



WASHINGTON STATE ROAD USAGE CHARGE

Steering Committee Meeting



Washington State
Transportation Commission

August 22, 2018
SeaTac Airport,
SeaTac, Washington

WELCOME AND INTRODUCTIONS

Joe Tortorelli
WA RUC Steering Committee Chair,
Washington State Transportation
Commission

- Steering Committee member self-introductions
- Recognition of invited guests

MEETING PREVIEW

- Agenda overview and timing
- Meeting objectives

Jeff Doyle
Project Manager
D'Artagnan Consulting

STATUS REPORT: LIVE PILOT OPERATIONS

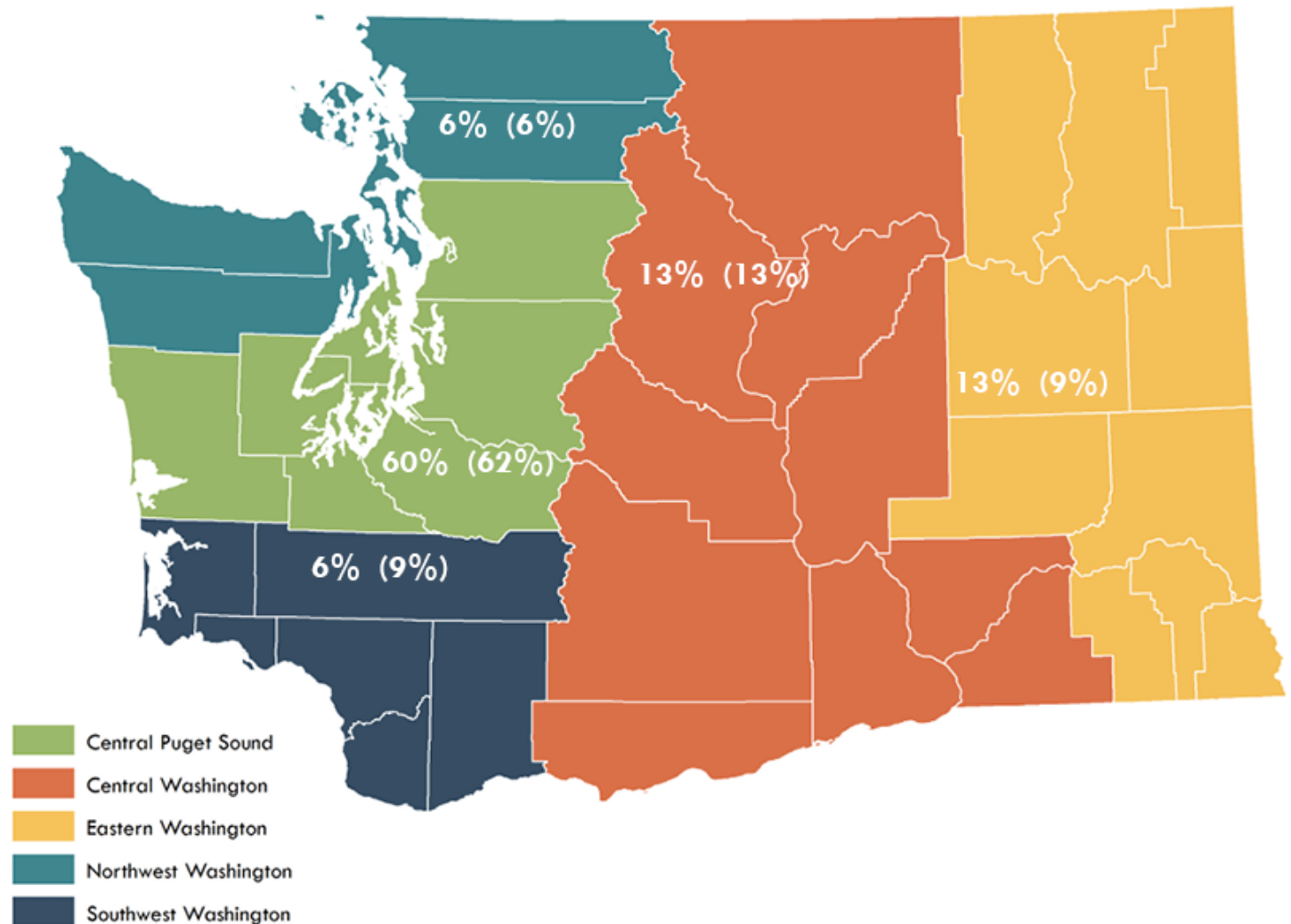
- Review of the participant pool
- Results from Open Enrollment
- Participant feedback to date
- General operational issues & observations

PARTICIPANT POOL

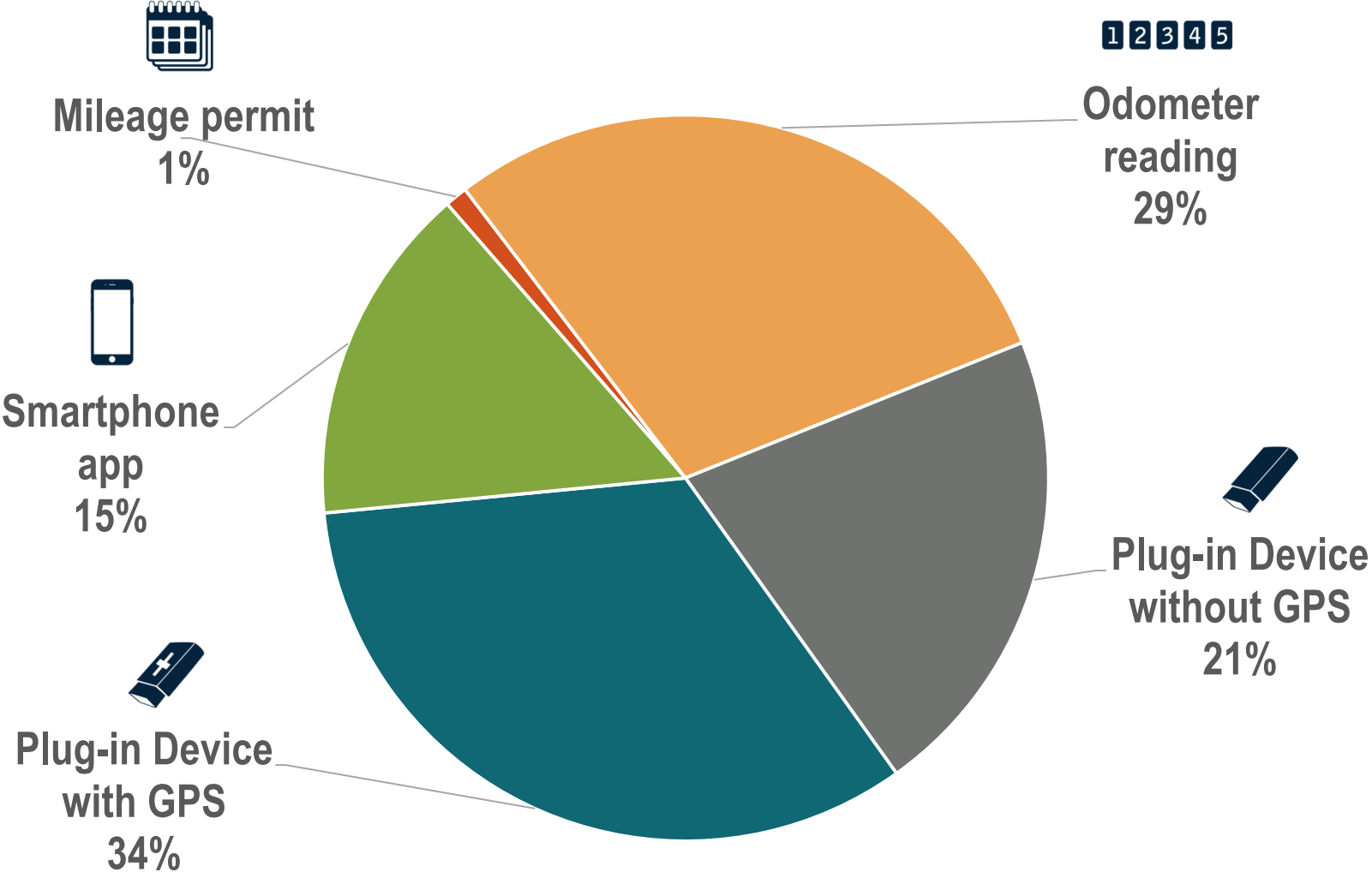
Ara Swanson
Envirolssues

PARTICIPANT POOL – GEOGRAPHIC DISTRIBUTION

- Drivers from across the state are now enrolled and participating
- These participants reflect our state's geographic distribution



PILOT PARTICIPANTS SELECT MILEAGE REPORTING OPTIONS



PARTICIPANT POOL – GEOGRAPHIC DISTRIBUTION

Geographic Distribution			
Region	% of WA Population	% of WA RUC Participants	Difference
Northwest	6%	6%	0%
Central Puget Sound	62%	60%	-2%
Southwest	9%	6%	-3%
Central	13%	13%	0%
Eastern	9%	13%	4%
Unknown		1%	

Source: WA Office of Financial Management, April 2017 Population by Cities, Towns and Counties

PARTICIPANT POOL – BY GENDER

Identified Gender	% of WA Population	% of WA RUC Participants	Difference
Male	50%	49%	-1%
Female	50%	49%	-1%
Prefer not to answer		1%	
Prefer to self-describe		0%	
Unknown		1%	

Source: American Community Survey, 2012-16 5-year estimates

PARTICIPANT POOL – BY RACE OR ETHNICITY

Identified Race or Ethnicity	% of WA Population	% of WA RUC Participants*	Difference
African-American	3%	2%	-1%
American Indian or Alaska Native	1%	3%	2%
Asian (excl. Indian)	7%	5%	-2%
Caucasian or white	71%	85%	14%
Hispanic	12%	4%	-8%
Indian subcontinent	1%	1%	0%
Native Hawaiian or other Pacific Islander	1%	1%	0%
Other/None of the above		2%	
Prefer not to answer		3%	

Source: American Community Survey, 2012-16 5-year estimates

*As participants could select more than one option, the total equals more than 100%

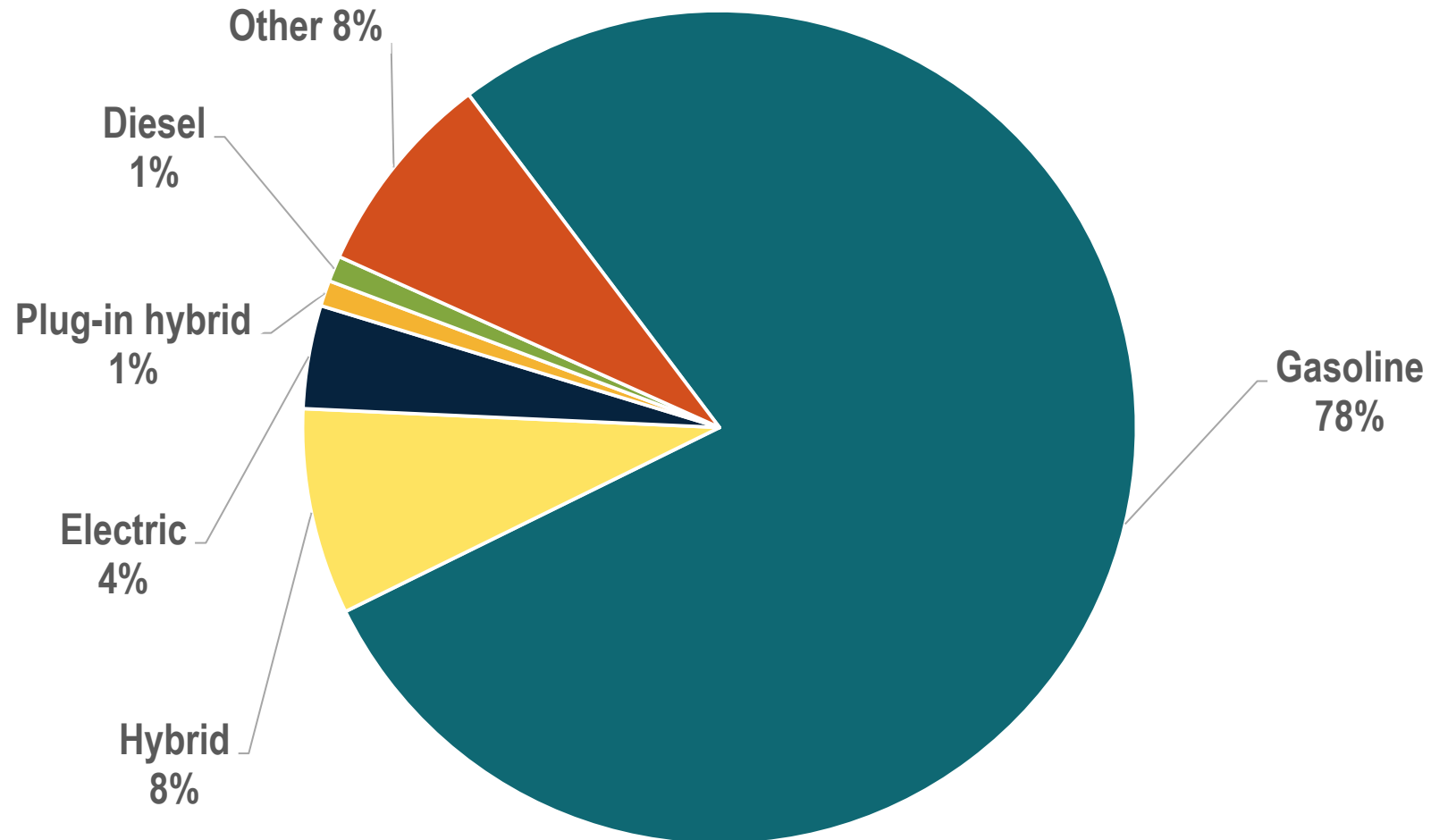
PARTICIPANT POOL – BY HOUSEHOLD INCOME

Household Income				
	% of WA Population	Household Income*	% of WA RUC Participants	Difference
Less than \$25K	12%	Less than \$30K	7%	-5%
\$25K-50K	19%	\$30K-60K	20%	1%
\$50K-100K	34%	\$60K-120K	43%	9%
\$100K-200K	27%	\$120K-200K	17%	-10%
More than \$200K	8%	More than \$200K	6%	-2%
Prefer not to answer		Prefer not to answer	5%	-3%
		Unknown	1%	

Source: American Community Survey, 2012-16 5-year estimates

*Participant categories varied slightly from American Community Survey categories

PARTICIPANT POOL – BY VEHICLE TYPE

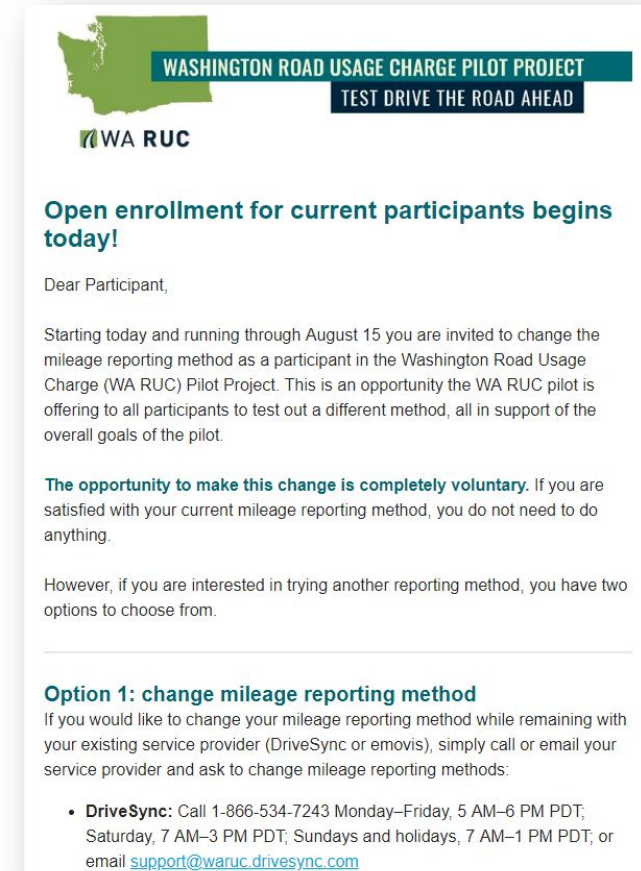


RESULTS FROM OPEN ENROLLMENT

Ara Swanson
EnviroIssues

OPEN ENROLLMENT: CURRENT PARTICIPANTS

- Invited approximately **1,950 enrolled drivers** to switch mileage reporting methods or service provider on August 1
- Results: **4 drivers have switched reporting methods** and **3 drivers have switched service providers** as of August 15



The screenshot shows an email header with a green map of Washington and the text "WASHINGTON ROAD USAGE CHARGE PILOT PROJECT" and "TEST DRIVE THE ROAD AHEAD". Below the header is the WA RUC logo. The main body of the email contains the following text:

Open enrollment for current participants begins today!

Dear Participant,

Starting today and running through August 15 you are invited to change the mileage reporting method as a participant in the Washington Road Usage Charge (WA RUC) Pilot Project. This is an opportunity the WA RUC pilot is offering to all participants to test out a different method, all in support of the overall goals of the pilot.

The opportunity to make this change is completely voluntary. If you are satisfied with your current mileage reporting method, you do not need to do anything.

However, if you are interested in trying another reporting method, you have two options to choose from.

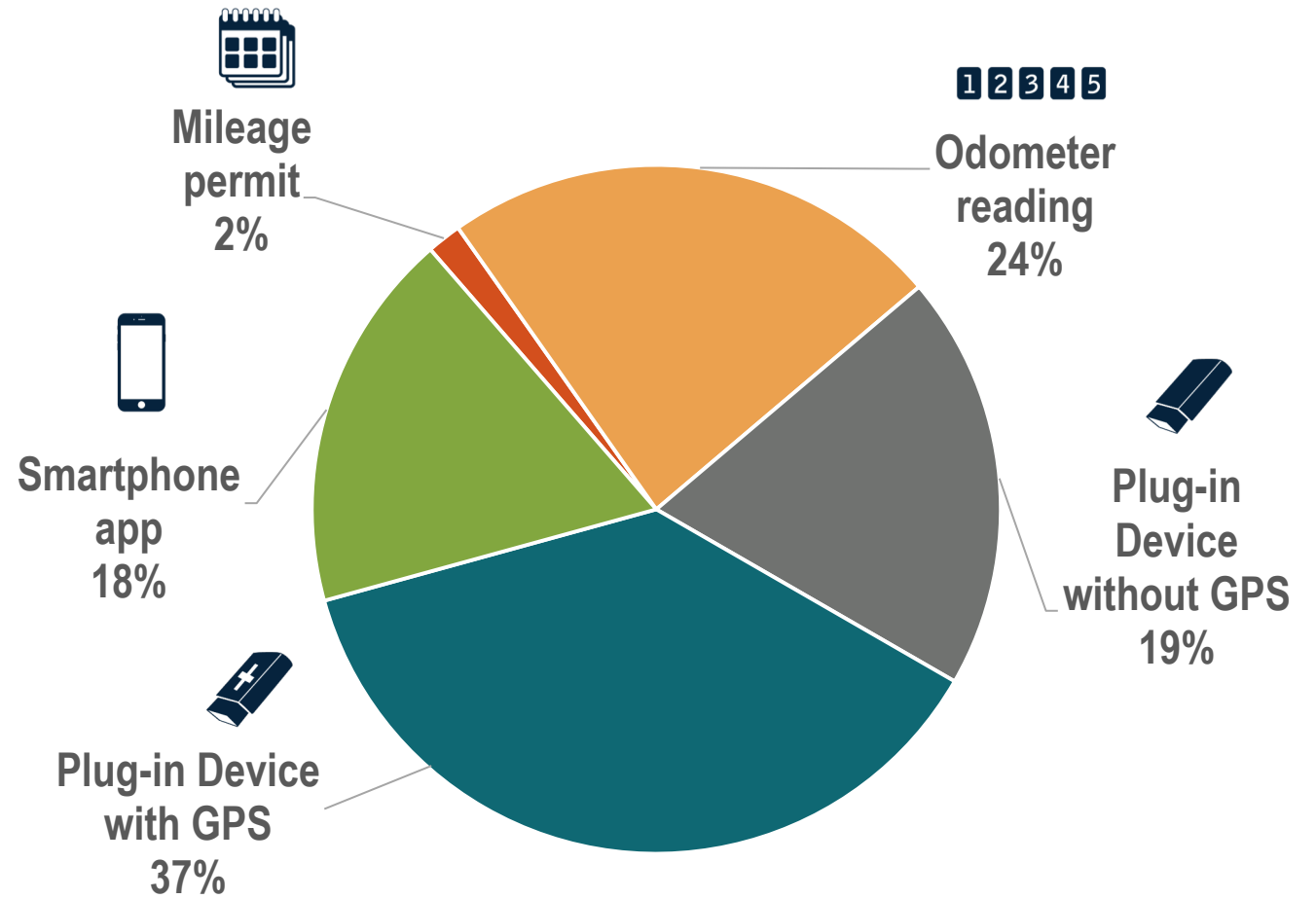
Option 1: change mileage reporting method

If you would like to change your mileage reporting method while remaining with your existing service provider (DriveSync or emovis), simply call or email your service provider and ask to change mileage reporting methods:

- **DriveSync:** Call 1-866-534-7243 Monday–Friday, 5 AM–6 PM PDT; Saturday, 7 AM–3 PM PDT; Sundays and holidays, 7 AM–1 PM PDT; or email support@waruc.drivesync.com

OPEN ENROLLMENT: INVITING NEW DRIVERS

- Invites sent in batches to just over 700 potential enrollees
- 123 new drivers enrolled August 7 to August 14

