BRIEF BACKGROUND: ROAD USAGE CHARGE IN WASHINGTON

Jeff Doyle, D’Artagnan Consulting
WHAT IS A ROAD USAGE CHARGE (RUC)?

A road usage charge 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 utilities, such as electricity or water.

There are different ways to assess the charge: for each mile driven or for use of the road for a certain amount of time.

Identified as a viable future funding source in need of further exploration.
Since 2012, the Washington State Transportation Commission has led this work and established a 25-member steering committee comprised of stakeholders representing a variety of interests.

Three Commissioners – One serves as Chair

Eight Legislators – four Senators and four Representatives

Representatives from:
- Auto and light truck manufacturers
- Ports
- Environmental
- Counties
- Trucking industry
- Cities
- Public transportation

- Consumer/Public
- WSDOT
- Department of Licensing
- Motoring public
- Business
- User fee technology
- Treasurer’s Office
BASIS OF THE ASSESSMENT

- Identify and develop a sustainable, long-term revenue source for Washington State’s transportation system, and transition from the current gas tax system.
- Ensure there is consumer choice on how mileage information can be collected and paid for.
- During the transition period of moving from the gas tax to a road usage charge, 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.
PROGRESSION OF RUC ASSESSMENT

Now completing the Implementation Plan for a Pilot Project in 2017-19

**WORK TO DATE**
- **Foundational Work**
  - Prior studies by:
    - Transportation Commission
    - Joint Transportation Committee
    - Connecting Washington Task Force
- **2012: Feasibility Evaluation**
  - Feasibility assessment
  - Initial policy evaluation and research
  - Work plan
- **2013: Policy Framework and Business Case Evaluation**
  - Policy framework
  - Business case evaluation of illustrative operational concepts
  - Work plan

**PROPOSED WORK PLAN**
- **2014: Develop Concept of Operations**
  - Refine policy framework
  - Develop a single concept of operations
  - Update financial evaluation
- **2015-2017**
  - Demonstration
  - Evaluation
  - Public attitude assessment
  - Public communications and engagement

**POTENTIAL REFINING WORK**
- **2017 and Beyond**
  - Reevaluate road usage charge methods based on demonstration
  - Further policy refinement
  - Draft legislation
  - Develop organizational design
  - Develop transition strategy
  - Refine business case
• Road usage charging is being looked at in several states across the country.

• 14 western states are involved in research, testing, or legislatively enacted programs.

• Most important remaining task: let the public “test drive” RUC through a live pilot test (volunteer participants).

• NEWS: On August 28, FHWA announced that Washington was awarded a $3.847 million federal grant to prepare for a live pilot test, scheduled to begin in 2017.
WASHINGTON RUC PILOT PROJECT

Federal funding for:

• Year-long, statewide test of Washington-designed RUC system for up to 2,000 volunteer test vehicles

• Partners: OReGO, City of Surrey, BC, and Seattle Electric Vehicle Association

• Choices: Time Permit, Odometer Charge, and Automated Mileage Reporting

Unique features:

• International Interoperability test with British Columbia drivers

• Financial Interoperability test with Oregon

• Feedback specifically from EV drivers

• Hackathon event to develop new technology or RUC app for smartphones
Three primary work areas were recommended:

<table>
<thead>
<tr>
<th>Demonstration (or “pilot”)</th>
<th>Public Attitude Assessment</th>
<th>Public Communications and Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
</tr>
<tr>
<td>• Expose Washington motorists to road usage charging policy and concepts,</td>
<td>• Evaluate how well the public understands transportation funding sources and needs,</td>
<td>• Communicate the purpose and details of the demonstration,</td>
</tr>
<tr>
<td>• Raise awareness of transportation funding issues,</td>
<td>• Assess public understanding of road usage charging, and</td>
<td>• Address questions about road usage charging, and</td>
</tr>
<tr>
<td>• Test road usage charge operations,</td>
<td>• Identify questions, concerns, and reasons for support and opposition.</td>
<td>• Stimulate and monitor public discussion of transportation funding.</td>
</tr>
<tr>
<td>• Identify organizational challenges, and</td>
<td><strong>Activities:</strong></td>
<td><strong>Activities:</strong></td>
</tr>
<tr>
<td>• Refine cost estimates.</td>
<td>• Polling,</td>
<td>• Recruit participants;</td>
</tr>
<tr>
<td><strong>Activities:</strong></td>
<td>• Surveys,</td>
<td>• Provide Q&amp;A to demonstration participants, public, and media;</td>
</tr>
<tr>
<td>• Plan, execute, and evaluate a demonstration of road usage charging methods.</td>
<td>• Focus groups,</td>
<td>• Provide speakers to community groups; and</td>
</tr>
<tr>
<td></td>
<td>• Stakeholder meetings, research, and analysis.</td>
<td>• Maintain web and social media presence.</td>
</tr>
</tbody>
</table>
OVERVIEW OF TODAY’S PRESENTATION

- Business Case analysis for RUC in Washington
- Objectives and Pilot Project evaluation measures
- Proposed RUC system and technologies
- Statewide participation in the Pilot test
- Communications plan
- Recruiting volunteers for the Pilot test
- Next steps
BUSINESS CASE FOR ROAD USAGE CHARGE

Travis Dunn, D’Artagnan Consulting
Washington State's current light-duty fleet fuel economy of ~20.5 MPG translates to a fuel tax of 2.4 cents per mile driven, on average, at 49.4 cents/gallon.
THREE ILLUSTRATIVE SCENARIOS

• **Stuck In Traffic**: MPG improves slowly due to persistent low oil prices that result in purchases of lower MPG vehicles, increased congestion leading to lower on-road MPG, and slower fleet turnover.

