



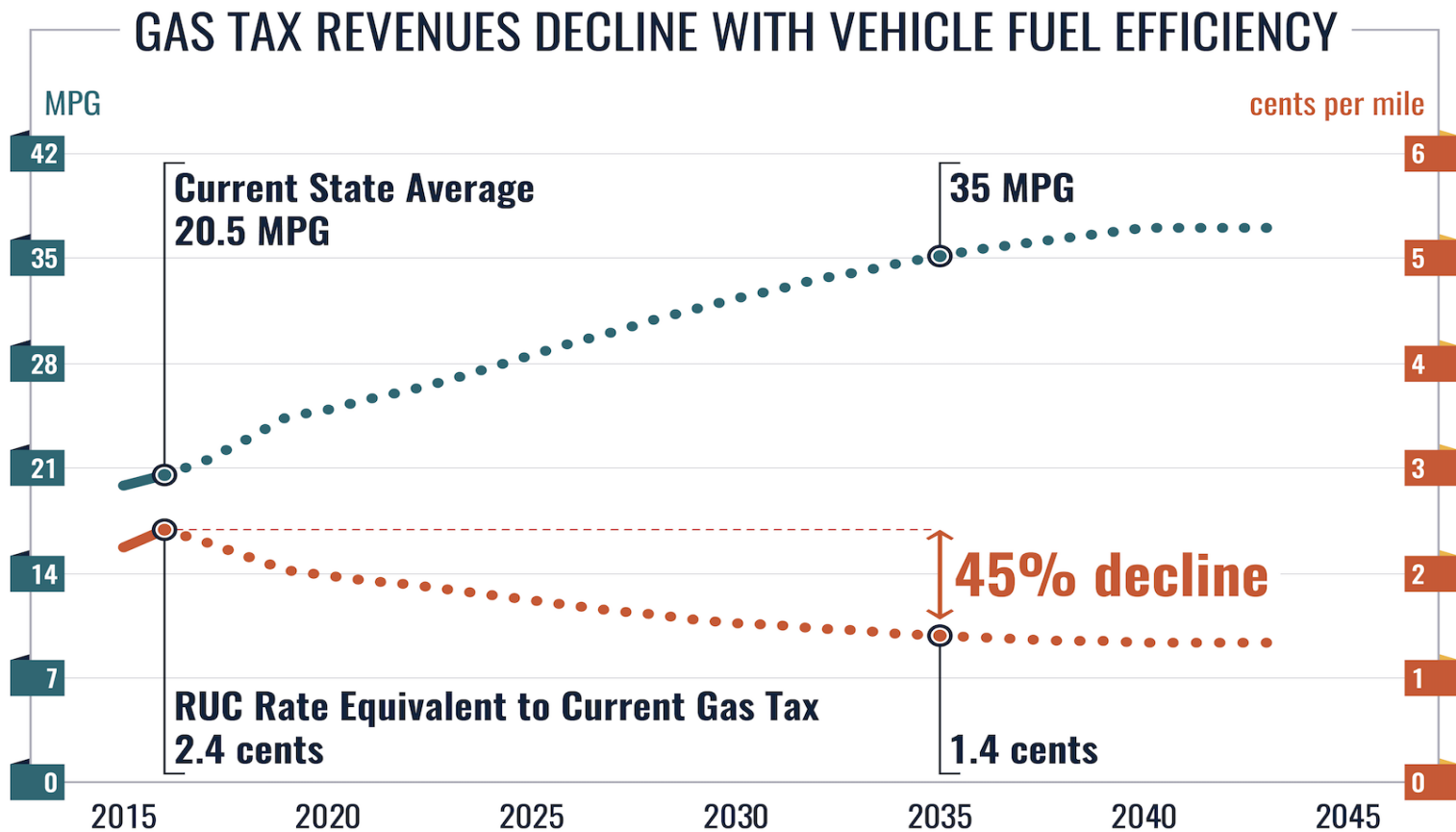
# WASHINGTON STATE ROAD USAGE CHARGE PILOT PROJECT UPDATE

Presentation to Joint Transportation Committee  
Washington State Legislature  
September 14, 2017  
Olympia, WA

# BACKGROUND

# THE BASIC PROBLEM WITH THE GAS TAX

Conservative forecasts show Washington's vehicles will reach 35 MPG average by 2035 – causing a 45% reduction in gas tax revenue per mile driven.