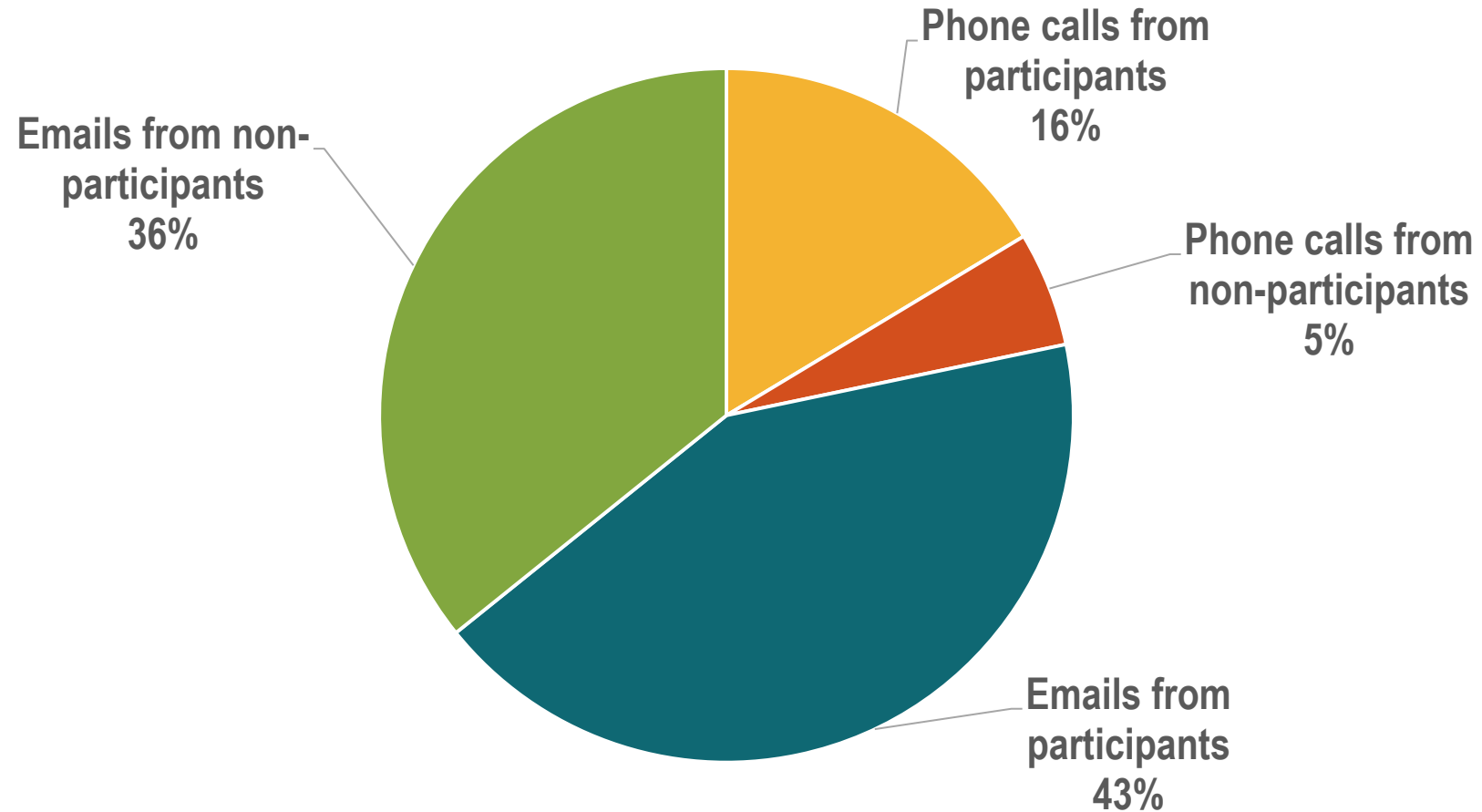


PARTICIPANT FEEDBACK TO DATE

Ara Swanson
EnviroIssues

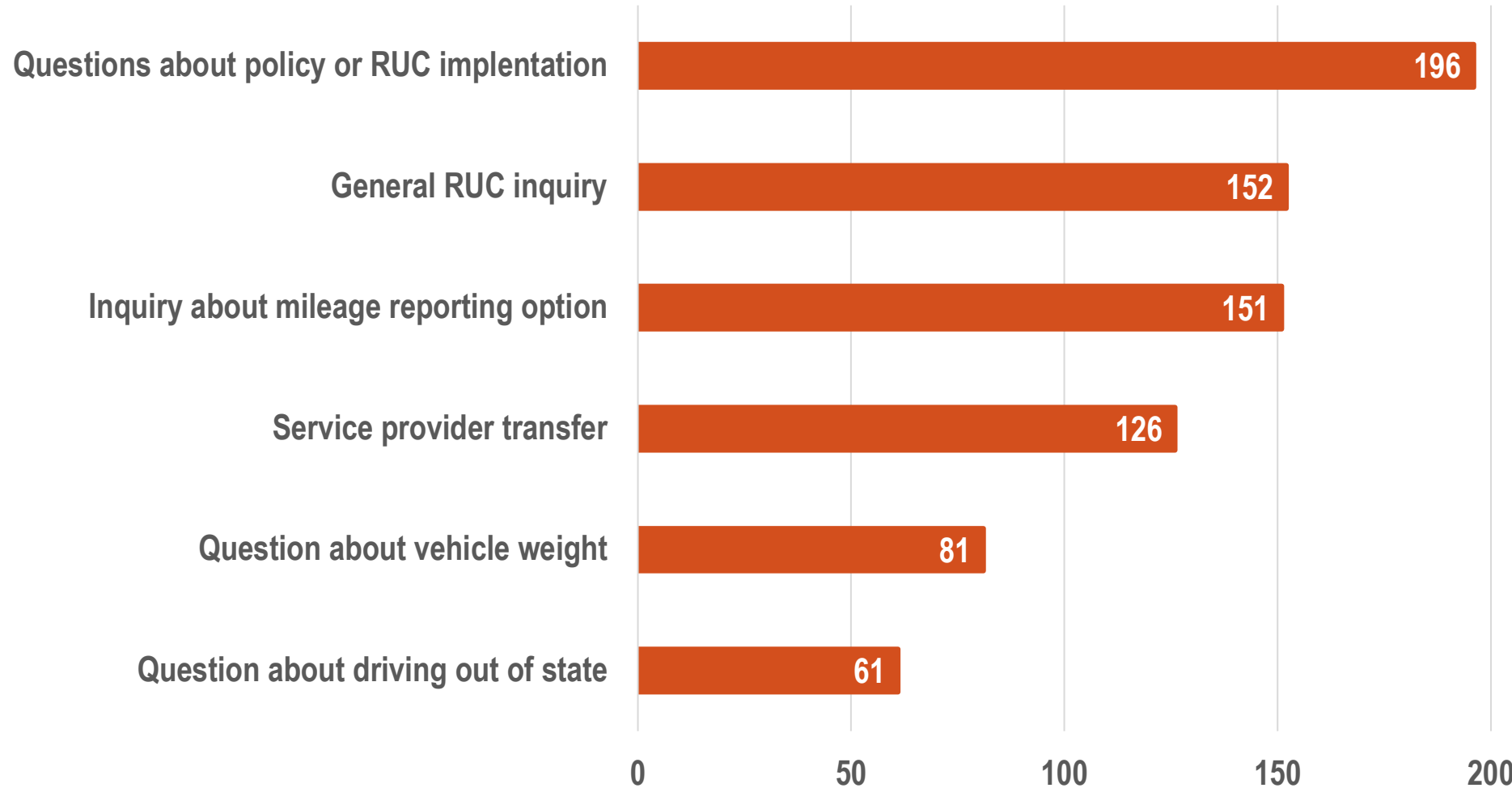
BY THE NUMBERS – OVERVIEW

SEPTEMBER 2017 – JULY 2018

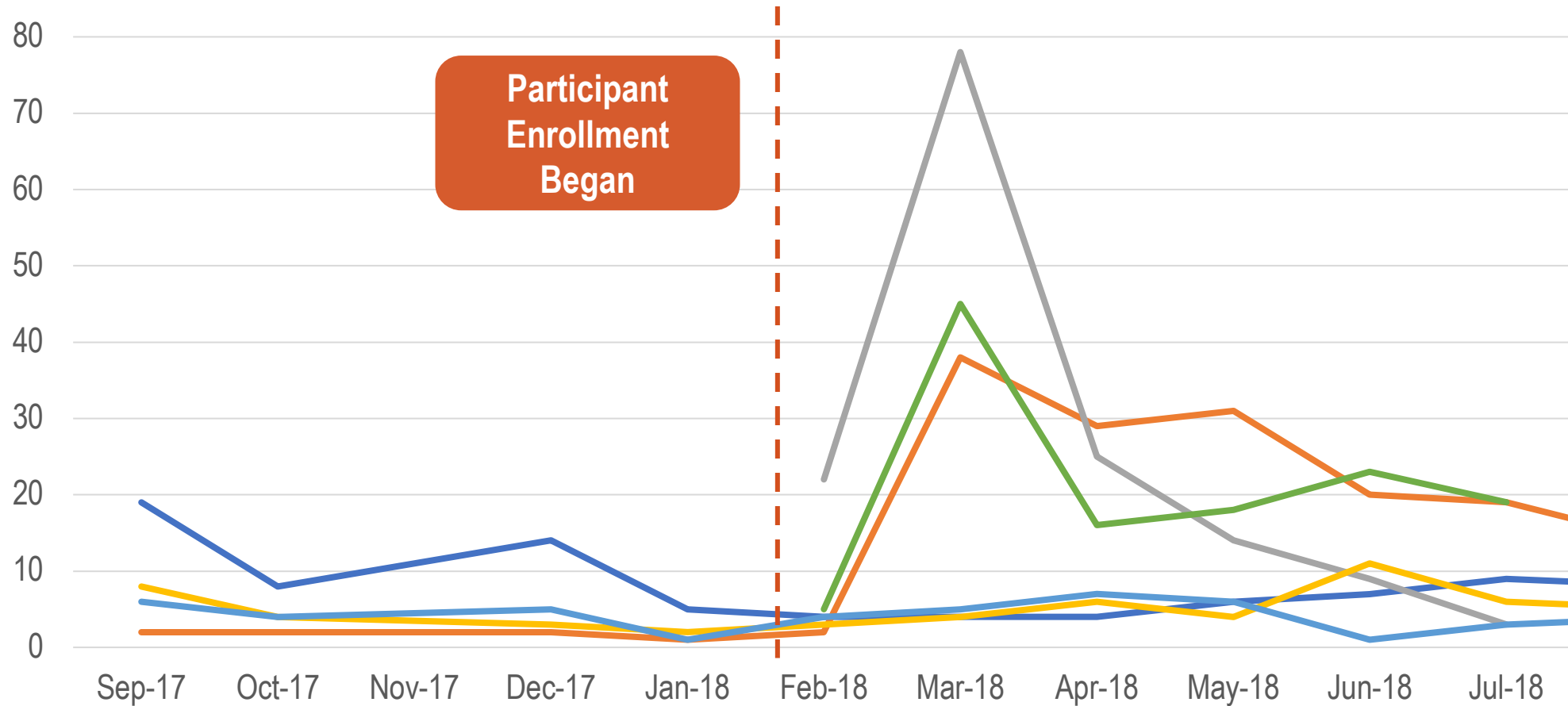


Total incoming communications: 1,515

BY THE NUMBERS – FREQUENTLY DISCUSSED TOPICS OVER PROJECT LIFETIME



MOST FREQUENT HELP DESK TOPICS: SEPTEMBER 2017 – JULY 2018



— Policy Implementation

— Driving Out of State

— General RUC Inquiry

— Vehicle Weight

— MRM Option

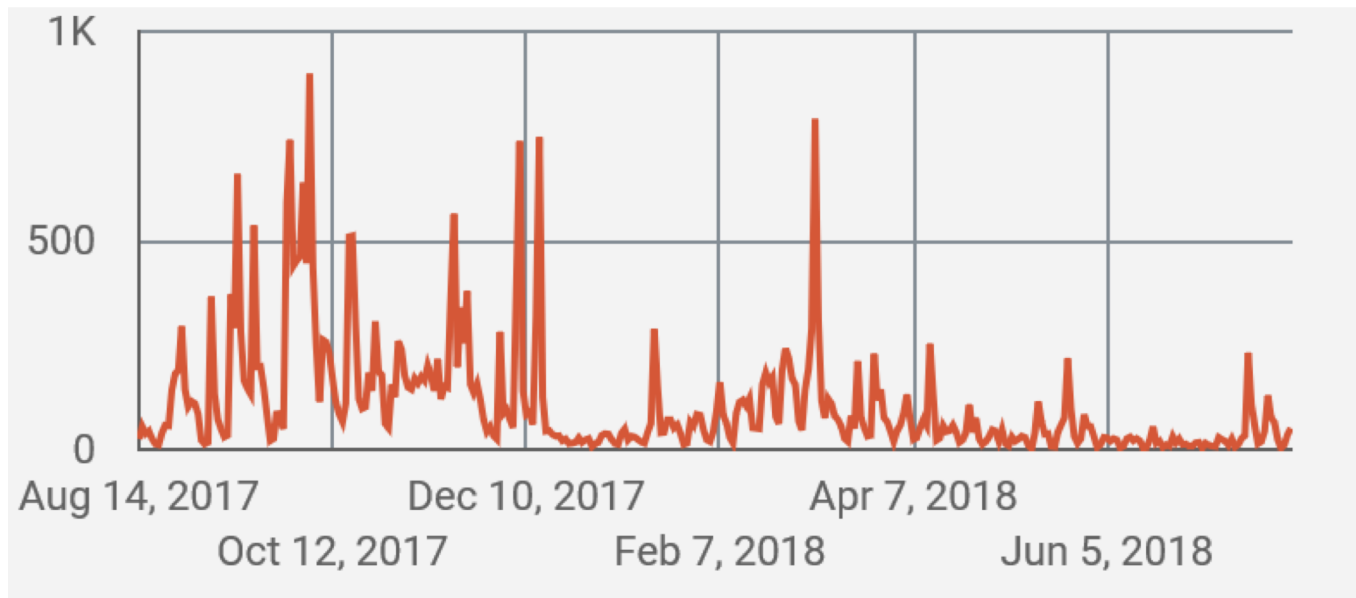
— Service Provider Transfers

GENERAL OPERATIONAL ISSUES & OBSERVATIONS

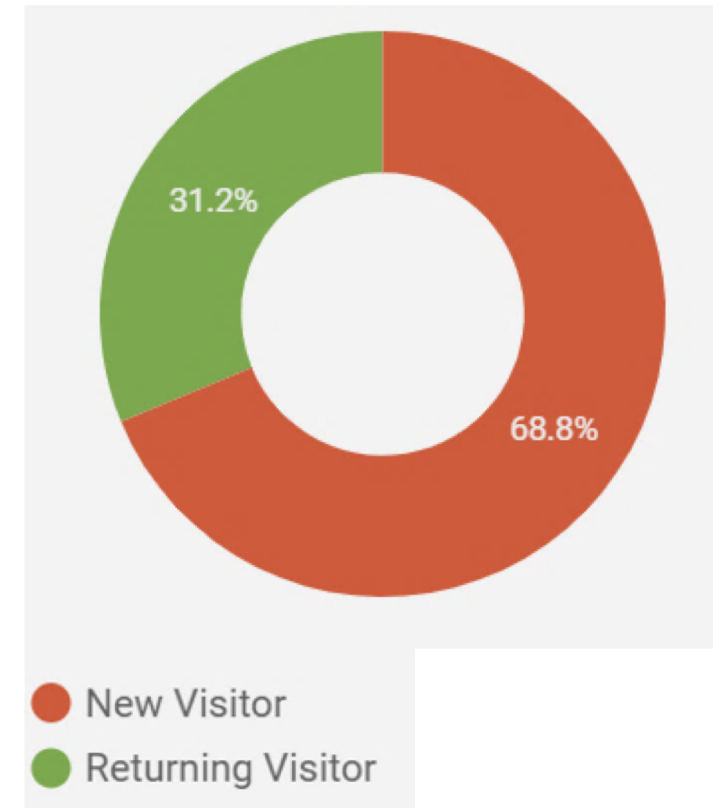
Jeff Doyle
Project Manager
D'Artagnan Consulting

WEBSITE ANALYTICS: AUGUST 2017 – AUGUST 2018

Overall website traffic (sessions)



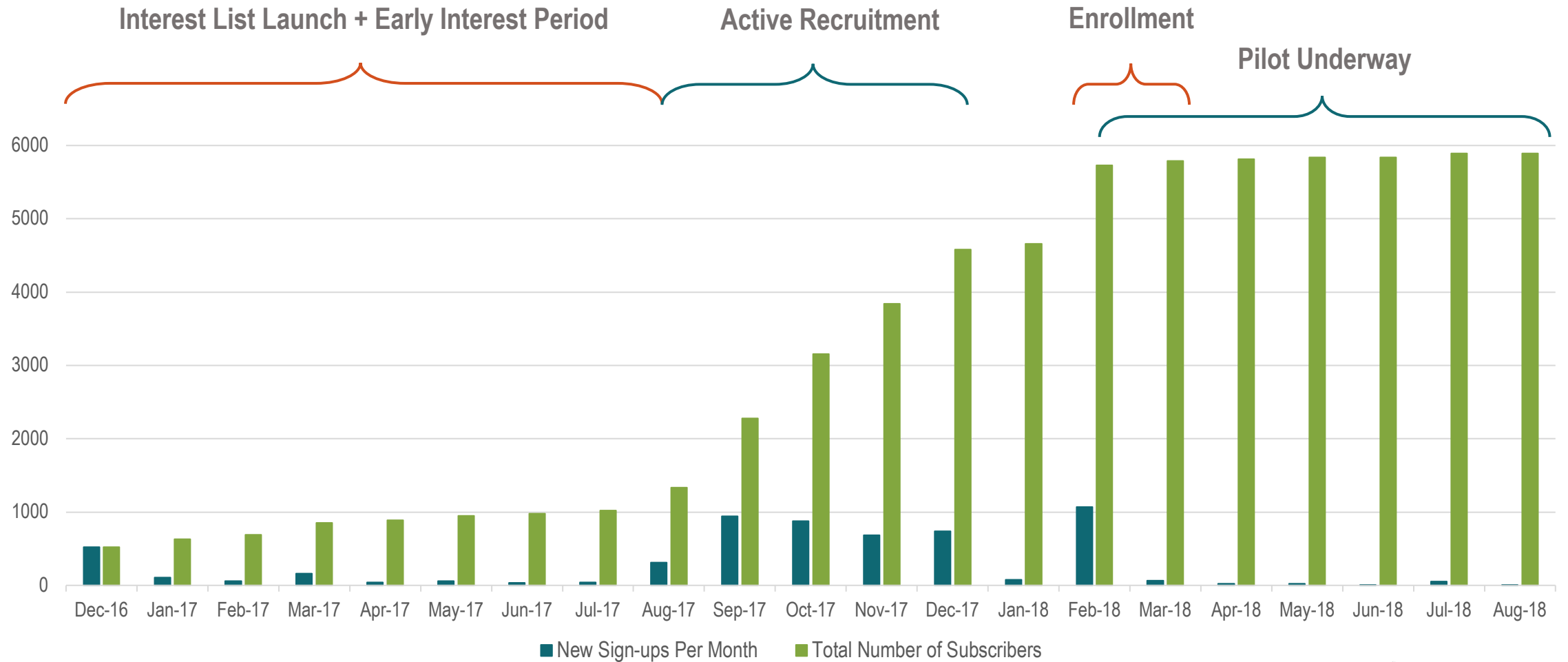
User type



Top Referrers

	Source / Medium	Pageviews ▾
1.	(direct) / (none)	18,076
2.	google / organic	9,236

INTEREST LIST GROWTH



Data as of August 14, 2017

TEAM OBSERVATIONS: ANECTDOTAL -- NOT EMPIRICAL!