• **CAFE Detroit**: MPG improves in line with U.S. EIA expectations based on automaker technology improvements driven in part by automaker technology improvements in conventional engines (EVs and PHEVs are less than 2% of new sales by 2040).

• **Shift Happens**: MPG improves quickly due to faster adoption of EVs and PHEVs (20% of new sales by 2040).
LIGHT VEHICLE FUEL TAX SCENARIOS AT 49.4 CENTS/GALLON

Historical

Shift Happens

CAFE Detroit

Stuck In Traffic
POLICY ALTERNATIVES

- Fuel tax flat at 49.4 cents/gallon

- Index fuel tax at 2.5% increase per year
  - 57 cents/gallon by 2025
  - 83 cents/gallon by 2040

- Transition to RUC at 2.4 cents/mile
  - Begins in 2019
  - Vehicles MY2018 and older continue to pay flat 49.4 cents/gallon fuel tax
STUCK IN TRAFFIC

Historical Fuel Tax

Index Fuel Tax

Flat Fuel Tax

Washington RUCs

$0.030

$0.020

$0.010

$0.000

1990 2000 2010 2020 2030 2040
CAFE DETROIT

Historical
Flat Fuel Tax
Index Fuel Tax
Washington RUCs
SHIFT HAPPENS

Historical Fuel Tax
Index Fuel Tax
Flat Fuel Tax
Washington RUCs

$0.030

$0.020

$0.010

$0.000

1990 2000 2010 2020 2030 2040
COMPARISON: IMPACT OF POLICIES BY VEHICLE TYPE

- Tesla Model S
- 2010 Ford Focus
- 2010 Ford Fusion
- 2007 Ford F-150
- 2016 Toyota Prius c

- 49.4 cent fuel tax
- 57 cent fuel tax (2025)
- 83 cent fuel tax (2040)
- RUC @ 2.5 cents/mile

*Assumes 10,000 miles driven
COST OF COLLECTION SUMMARY

<table>
<thead>
<tr>
<th>Annual Cost Per Vehicle</th>
<th>State-Run RUC</th>
<th>RUC with Commercial Partners</th>
<th>Fuel Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$80</td>
<td></td>
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<td></td>
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<td>$20</td>
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<td>$-</td>
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</tr>
</tbody>
</table>

16-18% of revenue
8-10% of revenue
4-6% of revenue

Number of Vehicles
250,000
1,000,000
6,000,000
EXAMPLE: BREAK-EVEN ON NET REVENUE

Net Revenue Per Mile Driven

- Historical Fuel Tax
- Projected Fuel Tax
- Projected RUC


Revenue Values: 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0
## SUMMARY OF RESULTS

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Goal: Long Term Revenue Sustainability vs. MPG</th>
<th>Guiding Principle: Fairness</th>
<th>Guiding Principle: Cost Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Fuel Tax</td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
</tr>
<tr>
<td>Index Fuel Tax</td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
</tr>
<tr>
<td>Washington RUCs</td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
</tr>
</tbody>
</table>
WASHINGTON RUC PILOT EVALUATION MEASURES

Travis Dunn, D’Artagnan Consulting
Gather information about and evaluate the performance of a prospective road usage charge (RUC) policy for Washington use.
EVALUATION PRINCIPLES

- Address Steering Committee guiding principles
- Be measureable
- Be concise
EVALUATION PROCESS

Develop Evaluation Methods
- Participant surveys
- Pilot data analysis

Implement Measurement
- Conduct surveys
- Analyze data
- Use feedback to improve pilot as appropriate

Report
- Quantitative findings
- Qualitative findings
- Integration with other pilot reporting
INPUTS TO FORMULATION OF EVALUATION MEASURES

- Guiding principles
- FAST Act criteria
- Criteria and measures used elsewhere
## GUIDING PRINCIPLES VS. FAST ACT PILOT OBJECTIVES

<table>
<thead>
<tr>
<th>Guiding Principle</th>
<th>Related Pilot Objectives from FAST Act Section 6020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparency</td>
<td>Public acceptance</td>
</tr>
<tr>
<td>Complementary policy objectives</td>
<td>Congestion mitigation (if appropriate)</td>
</tr>
<tr>
<td>Cost-effectiveness</td>
<td>Cost of system administration</td>
</tr>
<tr>
<td>Equity</td>
<td>Income, geographic, urban vs. rural equity</td>
</tr>
<tr>
<td>Privacy</td>
<td>Protection of personal privacy</td>
</tr>
<tr>
<td>Data Security</td>
<td>Reliability and security of technology</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Ease of compliance</td>
</tr>
<tr>
<td>Accountability</td>
<td>Implementation</td>
</tr>
<tr>
<td>Enforcement</td>
<td>Auditing and enforcement</td>
</tr>
<tr>
<td>System Flexibility</td>
<td>Use of independent third-party vendors</td>
</tr>
<tr>
<td>User Options</td>
<td>Flexibility and user choice</td>
</tr>
<tr>
<td>Interoperability and Cooperation</td>
<td>Interoperability</td>
</tr>
<tr>
<td>Phasing</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### EXAMPLES OF EVALUATION MEASURES NOT PROPOSED