The state gas tax was increased in 2015-2016

# THE ROAD USAGE CHARGE EMERGES

A Road Usage Charge (RUC) is a **per mile charge** drivers would pay for the use of the roads, rather than paying by the gallon of gas

- Similar to how we pay for other public utilities, such as electricity or water

## Legislative direction:

- Explore RUC as a potential long-term revenue source for Washington State's transportation system
- Ensure consumer choice on how mileage information can be collected and paid
- During any transition period from the gas tax to RUC, drivers would pay one or the other, but never both

For purposes of assessing the gas tax against a road usage charge, we have assumed **revenue neutrality** and **focused on net revenue potential for both.**



# WASHINGTON RUC MILESTONES, 2012 - 2016

- ✓ **Feasibility study:** RUC is technologically feasible on a large scale
- ✓ **Preliminary operational concepts:** RUC system must offer user choice
- ✓ **Financial analysis:** RUC is financially advantageous vs. gas tax
- ✓ **Fiscal and policy issues:** documented, several researched, much more planned
- ✓ **Policy objectives:** 13 “Guiding Principles” adopted for any future RUC system
- ✓ **Public demonstration project:** designed to test 4 different RUC methods
- ✓ **Pilot evaluation:** criteria, process and specific evaluation measures adopted
- ✓ **Pilot communications:** website developed, public communications activities mapped
- ✓ **Pilot project implementation:** federal funding secured; pilot test plan adopted

*\* For more detailed information on these milestones and work products, see:*

<http://wstc.wa.gov/StudiesSurveys/RoadUsage/RUC2013/default.htm> or contact D’Artagnan Consulting, LLP

# SNAPSHOT: WASHINGTON'S RUC PILOT PROJECT

## Pilot Project funding source: Federal FAST Act

- \$95 million over 5 years for the Surface Transportation System Funding Alternatives Program, administered by FHWA
- Washington's Pilot Project was fully funded for Stage 1 (Final Design & Set-up, \$3.874 M)
- Remaining funding request for Stage 2 (12-month live pilot) and Stage 3 (evaluation and reporting) is pending with FHWA : \$4.6 M. **Expected announcement by October 1, 2017**

## Summary of Washington RUC Pilot project:

- **Year-long**, statewide test of Washington-designed RUC system for up to **2,000** volunteer test vehicles
- **Partners:** Oregon DOT, City of Surrey, BC, Seattle Electric Vehicle Association and Plug-in America
- **Choices:** Mileage Permit, Odometer Charge, Automated Mileage Meter, and Smartphone

## Unique features:

- **Interoperability testing:** British Columbia drivers (international); OReGO drivers (live RUC tax collection); and Idaho drivers (a non-RUC state)
- **Business partners:** select DOL subagent licensing offices will help administer odometer readings
- **Electric vehicles:** feedback specifically sought from drivers of plug-in electric vehicles
- **Smartphone Innovation Challenge:** competition to develop new technology or RUC app for smartphones