Mileage Reporting Methods:

- Higher-than-expected compliance rate for self-reported odometer mileage (80%+)
- Lower-than-expected interest in changing mileage reporting methods (0.5%)
- Some misunderstanding and/or concerns about the “value-added” features (e.g., good driving scores)

Level of participant engagement:

- Call and email volumes have far exceeded forecasts
- Lower than expected volunteer attrition rate
- Higher than expected interest in the details (e.g., invoice questionnaire)
- Difficult to recruit volunteers from jurisdictions that have little public dialogue around RUC

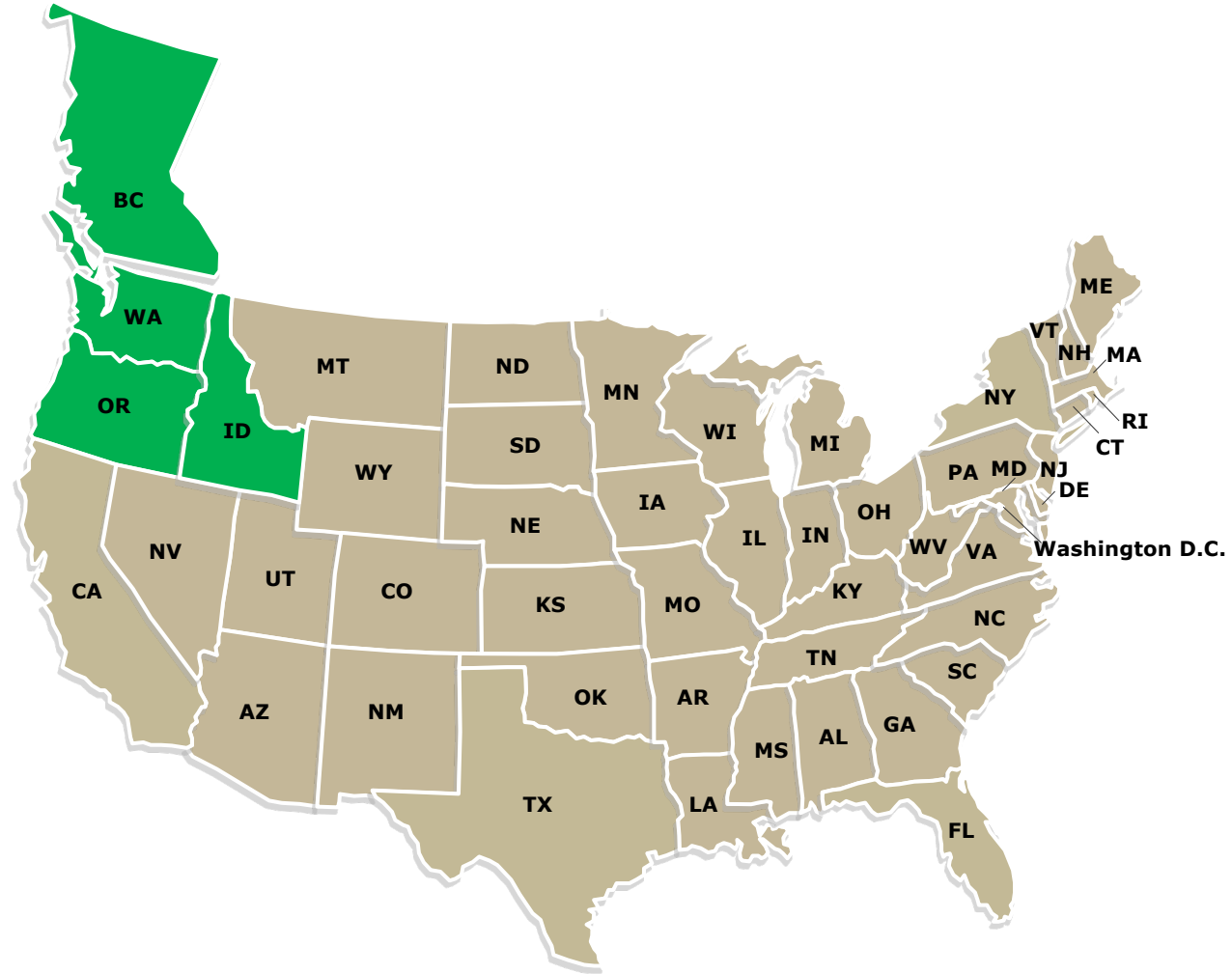
MULTI- JURISDICTIONAL RUC

- Washington, Oregon, British Columbia & Idaho interoperability
- Financial interoperability: Washington and Oregon real money demonstration

RUC INTEROPERABILITY FOR WASHINGTON, OREGON, IDAHO AND BRITISH COLUMBIA

Matthew Dorfman
D'Artagnan Consulting

SCOPE OF INTEROPERABILITY



RUC VALUES BY JURISDICTION

State/Territory	Washington	Oregon	Idaho	British Columbia
RUC rate	2.4 cents/mile	1.7 cents/mile	1.6 cents/mile	0
Fuel credit rate	49.4 cents/gal	34 cents/gal	32 cents/gal	0
Service Providers	DriveSync, emovis	Azuga	DriveSync	DriveSync
MRMs Offered	All	Plug-in Device with Location	All (no local VLOs)	Plug-in Device with Location
# Participants	1985	90	8	24

MRM SUPPORT OF INTEROPERABILITY

- Only location-based methods (plug-in Device with GPS, smartphone) provide interoperability data
- Payments Demo participants
 - Required to have plug-in device with location
 - Invited from counties bordering Oregon/Washington

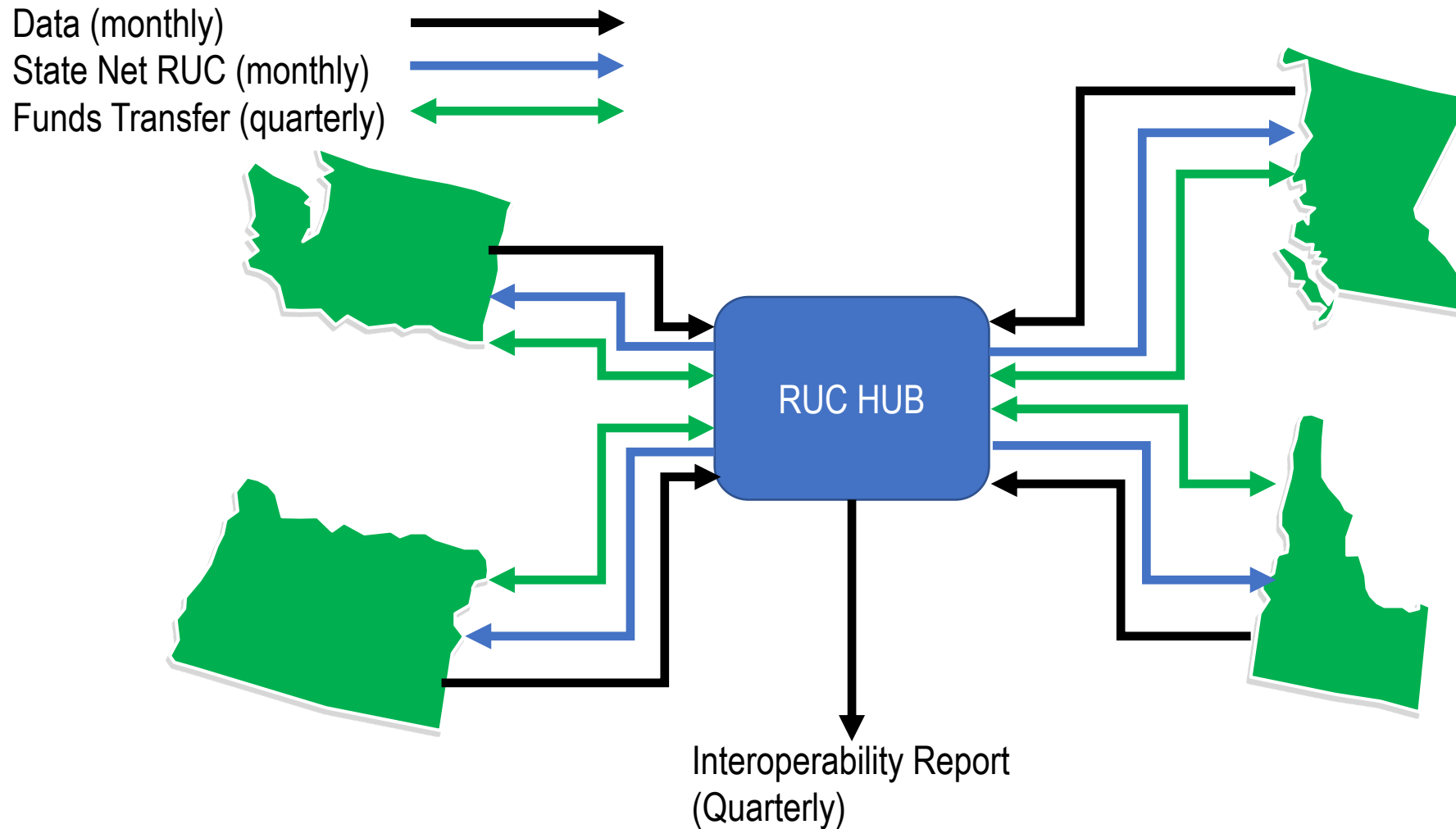
CREDITS/REFUNDS FOR INTEROPERABILITY

- Non-location-based methods
 - Fuel tax credits based on home state for all miles traveled
 - No credits for out-of-state, off-road, private road miles traveled
- Location-based methods
 - Fuel tax credits based on state in which miles were traveled
 - Out-of-state miles traveled not charged or charged at RUC rate
 - *For plug-in device with GPS only:* off-road and private road miles not charged

RUC HUB

- Interoperability clearinghouse for data and money
- Data reported monthly
- Money reconciled quarterly, two reports:
 - Full Interoperability (all miles/participants)
 - Payments Demonstration/Real Money

RUC HUB ILLUSTRATION: FULL INTEROPERABILITY



FINANCIAL INTEROPERABILITY: WASHINGTON AND OREGON REAL MONEY DEMONSTRATION

Travis Dunn
D'Artagnan Consulting

OBJECTIVES

- Fully define process and steps for reconciliation from customer and state perspective
- Demonstrate proof-of-concept for one method of multi-jurisdictional RUC funds reconciliation
- Study proof-of-concept to identify issues for full system development

VOLUNTEER PERSPECTIVE

- **Washington volunteers (25)**
 - March: Invite WA RUC participants who live near the Oregon border
 - April: Provide cash card to each volunteer to cover cost of RUC invoices
 - April: Participants pay RUC invoices through end of March
- **Oregon volunteers (90)**
 - March: Invite all OReGO participants enrolled with service provider Azuga
 - April: Participants review monthly statement showing miles traveled and RUC assessed for Washington miles

REAL MONEY INVOICE – PAGE 1



Front page
of invoice

Bill to
Jeff Doyle
waruc+imspidgppayment@dartagnancons
ulting.com
Olympia WA 98502
USA
Thank you for volunteering for the
Washington road usage charge pilot

120002
Account Number

INV07675
Invoice number

8/1/18
Invoice date

7/1/18 - 7/31/18
Invoice period

\$22.63
AMOUNT DUE BY 9/1/18

A Road Usage and Payment Summary

Distance Charged (mi.)	Road Usage Charge (\$)	Gas Consumption (gal.)	Gas Tax Credit (\$)	Net RUC (\$)
1,699.8	39.54	35.72	(16.91)	22.63

Previous Balance (\$)	22.15
Payments Received (\$)	0
Outstanding Balance (\$)	22.15
Invoice Total (\$)	22.63
Total Amount Due (\$) by September 1, 2018	44.78

More information about your invoice
[Online at waruc.drivesync.com](https://waruc.drivesync.com)

REAL MONEY INVOICE – PAGE 2



Second page of invoice

8/1/18
Invoice date
7/1/18 - 7/31/18
Invoice period
INV07675
Invoice number

Honda Accord Hybrid - XXXX

Plug-in Device

Odometer Reading

Day	Odometer Reading (mi.)	Reading Type	Distance Driven (mi.)
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Charges

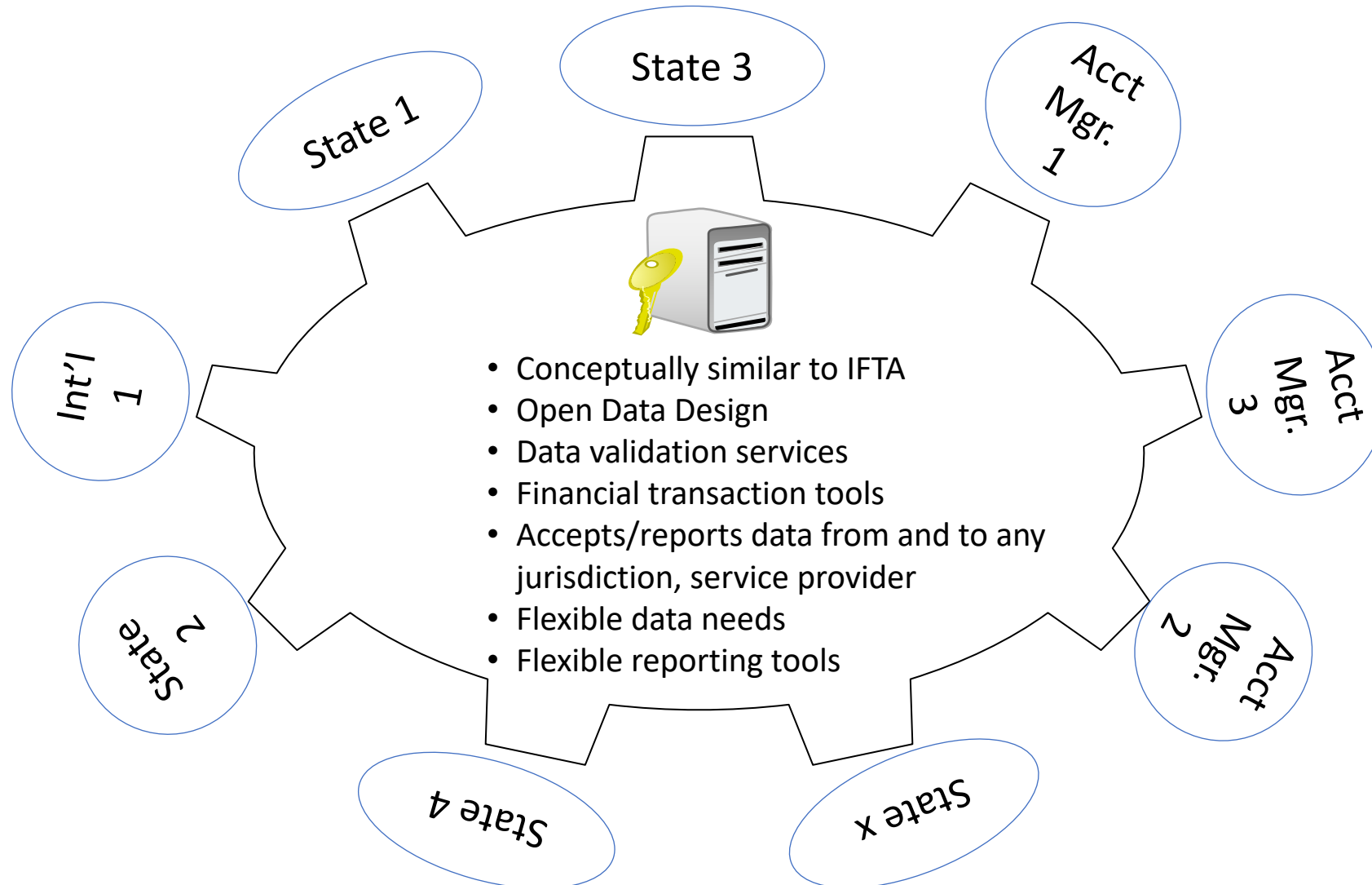
Jurisdiction	Distance Charged (mi.)	Distance Not Charged (mi.)	RUC Rate (\$/mi.)	Road Usage Charge (\$)	Gas Consumption (gal.)	Gas Tax Rate (\$/gal.)	Gas Tax Credit (\$)	Net RUC (\$)
OR	173.4	0.3	0.017	2.95	3.62	0.340	(1.23)	1.72
All other miles	24.7	0.0	0.024	0.56	0.51	0.494	(0.19)	0.37
WA	1,501.7	15.8	0.024	36.03	31.59	0.494	(15.49)	20.54

22.63

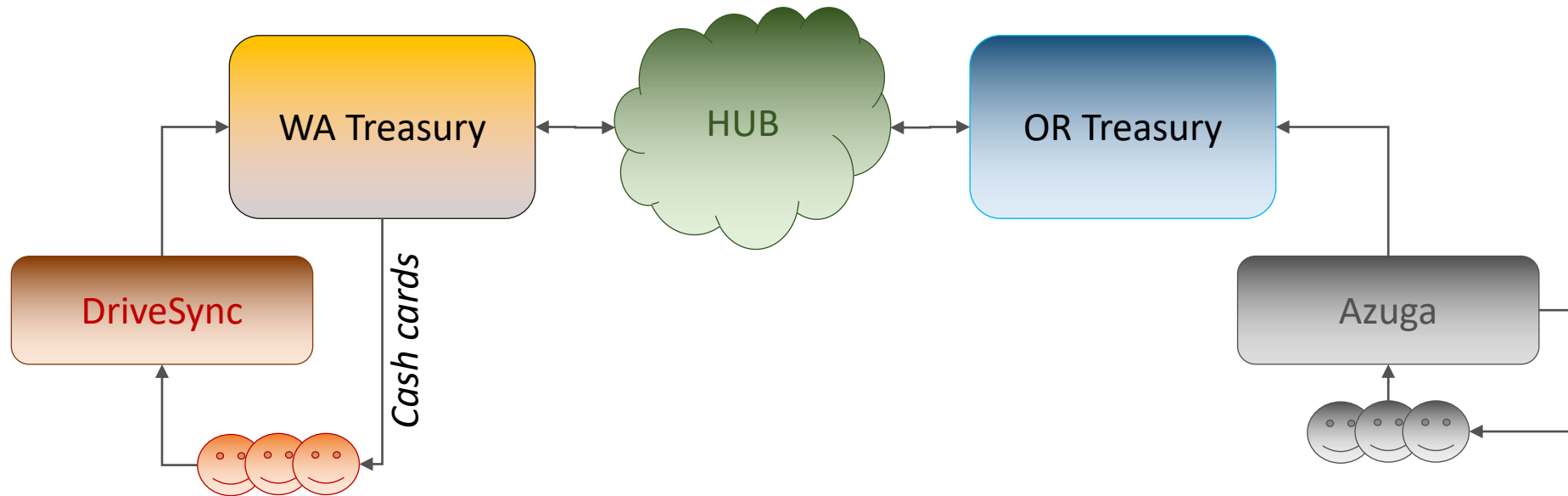
Total (\$)

Washington miles (WA) and Oregon miles (OR) show amount due for driving in each state at the RUC test rates. For this test, gas taxes are credited against RUC.

SYSTEM PERSPECTIVE



SYSTEM PERSPECTIVE



Q1 RESULTS

- **Oregon volunteers:**
 - Drove 2,855.2 miles on Washington public roads, incurring \$68.52 in Washington RUC
 - Consumed 114.75 gallons of fuel in Washington, earning \$56.69 in Washington gas tax credits
 - Net amounts due collected by Azuga and transmitted to simulated Oregon treasury
 - In aggregate, Oregon owes \$11.84 to Washington
- **Washington volunteers**
 - Drove 1,766.8 miles on Oregon public roads, incurring \$30.03 in Oregon RUC
 - Consumed 84.5 gallons of fuel in Oregon, earning \$28.65 in Oregon gas tax credits
 - Net amounts due collected by DriveSync and transmitted to simulated Washington treasury
 - In aggregate, Washington owes \$1.38 to Oregon
- **Net result: Oregon owes Washington \$10.46**

Q1 SETTLEMENT STATEMENT

RUC-Hub Settlement Report - PAYMENTS DEMO VEHICLES ONLY				
Reporting Period	3/1/18 to 3/31/18			
Rule ID	Jurisdiction	Total Credits	Total Debits	Net Due From (To) RUC-Hub
53	WA	\$ 10.46	\$ -	\$ 10.46
41	OR	\$ -	\$ 10.46	\$ (10.46)
16	ID	\$ -	\$ -	\$ -
304	BC	\$ -	\$ -	\$ -

BREAK

PILOT EVALUATION

- Process and results from pre-pilot survey (Survey #1)
- Participant focus group plan
- Scofflaw exercise: cataloging and assessing ways to evade RUC

PRE-PILOT PARTICIPANT SURVEY #1

Allegra Calder
BERK Consulting

PARTICIPANT SURVEY #1

After participants completed the setup of their WA RUC accounts, including adding a vehicle and selecting a mileage reporting method, they were emailed Survey #1.