<table>
<thead>
<tr>
<th>Example</th>
<th>Reason Not Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participant inquiries and average response times</td>
<td>Too detailed for policy purposes; more important to focus on qualitative inquiry trends and participant survey responses</td>
</tr>
<tr>
<td>Number of participants in pilot</td>
<td>The number is a means to and end, not an end in itself</td>
</tr>
<tr>
<td>Pilot implementation cost</td>
<td>Cost of the pilot is not as relevant as what it tells us about the cost to implement a real system</td>
</tr>
<tr>
<td>Ability to enforce compliance</td>
<td>More important in a test environment to understand compliance factors and compare relative effectiveness of potential enforcement tools</td>
</tr>
<tr>
<td>Amount of revenue generated</td>
<td>Purpose of pilot is not to generate revenue but rather to improve understanding of RUC as a revenue policy</td>
</tr>
</tbody>
</table>
• 23 measures across 13 categories
• Measures define what will be determined from the pilot (quantitatively calculated or qualitatively assessed), in order to provide information to policy makers
• Measures are not targets or requirements (e.g., not pass/fail)
1) Change in participant understanding of gas tax rate, collection method, and use

2) Change in participant understanding of RUC rate, collection method, and use
COMPLEMENTARY POLICY OBJECTIVES

3) Impact of pilot on driving habits of participants

4) Impact of pilot on stated vehicle purchasing preferences of participants
As a small-scale effort, the pilot project will not itself generate data that can be evaluated for cost-effectiveness. We recommend that information from the pilot be used to refine and update the RUC business case analysis.
5) Total and per-mile RUC vs. gas tax paid by urban, suburban, vs. rural status of participant

6) Total and per-mile RUC vs. gas tax paid by participant income

7) Total and per-mile RUC vs. gas tax paid by in-state vs. out-of-state participants

8) Participant expectations and before-and-after perceptions of RUC equity relative to gas taxes
9) Participant perception of privacy protection, including any changes in perception during the pilot

10) Relative ability of mileage reporting methods to protect participant privacy
11) Participant perception of data security, including any changes in perception during the pilot

12) Relative ability of mileage reporting methods to provide data security
13) Time and indirect costs expended by participants to comply with pilot tasks

14) Participant understanding of compliance requirements
15) Description of assignment of responsibility and oversight for Washington agencies and other entities involved in pilot

16) Accuracy of reported road usage, revenue collected, and revenue distributed
17) Participant perceptions of relative effectiveness of enforcement methods in maintaining compliance

18) Reasons for non-compliance expressed by participants (e.g., confusion, negligence, fraud)

19) Participant-stated locations of fuel purchases (potentially only for interoperability participants)
In a short-term pilot project, long-term system flexibility cannot be effectively measured. We recommend outside policy analysis to address this principle.
19) Participant overall satisfaction and relative satisfaction with choices available in the pilot project

20) Reason for participant preferences of various mileage reporting methods
21) Description of assignment of responsibility and oversight for Washington agencies and other jurisdiction agencies involved in pilot

22) Participant understanding of interoperable RUC

23) Relative ease of compliance for interoperability test participants vs. others
PHASING

Information from policy analysis, legal analysis, and business case analysis can inform this guiding principle.
PROPOSED PILOT OPERATIONS & TECHNOLOGY

Jeff Doyle, D’Artagnan Consulting
Concept of Operations (ConOps): a higher-level blueprint for how the RUC system will work, written for the end-user (i.e., the driver)

More technical engineering documents being finalized: System Requirements Specifications (SRS); Interface Control Documents (ICD)
FOUR WAYS TO COLLECT A RUC: FROM NO-TECH TO HIGH-TECH

Volunteers in the pilot test can choose among four options:

- **Time Permit:** flat fee to drive unlimited miles in a given period (month or year)
- **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
OPERATIONAL CONCEPT A: TIME PERMIT

The Time Permit provides unlimited driving for a specific period.

How it works:

- The driver chooses time permit on the pilot project website or by phone.
- Optionally, the driver may provide their vehicle’s current odometer reading.
- The driver is notified of the reminders that will be sent (typically by e-mail).
- While the permit is valid, the driver drives without limitation.
- The driver purchases new permit when reminder comes.
- If drivers fails to purchase new permits, they get further reminders.
The Odometer Charge is based on odometer readings taken from the vehicle.

How it works:

• The driver chooses Odometer Charge on the pilot project website or by phone.
• The driver may choose from the mobile phone or DOL subagent options:
  • The mobile phone option means the driver takes pictures of the odometer with his/her own phone with a special smartphone app.
  • For the subagent option, the subagent provides a smartphone for the driver’s use.
• The driver provides an odometer reading and receives an invoice every 3 months.
  • Earlier concept was that drivers would pay in advance, based on estimated mileage.
  • To simplify, the Odometer Charge will simply invoice the driver for actual miles driven during the reporting period (quarterly is recommended).
OPERATIONAL CONCEPT C: AUTOMATED MILEAGE CHARGE

The Automated Mileage Charge automatically records and posts mileage to a driver’s RUC account

How it works:

• The driver sets up an account with an account manager.
  • Contact info, VIN, and initial odometer reading is required.