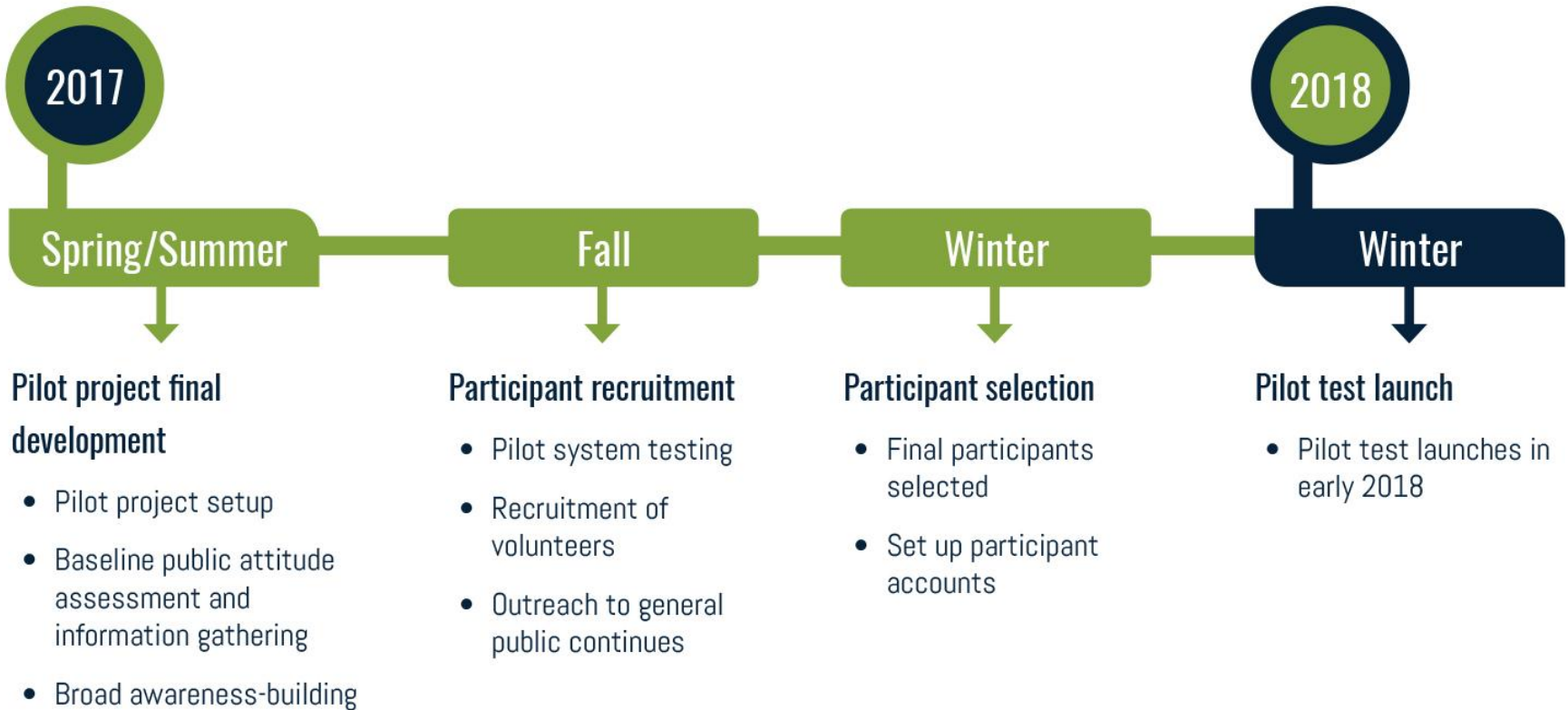
# PREPARATIONS FOR THE PILOT TEST

# WASHINGTON'S GUIDING PRINCIPLES FOR A RUC SYSTEM

Guiding Principle	Example of pilot measure
Transparency	Change in participant understanding of RUC rate, collection method, and use
Complementary policy objectives	Impact of pilot on driving habits of participants
Cost-effectiveness	N/A
Equity	Total and per-mile RUC vs. gas tax paid by participant income
Privacy	Participant perception of privacy protection, including any changes in perception during pilot
Data Security	Participant perception of data security, including any changes in perception during the pilot
Simplicity	Participant understanding of compliance requirements
Accountability	Accuracy of reported road usage, revenue collected, and revenue distributed
Enforcement	Reasons for non-compliance expressed by participants
System Flexibility	N/A
User Options	Reason for participant preferences of various mileage reporting methods
Interoperability and Cooperation	Participant understanding of interoperable RUC
Phasing	N/A



# PRE-LAUNCH MILESTONES



# STATUS OF TECHNICAL DESIGN AND SETUP

## **Completed and nearing completion:**

- ✓ Technical documents (SRS, ICD, ConOps)
- ✓ Procurement of RUC Service Providers (i.e., account management and reporting technology)
- ✓ Smartphone Innovation Challenge complete
- Constructing the multi-jurisdictional RUC clearinghouse function (Hub)

## **To be completed by mid-November:**

- Help desk and participant support
- Partnerships with DOL agents/subagents to provide in-person odometer verification
- Finalize the pilot evaluation plan
- Begin system testing

## **Scheduled for later:**

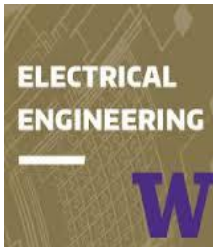
- Organizational design (potential roles for government, private sector in a future RUC system)
- Comprehensive research and analysis on 18+ policy issues related to RUC in Washington state

# SMARTPHONE INNOVATION CHALLENGE

**Challenge:** Can IT engineers, software developers and designers create a prototype solution (software or device) for mileage reporting by **smartphone**?

- Allows drivers to use their own smartphone to record and report mileage
- Allows drivers to decide whether or when to enable location-based services (GPS)

**CoMotion** (UW organization that matches private industry with public research) helped support four research teams from the following departments:



# RESULTS FROM INNOVATION CHALLENGE

## UW information school (iSchool) team:

- Developed an iOS app: *WARUC*, now available in Apple's App Store. [WARUC video clip](#)
- Simple, "no-look" swipe on the smartphone screen to activate or deactivate mileage recording.