- **1,952 participants received** the first survey
- **1,621 completed** it and received a \$10 gift card (83% response rate)

STATUS OF PARTICIPANT SURVEYS

What happens next:

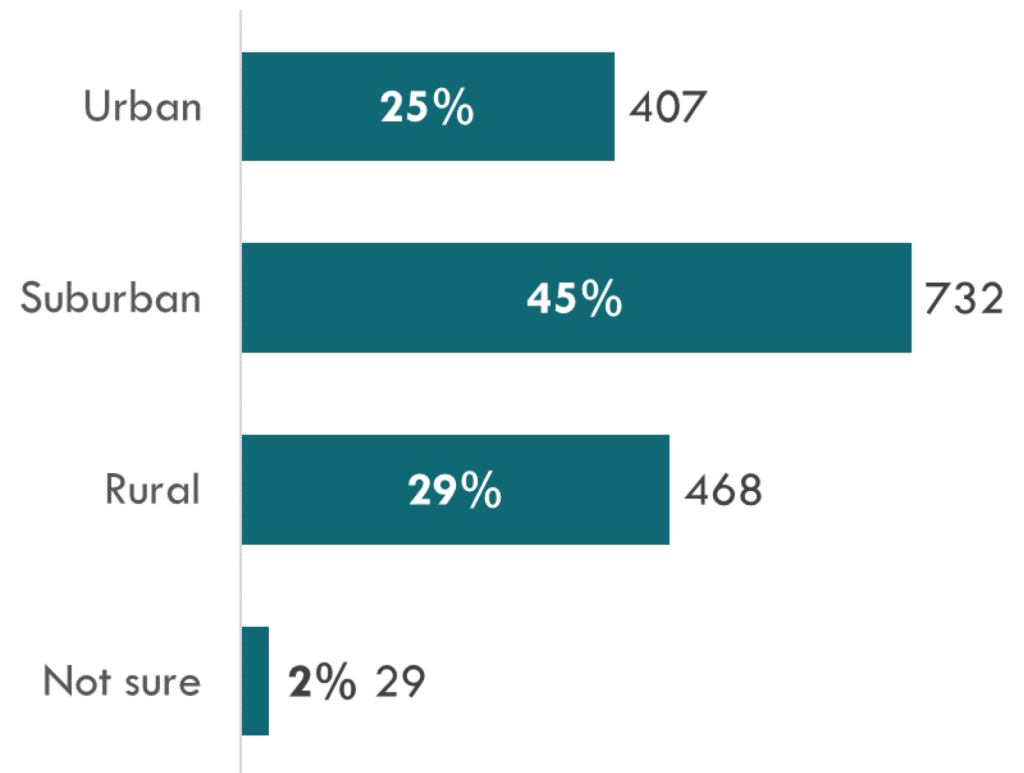
- Analysis of survey #1 is presented in the following slides
- Survey #2 has been drafted
- Survey #2 is scheduled to be sent out in September (near the mid-point of the pilot)
- A voluntary invoice survey was promoted in the July newsletter (238 participants responded)

SURVEY #1 RESULTS

- About Participants and Their Driving
- RUC Pilot Issues
- Transportation in Washington State

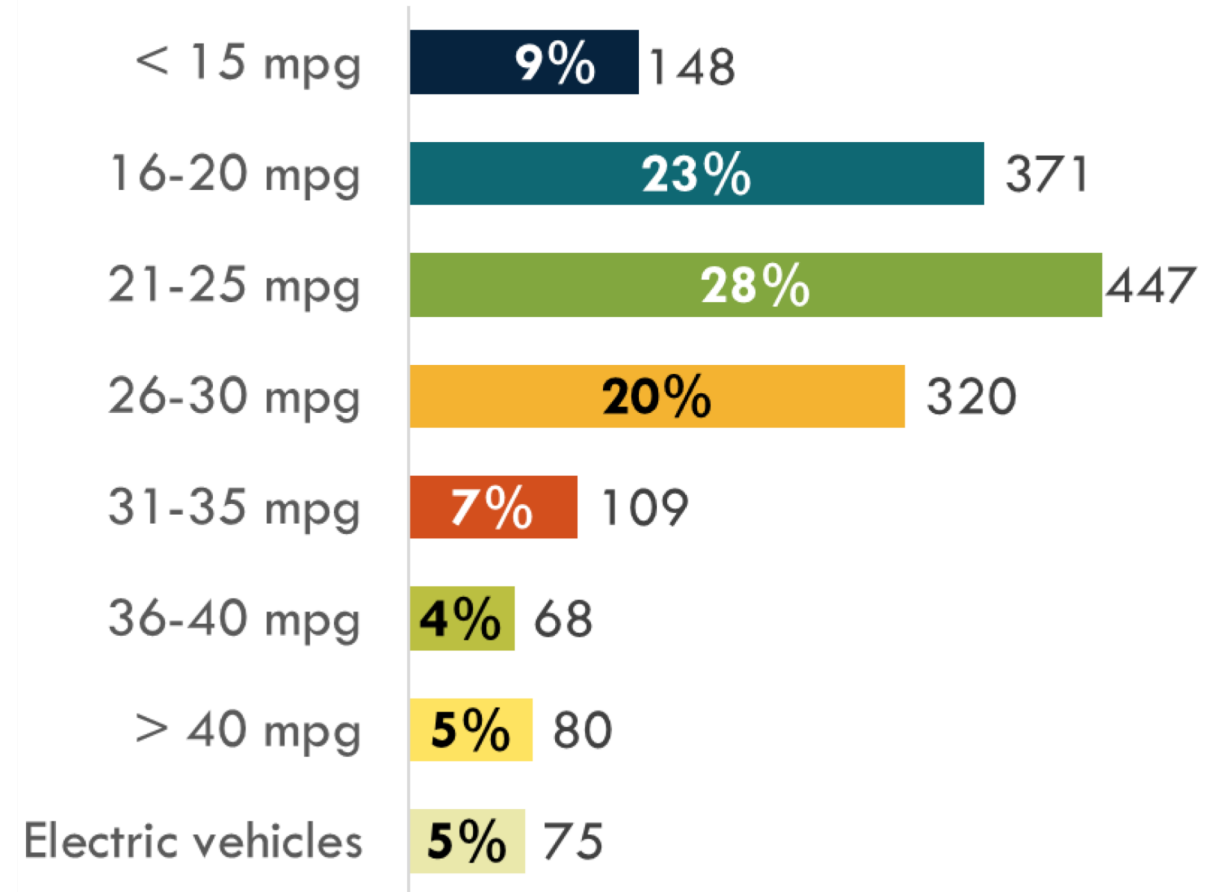
HOW WOULD YOU DESCRIBE WHERE YOU LIVE? (N=1,636)

- Most live in a suburban area, followed by rural and then urban



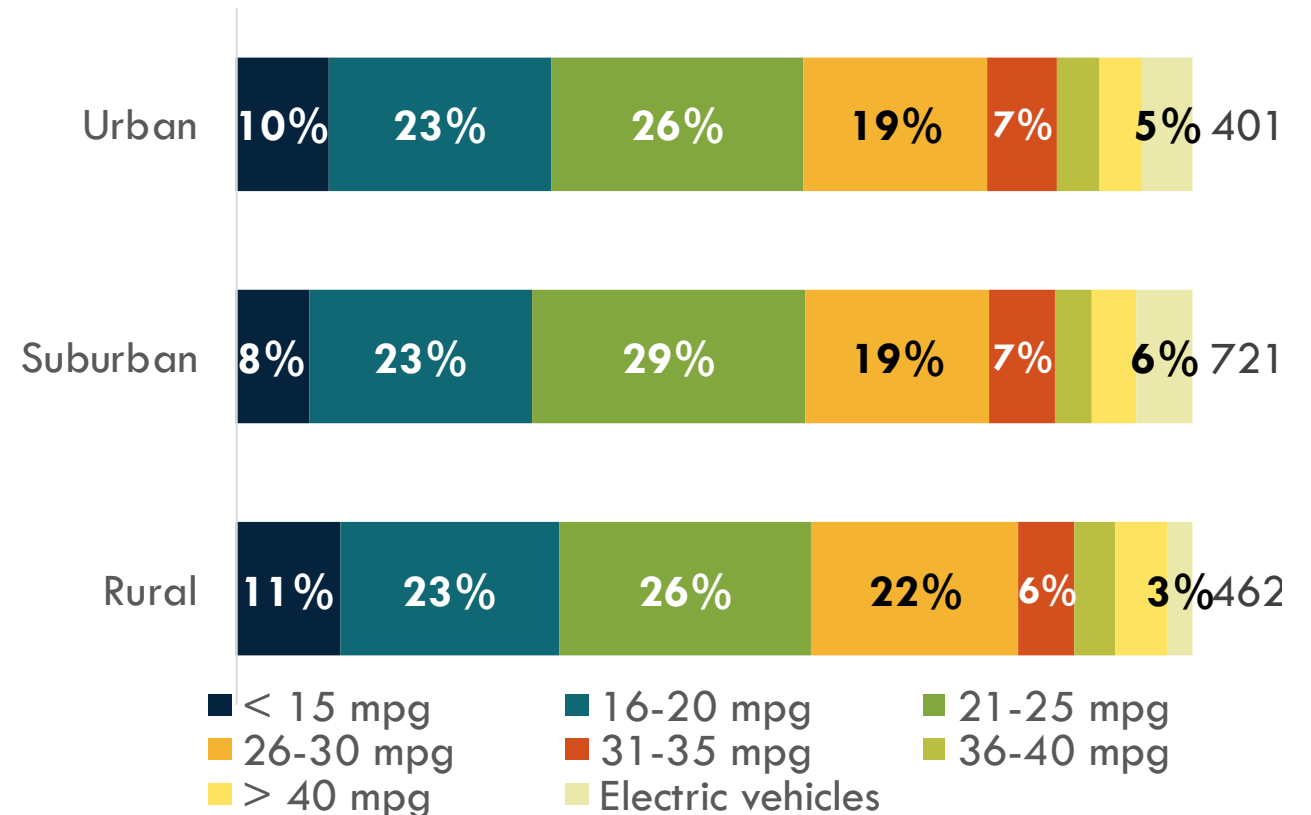
HOW MANY MILES PER GALLON WOULD YOU ESTIMATE YOUR VEHICLE GETS? (*n=1,618*)

- The median vehicle miles per gallon of all participants is 24 MPG
- 5% have electric vehicles



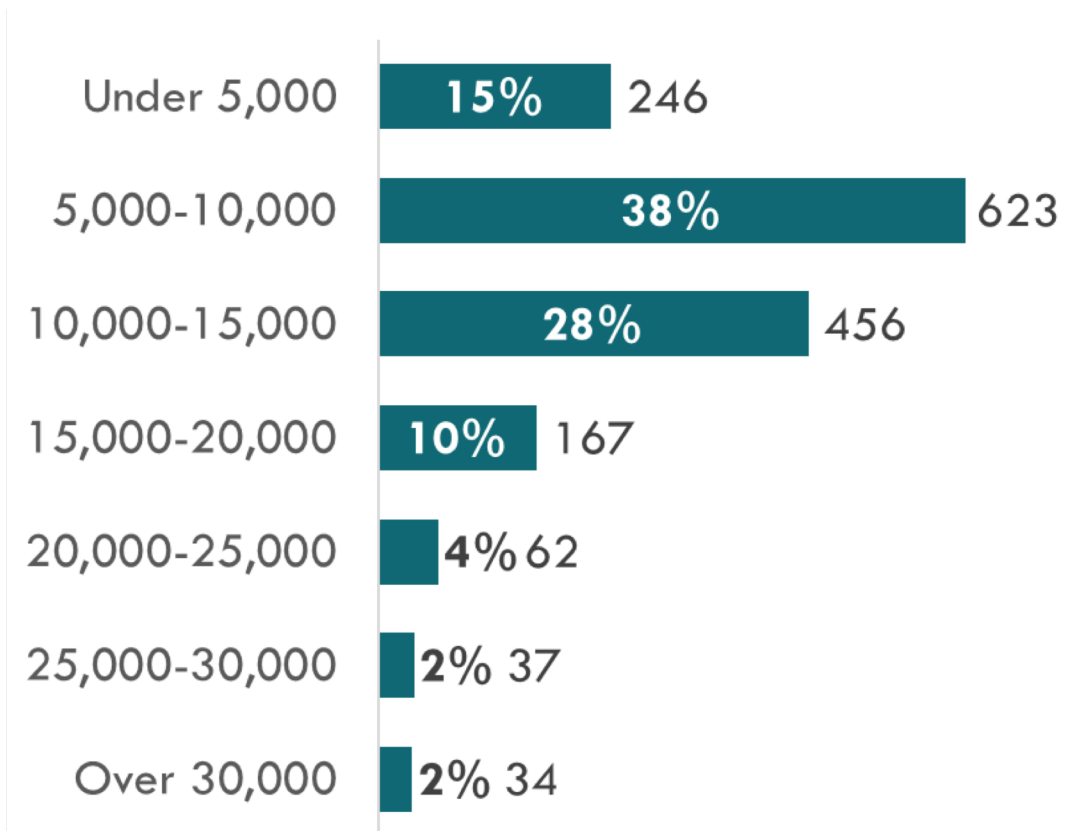
HOW MANY MILES PER GALLON WOULD YOU ESTIMATE YOUR VEHICLE GETS? (n=1,618)

- Participants' vehicle MPG is similar across locations



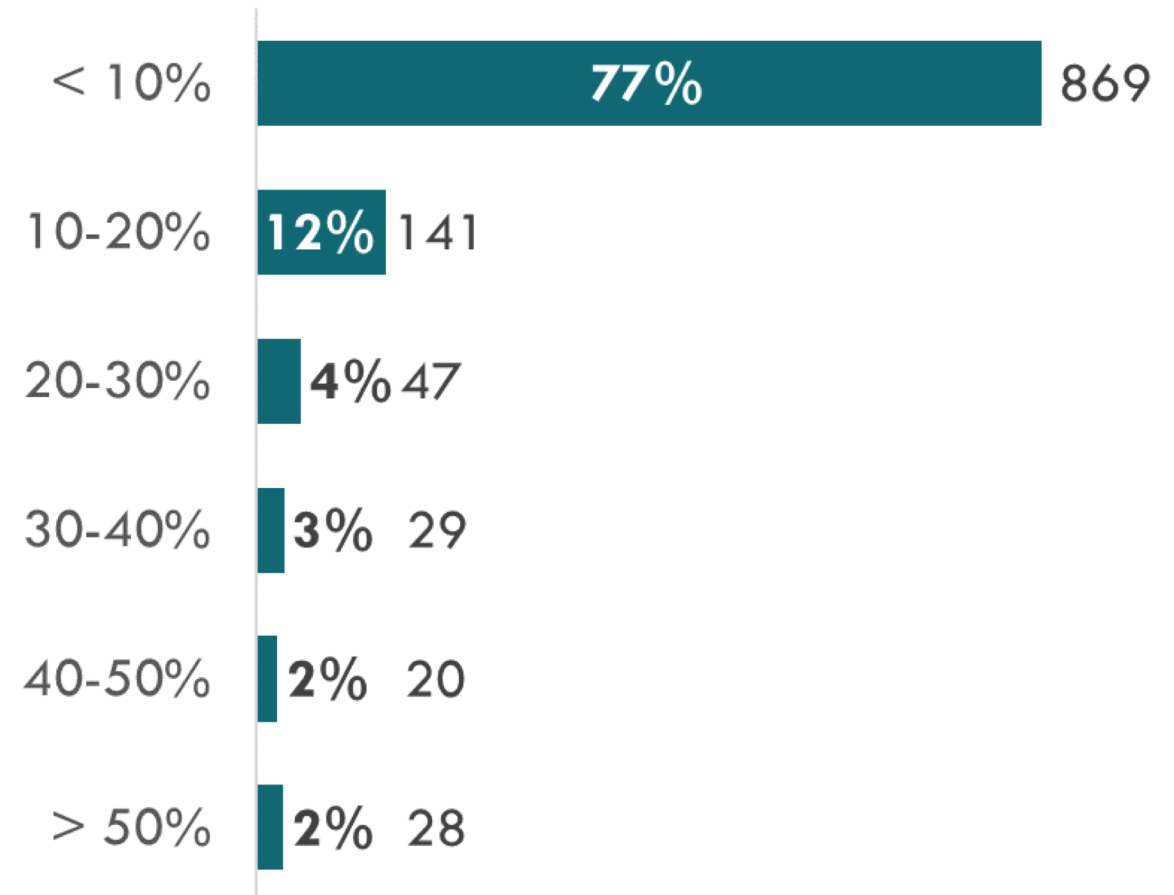
APPROXIMATELY HOW MANY MILES DO YOU DRIVE THIS VEHICLE EACH YEAR? (*n=1,625*)

- The median miles driven per vehicle is 10,000 miles annually
- 53% drive 10,000 miles or less



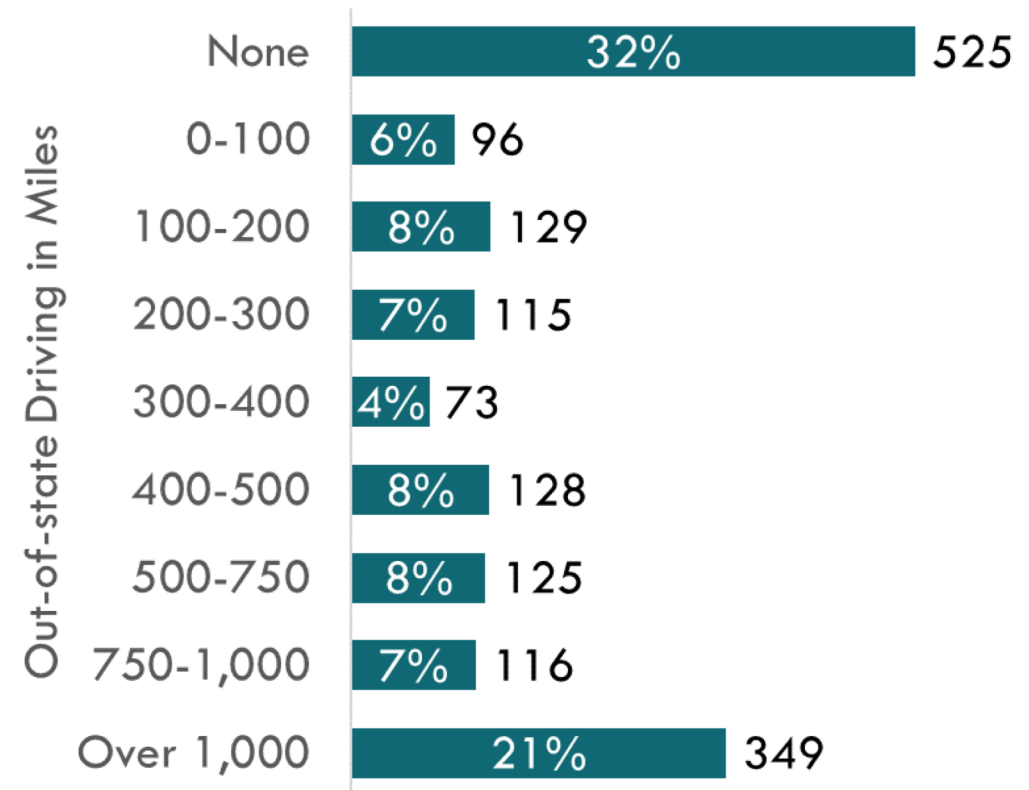
OF THOSE MILES YOU DRIVE EACH YEAR, WHAT PERCENT DO YOU ESTIMATE YOU DRIVE OUT-OF-STATE? (n=1,133)

- 77% of participants drive less than 10% of their miles out of state



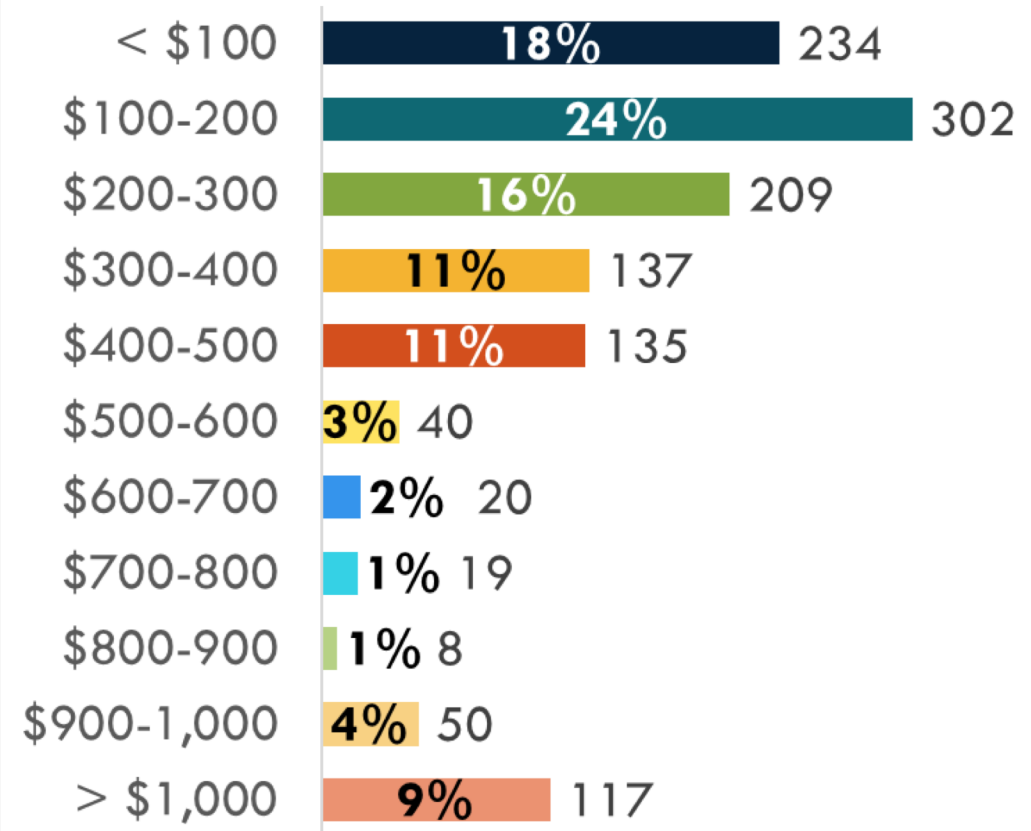
OF THOSE MILES YOU DRIVE EACH YEAR, WHAT PERCENT DO YOU ESTIMATE YOU DRIVE OUT-OF-STATE? (n=1,133)

- Just under half of participants drive less than 200 miles out of state per year
- Almost one third estimate they drive no miles out of state



