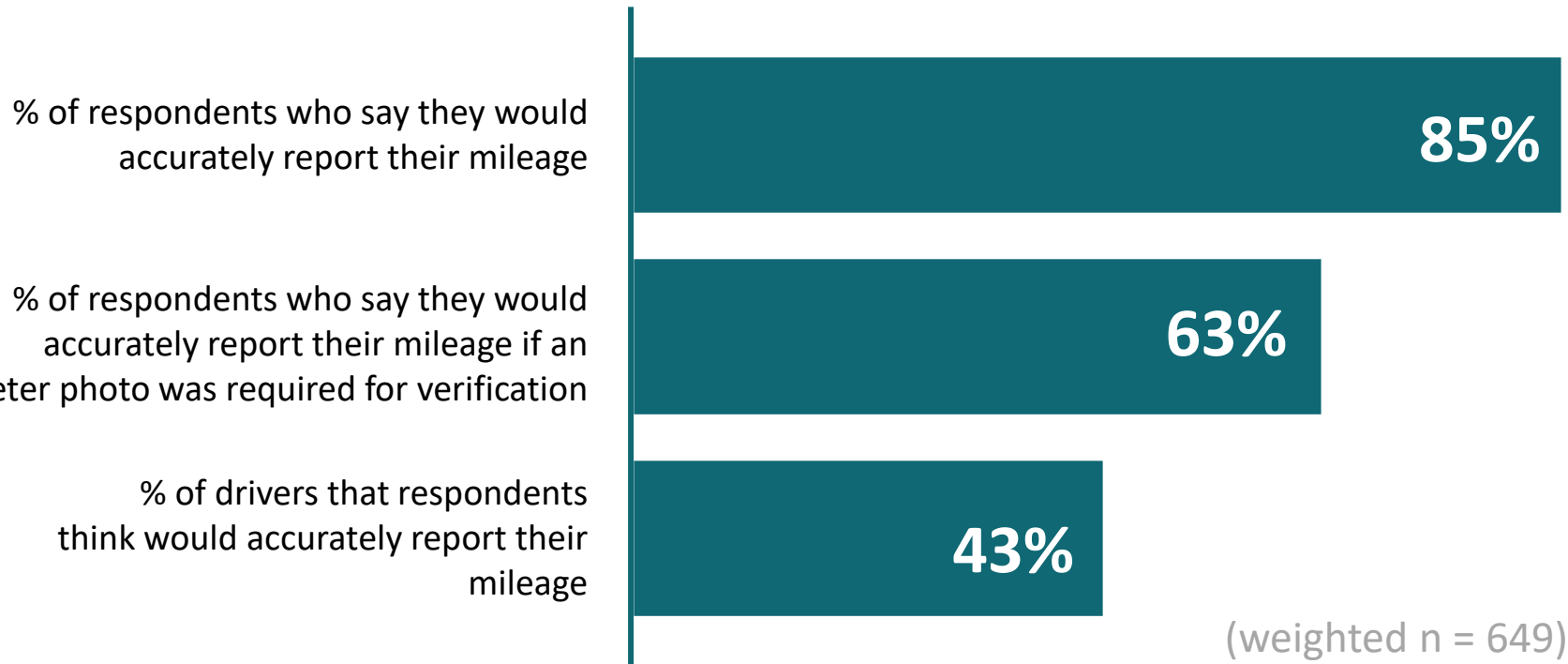
Independents & Undecideds (weighted n = 66)



Republicans (weighted n = 216)



Mileage Reporting Preferences



Key Findings:

- **85% chose self-reporting as their preferred mileage reporting method (weighted n = 649).**
- **Respondents underestimate others' honesty in reporting miles driven.**

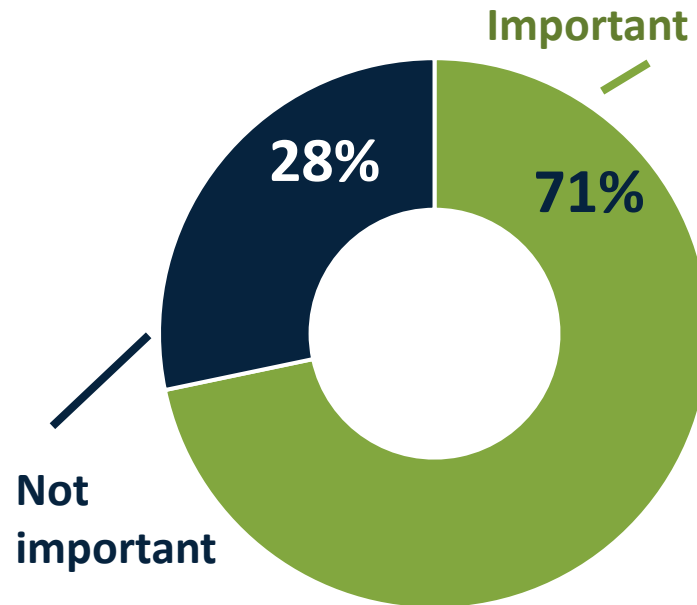
Survey questions:

- *Would you accurately report how many miles you drove for a real road usage charge?*
- *If the state of Washington implemented a road usage, what percentage of people do you believe would accurately report their miles driven in the past year?*
- *If the state of Washington implemented a road usage charge and required drivers to share an odometer photo to verify mileage, what percentage of people do you believe would accurately report their miles driven in the past year?*