## UW human centered design engineering (*two teams*):

### Team 1:

- Focused on smartphone app design that appeals to the average driver.
- Clever explainer video, "[WA Miles](#)", to help drivers learn the primary reason for RUC, and how the smartphone app is used.

### Team 2:

- Drivers can choose to categorize their trips to self-analyze (and economize) their driving habits.
- Drivers can quickly and easily "*Contest this Trip*" through a drop-down menu, requesting their RUC account manager to fix any incorrect mileage. [Tongle](#) video clip

## UW electrical engineering department team:

- Toggle on/off location-based (GPS) mileage recording, to ensure out-of-state miles are deducted from a drivers' RUC account.
- Border Proximity Detection, where an audible sound reminds drivers to activate the out-of-state mileage deduction feature as the vehicle approaches a state border.

# RECRUITING VOLUNTEERS TO PARTICIPATE

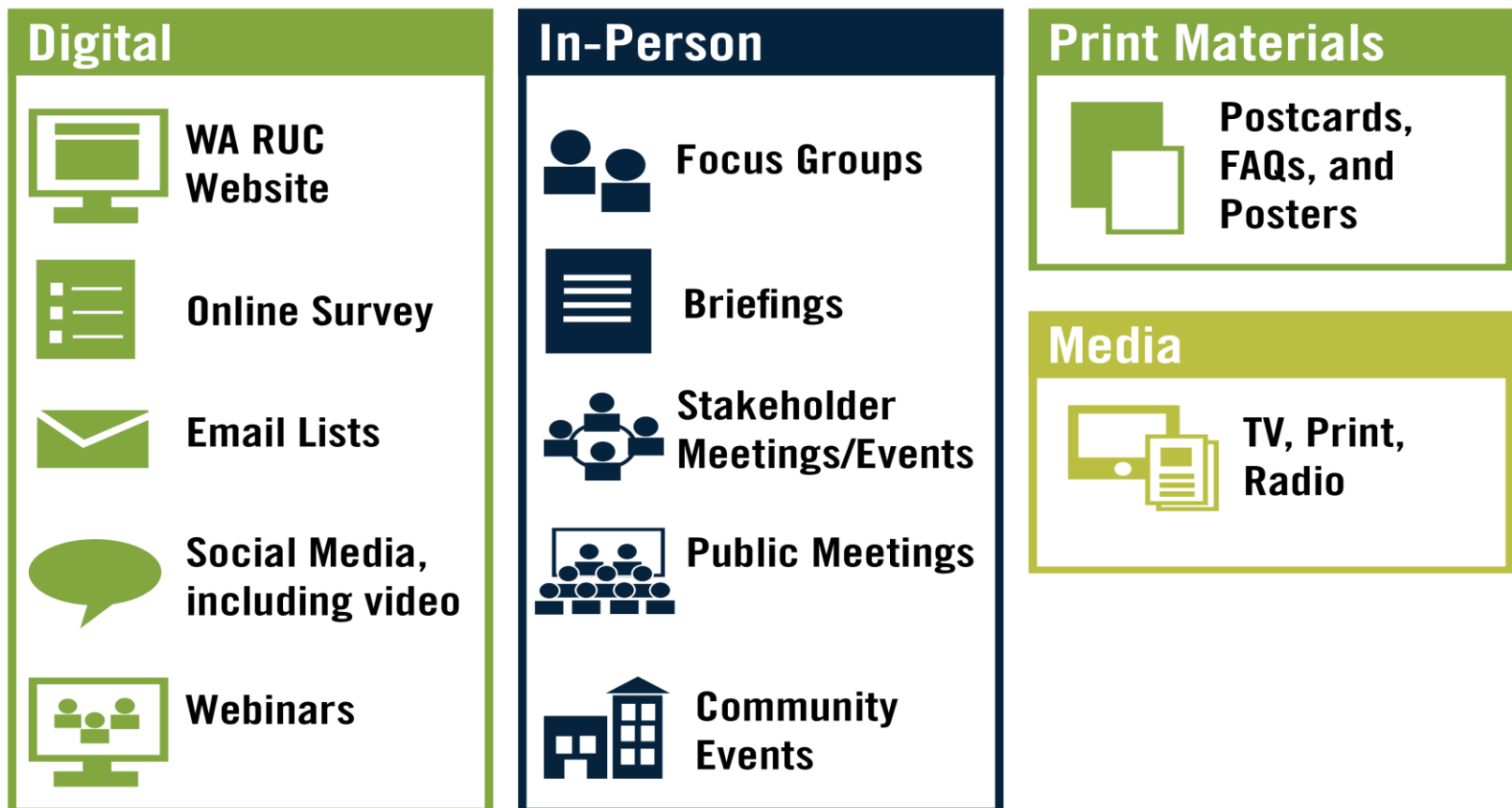
## Recruitment goals:

- Represent the geographic and socio-economic diversity of the state
- Provide equitable access for participants to sign up, enroll and complete the pilot, while remaining mindful of the overall budget and timeline for the pilot
- At least 2,000 vehicles recruited from Washington
- Up to 200 vehicles from Surrey, British Columbia
- Approximately 20 vehicles from Oregon
- Approximately 50 vehicles from Idaho



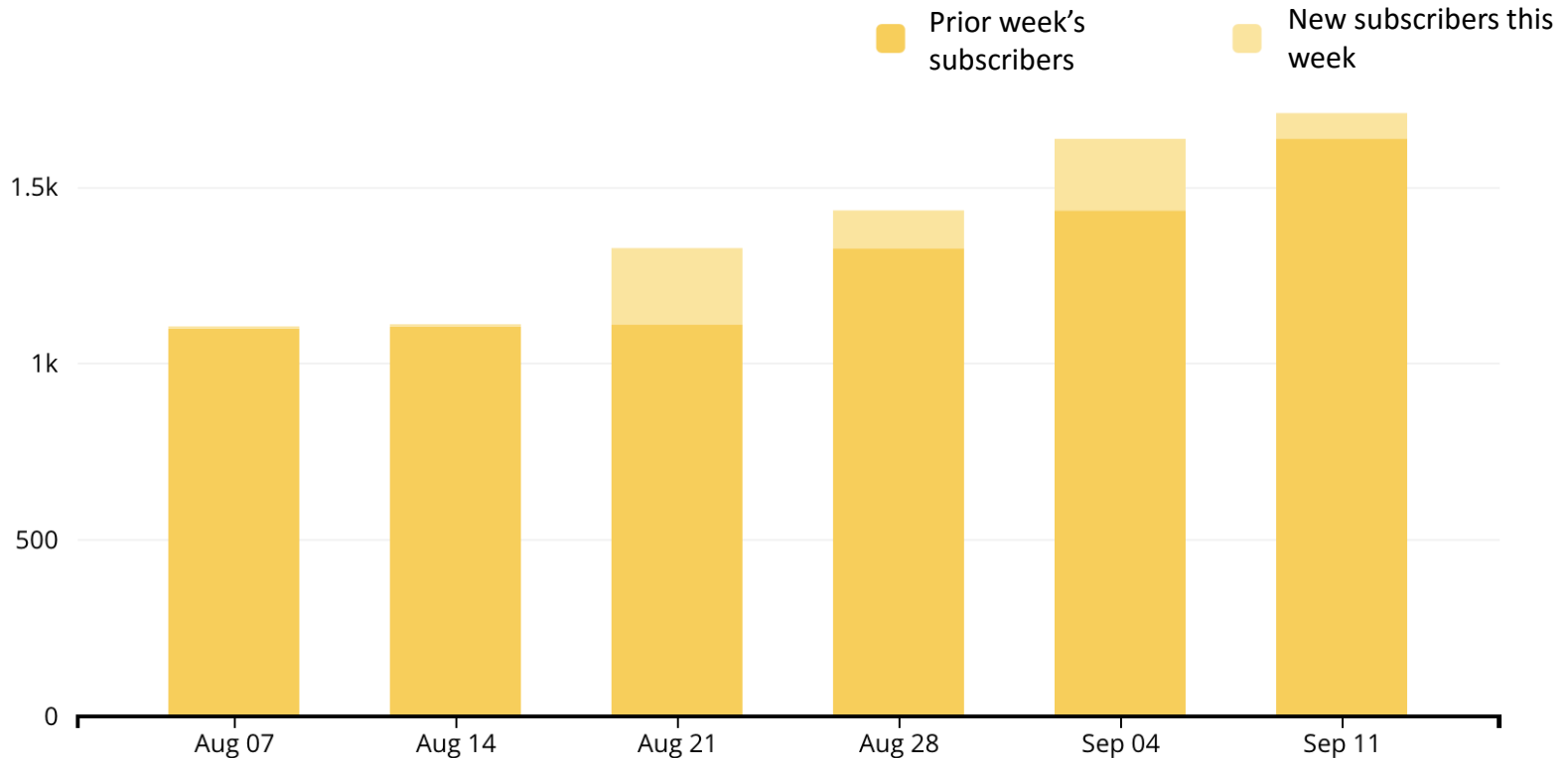
# ASSETS THAT SUPPORT RECRUITING

## COMMUNICATION PLATFORMS



# INTERESTED PERSONS LIST

**As of September 12:** a total of 1,706 people have signed up on the Interested Persons list (“subscribers”) – an increase of 56% within last 30 days