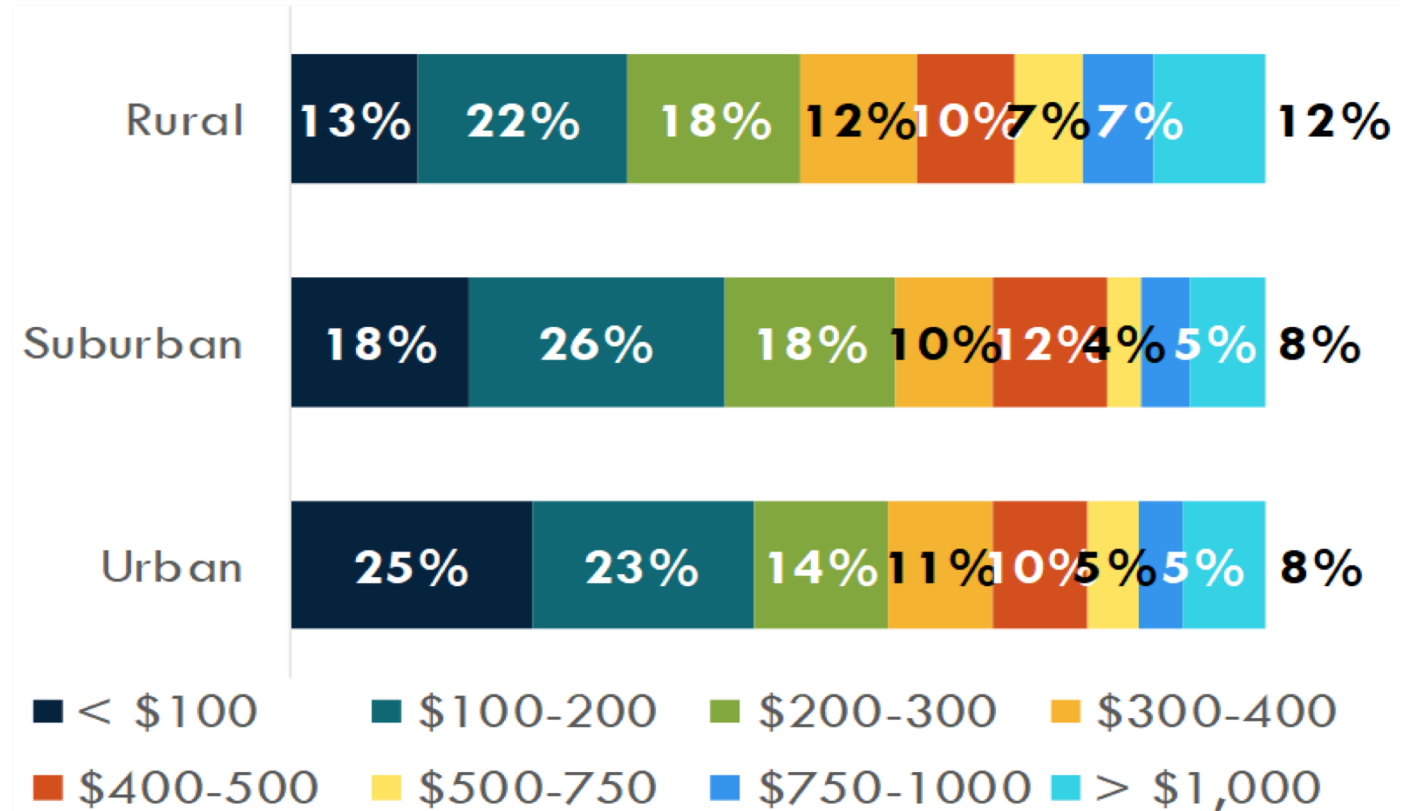
HOW MUCH WOULD YOU ESTIMATE YOU PAY IN STATE GAS TAX PER YEAR FOR YOUR VEHICLE? (n=1,271)

- The median response was \$250 per year



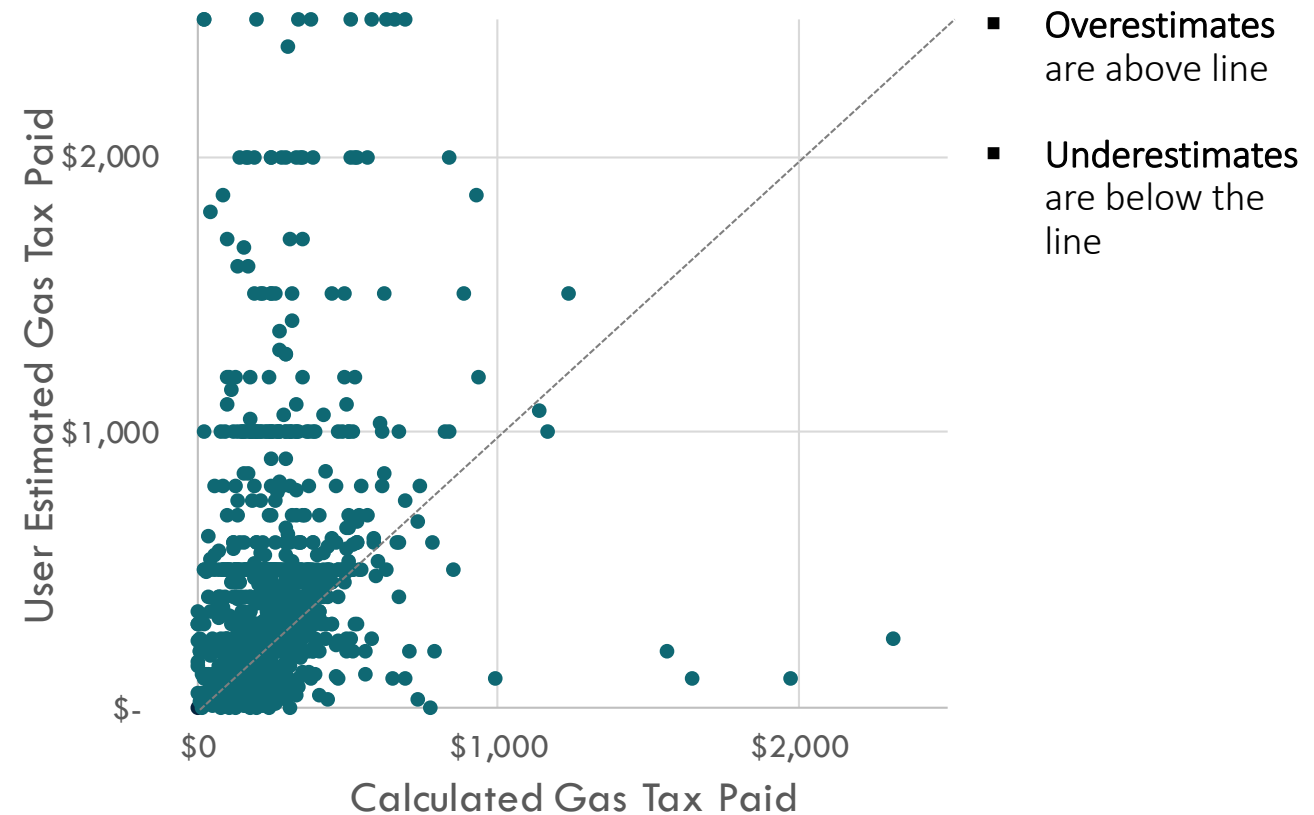
HOW MUCH WOULD YOU ESTIMATE YOU PAY IN STATE GAS TAX PER YEAR FOR YOUR VEHICLE? (n=1,271)

- Rural and suburban drivers estimate they pay more in gas taxes



USER ESTIMATED TAXES PAID COMPARED TO CALCULATED

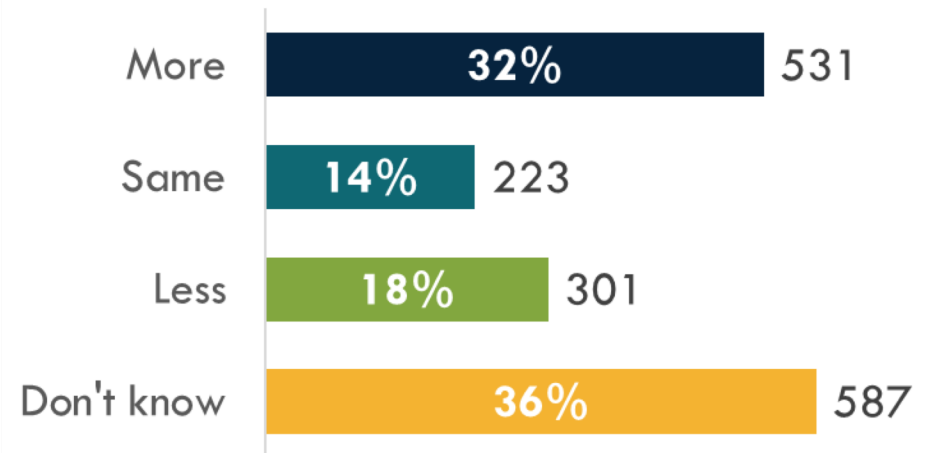
- We calculated the actual gas tax participants would have paid and compared that to their estimate of tax paid.
- People tend to overestimate how much they pay in gas taxes.



Note: due to outliers in the data, the axis range shows only results below \$2,500 (approximately 10 times the median results).

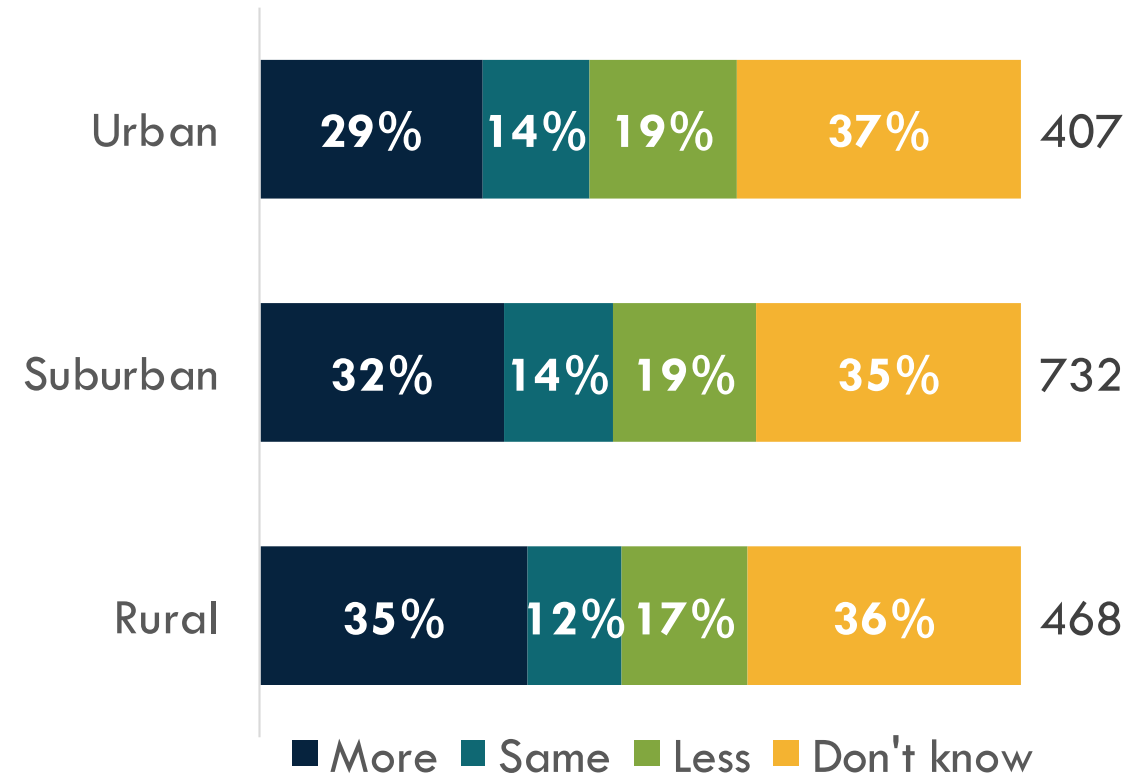
UNDER A RUC PROGRAM, DO YOU THINK YOU WOULD PAY MORE OR LESS THAN YOUR ESTIMATED STATE GAS TAX PER YEAR? (n=1,642)

- Just over one third of participants don't know what they will pay under a RUC and almost one third expect to pay more



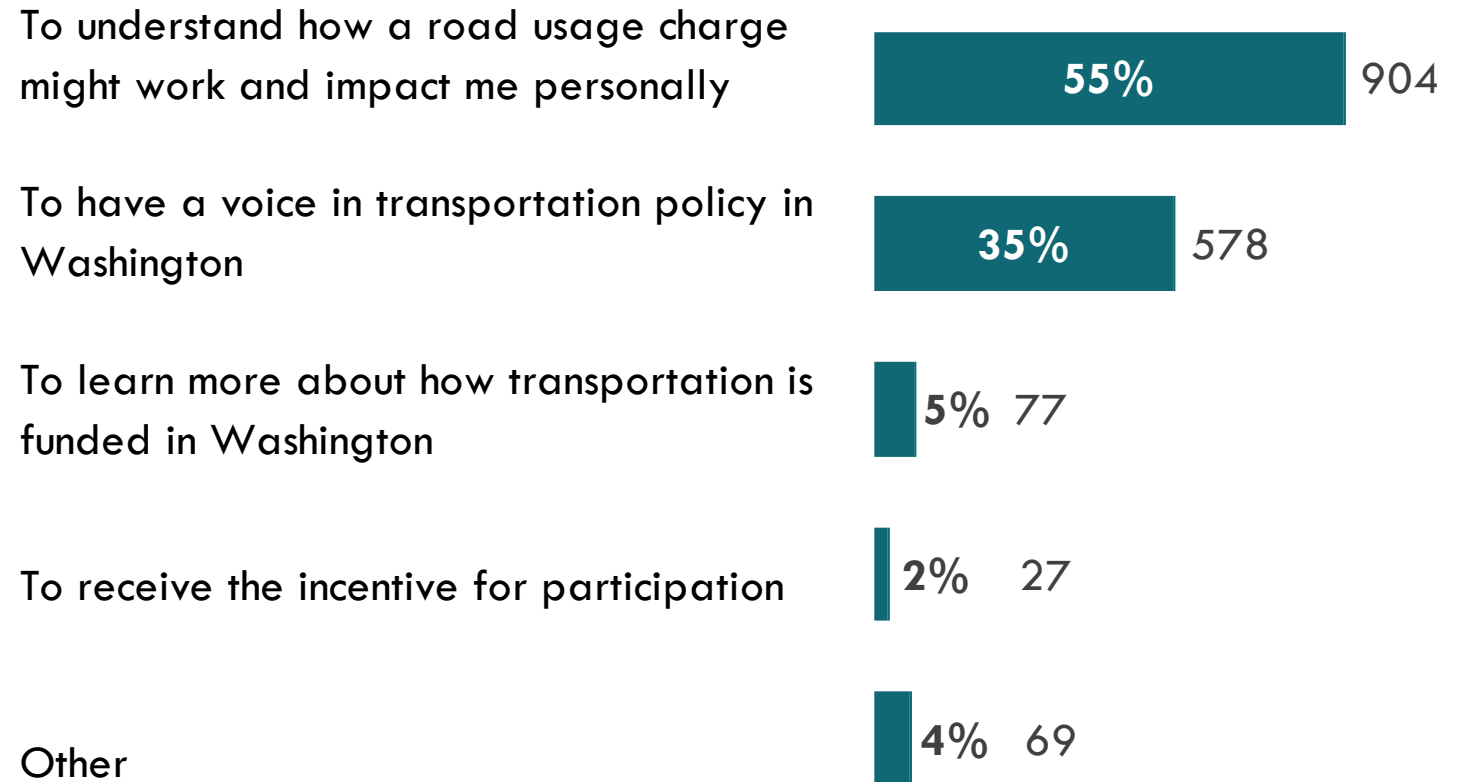
UNDER A RUC PROGRAM, DO YOU THINK YOU WOULD PAY MORE OR LESS THAN YOUR ESTIMATED STATE GAS TAX PER YEAR? (n=1,642)

- Slightly more rural drivers estimate they pay will more in gas taxes



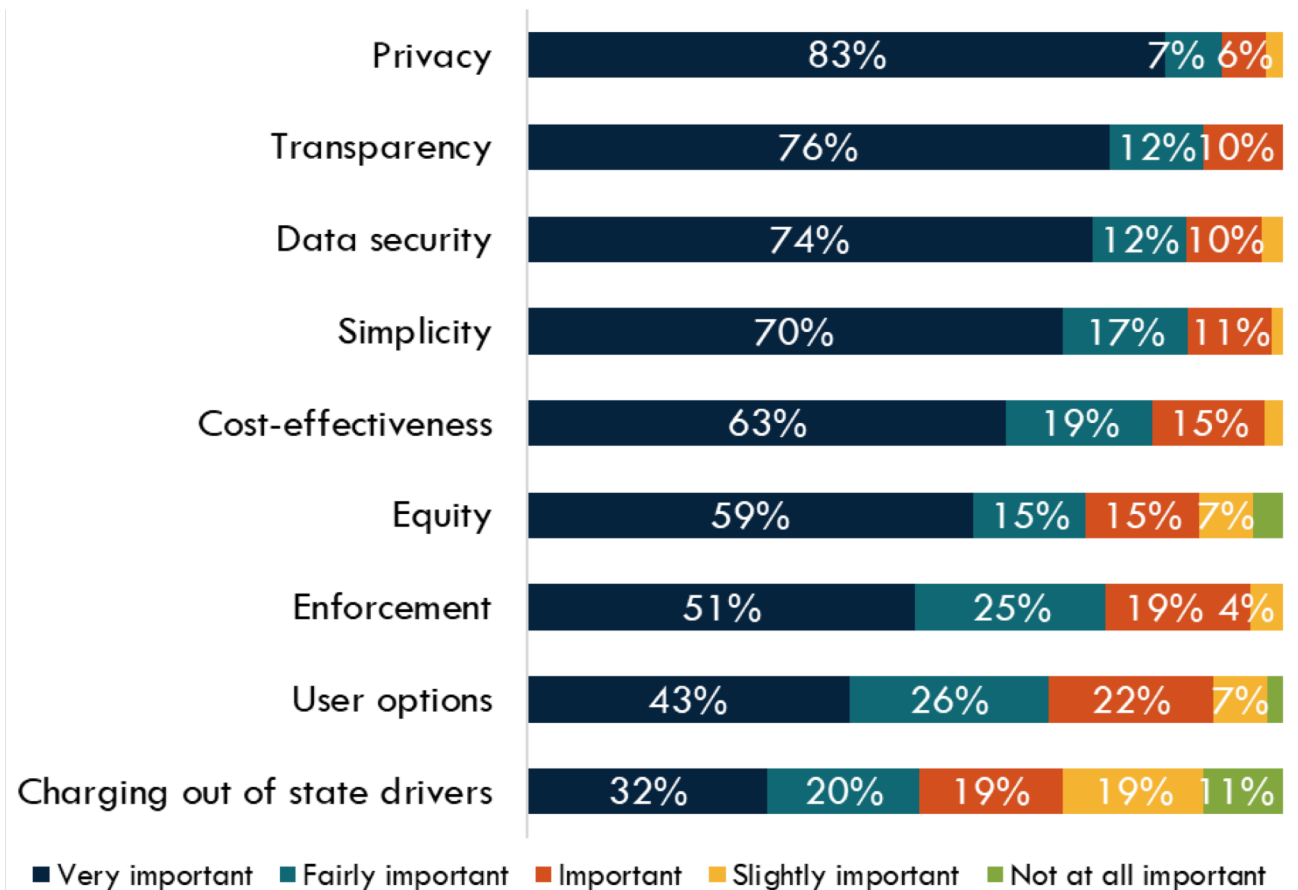
WHAT IS YOUR PRIMARY MOTIVATION FOR PARTICIPATING IN THE RUC PILOT? (n=1,655)

- Most participants are motivated by understanding the RUC and how it will impact them personally.



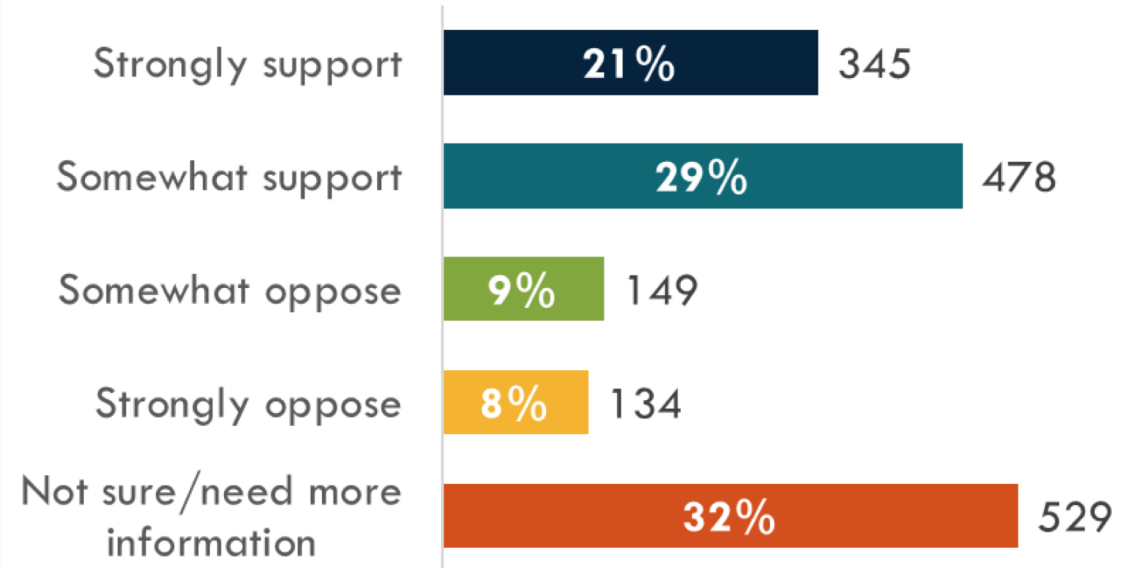
HOW IMPORTANT TO YOU ARE THE FOLLOWING ISSUES FOR A POTENTIAL ROAD USAGE CHARGE SYSTEM? (n=1,635)

- For all principles, at least 50% of participants rated them as very or fairly important



AT THIS POINT,¹ HOW DO YOU FEEL ABOUT IMPLEMENTING A RUC AS A REPLACEMENT TO THE GAS TAX IN WASHINGTON TO FUND TRANSPORTATION INFRASTRUCTURE? (n=1,635)

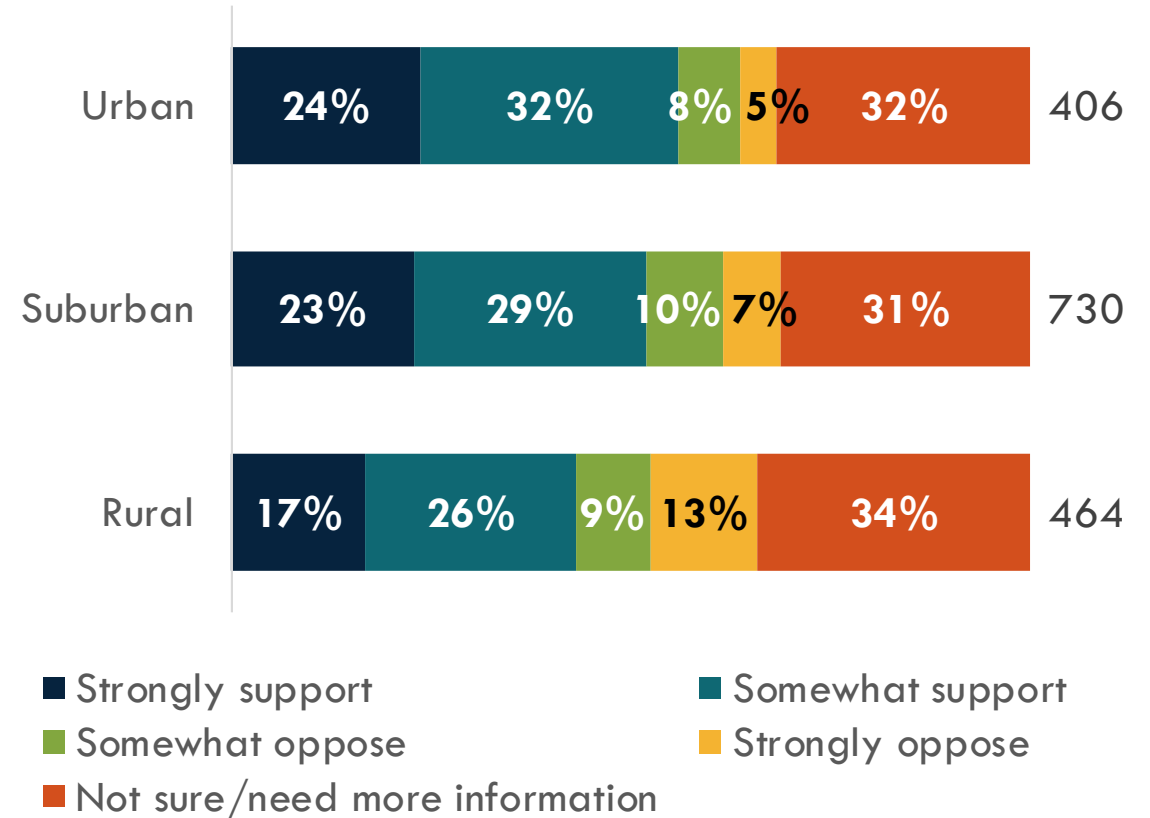
- One third of participants responded not sure or need more information about the RUC



¹ The survey was administered to enrollees on an ongoing basis between March 8 and May 21, 2018. Participants at that point had just begun the pilot and some completed the survey immediately following enrollment.