• The driver then selects his or her preferred mileage reporting technology:
  • OBD-II mileage meter (either with or without GPS chip): driver plugs in device.
  • Mobile phone: driver downloads and installs the app.

• The driver automatically receives a RUC statement each month.

• GPS-enabled mileage meters automatically apply credits for gas taxes paid.

• The driver may be offered other value-added services with a GPS-enabled mileage meter.
OPERATIONAL CONCEPT D: SMARTPHONES IN THE PILOT PROJECT

Since 2012, the Smartphone has been referred to as the “4th Method” for paying RUC:

- Method A: Time Permit
- Method B: Odometer Charge
- Method C: Automated Mileage Charge
- Method D: Smartphone

However, a smartphone is actually a supporting technology for how to report mileage, just as the OBD-II Mileage Meter is a supporting technology.

Moving from past RUC engineering terminology to consumer-friendly descriptions for the pilot in 2017, the Smartphone option will now be presented similar to this:

Report using your smartphone

- Download and use the MVerity OdoFoto™ smartphone app
- Coming in 2017: Mileage Meter smartphone app*

* Will be offered only if RUC Hackathon produces a viable approach

Accurate, reliable smartphone technologies for RUC are extremely limited. The pilot project will sponsor a competition among software and hardware engineering students to develop a new RUC Smartphone option. If successful, the new option will be tested in the pilot.
Emerging technologies show potential for reliably collecting mileage data while protecting drivers’ privacy.

- Mobile phone app-based solutions are emerging – works for every vehicle.
- Relies on consumers’ own mobile phone and vehicle odometer.
- VIN and odometer photo captured and transmitted with driver’s phone.
- Data is extracted and validated using photo recognition technology, algorithms, and databases.
- System can detect fraud.
<table>
<thead>
<tr>
<th>Original RUC Methods</th>
<th>How miles are reported</th>
<th>How RUC is calculated</th>
<th>How RUC is paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Time Permit</td>
<td>No mileage reported.</td>
<td>Fixed price for annual permit, pricing assumes high miles driven</td>
<td>Pay up front, at time of purchase</td>
</tr>
<tr>
<td>B: Odometer Charge</td>
<td>Certified smartphone photo or in-person verification of vehicle odometer by authorized rep</td>
<td>RUC invoice based on exact mileage driven, multiplied by the per-mile rate</td>
<td>Pay upon receipt of invoice, after mileage driven</td>
</tr>
<tr>
<td>C: Automated Mileage Charge</td>
<td>Plug-in mileage meter records and reports vehicle’s actual mileage. Drivers can choose either GPS-enabled or simple mileage meter.</td>
<td>RUC invoice based on exact mileage driven, multiplied by the per-mile rate. GPS-enabled meters automatically deduct non-taxable miles.</td>
<td>Pay upon receipt of invoice, after mileage driven</td>
</tr>
<tr>
<td>D: Smartphone</td>
<td>Special smartphone app to take photo and report vehicle odometer mileage (Other smartphone mileage recording and reporting options under development)</td>
<td>RUC invoice based on exact miles driven, multiplied by the per-mile rate. Seeking new smartphone solution to automatically deduct non-taxable miles</td>
<td>Pay upon receipt of invoice, after mileage driven</td>
</tr>
</tbody>
</table>
THREE ISSUES HAVE BEEN RAISED

Based on Steering Committee feedback, three issues must be resolved:

1. Since the pilot project cannot collect real money from participants, what can be learned by offering the **Time Permit**?

2. **Which manual method** will best allow drivers to pay for their expected mileage in the clearest, most easily understood way?

3. What are the possible ways in which a driver can use a **smartphone** to report mileage?
ISSUE #1: WHY OFFER A TIME PERMIT?

Designed for maximum privacy; least possible information is provided to government

• RUC payment is not based on actual usage (i.e., miles driven) – instead, based on time: annual permit to drive unlimited miles for the year.

• **Tradeoff**: price of time permit assumes high-mileage driving (98th percentile of US drivers, about 35,000 mile per year) to minimize revenue leakage from “adverse selection” – drivers who otherwise would take advantage of the all-you-can-drive approach.

• Time permit requires payment up front, at time of purchase

• In a pilot program that does not collect real tax money from participants, offering the time permit does not provide much insight into driver behavior or consumer preference.

• **Proposed change**: *do not include Time Permit in the pilot test, but keep it as a recommendation for a future RUC system.*
PARTICIPANT CHOICES IN THE CALIFORNIA RUC PILOT

Only 1.7% of Pilot Project Participants chose a Time Permit
ISSUE #2: IS THERE AN EASIER MANUAL OPTION FOR DRIVERS?

Given the exclusion of the “time permit” in the pilot, a new manual reporting option is added to address concerns about needing a more affordable “pay-as-you-go” manual method.

**NEW - Mileage Permit:** drivers purchase customized mileage amounts based on their own unique driving habits.

- Paid in advance, in fixed “mileage blocks” (1,000 miles, 5,000 miles, etc. – similar to pre-paid cards for cell phone minutes).
- A new mileage permit is only required when actual miles driven exceed the amount of the pre-paid miles.