# OCCASIONAL EMAILS KEEP VOLUNTEERS INFORMED

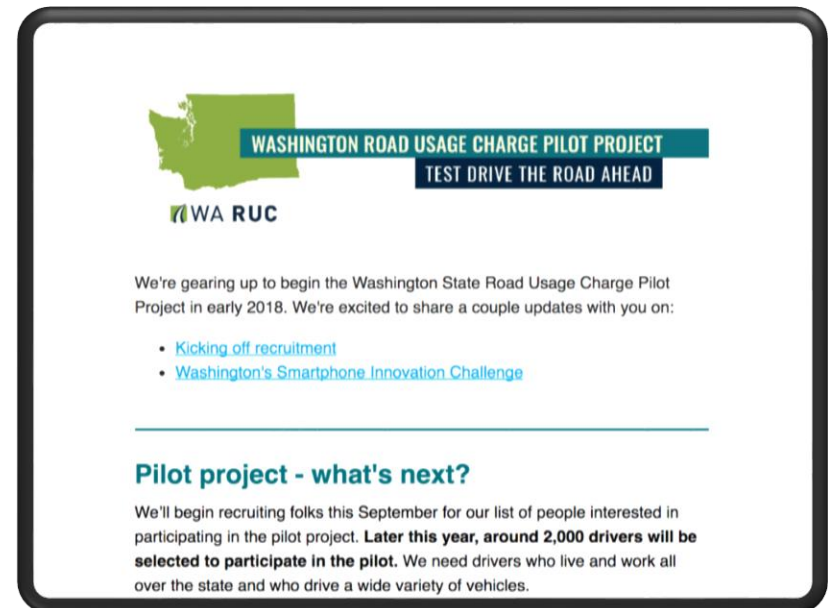
Email updates will be sent about every 4 weeks, providing updates on the pilot project

## Email #1:

- sent March 2017 to 894 subscribers
- 74% opened (industry average: 16.6%)
- Over 120 people volunteered for the Smartphone Innovation Challenge

## Email #2:

- Sent in early August 2017 to 1,101 subscribers
- 61.6% opened





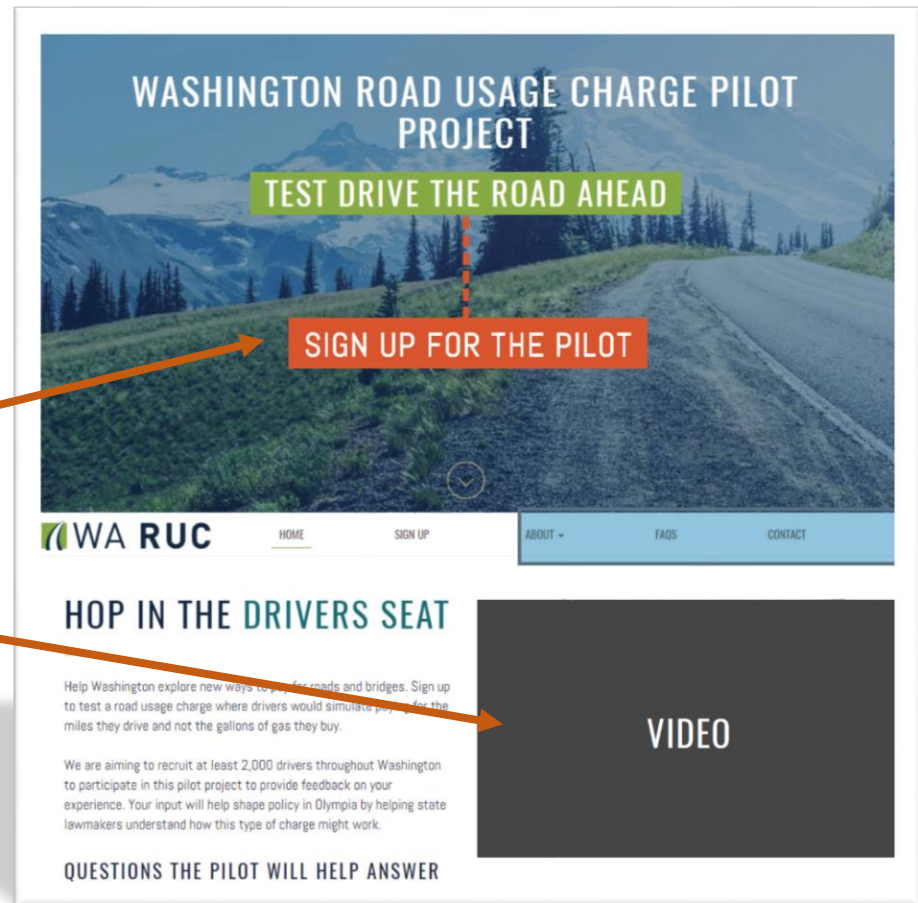
# WA RUC PILOT: FROM THE PUBLIC'S PERSPECTIVE