AT THIS POINT,¹ HOW DO YOU FEEL ABOUT IMPLEMENTING A RUC AS A REPLACEMENT TO THE GAS TAX IN WASHINGTON TO FUND TRANSPORTATION INFRASTRUCTURE? (n=1,635)

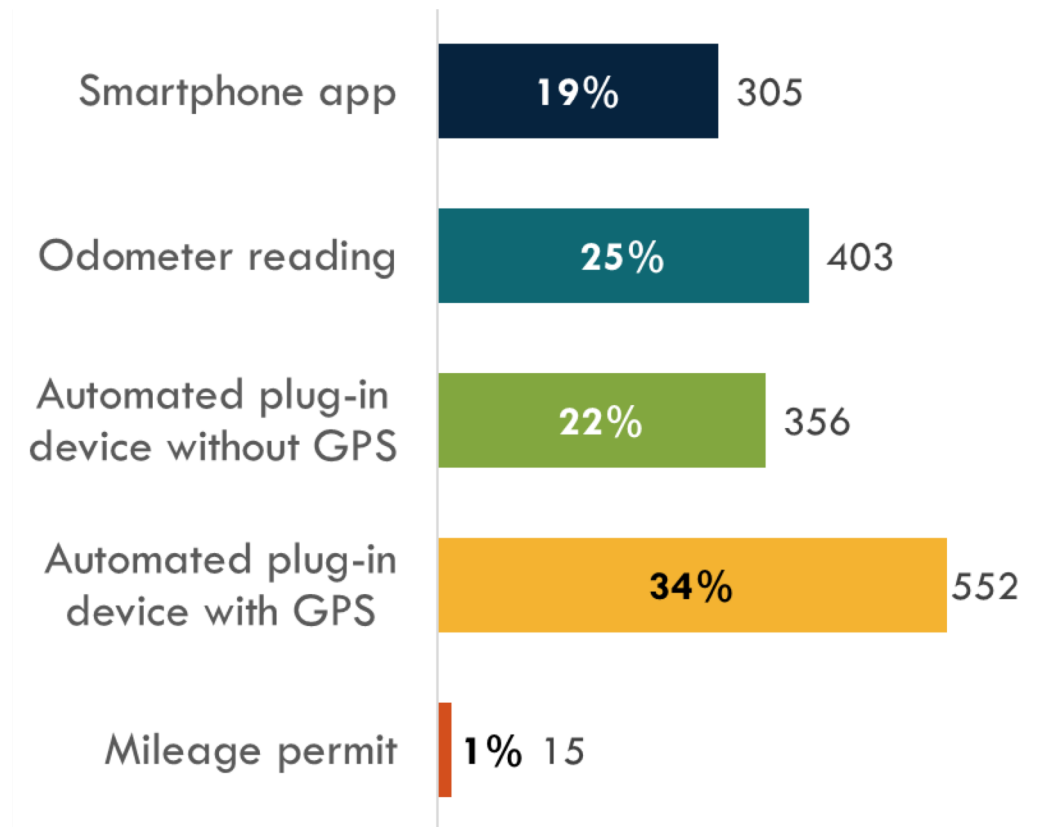
- A greater share of rural participants strongly oppose a RUC
- Across locations almost one third are not sure or need more information



¹ The survey was administered to enrollees on an ongoing basis between March 8 and May 21, 2018. Participants at that point had just begun the pilot and some completed the survey immediately following enrollment.

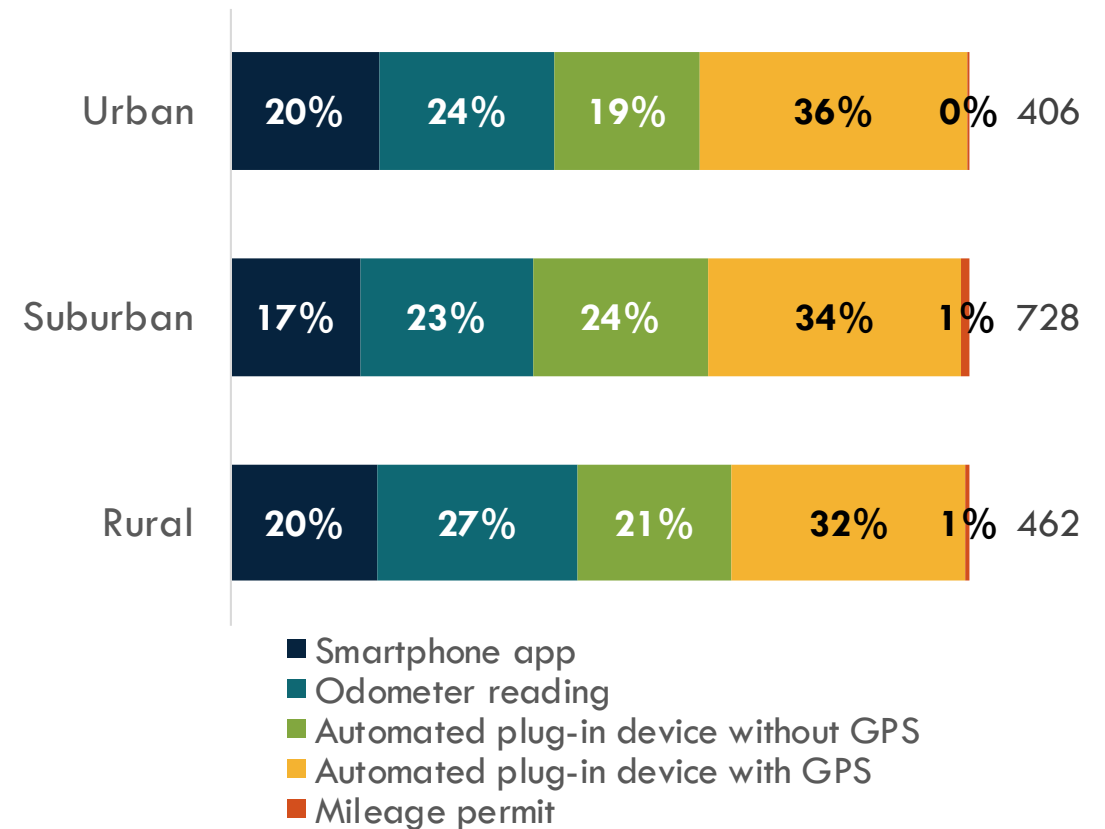
WHICH MILEAGE REPORTING METHOD DID YOU SELECT TO TEST IN THE PILOT? (N=1,631)

- 15 participants selected the mileage permit



WHICH MILEAGE REPORTING METHOD DID YOU SELECT TO TEST IN THE PILOT? (N=1,631)

- Mileage reporting method selection was consistent across areas

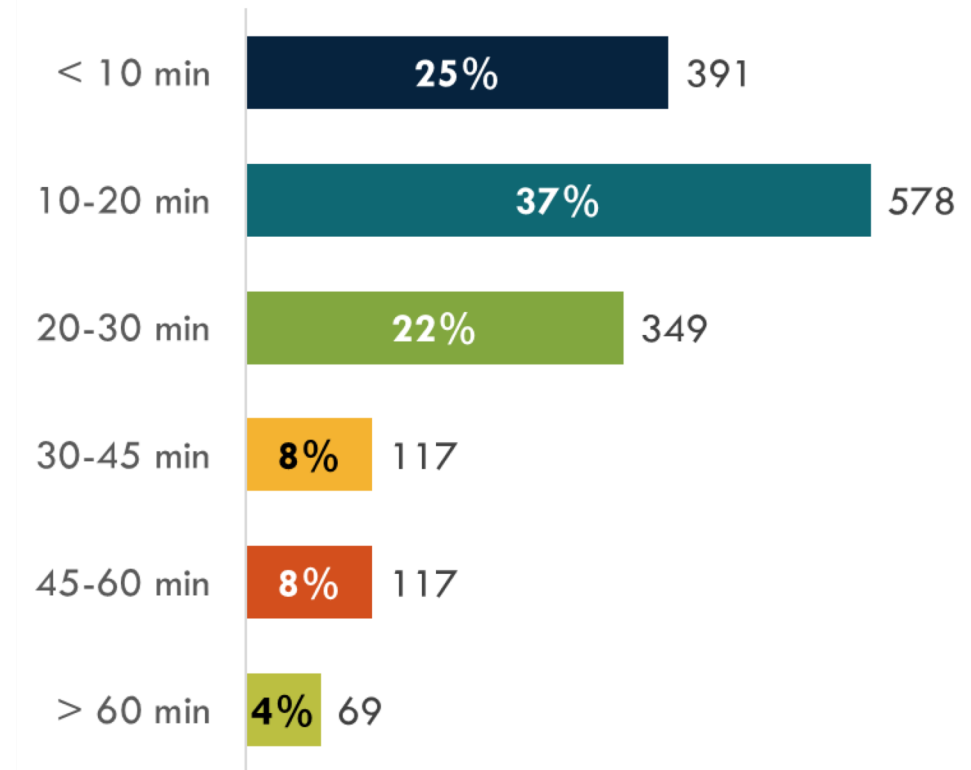


WHY DID YOU CHOOSE THIS METHOD? (*n*=1,604)

- **69%** (1,110 participants) provided a response related to the **ease and convenience** of the reporting method they selected.
- **11%** (178 participants) provided responses related to **privacy**. Participants had concerns about their movements being tracked, the security of their data, or other related reasons.
- **4%** provided responses related to **accuracy of the mileage reporting** (58 participants), **4%** noted the desire to track out-of-state miles (58 participants), and **4%** noted that they had an older car and certain technology was unavailable (61 participants).

APPROXIMATELY HOW MUCH TIME DID YOU DEVOTE TO THE ENROLLMENT AND PILOT VEHICLE REGISTRATION PROCESS? (n=1,552)

- Across reporting methods, the median time devoted to the enrollment process was 20 minutes



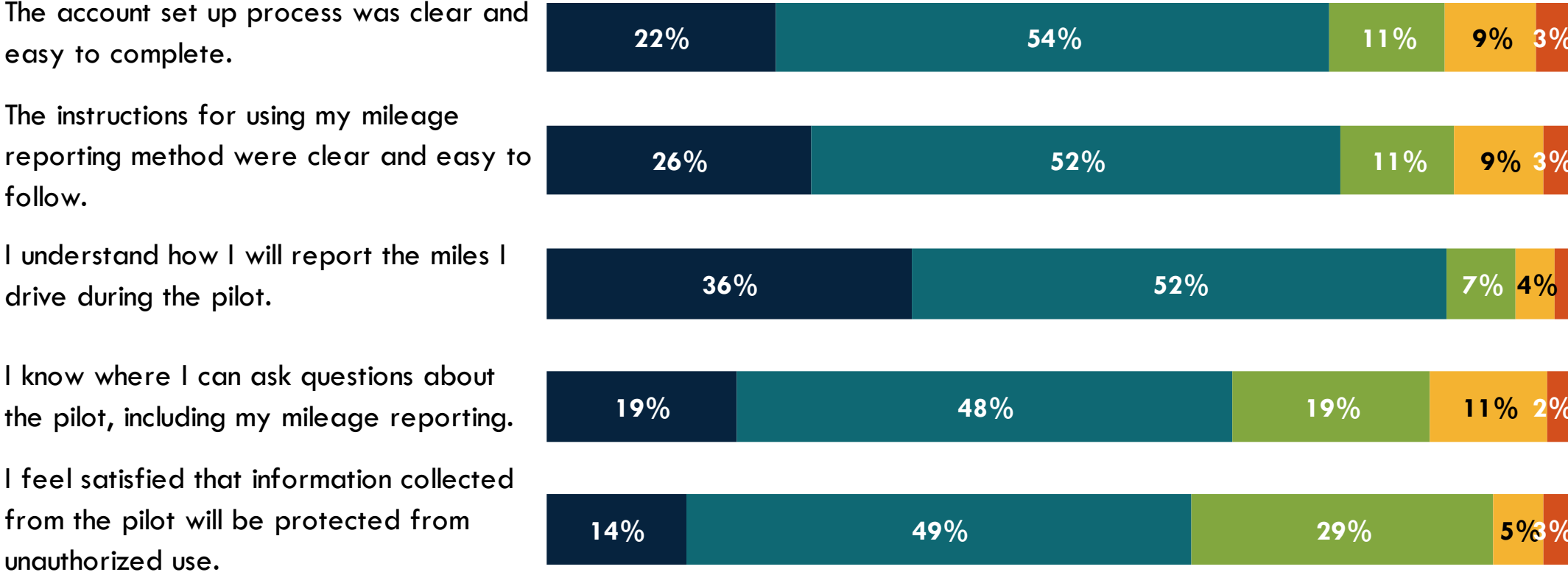
Note: due to outliers in the data, the axis range shows limited results

HAVING FIVE MILEAGE REPORTING OPTIONS OFFERED TO CHOOSE FROM SEEMED LIKE: *(n=1,631)*

- A large majority thought five options was the right number of choices



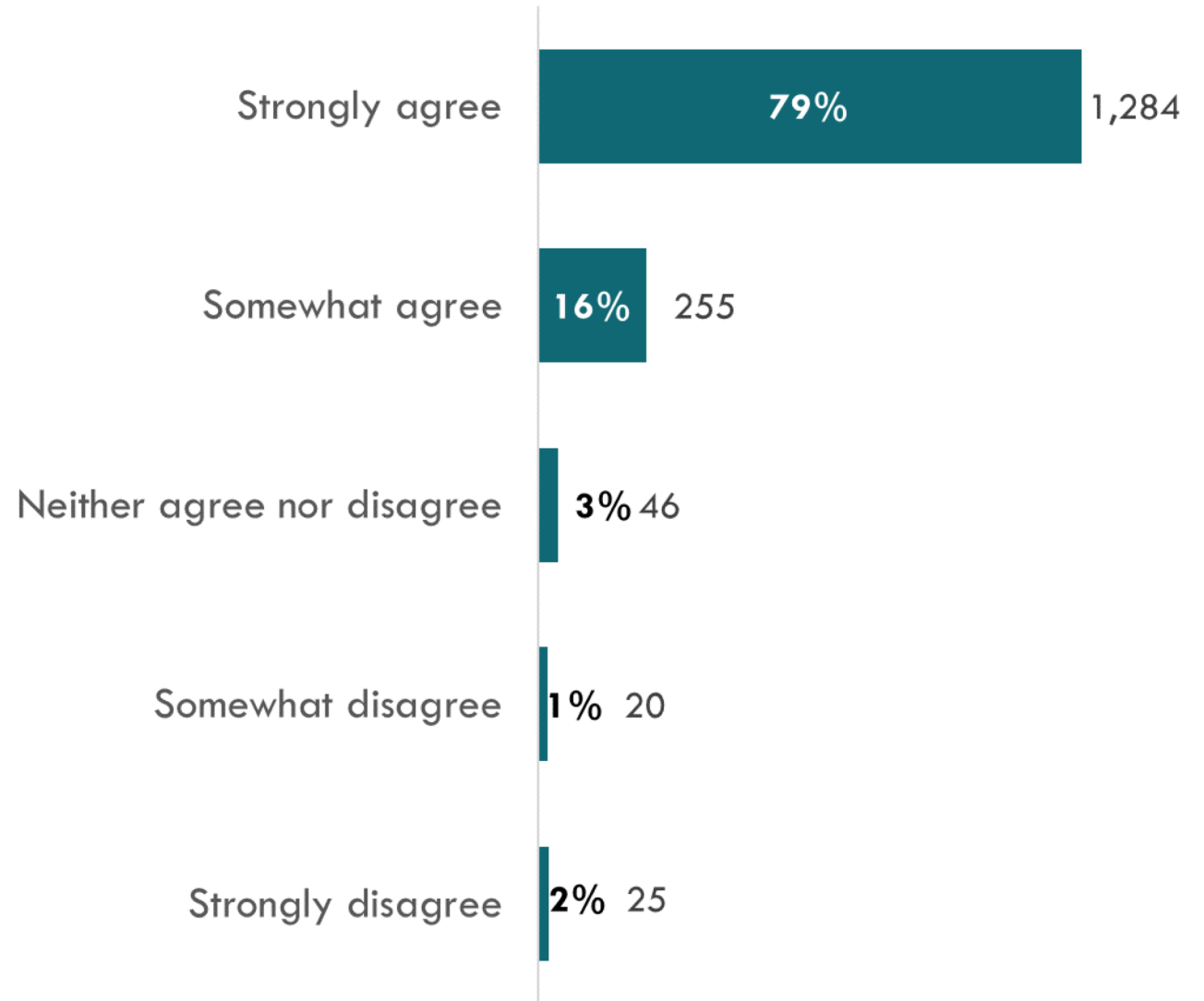
THINKING ABOUT THE RUC PILOT ACCOUNT SETUP PROCESS, PLEASE INDICATE YOUR LEVEL OF AGREEMENT WITH THE FOLLOWING: (n=1,630)



■ Strongly Agree
 ■ Agree
 ■ Neither agree nor disagree
 ■ Disagree
 ■ Strongly disagree

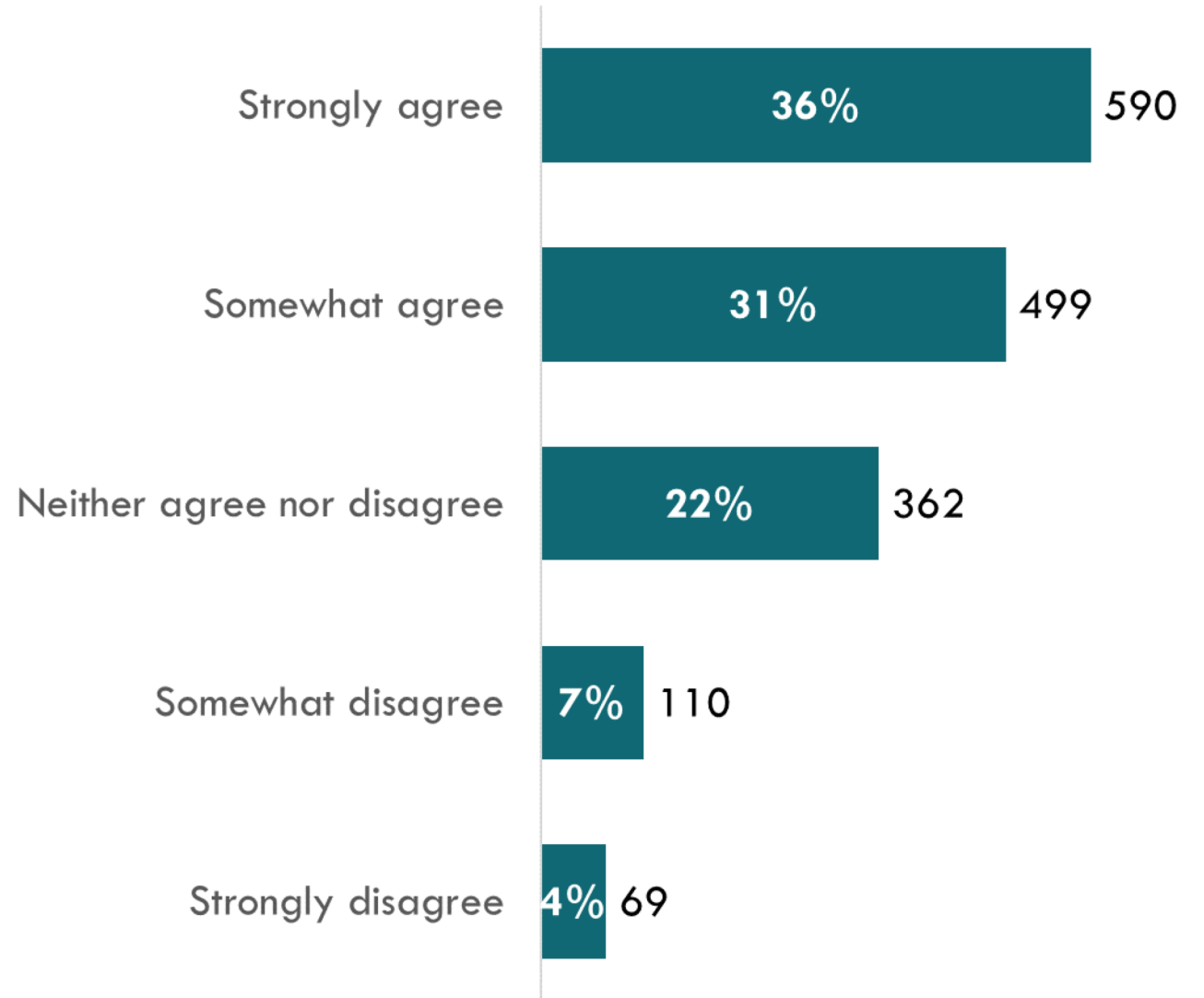
Please indicate your level of agreement with the following statement:

Washington State needs to ensure adequate funding is available to keep our transportation infrastructure safe, effective, and properly maintained



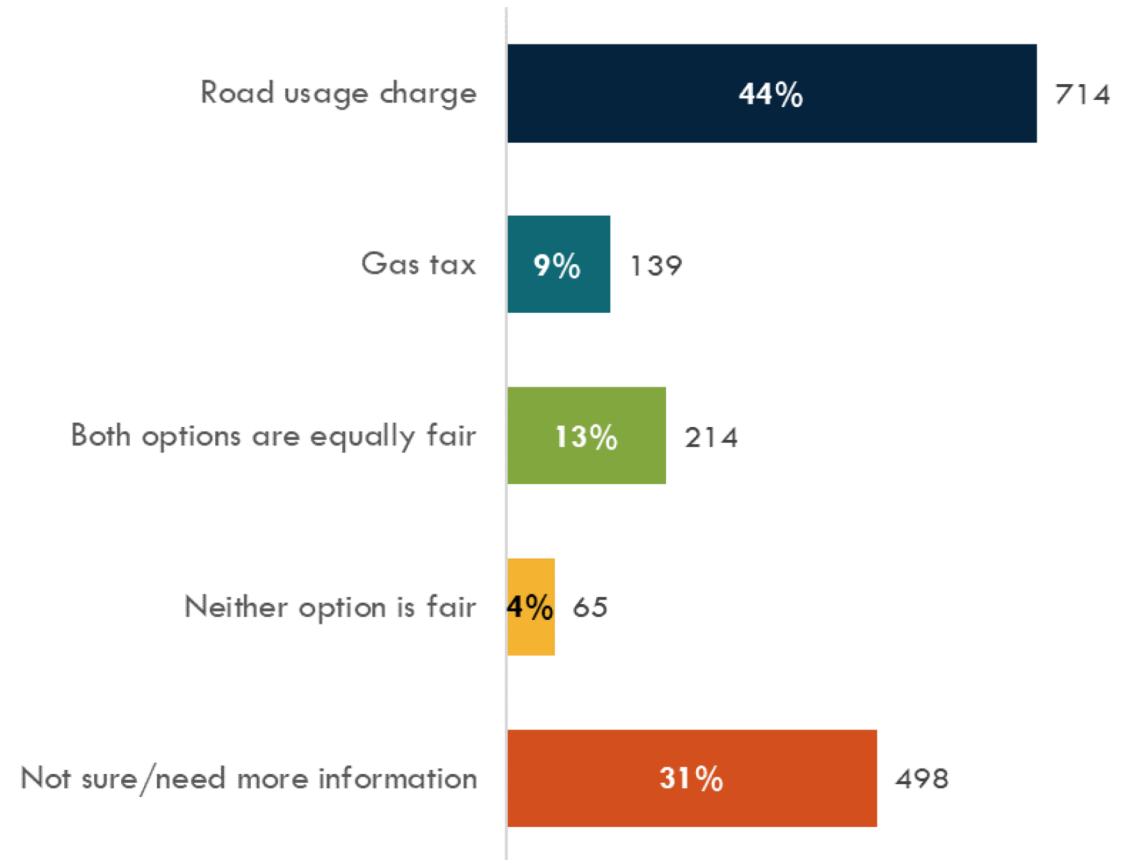
Please indicate your level of agreement with the following statement:

Washington State needs to find an alternative to the gas tax to adequately fund our transportation infrastructure.



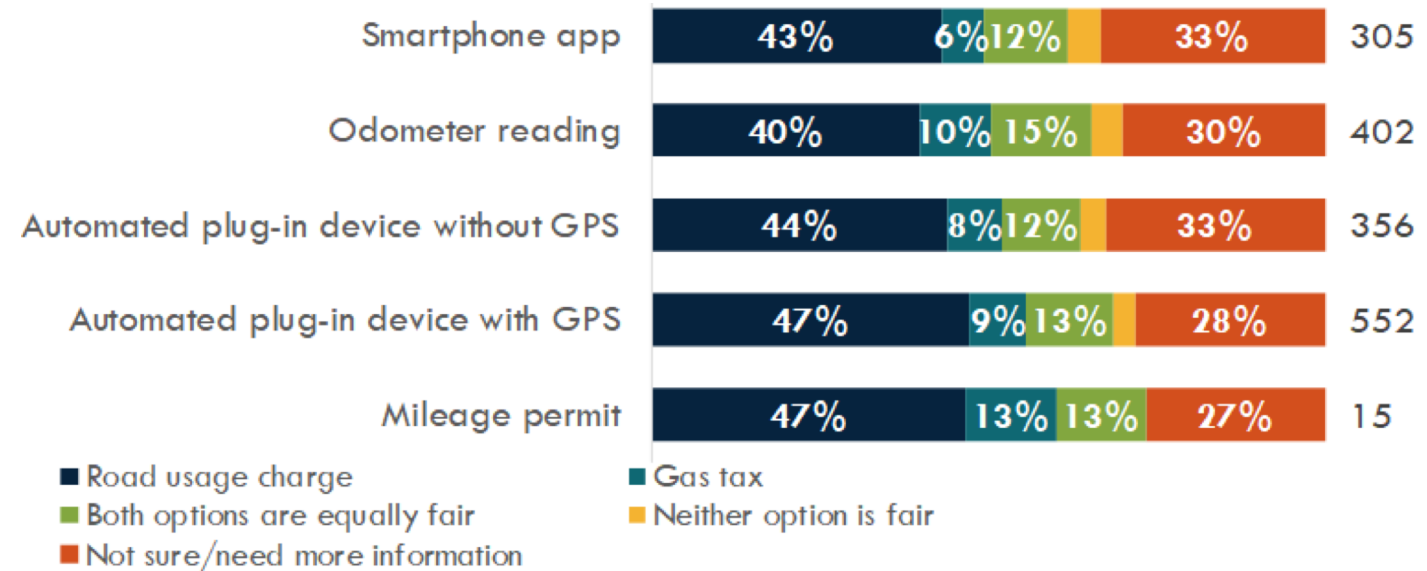
OF THE OPTIONS LISTED, WHICH TRANSPORTATION FUNDING APPROACH DO YOU THINK IS MORE FAIR? (n=1,630)

- The largest share selected a RUC, but a significant number of participants responded not sure or need more information



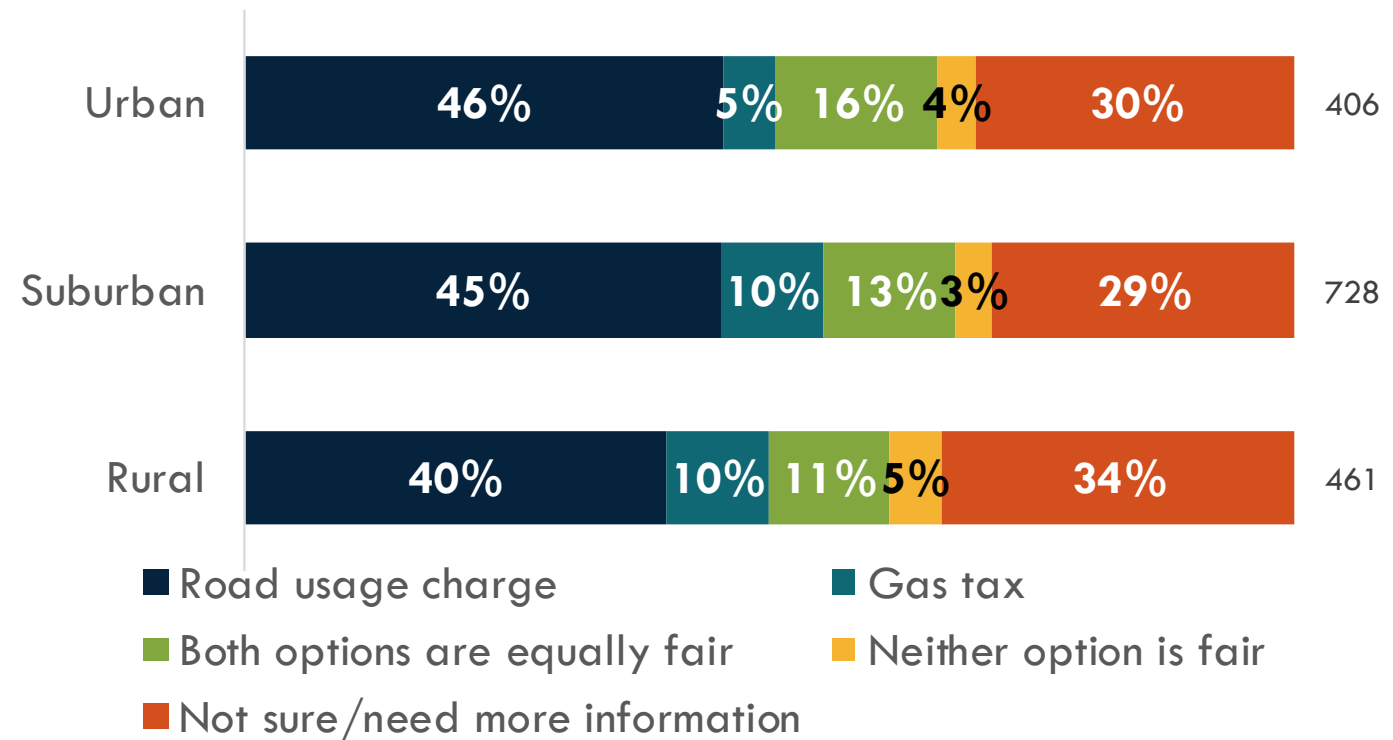
OF THE OPTIONS LISTED, WHICH TRANSPORTATION FUNDING APPROACH DO YOU THINK IS MORE FAIR? (n=1,630)

- There was no significant difference based on mileage reporting method selected



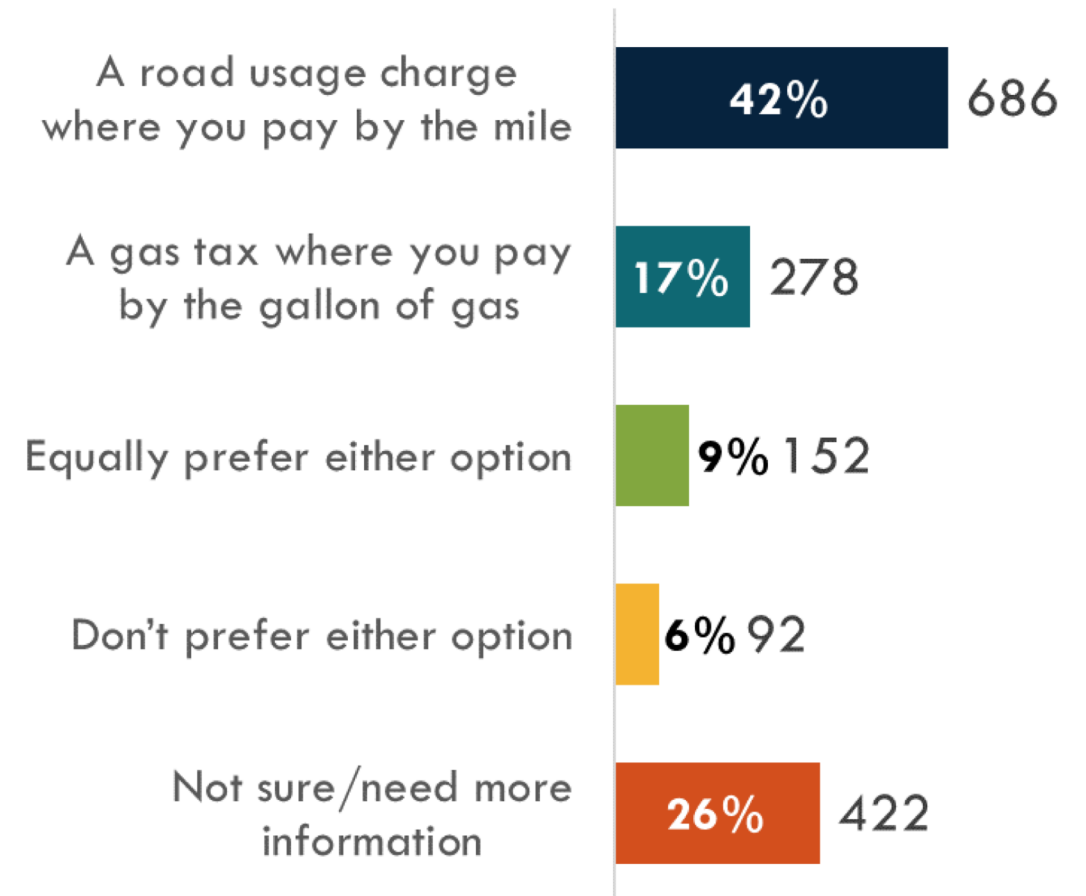
OF THE OPTIONS LISTED, WHICH TRANSPORTATION FUNDING APPROACH DO YOU THINK IS MORE FAIR? (n=1,630)

- There was no significant difference based on location



FAIRNESS ASIDE, KNOWING WHAT YOU KNOW TODAY, WHICH METHOD TO FUND TRANSPORTATION WOULD YOU PREFER? (n=1,630)

- There was no significant difference by location or mileage reporting method selected.



PARTICIPANT FOCUS GROUP PLAN

Jennifer Tippins
BERK Consulting

FOCUS GROUP OVERVIEW

Purpose

- In-depth and in-person discussion with RUC participants.
- Understand perceptions on topics such as:
 - RUC equity relative to gas taxes
 - Privacy protection and data security
 - Ease of participation and compliance
- 5 focus groups will be held in September 2018 (mid-pilot) and early 2019 (post-pilot).



FOCUS GROUP DISCUSSION QUESTIONS

- Mix of individual written exercises and group discussion.
- Discussion Topics:
 - General impressions of the road usage charge before vs. now
 - Understanding of transportation funding in WA state
 - Road usage charge pros, cons, and priorities
 - Driving behavior changes
 - Support and preferences for gas tax vs. road usage charge

FOCUS GROUP RECRUITMENT

Recruitment Objectives

- Balance of location (Eastern and Western Washington).
- Gain perspective on a thematic topic or represent a specific characteristic:
 - Non-white
 - Low-income
 - Rural
 - Commercial Drivers
 - Electric/Hybrid Vehicles
 - High mileage

FOCUS GROUPS: WESTERN WASHINGTON – FEDERAL WAY

Dates

1. Thursday September 20
6:00 – 8:00pm
2. Saturday September 22
9:00 – 11:00am
3. Saturday September 22
12:00 – 2:00pm

Thematic Perspectives

- Commercial vehicles, including hybrid/electric drivers
- Non-white and low/moderate income
- Rural and/or high mileage



FOCUS GROUPS: EASTERN WASHINGTON – SPOKANE & YAKIMA

Dates

4. Spokane: Monday
September 24
6:00 – 8:00pm
5. Yakima: Tuesday
September 25
6:00 – 8:00pm

Thematic Perspectives

- Spokane: General Mix
- Yakima: Rural



PROGRESS TO DATE

Recruitment Complete

- Initial recruitment email sent to approximately 1,276 from a priority pool.
- 269 interested participants responded to date.
- Selected and invited participants based on preferred characteristics.



The screenshot shows a web-based survey titled "Focus Group Recruitment" under the "WA RUC" logo. The survey is titled "Focus Group Availability" and includes an introductory paragraph: "By answering the questions below, you will help us to select a diverse group of focus group participants." The survey contains two numbered questions:

- * 1 Are you currently participating in the WA RUC pilot study?
 Yes
 No
- * 2 Please mark your availability to participate in a focus group. ALL times are listed in PDT. Please note that you will have to provide your own transportation to the focus group. Select all times that you are available.

SCOFFLAW EXERCISE: CATALOGING AND ASSESSING WAYS TO EVADE RUC

Travis Dunn
D'Artagnan Consulting

SCOFFLAW EXERCISE SUMMARY

- **What:** Examination of the pilot design from a participant perspective to identify ways to evade RUC
- **Who:** Project team researchers
- **Purpose:** To learn about compliance and enforcement in a controlled environment without disrupting the pilot

PROCESS

- **Kick off** with research team: review scope, provide background documents on pilot design
- **Workshop** with research team: review pilot design, operations to date, participant feedback related to compliance, and select performance data from RUCA
- **Analyze** data provided
- **List** vulnerabilities of mileage reporting methods used in pilot
- **Design or recommend** mitigation techniques for each vulnerability
- **Timeline:** February – April, 2019

EXAMPLES OF ISSUES TO BE EXPLORED

- **Plug-in devices**
 - A driver could unplug the device (strategically) to prevent mileage from being recorded
- **Odometer reading or mileage permit with self-reported odometer image**
 - A driver could disregard the requirement to report vehicle mileage
 - A driver could take photo of an old odometer reading photo in order to under-report actual miles traveled during the reporting period
 - A driver could roll back the vehicle's odometer
- **Smartphone app**
 - A driver could travel out-of-state in a different car, activate the Mile Mapper app, and record out-of-state miles that would be deducted from the driver's own vehicle

WANT TO HELP?

FIND A FLAW? TELL US MORE!

Testing out a possible new way to pay for roads is complicated – which is exactly why this is a pilot project and an opportunity to test this type of system. Our research includes discovering potential issues and vulnerabilities. We want to better understand pilot participants' experience using the various mileage reporting methods. See a flaw in how this pilot system might work in the real world? Let us know!

Enter your text here.

Enter your text here.

First name

First name (optional)

Last name

Last name (optional)

WORKING LUNCH

Beginning in 15 minutes:

- Overview of the STSFA grant program
- Status report on STSFA-funded project
- Mileage-based fee developments in other states

OVERVIEW OF THE STSFA GRANT PROGRAM & STATUS REPORT ON FUNDED PROJECTS

Angela Jacobs,
Federal Highway Administration

Sonika Sethi
Leidos Consulting

MILEAGE-BASED FEE DEVELOPMENTS IN OTHER STATES

Jeff Doyle
D'Artagnan Consulting

STATES ACTIVELY TESTING RUC

Oregon:

- Legislature enacted law that allows EVs to pay RUC instead of annual EV registration fee
- ODOT continues to enhance OReGO program by expanding reporting options, exploring interoperability
- Road User Fee Task Force recommendation to mandate RUC on vehicles above 20 MPG starting in 2025.

Hawaii:

- Completed mileage fee feasibility study in 2016
- Received federal funding for statewide pilot -- ~1 million vehicles
- Phase 1: odometer readings taken during safety inspections
- Phase 2: automated mileage reporting

Delaware (I-95 corridor):

- Small scale pilot (3 months, 120 VIP drivers), ended July 2018
- Focus of pilot was multi-state travel and toll interoperability
- Second phase planned for 2019, focusing on commercial vehicles

STATES ACTIVELY TESTING RUC

Utah:

- Legislative mandate to offer RUC by 2020 as an alternative for EVs, PHEVs, and hybrid vehicles that otherwise must pay a new flat annual fee.
- Possible extension of the program beyond 2020 to pilot involvement by other vehicles

California:

- Final report on road charging pilot program released late 2017.
- Citizen initiative to repeal recent gas tax hike on November 2018 ballot.
- Caltrans continues to study possible pay-at-the-pump method for road charging.

Colorado:

- Conducted small-scale (147 drivers, 4 month) pilot in spring 2017.
- Continued study examining rural area impacts. A follow-up pilot is planned.

STATES THAT HAVE CONSIDERED RUC

Wisconsin:

- Legislative revenue commission developed options for low-tech mileage tax. No action taken.
- Wisconsin Senate introduced bill for weight-mile tax, but no action taken.

Virginia:

- MPOs urge state study of mileage-based fees
- Legislature considering authorizing study of mileage based fees.

New Hampshire:

- Legislative proposal to increase vehicle registration fees based on MPG
- Legislation passed House, but Governor's veto threat stalled it in the Senate. No further action.

STATES THAT CONSIDERED (BUT ARE NOT PURSUING) RUC

Connecticut:

- Governor and DOT supported I-95 pilot.
- Legislature passed bill requiring their approval to fund study of mileage taxes. No approval granted.
- Connecticut dropped out of I-95 pilot.