*NOTE: Both the Odometer Charge and a Mileage Permit require periodic mileage reporting based on the vehicle’s odometer.*
MANUAL METHODS FOR THE PILOT: HIGH-LEVEL COMPARISON

<table>
<thead>
<tr>
<th></th>
<th>Odometer Charge</th>
<th>New: Mileage Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre or Post pay?</td>
<td>Pay upon receipt of invoice, after miles are driven</td>
<td>Pay up front, at time of purchasing miles</td>
</tr>
<tr>
<td>Odometer reported?</td>
<td>Yes (quarterly is recommended)</td>
<td>Yes (quarterly is recommended)</td>
</tr>
<tr>
<td>Price structure</td>
<td>RUC invoice is based on exact mileage driven by the vehicle, multiplied by the per-mile rate</td>
<td>Pay for a number of miles selected by the driver, multiplied by the per-mile rate. Driver must pay for any miles exceeding the original purchased amount.</td>
</tr>
<tr>
<td>How renewals work</td>
<td>Automatically renews each reporting period (monthly, quarterly, annually, etc.)</td>
<td>Driver pays for any excess mileage at quarterly reporting/renewal period. Driver must purchase new miles before original amount is exhausted.</td>
</tr>
</tbody>
</table>
Can IT engineers and software developers provide a novel solution to mileage reporting by smartphone?

**General approach:**

- **Goal:** create a prototype solution (software or device) that can be tested by a small pool of participants during the Washington pilot.
- **Developers provided with problem statement, desired outcome, relevant information, and charge:** find a solution.
- **Competitive event, with finalists earning a cash stipend for final development and if warranted, beta testing in the Washington pilot.**
- **Tentative schedule:** development in Spring/Summer 2017; beta testing in Fall 2017; deployment Winter 2017/2018.
Main take-aways:

- Emerging (or re-emerging) technologies will not be sufficiently mature for a pilot in the 2017 timeframe (5G, pay-at-the-pump)
- MVerity smartphone app is a good way of reporting odometer readings
- GPS Smartphone option needs work – see Washington RUC Hackathon event
- OBD-II devices (still) work well
- In-vehicle telematics: limited availability based on vehicle make and model; provides odometer readings only (no automated calculation of out-of-state or other non-taxable miles)
## Revised RUC Options

<table>
<thead>
<tr>
<th>Revised RUC options</th>
<th>How miles are reported</th>
<th>How RUC is calculated</th>
<th>How RUC is paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mileage Permit</td>
<td>Certified <strong>smartphone</strong> photo or in-person verification of vehicle odometer by authorized rep</td>
<td>RUC based on number of miles driver chooses to purchase, in 1,000 mile increments, reconciled with actual miles driven every 3 months</td>
<td>Pay up front, at time of purchasing miles</td>
</tr>
<tr>
<td>Odometer Charge</td>
<td>Certified <strong>smartphone</strong> photo or in-person verification of vehicle odometer by authorized rep</td>
<td>RUC invoice based on exact mileage driven</td>
<td>Pay upon receipt of invoice, after mileage driven</td>
</tr>
<tr>
<td>Automated Mileage Charge</td>
<td>Plug-in mileage meter records and reports vehicle’s actual mileage.</td>
<td>RUC invoice based on exact mileage driven</td>
<td>Pay upon receipt of invoice, after mileage driven</td>
</tr>
<tr>
<td></td>
<td>Drivers choose either GPS-enabled or simple mileage meter.</td>
<td>GPS-enabled meters automatically deduct non-taxable miles.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TBD: Smartphone</strong> app to automatically report mileage</td>
<td>Smartphone app could also deduct non-taxable miles.</td>
<td></td>
</tr>
</tbody>
</table>
PILOT PROJECT PARTICIPANTS

Jeff Doyle, D’Artagnan Consulting
PILOT FEATURES RELEVANT TO VOLUNTEER RECRUITING

Key Assumption: pilot is to consist of no more than 2000 Washington vehicles.
RECOMMENDED REGIONS: OBJECTIVES

• Support the four key pilot features (previous slide)
• Reflect the geographic, economic, and demographic diversity of the state
  • Housing and employment patterns
  • Income
  • Ethnicity
  • Age distributions
• Volunteer recruitment will focus on five regions to ensure a sufficiently large and diverse pool of prospective participants
RECOMMENDED REGIONS: FACTORS

• Leverage pre-existing regional boundaries and communications channels
  • MPO
  • RTPO
  • Legislative districts
  • Media market territories
TEST INTERNATIONAL INTEROPERABILITY WITH SURREY, BC

- City of Surrey is a key partner
- Will recruit up to 200 British Columbia residents to participate in test of international interoperability
• Test technological and financial interoperability with Oregon DOT’s OreGO system

• Oregon DOT is a key partner
  • Will recruit OReGO customers to participate in test of interstate interoperability
Desired participant characteristics:

• Are currently enrolled in OreGO
• Have a GPS-enabled mileage reporting device
• Drive into Washington at least occasionally (preferably on a regular basis)
• Willing to participate in Washington’s pilot (this is critical since the Washington/Oregon component of the pilot will levy “real” payments from participants)