Web site refresh is underway and scheduled to go live in mid-September

## Purpose of the refresh:

Web page will now be focused on *recruiting volunteers* – not just providing general RUC project information

- Direct “call to action” is prominent on the splash page
- Short “explainer” video describing the project will be added



# WA RUC PILOT: FROM THE PUBLIC'S PERSPECTIVE

A new Volunteer Sign-Up page is under construction\* ...

Provides an estimate of the effort required over the full 12 months

**WA RUC** HOME SIGN UP ABOUT - FAQS CONTACT

## TAKE IT FOR A TEST DRIVE

Help us understand if a road usage charge will work for Washington! We need at least 2,000 drivers from across Washington to participate in our 12-month long pilot starting in early 2018. As a pilot participant, you'll be able to provide valuable feedback on your experience and help answer questions like:

- Does a road usage charge make sense for Washington long-term?
- How does it work for drivers?
- Will it enable us to better fund our transportation system into the future?

## WHAT PILOT PARTICIPANTS CAN EXPECT

LOOKING FOR **WASHINGTON DRIVERS** FROM ALL OVER THE STATE

**2,000 DRIVERS** from across Washington  
**10 MINUTES A MONTH** average commitment for 12 months  
**\$0 COST** to participate  
**4 MILEAGE REPORTING OPTIONS** from no-tech to high-tech

## HERE'S HOW IT WORKS

**STEP 1:** Let us know you're interested in being a participant in the pilot by signing up here.  
**SIGN UP NOW!**

**STEP 2:** Complete the short interest survey, which will be emailed to you after you sign up for the interest list.

**STEP 3:** In January 2018, we will invite at least 2,000 drivers to participate in the pilot from across the state.

**STEP 4:** Invited participants will select a mileage recording method.  
**CONGRATULATIONS!**  
You are now an official pilot participant!

**STEP 5:** Start recording your miles!

**STEP 6:** During the pilot, review mock invoices and complete quarterly surveys to earn a small reward for completing key tasks.

Shows steps required to becoming a volunteer pilot test driver

# WA RUC PILOT: FROM THE PUBLIC'S PERSPECTIVE

... which also describes the mileage reporting options at a high-level

**Goal:** provide enough information for people to make a realistic assessment of their interest in a 12-month research project

**FROM NO-TECH TO HIGH-TECH WE'VE GOT YOU COVERED**

Everyone is different, that's why we're offering four ways to record and report your miles. Choose the mileage reporting method that works best for you and your lifestyle!

 MILEAGE PERMIT	 ODOMETER READINGS	 PLUG AND PLAY	 SMARTPHONE APP
Pre-select a block of miles you anticipate using in three-month increments	Quarterly odometer reading, completed using your smartphone or in person	Automated mileage meter connected to your car's OBD-II port	Record your miles using your smartphone
Submit odometer photo using your smartphone or in person at Department of Licensing (DOL) offices	Submit odometer photo using your smartphone or at select DOL offices	Mileage reports automatically submitted	Submit odometer photo using your smartphone
Average of 10 minutes of your time a month <ul style="list-style-type: none"> <li>– Monthly: review mock invoice</li> <li>– Quarterly: complete pilot survey</li> <li>– Quarterly: report updated odometer reading</li> <li>– As needed: obtain new permit when miles are used up</li> </ul>	Average of 5 minutes of your time a month <ul style="list-style-type: none"> <li>– Monthly: review mock invoice</li> <li>– Quarterly: complete pilot survey</li> <li>– Quarterly: report updated odometer reading</li> </ul>	Average of 10 minutes of your time a month <ul style="list-style-type: none"> <li>– Monthly: review mock invoice</li> <li>– Quarterly: complete pilot survey</li> </ul>	Average of 10 minutes of your time a month <ul style="list-style-type: none"> <li>– Monthly: review mock invoice</li> <li>– Monthly: report updated odometer reading</li> <li>– Quarterly: complete pilot survey</li> </ul>
Travel out-of-state? No problem! Some of the mileage reporting methods will deduct miles you travel outside of Washington. Stay tuned for more details later this year.			