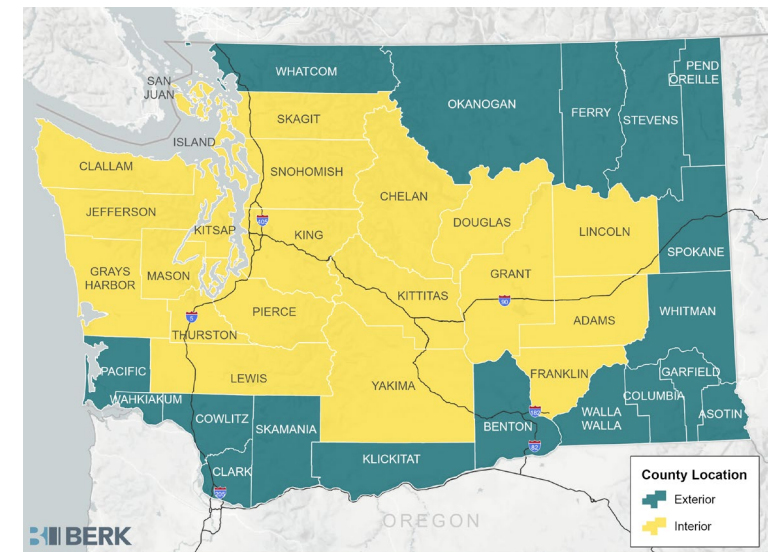
Accounting for Out-of-State Miles

Most say it is important to be able to claim exemptions for out-of-state and private miles driven (regardless of resident's location in an interior versus border county)

85%
chose self-reporting



Border and Interior Counties



Payment Options

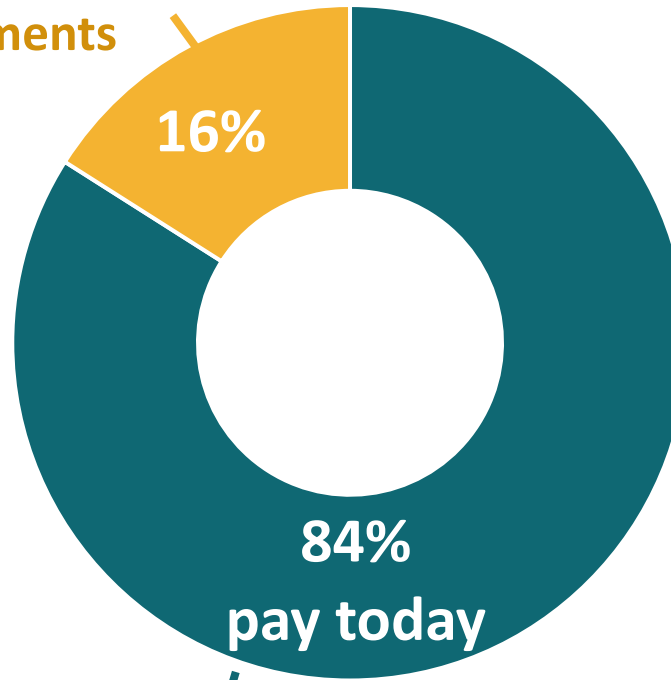
The average RUC due among participants, net of gas tax credits, was relatively small.



Average net RUC per year

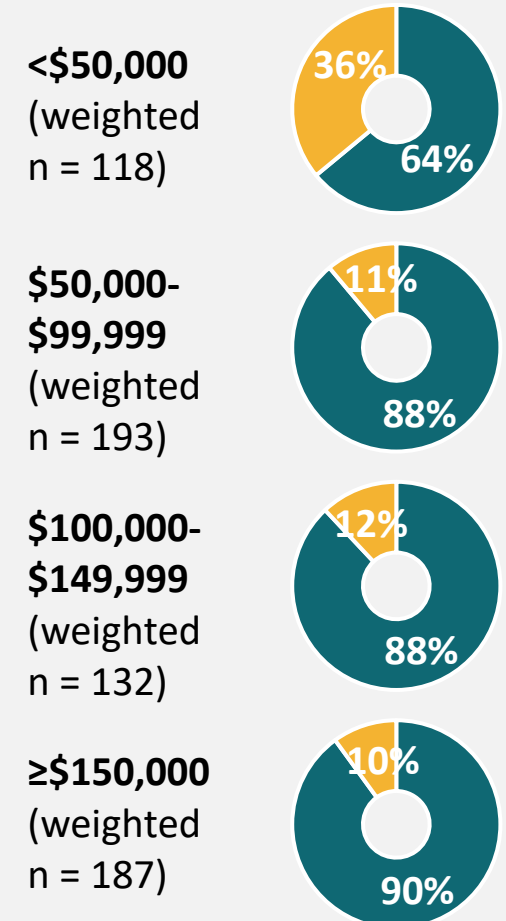
\$ 29.64

Four equal payments



Most participants opted to pay RUC in a single installment

A higher rate of respondents with the lowest incomes preferred installments





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

www.waroadusagecharge.org



Contact Information

**Reema Griffith, Executive Director
Washington State Transportation Commission**

griffir@wstc.wa.gov

360-705-7070

Consultant support provided by:

**CDM
Smith**

BERK

ei enviroissues

Yates
Consulting
Group