NOTE: A large number of OreGO participants is not required since this feature is a proof-of-concept for financial interoperability. All funds sent by OreGO participants to Washington will be refunded at the conclusion of the pilot; funds paid by Washington residents will be “seeded” by the pilot project.
RUC AS AN ALTERNATIVE TO SPECIAL SURCHARGES ON PLUG-IN ELECTRIC VEHICLES

Seattle Electric Vehicle Association (SEVA) is a key partner

- Represent EV owners statewide
- Over 3,000 members
- Have been leaders in EV technology and policy in PNW for over 20 years
PARTNER WITH DOL TO ASSIST IN ADMINISTERING THE ODOMETER CHARGE

Washington Department of Licensing (DOL) is a key partner

- Pilot will utilize DOL’s network of licensing service offices (County Auditors and subagents) to support the manual odometer read option
  - Pilot regions are defined to contain multiple potential support locations
REPRESENT THE GEOGRAPHIC DIVERSITY OF THE ENTIRE STATE

Total Population

- 6.9 million
- ~5.5 million aged 18+
RECOMMENDED GEOGRAPHIC DISTRIBUTION OF PILOT RECRUITING REGIONS
RECOMMENDED GEOGRAPHIC DISTRIBUTION OF PILOT RECRUITING REGIONS

• **Central Puget Sound.** This region has the majority of the state’s population and will provide perspectives from primarily urban and suburban drivers regarding RUC. It also includes the largest concentration of PEV drivers in the state.

• **Eastern Washington.** This region includes Spokane and the Palouse. Region features a fair amount of cross-border travel to Idaho. It includes a mixture of urban, suburban, and rural residents, and important agricultural communities.

• **Northwest Washington.** Recruiting from this region will include large number of rural residents but will have a special focus on the international interoperability aspects.

• **South-Central Washington.** This region will provide a mixture of urban (Tri-Cities) and rural drivers from surrounding areas.

• **Southwest Washington.** This region will provide a mixture of suburban and rural drivers in a region with a high volume of cross-border travel with Oregon.
PILOT PROJECT
COMMUNICATIONS & MEDIA STRATEGY

Allegra Calder and Jennifer Tippins, BERK Consulting
COMMUNICATIONS PLAN TO SUPPORT PILOT LAUNCH

• Umbrella document to guide all communications efforts and ensure consistency

• Establishes the communications goals and principles

• Identifies three primary audience types and strategies for each – focuses on the what and the why. Individual work plans will provide more details on the how.
COMMUNICATION GOALS

- Inform and educate the public.
- Recruit participants into the pilot project from across the state.
- Generate broad understanding for the pilot project.
- Cultivate balanced and accurate media coverage.
- Assess public opinion before and throughout the course of the pilot.
COMMUNICATION PRINCIPLES

• Be consistent and clear.
• Stay proactive.
• Adapt and learn.
• Keep it brief, use visuals.
### Inform and Educate Messages

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>MAIN MESSAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is a road usage charge?</td>
<td>Pay-per-mile rather than by the gallon to fund roads.</td>
</tr>
<tr>
<td>Why a road usage charge?</td>
<td>As vehicles become more fuel-efficient or use no gasoline, our system of funding roads needs to evolve as well to raise sufficient funds and be more equitable.</td>
</tr>
<tr>
<td>Will this be an additional tax?</td>
<td>No.</td>
</tr>
<tr>
<td>What work has already been done?</td>
<td>Four years of research and policy analysis, with pilot planning now underway.</td>
</tr>
<tr>
<td>Digital</td>
<td>In-Person</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>WA RUC Website</td>
<td>Focus Groups</td>
</tr>
<tr>
<td>Online Survey</td>
<td>Briefings</td>
</tr>
<tr>
<td>Email Lists</td>
<td>Stakeholder Meetings/Events</td>
</tr>
<tr>
<td>Social Media,</td>
<td>Public Meetings</td>
</tr>
<tr>
<td>including video</td>
<td>Community Events</td>
</tr>
<tr>
<td>Webinars</td>
<td></td>
</tr>
</tbody>
</table>
ROLES AND RESPONSIBILITIES

**Commission Staff and Commissioners**
Assist with pilot project implementation and serve as the lead state agency on the WA RUC. Executive Director and one or two Commissioners will serve as spokespeople.

**Steering Committee Members**
Use strategically related to their experience and affiliation. Five members have volunteered to serve as spokespeople.

**Consultant Support**
Take the lead on various communication platforms. Provide staffing for events, meetings, and focus groups.
MEDIA STRATEGY

• Focus on education and awareness in advance of key decisions/milestones

• Range of spokespeople available, depending on interest and topic

• Clear, concise materials available throughout process

• Coordination with key state offices and elected officials
PROJECT WEBSITE

Priya Singh, PRR
PARTICIPANT RECRUITMENT PLAN

Jeff Doyle, D’Artagnan Consulting
ASSOCIATED DOCUMENTS

Website Communication Plan

Media Strategy

Outreach Strategy
RECRUITING GOAL

Recruit up to 2,000 vehicles to reflect the geographic diversity of Washington to participate in a test of RUC methods.