# A CLOSER LOOK AT MILEAGE REPORTING OPTIONS

Volunteers in the pilot test can choose among four options:



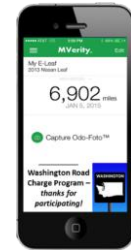
**Mileage Permit:**  
Drivers chose how many miles to purchase



**Odometer Readings:** per-mile charge based on vehicle odometer



**Automated Mileage Meter:** in-vehicle device reports miles – drivers choose if they want GPS or not



**Smart Phone:** app that uses driver's phone to record and/or report miles driven

*No-tech*

*Low-tech*

*Higher-tech*

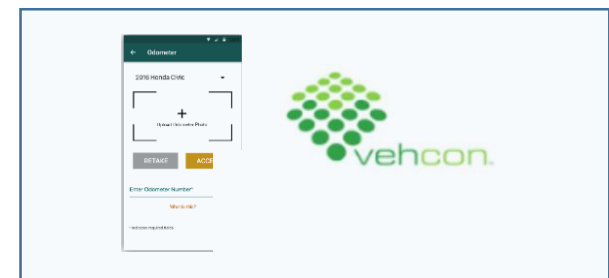
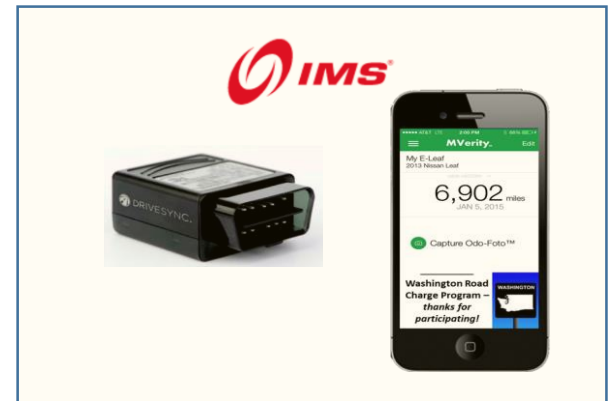
*High-tech*

# A CLOSER LOOK AT RUC SERVICE PROVIDERS



Participant enrollment  
(Single Sign On System)

WA RUC Services for Pilot Participants		
Service Provider 1	Service Provider 2	OPERATIONAL CONCEPTS
✓	✓	Mileage Permit
✓	✓	Odometer Charge
✓	✓	Automated Distance Charge (location)
✓	✓	Automated Distance Charge (no location)
✓	✓	Smartphone Location Application



# WA RUC PILOT: FROM THE PUBLIC'S PERSPECTIVE

Volunteers must fill out an online survey asking for demographic information for research purposes only (would not be required in a real system). Results will be used for pilot evaluation to better understand potential impacts on people and communities.

## Topics include:

- Primary language they speak
- Where they live
- Type of vehicle (gas, hybrid, electric)
- Age (ranges)
- Gender
- Household income (ranges)
- Household size (occupants)
- Racial or ethnic identity
- Contact information

Washington Road Usage Charge Volunteer Survey - Draft 9/11/2017

PRIMARY VEHICLE

6. Which of the following best describes your vehicle:

- My vehicle has a fully electric engine
- My vehicle uses only gasoline or diesel fuel
- My vehicle has a hybrid engine and plugs in
- My vehicle has a hybrid engine but does not plug in
- My vehicle is a motorcycle or an RV
- Other or not sure

7. Approximately how many miles do you drive this vehicle per year?

- 5,000 miles per year or less
- 5,001 to 10,000 miles per year
- 10,001 to 15,000 miles per year
- More than 15,000 per year

8. Other than your daily commute to work, do you use your vehicle regularly for commercial or business purposes?

- Yes
- No

9. Do you have a vehicle that is modified to be accessible for those with disabilities?

- Yes, I drive a modified vehicle as a disabled driver
- Yes, I drive a modified vehicle for a disabled passenger
- No

# UPCOMING PROJECT MILESTONES

## Stage 1 Milestones (September – November 2017)

- Decision by FHWA on Round 2 STSFA Grant Funding – expected by September 30 -- (funds live pilot, evaluation and reporting)
- Web site refresh goes live
- Launch participant recruitment activities
- Provide active assistance to British Columbia and Idaho participants
- Testing of all devices, account services and customer interface/support
- Establish partnerships with DOL agents/subagents located near participants that choose in-person odometer validation method



# THANK YOU

[WWW.WAROADUSAGECHARGE.ORG](http://WWW.WAROADUSAGECHARGE.ORG)

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