Illinois:

- Legislative proposal in 2016 was promptly withdrawn
- Gubernatorial candidate proposed it again in 2017
- Legislator files bill to block mileage tax in January 2018
- Illinois DOT studying mileage tax; may conduct pilot project if funding is received

Missouri:

- 23 member legislative task force recommended 10 cent increase in gas tax now
- 10% increase in registration fees, and doubling registration fees for EVs and hybrids
- Other: registration fee based on vehicle MPG (instead of horsepower)

OTHER COUNTRIES THAT ARE EXPLORING RUC

Vancouver, BC:

- Metro Vancouver Mayor's Council established a Mobility Pricing Commission to study both per-mile and congestion charges
- Four-month study only – no pilot, limited public involvement.
- No further action at this time.

London:

- Mayor introduces proposal for pay-per-mile system.
- Per mile charge would vary based on each vehicle's emissions profile.
- Would replace single flat fee to drive within London (i.e., the London congestion charge).

Australia:

- Federal government will conduct a large-scale pilot project for per-mile tax on (heavy trucks).
- Heavy vehicle charging is part of larger reform of collection and distribution of road funds to align with principles of utilities.
- Pilots expected to begin in late 2018 and last several years.

POLICY ISSUES WORK PLAN & PROGRESS

- Review of policy issues work plan (“parking lot”)
- Decisions made for pilot
- Policy analysis and options for decision-makers

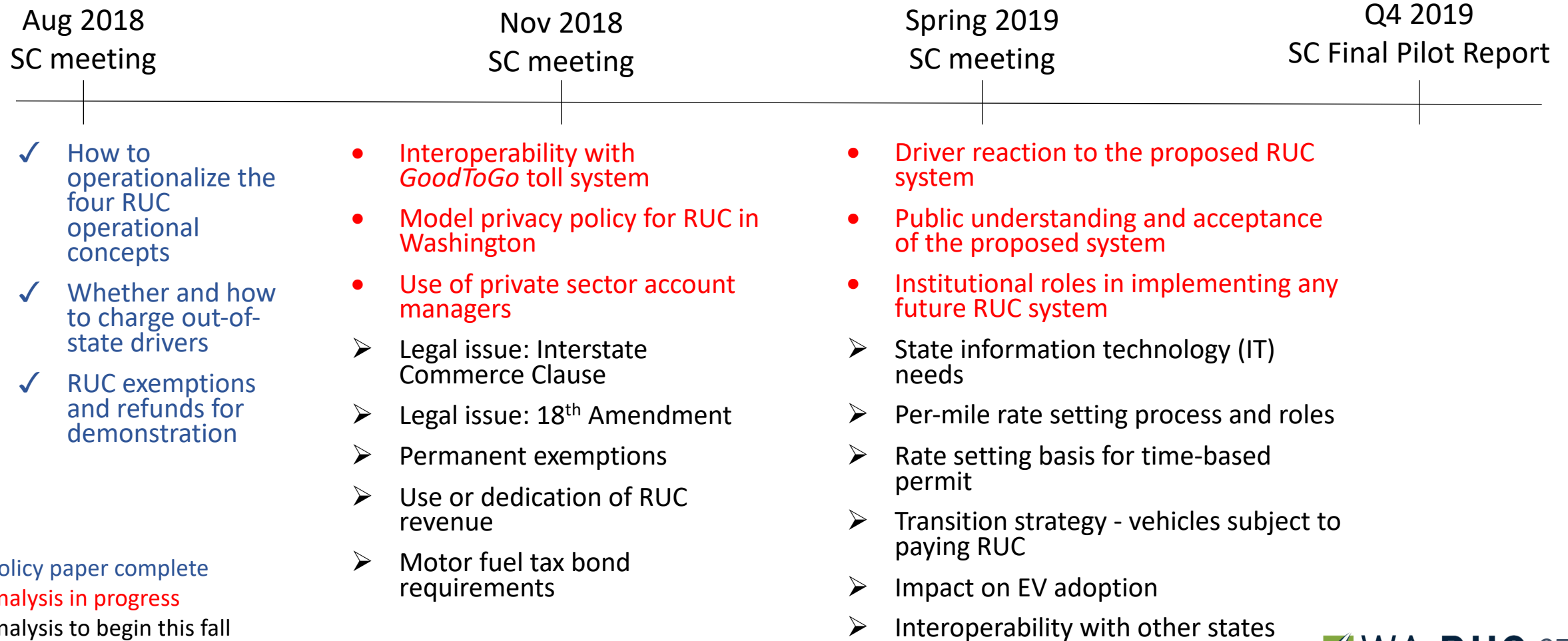
REVIEW OF POLICY ISSUES WORK PLAN

Travis Dunn
D'Artagnan Consulting

SUMMARY OF POLICY ISSUES

Address in conjunction with pilot launch	Address based on pilot findings	Address apart from the pilot test
<ul style="list-style-type: none">• How to operationalize the four RUC operational concepts• Whether and how to charge out-of-state drivers• Exemptions from road usage charges for demonstration• Refunds• Use of private sector account managers	<ul style="list-style-type: none">• Driver reaction to the proposed RUC system• Public understanding and acceptance of the proposed system• State information technology (IT) needs• Institutional roles in implementing any future RUC system	<ul style="list-style-type: none">• Interoperability with GoodToGo toll system• Legal issue: Interstate Commerce Clause• Legal issue: 18th Amendment• Per-mile rate setting process and roles• Motor fuel tax bond requirements• Permanent exemptions• Use or dedication of RUC revenue• Rate setting basis for time-based permit• Transition strategy - vehicles subject to paying RUC• Interoperability with other states

POLICY WORK PLAN SCHEDULE



- ✓ policy paper complete
- analysis in progress
- analysis to begin this fall

POLICY ANALYSIS AND PILOT DECISIONS

Travis Dunn
D'Artagnan Consulting

POLICY DECISIONS MADE FOR THE PILOT

- **Operational concepts**
 - Five mileage reporting methods
 - How to operationalize each method
- **Out-of-state testing**
 - Offer all methods to Idaho drivers
 - Offer plug-in device with GPS to OR, BC drivers
 - Off-road refunds and gas tax credits available
- **Procure service providers**
 - Simulated open system
 - Multiple service providers (2)
- **Rate setting**
 - WA base per mile rate of 2.4 cents per mile
 - Gas tax credits
 - WA gas tax credit of 49.4 cents per gallon for WA drivers and visitors
 - OR gas tax credit of 34 cents per gallon for WA drivers
 - Exemptions for off-road and out of state miles
- **Vehicle types**
 - Light vehicles <10k pounds (exceptions allowed)
 - No limitations on vehicle age or MPG
 - Other vehicles not allowed
- **Operations**
 - Invoice monthly or quarterly
 - Provide phone and email customer service during regular business hours
 - Business rules
 - Invoice design
- **Enforcement:** detect, but do not notify or penalize
- **Interoperability**
 - Real money and simulated
 - HUB method of reconciliation
 - Monthly payments, quarterly reconciliation
 - Use simulated Treasury accounts

OPERATIONALIZING THE MILEAGE REPORTING METHODS

Matthew Dorfman
D'Artagnan Consulting

MANY DECISIONS NEEDED TO BE MADE IMPLEMENT THE MILEAGE REPORTING METHODS

- Presents decisions made by the project team to implement the 5 MRMs
- Need not all be carried over to any potential future program
- In addition to the decisions on the methods themselves, this section presents:
 - Legal/Regulatory Options for implementing the methods
 - Possible Improvements to the methods
 - Fundamental issues to resolve

MILEAGE REPORTING OPTIONS OFFERED

- Manual Methods
 - Odometer Reading
 - Mileage Permit
- Automated Methods
 - Plug-in Devices (GPS enabled, no GPS)
 - Smartphone

MANUAL METHODS: ODOMETER READING & MILEAGE PERMIT

- Why?
 - For participants who prefer simple, lower-technology, low-cost reporting.
- How?
 - Odometer Images
 - Own camera or VLO
- What?
 - Sign up with service provider / Set up account
 - Choose Method
 - Provide Initial odometer reading

ODOMETER READING

- Mileage Measurement:
 - Odometer Reporting / image capture
 - Own phone or VLO
 - Requested at end of reporting period (10 days from end)
 - 3 reminders sent (20th, 25th, 30th)
- Invoice: difference from last odometer report
- Exceptions: vehicle service, vacation, vehicle sold
- Compliance and Enforcement:
 - In pilot, drop never-reporters
 - In a future system, need to have penalties

MILEAGE PERMIT

- Same as Odometer Reading, but pre-pay for blocks of miles
 - 1,000, 5,000, 10,000 chosen for pilot
- As with Odometer reading, report mileage each quarter, get reminders
- Cost of permit = block size x mileage rate (2.4 cents)
- Fuel tax capped at value of permit

LEGAL/REGULATORY OPTIONS FOR MANUAL METHODS

- Which manual methods to offer?
- Allow credit for out-of-state and/or off-road miles on manual methods?
- Should initial odometer reading be manual or should image be required?
- How soon must initial odometer image be submitted before there is a penalty?
- If a participant fails to submit an odometer image, what should be done?
- What options should be available in case participant cannot provide a reading?

LEGAL/REGULATORY OPTIONS FOR MILEAGE PERMIT

- Which sizes of mileage permit should be offered?
- Should an odometer reading be required at the time of permit purchase?

AUTOMATED METHODS: PLUG-IN DEVICES & SMARTPHONE

- Why?
 - Require less time/activity of participant
 - Support easier credits for out-of-state, off-road, private road miles
- How?
 - Plug-in Device
 - App on phone
- What?
 - Sign up with service provider / Set up account
 - Choose Method
 - Plug in device or install app

PLUG-IN DEVICES

- Mileage Measurement
 - With OBDII-port data
 - Transmitted to central system (typically daily)
 - Only measures miles when plugged in
 - Odometer becoming available on OBDII port between 2019 and 2021
- Invoice: miles driven
- Exceptions: vehicle service
- Compliance and Enforcement:
 - In pilot, drop never plug-ins
 - In a future system, need to have penalties for long unexplained unplugs

SMARTPHONE APP/MILE MAPPER™

- Mileage Measurement:
 - Odometer reporting / image capture minus app-measured free miles
 - Own phone
 - Requested at end of reporting period (10 days from end)
 - 3 reminders sent (20th, 25th, 30th)
- Invoice: difference from last odometer report minus app-measured free miles
- Exceptions: vehicle service, vacation, vehicle sold
- Compliance and Enforcement:
 - In pilot, drop never-reporters
 - In a future system, need to have penalties

LEGAL/REGULATORY OPTIONS FOR AUTOMATED METHODS

- How plug-in device and smartphone apps should be certified?
- How often to invoice?
- Plug-in devices: What to do in cases where the plug-in device is unplugged for a long time?
- Non-GPS plug-in device: Allow refunds for out-of-state/off-road miles on devices without GPS?
- Smartphone
 - How to ensure the mileage recording phone is in the correct vehicle?
 - What to do if an odometer image is not submitted on time?

POSSIBLE IMPROVEMENTS (PRELIMINARY LIST)

- **Odometer Reading**
 - Way to submit reading at non-reporting intervals
 - Way to pay in middle of invoicing period
 - View of odometer reading history
- **Mileage Permit:** simplify how to see how much current permit has been used up
- **Plug-in devices:** better/faster reminders when unplugged
- **Smartphone app**
 - Validate in correct vehicle
 - Measure off-road/private road travel
 - Multiple phones on one account, multiple phones for same vehicle

FUNDAMENTAL ISSUES TO DECIDE

- Which mileage reporting methods to offer
- Whether/How best to offer fuel tax credits

CHARGING OUT-OF-STATE DRIVERS DURING THE PILOT

Matthew Dorfman
D'Artagnan Consulting

OUT-OF-STATE DRIVERS NEED SPECIAL CONSIDERATION

- Any potential future RUC-enabling law and legislation will need to handle out-of-state drivers
 - Need short-term options
 - Need options that can be set up quickly and easily
 - Enforcement considerations are different
- This section presents:
 - Options for charging out of state drivers in a pilot or program
 - How they are handled in the pilot
 - Options for communications with visitors

FOUR OPTIONS FOR CHARGING OUT-OF-STATE DRIVERS

1. Exempt out-of-state vehicles from RUC; continue collecting fuel tax from these vehicles
2. Allow automated mileage reporting through a service provider
3. Offer time permits
4. Offer mileage permits

*These options are not mutually exclusive.

**Option 2 was used in the WA RUC pilot project.

ALTERNATIVE 1: EXEMPT OUT-OF-STATE VEHICLES FROM RUC; CONTINUE COLLECTING FUEL TAX

- Likely solution *for early years* of potential future operational program because:
 - Fuel taxes remain in place (gradual ramp-up, no big bang),
 - Out of state vehicles constitute relatively small portion of traffic (5-9%)
 - Cost and complexity of collecting from out-of-state vehicles may outweigh revenue
- Fuel tax is all-or-nothing— extremely difficult and costly to selectively apply
- RUC is not all-or-nothing—may apply to some out-of-state vehicles
 - Vehicles from states with RUC
 - Opt-in
- Simple, no compliance/enforcement needed

ALTERNATIVE 2: AUTOMATED MILEAGE REPORTING THROUGH A SERVICE PROVIDER

- Use a service provider as Washington drivers would, w/location-based method
- Supports interstate interoperability
- To support international drivers:
 - Use local units (km, CAD\$)
 - Comply with applicable laws
- Requires enforcement on out-of-state drivers (to ensure they are signed up)
- Should not be only option available (uses location, sign-up time)

ALTERNATIVE 3: TIME PERMIT

- Right to drive unlimited miles in a given time period (e.g., week or a month)
- To set rate so as to prevent misuse/overuse:
 - Limit or prohibit fuel tax credits
 - Assume high number of miles driven
- Distribution: register vehicle (license plate) in database (web/mobile/retail)
- Does not support interoperability
- Requires enforcement on out-of-state drivers (to ensure they are signed up)

ALTERNATIVE 4: MILEAGE PERMIT

- Purchase block of miles, as in pilot
- Requires odometer reporting (smartphone, telematics, etc.)
- Distribution: register vehicle (license plate) in database (web/mobile/retail) with odometer reading
- Not ideal for interoperability
- Requires enforcement on out-of-state drivers (to ensure they are signed up)
- Should not be only option available (requires equipment)

COMMUNICATIONS WITH VISITORS

- Website
- Newsletters
- Mobile App
- Other state's agencies and commercial services
- Physical Signage
- Broadcast Media and Internet/Print Advertising

EXEMPTIONS FROM RUC DURING THE PILOT

Travis Dunn
D'Artagnan Consulting

PILOT EXEMPTIONS

Mileage exempt from Washington RUC

- For pilot participants using plug-in device with location or smartphone app (regardless of jurisdiction of residence):
 - Miles driven off of public roads (includes private roads and off road)
 - Miles driven out of state (note: Oregon and Idaho miles charged according to the business rules of those states; no other jurisdictions charged)
- For all other Washington and Idaho drivers: no exemptions available

Vehicles exempt from Washington RUC

- Heavy vehicles (>10k pounds, with exceptions)
- RVs
- Motorcycles
- Non-motorized vehicles
- Vehicles with no OBD-II port (older than 1996) or functioning odometer
- Vehicles designed exclusively for off-road purposes (e.g., ATVs)

ISSUES AND OPTIONS FOR PILOT EXEMPTIONS

Mileage exempt from Washington RUC

- Should exemptions vary by jurisdiction of residence?
- What role should accuracy play in allowing off-road exemptions?
- Should drivers who choose a manual method be afforded an opportunity to claim exemptions?
- What should be done with revenue collected from manual method participants who do not claim refunds?

Vehicles exempt from Washington RUC

- What Washington-registered vehicles should be subject to RUC?
- What out-of-state vehicles should be subject to RUC?

POLICY ANALYSIS AND OPTIONS FOR DECISION-MAKERS IN A FUTURE RUC SYSTEM

Travis Dunn
D'Artagnan Consulting

POLICY DECISIONS MADE FOR THE PILOT

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UPCOMING ACTIVITIES

- Tasks and activities through remainder of Stage 2 (live pilot)
- Preview of November 29, 2018 Steering Committee meeting topics

TASKS AND ACTIVITIES THROUGH STAGE 2 (LIVE PILOT)

Jeff Doyle
Project Manager
D'Artagnan Consulting

SIGNIFICANT REMAINING STAGE 2 ACTIVITIES

| 2018

| 2019

August

September

October

November

December

January

February

◆ Aug 22-23: FHWA site visit & briefings

◆ Sep 20-22: Western WA mid-pilot Focus Groups

◆ Sep 24-25: Central & Eastern mid-pilot WA Focus Groups

◆ Nov 29: WA RUC Steering Committee meeting

Subagents' evaluation of WA RUC process ◆

Invoice improvements ◆

Organizational assessment for RUC

Stage 3

Model privacy policy for RUC ◆

WA RUC website changes for Stage 3

Stage 3

Policy issue white papers

Stage 3

Ongoing pilot operations ◆

PREVIEW OF NOVEMBER 29, 2018 STEERING COMMITTEE MEETING

Jeff Doyle
Project Manager
D'Artagnan Consulting

NOVEMBER 29: TOPICS TO BE COVERED

- Updates on real money demonstration between Washington and Oregon
- Focus Group and Survey #2 (mid-pilot) high-level results
- Presentation of draft model privacy policy for RUC
- White papers and presentations on several policy issues from the “parking lot”
- Organizing for Stage 3 (Evaluation and Reporting): Steering Committee’s formation of small (voluntary) work groups to review pilot results, develop findings and provide policy options or recommendations

PUBLIC COMMENT

THANK YOU

Consultant support provided by:

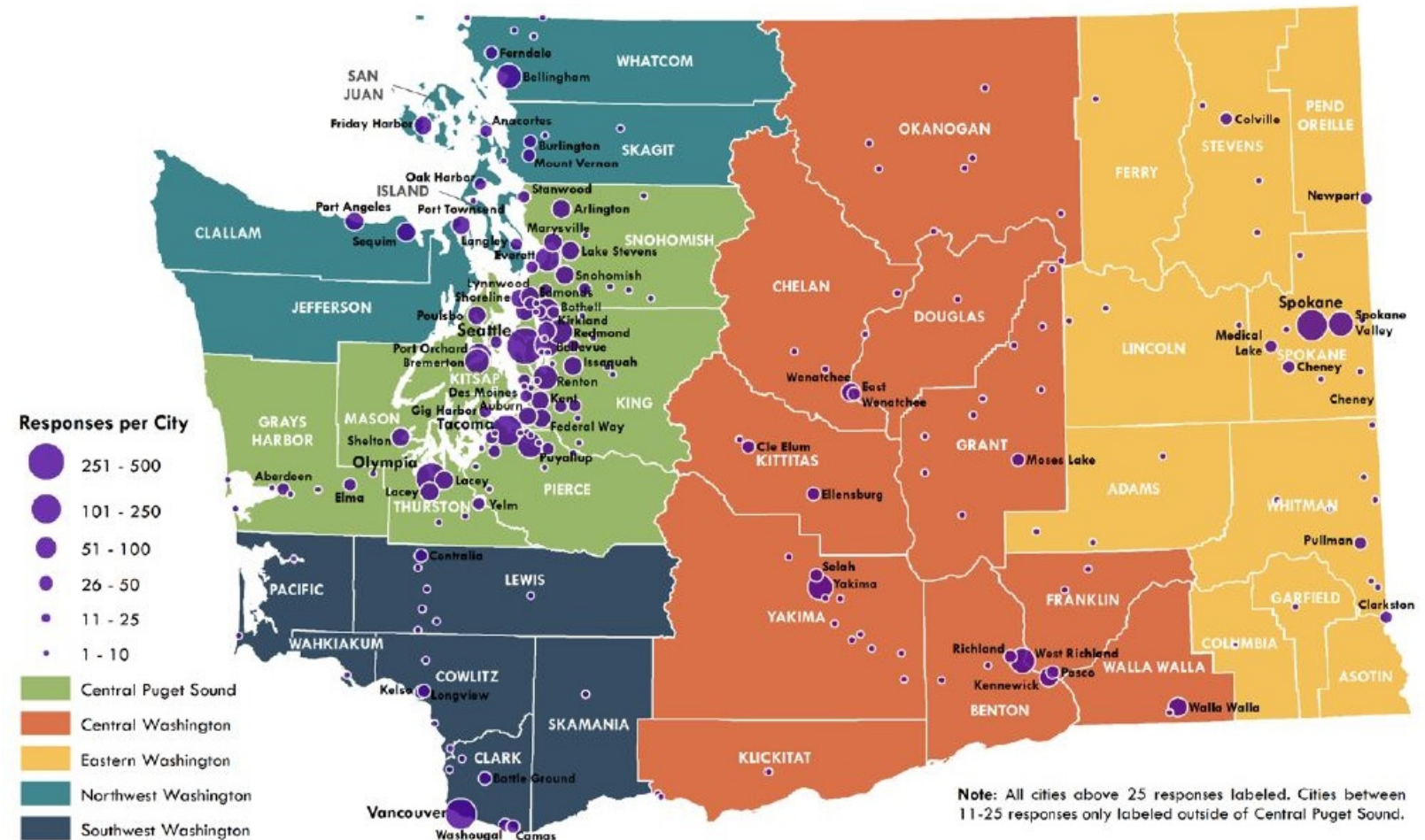


BACKPOCKET / TBD SLIDES

VOLUNTEER RECRUITMENT

VOLUNTEER POOL FOR INITIAL ENROLLMENT LATE 2017

- Nearly **5,000 drivers** from across the state expressed interest in being part of the final pool of 2,000 participants



INITIAL PARTICIPANT INVITATION PROCESS

SPRING 2018

General process

- Initial round of invites sent to 2,000 people who completed interest survey
- Invites sent in batches over the course of three weeks or until 2,000 complete enrollment

Who was invited to enroll

- At least one person from every County
- Geographical representation by survey regions
- Diverse group of people to best reflect Washingtonians
 - Identified race or ethnicity
 - Gender
 - Income
 - Vehicle type