• In addition to vehicles from Washington, up to 200 vehicles from Surrey, BC will be invited to participate in the pilot, and approximately 20 from Oregon’s OreGO program.
KEY RECRUITING ACTIVITIES

- Define channels for sharing facts about the pilot project
- Identify key partners in recruitment efforts
- Raise public and stakeholder awareness about the need for a long-term transportation funding solution and that a RUC may be a potential successor to the gas tax
- Provide interested volunteers with basic information that describes what they will be required to do as a participant in the pilot, and when they will need to do it
RECRUITING BY THE NUMBERS

- Up to 200 participants from Surrey, British Columbia
- Up to 20 participants from Oregon
- At least 25 plug-in electric vehicles (PEVs) recruited in cooperation with the Seattle Electric Vehicle Association (ceiling of 100)
- Up to 2000 participants recruited from 5 regions of Washington (including PEVs recruited in cooperation with SEVA):
  - Central Puget Sound
  - Northwest Washington (includes the International Interoperability test zone)
  - South-Central Washington
  - Southwest Washington (includes the primary Interstate Interoperability test zone)
  - Eastern Washington
RECOMMENDED GEOGRAPHIC DISTRIBUTION OF PILOT RECRUITING REGIONS
RECRUITING FRAMEWORK: INTEREST LIST

Pilot Website Interest List

- Tell Your Friends
- Indicate Interest in Volunteering
- Ask Questions
- Sign up for Newsletters/ follow us
RUC Ambassadors: very important component of the pilot recruiting strategy

• In the beginning…
  • RUC “Ambassadors” are drawn from the membership of the Steering Committee, the Commission, and WSDOT

• Throughout Phase 1 (pilot set-up)…
  • Core group of Ambassadors will recruit additional RUC Ambassadors through interaction with partner organizations and one-on-one briefings with key influencers in Washington
THE RECRUITING PIPELINE

Pool → Interest List → Prospects → Qualified

Participants
ASSETS THAT SUPPORT RECRUITING EFFORTS

- Pilot Website and Interest List
- Email newsletters
- Pilot Twitter account
- News Releases
- e-newsletter copy for partners and stakeholders
- PowerPoint presentations
- Op-Ed copy
- Printed media (FAQs, posters, postcards)
- Paper Interest List
- Interviews with WSTC and Steering Committee members
- Ambassador Talking Points
RECRUITING CHANNELS

Recommendation: **develop recruiting “toolkits” targeted to each recruiting channel.** Examples of materials that would be included in each toolkit are basic PowerPoint presentations about the pilot, publication-ready newsletter copy, social media copy, and elevator speeches.

- **Traditional Media**
  - Broad geographic coverage
  - Fact-based
  - Always includes link to Website/Interest List
  - Sign-up form

- **Digital**
  - Pilot Website with Interest List
  - Partner Email lists and digital media (SEVA, VOW, MPOs/RTPOs, DOL, etc.)
  - Tweets by DOL, WSTC
  - Targeted Social Media

- **Stakeholders & Partners**
  - Posters in DOL offices/DOL Spotlight
  - Content for partner newsletters and websites
  - Presentations to stakeholder and partner meetings/events
  - Account Manager Recruiting and Incentives

- **Public Meetings**
  - In-person presentations about pilot and invitation to join the interest list

- **Briefings**
  - 1-on-1 meetings with key influencers, explaining program, inviting to join, and recruiting as ambassadors
RECRUITING TIMELINE

- **Pilot Phase 0**: Late 2016
- **1**: Jan – Mar 2017
  - Stakeholder, Partner, and Media Outreach
- **1**: Apr – Jun 2017
  - Public Recruitment Effort Begins
- **1**: Jul - Sept 2017
  - Participant Selection and Open Enrollment
- **2**: Oct – Dec 2017
  - Begin Test Drive
- **2**: Jan – Jun 2018
  - Maintenance
TRADITIONAL MEDIA STREAM

Phasing
Carries throughout all pilot phases – see Communications Plan
- Educate and Inform in Phases 0 and 1
- Encourage Interest List Sign-ups in Phase 1
- Update, Encourage, and Influence in Phases 2 and 3

Target Audience
General Population in Target Regions
- Broad Geographic Coverage
  - Local newspapers
  - Local television news
  - Local radio

Assets
ALWAYS include link to website interest list
- News releases
- Op-Ed copy
- Interviews with members of Steering Committee and WSTC
DIGITAL MEDIA STREAM

Phasing
Carries throughout all pilot phases

Target Audience
General Population in Target Regions
• Members of Interest List and Volunteer Pool
• Partner email lists
• Specific sub-populations if insufficient interest
  • e.g. PEV drivers, border-region residents

Assets
ALWAYS include link to website interest list
• Pilot Website with Interest List
• Email newsletters and announcements leveraging partner email lists
• Pilot project twitter account
• Audience-specific e-newsletter copy; e.g. for SEVA
• Video Interviews with members of Steering Committee and WSTC
• Targeted social media campaigns to specific subpopulations
DIGITAL MEDIA STREAM: PILOT WEBSITE

Pilot Website Interest List

Tell Your Friends

Indicate Interest in Volunteering

Ask Questions

Sign up for Newsletters/follow us

Indicate Interest in Volunteering
# Stakeholders & Partners Stream – Washington Volunteers

## Phasing
Phases 0 and 1

## Target Audience
Stakeholder/partner interest groups
- Local Geographic Coverage
- Membership of SEVA, AAA, Chambers of Commerce, ACEC, MPO/RTPs, etc.

## Activities
- Presentations to interest groups (e.g. at breakfast or lunch meetings, workshops, and conferences)
- One-on-one or small group briefings with organization leadership
- Post paper assets in Partner facilities

## Assets
ALWAYS include link to website interest list
- PowerPoint presentations
- News Releases
- Printed handouts (postcards, FAQs, posters, etc.)
STAKEHOLDERS & PARTNERS STREAM

- Announce presentation on partner’s website
- Announce presentation on pilot website
- Prepare and Distribute Local News Release announcing presentation
  - Invite local media
- Give Presentation
  - Circulate paper interest list (and update e-interest list)
  - Distribute paper assets (postcards, FAQs)
- Any media coverage of the event should contain a link to the pilot website
STAKEHOLDERS & PARTNERS STREAM – NON-WASHINGTON VOLUNTEERS

**Phasing**
- Phases 0 and 1

**Target Audience**
- Interoperability Volunteers
  - OreGO members who travel to Washington
  - Residents of Surrey, BC and Greater Vancouver who travel to Washington

**Activities**
- Coordination with OreGO staff to identify and invite appropriate motorists
- Support for Surrey, BC staff to recruit motorists

**Assets**
- ALWAYS include link to website interest list
  - PowerPoint presentations
  - News Releases
  - Printed handouts (postcards, FAQs, posters, etc.)
STAKEHOLDERS & PARTNERS STREAM – NON-WASHINGTON VOLUNTEERS

- Announce presentation on partner’s website
- Announce presentation on pilot website
- Prepare and Distribute Local News Release announcing presentation
  - Invite local media
- Give Presentation
  - Circulate paper interest list (and update e-interest list)
  - Distribute paper assets (postcards, FAQs)
- Any media coverage of the event should contain a link to the pilot website
PUBLIC MEETINGS STREAM

**Phasing**
Phases 0 and 1

**Target Audience**
General Public in Target Regions
- Local Geographic Coverage
- Citizens, transportation professionals, policy makers

**Activities**
Make Presentations at Public Meetings
- Presentations
- Panel Discussions
- Information Tables

**Assets**
ALWAYS include link to website interest list
- PowerPoint presentations
- Printed assets (postcards, FAQs)
- Paper interest list (to add to e-interest list)
PUBLIC MEETINGS STREAM

Announce presentation on Partner’s Website

Prepare and Distribute Local News Release announcing presentation
  - Invite local media

Give Presentation
  - Circulate paper interest list (and update e-interest list)
  - Distribute paper assets (postcards, FAQs)

Any media coverage of the event should contain a link to the pilot website
BRIEFINGS STREAM

**Phasing**

- Phases 0 and 1

**Target Audience**

- Policy Makers, Key Influencers
  - Local Geographic Coverage
  - Legislators, transportation leadership, state agency leaders, media

**Activities**

- One-on-one or small group briefings

**Assets**

- ALWAYS include link to website interest list
  - Talking points/Briefing packets
  - PowerPoints for Audience to use should they wish to become ambassadors
  - Printed assets (postcards, FAQs)
  - Paper interest list (to add to e-interest list)
INCENTIVES

Possibilities include:

- Value-added services provided by account managers
- “Volunteer of the Month” feature on pilot website
- Awards upon completion of each milestone. Examples of milestones include the following:
  - Successfully installing equipment or mobile apps
  - Completing a manual odometer reading
  - Completing a survey or focus group
  - “Paying” an invoice
  - Returning OBDII devices at the end of the pilot
- Cash compensation for time spent on pilot activities
- Direct incentives by account managers to enrolled customers
NEXT STEPS

Jeff Doyle, D’Artagnan Consulting
STATUS OF OTHER IMPLEMENTATION PLAN TASKS

Agency Roles in the Pilot (Task 1.1):

✓ Technical memo *Road Usage Charge Pilot Functions* is complete.

Pilot Project Expenditure Plan and Revenue Estimates (Task 1.5):

✓ Project expenditure plan has been submitted to WSTC (and in turn, to OFM)
✓ (Hypothetical) revenue estimates from Washington RUC system to be tested in pilot. Results will be available December 16, 2016.

Finalize *Pilot Project Implementation Plan*

- Send to WSTC RUC subcommittee for review and edits
- Transmit *Pilot Project Implementation Plan* to Governor and Legislature early January.
NEXT STEPS: PHASE 1 MILESTONES

FHWA Funding Decision

Launch recruiting

System test period

Enroll test vehicles

Drive!

Possible In-Person Steering Committee Meetings
REQUESTED ACTION

1. WSTC approval of the following modifications to the pilot design:
   • Remove Time Permit from the Pilot test, but affirm that option for any future RUC system in Washington
   • Adding a Mileage Permit as a new low-tech option to allow drivers to choose how many miles
   • Simplifying the presentation of the RUC options by describing the Smartphone as a supporting technology that could be used for any of the other three options

2. WSTC approval of the final Implementation Plan (as modified above)

3. Delegation of review and edits to the Final Implementation Plan report to the Commission’s RUC subcommittee
THANK YOU

Consultant support provided by: