

A stylized graphic of a road with a dashed yellow center line and solid blue edges, curving upwards and to the right against a light green background.

# WASHINGTON STATE ROAD USAGE CHARGE

*Progress Report to Washington State  
Transportation Commission*



**Washington State  
Transportation Commission**

July 16, 2019  
Olympia, Washington

## PART II (AFTERNOON SESSION)

- WA RUC Pilot System Performance
- Legal, Operational, Policy and Fiscal Issues with RUC
- Identification of issues for further examination by WSTC at October 2019 meeting

Jeff Doyle  
Project Manager  
D'Artagnan Consulting

# SUMMARY RESULTS OF PILOT OPERATIONS

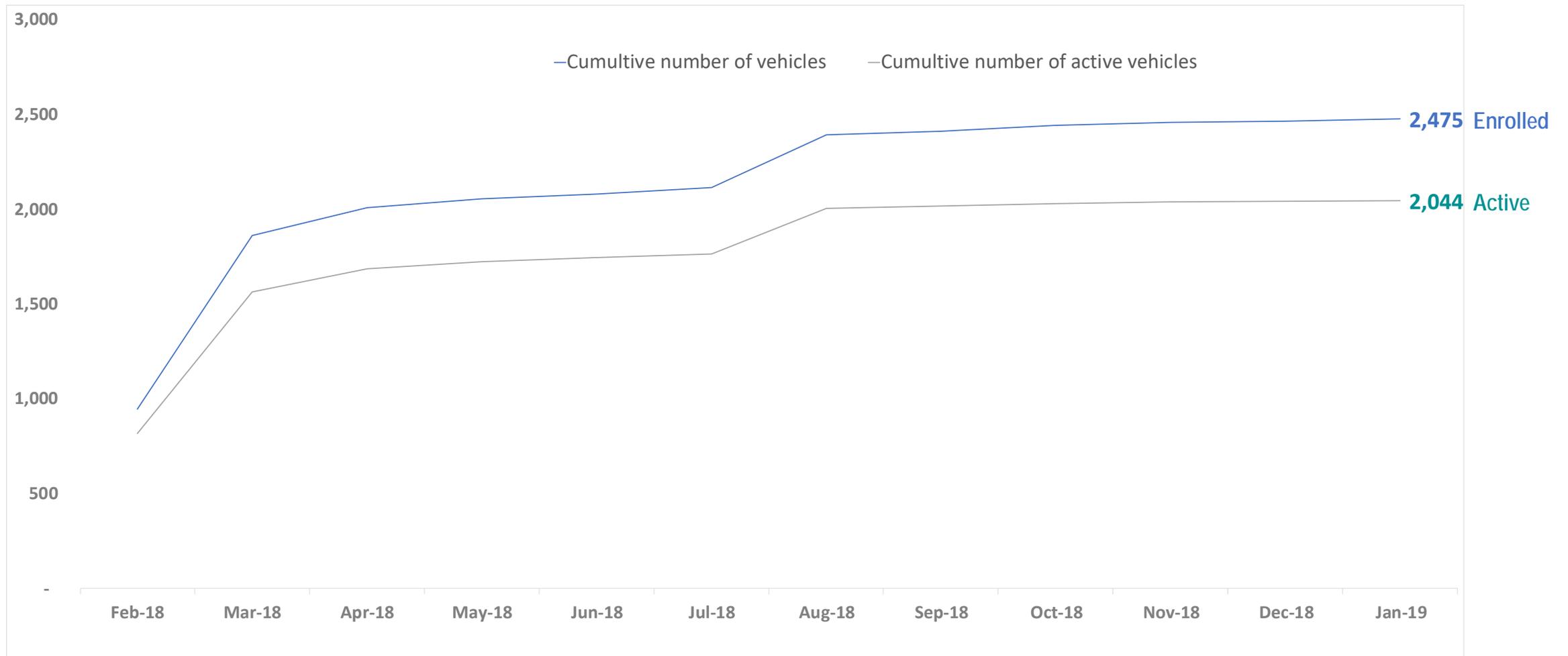
- Vehicle driving data
- Interoperability with other states
- Private vehicle licensing offices (DOL subagents) to support RUC

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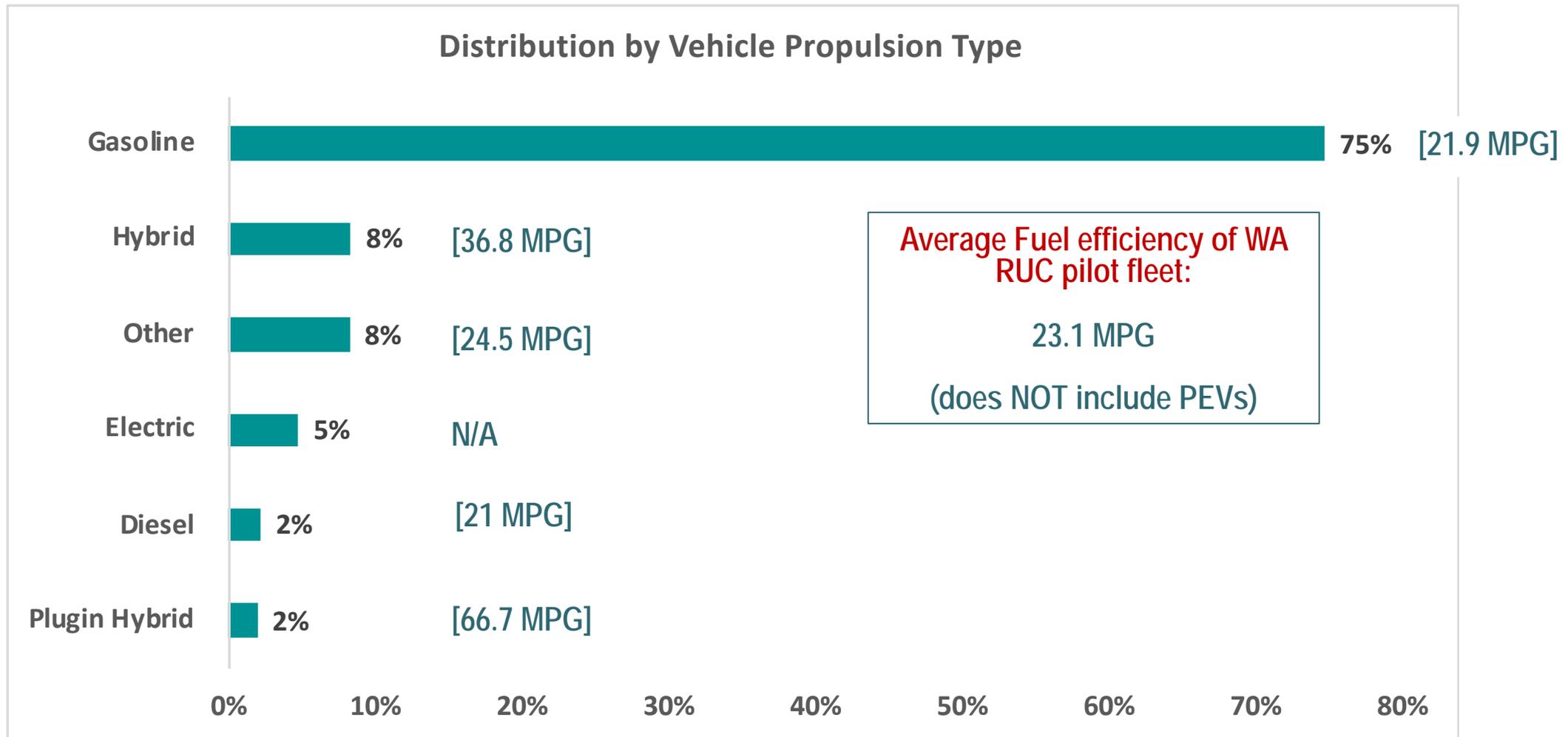
# VEHICLE DRIVING DATA

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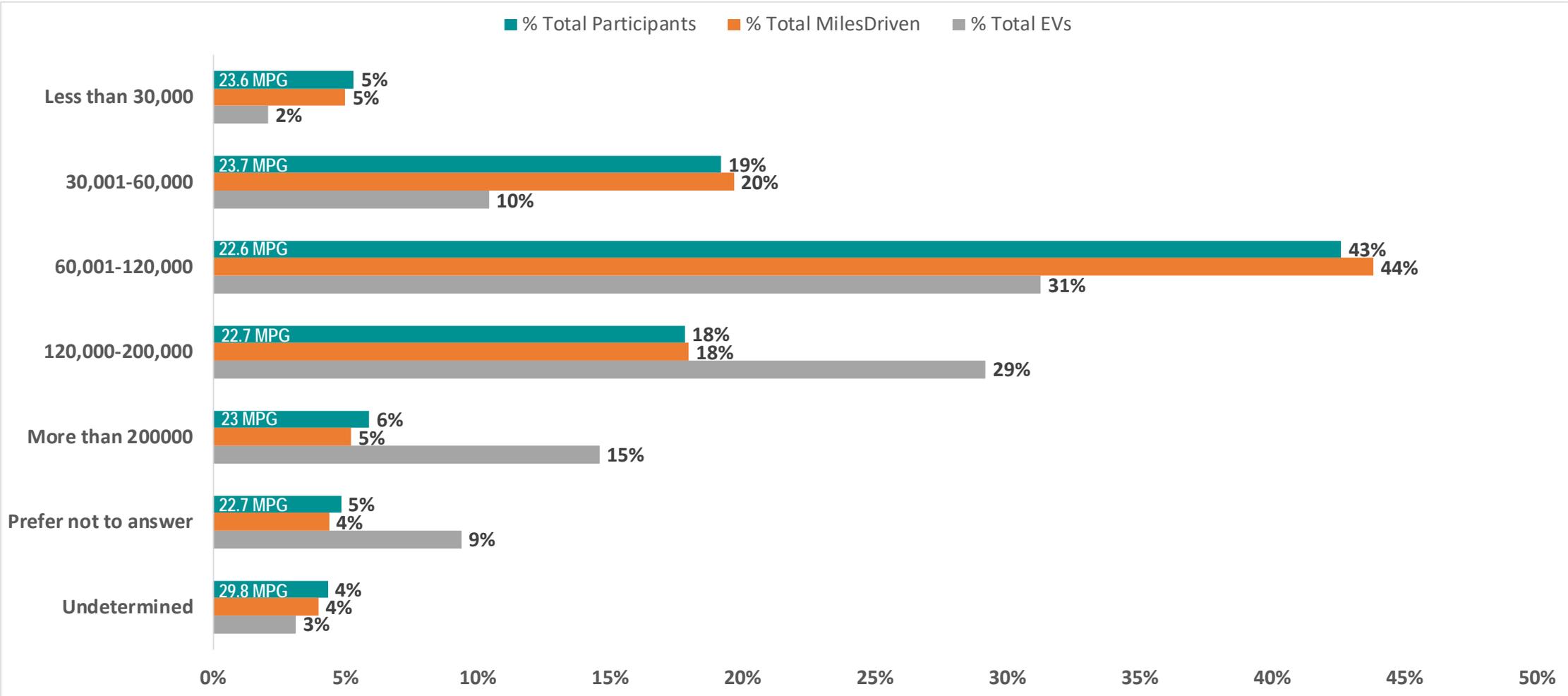
# PARTICIPANT VEHICLE ENROLLMENT OVERVIEW



# OVERVIEW OF VEHICLE PROPULSION TYPE

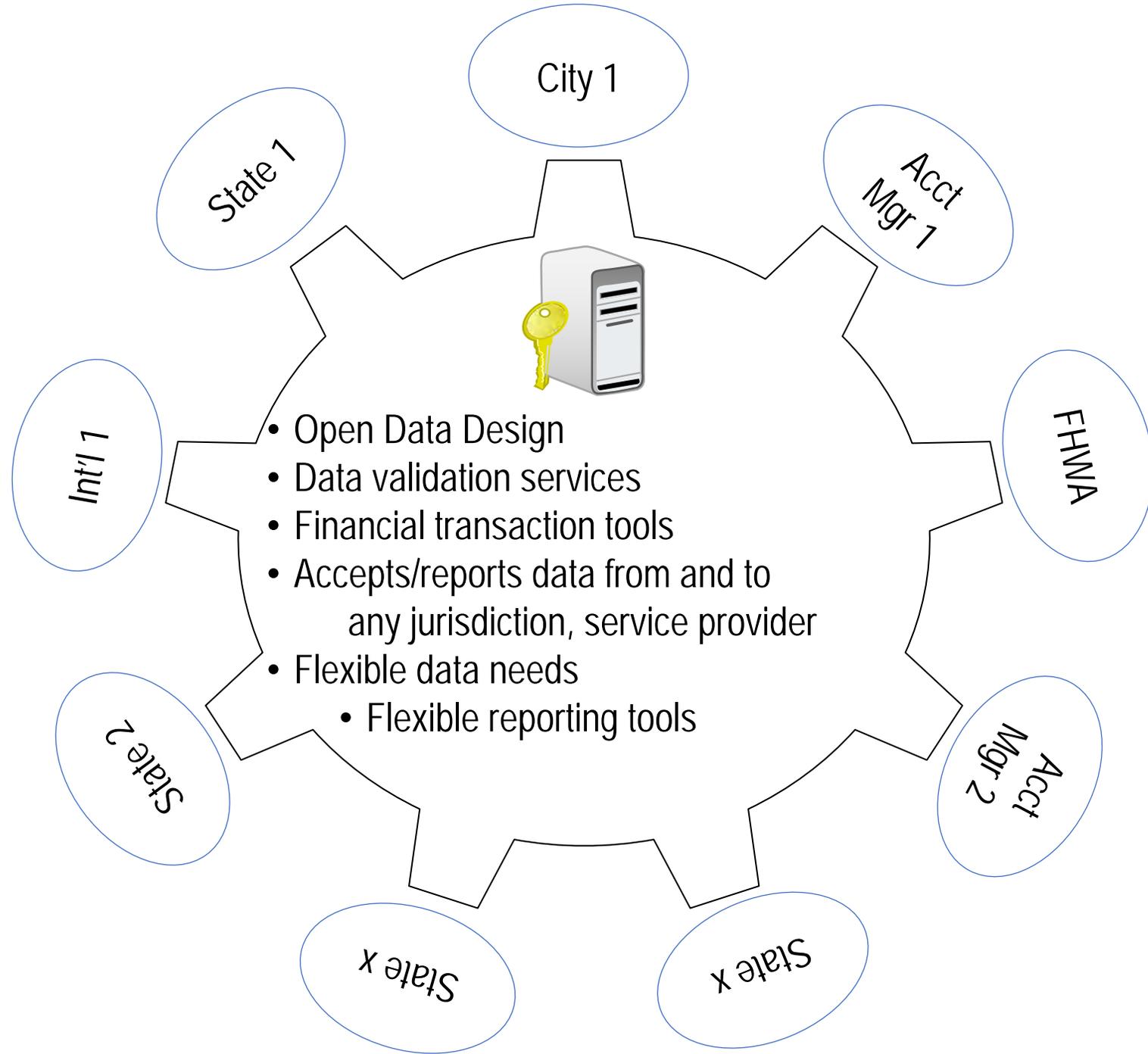


# DISTRIBUTION BY INCOME



# INTEROPERABILITY TEST WITH OTHER STATES

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## WA RUC HUB DESIGN FEATURES

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- Does not require bilateral agreements
- Is independent of Service Providers – can work with our without them
- Can perform selected data management functions, potentially reducing the state's administration costs
- Performs financial reconciliation of RUC among jurisdictions
- Calculates RUC due to/from jurisdictions
- Handles payments

# FINANCIAL RECONCILIATION BETWEEN OREGON AND WASHINGTON

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- Small number of both OReGO (~90) and Washington (~25) volunteers paid both Washington and Oregon RUC in the pilot
- To be eligible, participants had to use a plug-in device with GPS
- This small subset of pilot participants was seeded with project funds, so there was no out-of-pocket costs; participants paid funds paid back to the project through monthly invoices

EXAMPLE  
INVOICE:  
PARTICIPANT  
WHO DROVE IN  
(AND WAS  
CHARGED FOR)  
TRAVEL IN WA,  
OR AND BC

<b>7/2/18</b> Invoice date	<b>6/1/18 - 6/30/18</b> Invoice period	<b>INVO</b> Invoice number
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 Nissan

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	286.1	3.8	0.017	4.86	13.79	0.340	(4.70)	0.16
All other miles	48.8	0.0	0.024	1.18	2.39	0.494	(1.16)	0.02
BC	154.6	8.5	0.000	0.00	9.75	0.000	0.00	0.00
WA	1,524.5	6.5	0.024	36.60	56.74	0.494	(27.95)	8.65

**8.83**

Total (\$)

## WHAT DID WE LEARN?

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- Flawless data reporting from Oregon to HUB due to extensive testing and mature operations
- Manual entry of Oregon data quarterly was simple, consumed little time, could be automated
- Updates needed to OReGO technical documentation to track rate tables for all jurisdictions, allow taxable miles outside Oregon
- HUB cannot hold Oregon funds more than 24 hours
- Errors in Washington data reporting due to a less mature system; real system requires more testing
- Next: RUC West will test a “data only” clearinghouse, with bilateral financial transactions

# OPTIONS FOR ADDRESSING OUT-OF-STATE DRIVERS IN A LIVE RUC SYSTEM

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## Near term options

- Keep the gas tax in place (no change)
- Allow out-of-state drivers from states with a RUC system to opt in to a multi-state system (similar to pilot approach)

## Additional options to consider in the future

- Require out-of-state drivers from states with a RUC system to participate
- Require all drivers from out of state to participate

# USING PRIVATE VEHICLE LICENSING OFFICES TO SUPPORT RUC

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## OBJECTIVE AND BACKGROUND

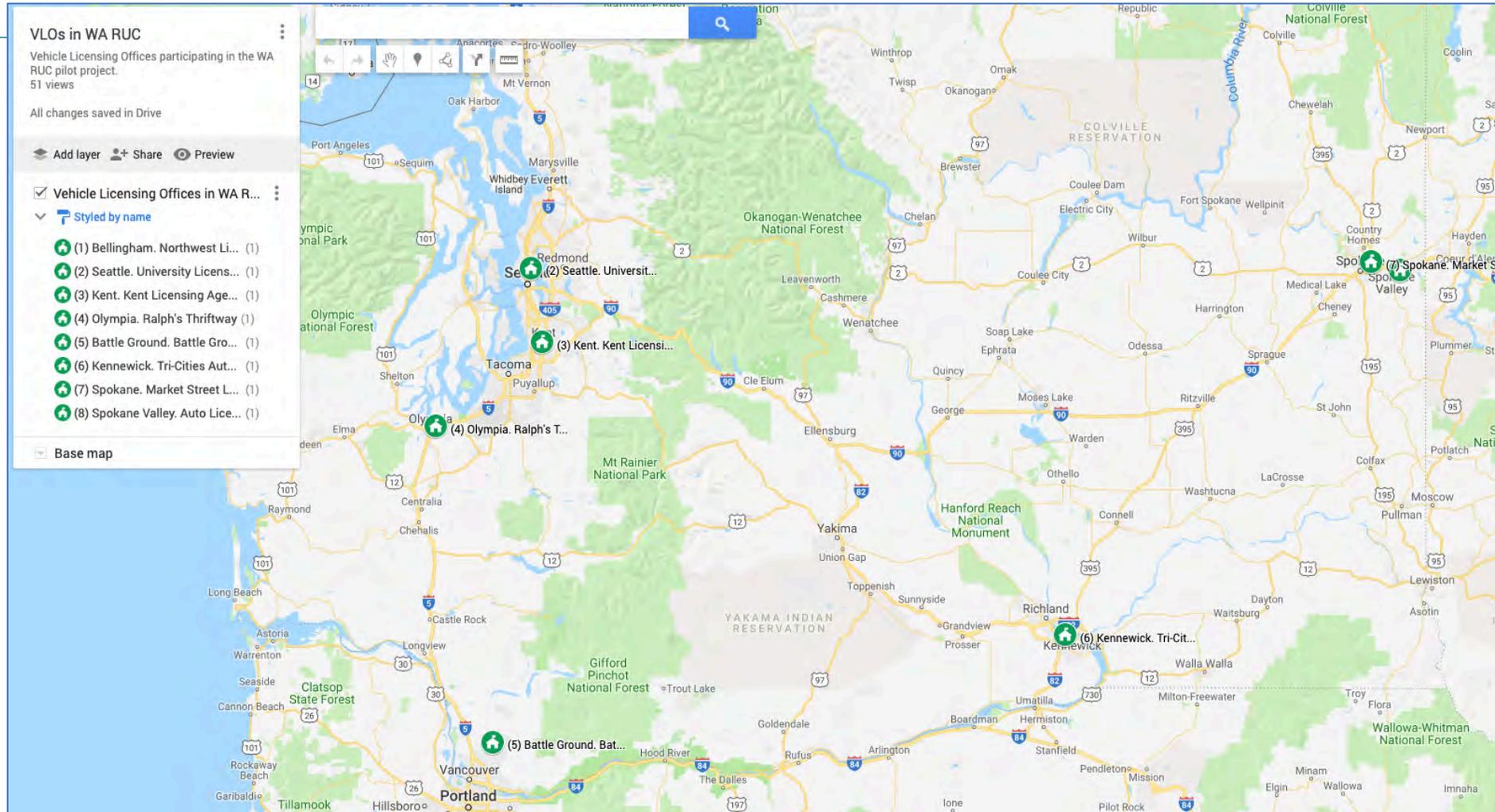
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- A key objective of the WA RUC Pilot Project

*Develop and pilot a mileage reporting method for those that do not have a mobile device with a camera or prefer not to use their personal mobile device for privacy reasons*

- DOL helped establish contact with VLOs to provide service to walk-in participants that needed to report their mileage
- Eight Vehicle Licensing offices agreed to participate following a recruitment campaign.

# EIGHT PARTICIPATING VEHICLE LICENSING OFFICES



## KEY RESULTS OF VEHICLE LICENSING OFFICE SURVEYS

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- Most VLO reps (21 of 23) felt comfortable assisting participants and answering their questions
- Method of using the MVerity App for taking and uploading pictures worked well for most VLO reps with one interesting comment:
  - “Sometimes the software works and sometimes it doesn't, usually we have to restart the phone in order to have the app work again but even sometimes that doesn't work. I'd like to see a more reliable app produced or this one have its bugs worked out.”*
- Several VLO reps provided ideas on to improve the Participant experience when they visit a VLO:
  - “Would be nice if customers could take the pictures on their phone.”*
  - “Having the customer enter a phone number and the app should pull up their information rather than have them enter all their information every time.”*

## KEY RESULTS OF VEHICLE LICENSING OFFICE SURVEYS

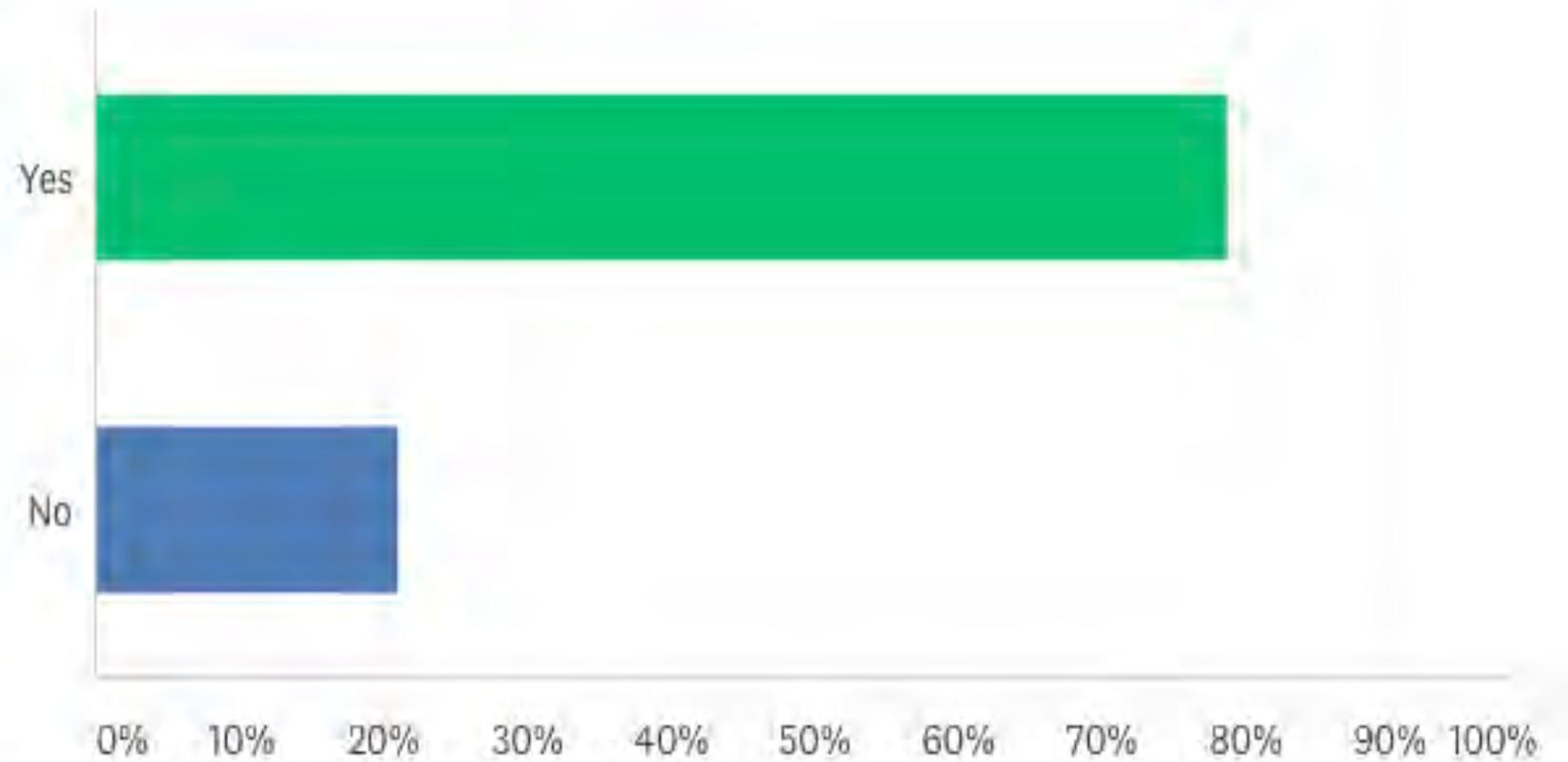
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- Method of using MVerity App for taking and uploading pictures worked well. Comments:
  - "Maybe when you take the picture the app auto fills the mileage."*
  - "But the camera would not work sometimes. Took awhile to load sometimes."*
  - "iPhone worked about 70% of the time."*
- Hypothetical question about a future system with VLO support for submitting odometer readings:
  - > 18 of 19 VLO reps believe that this would be of interest to their business

## KEY RESULTS OF VEHICLE LICENSING OFFICE SURVEYS

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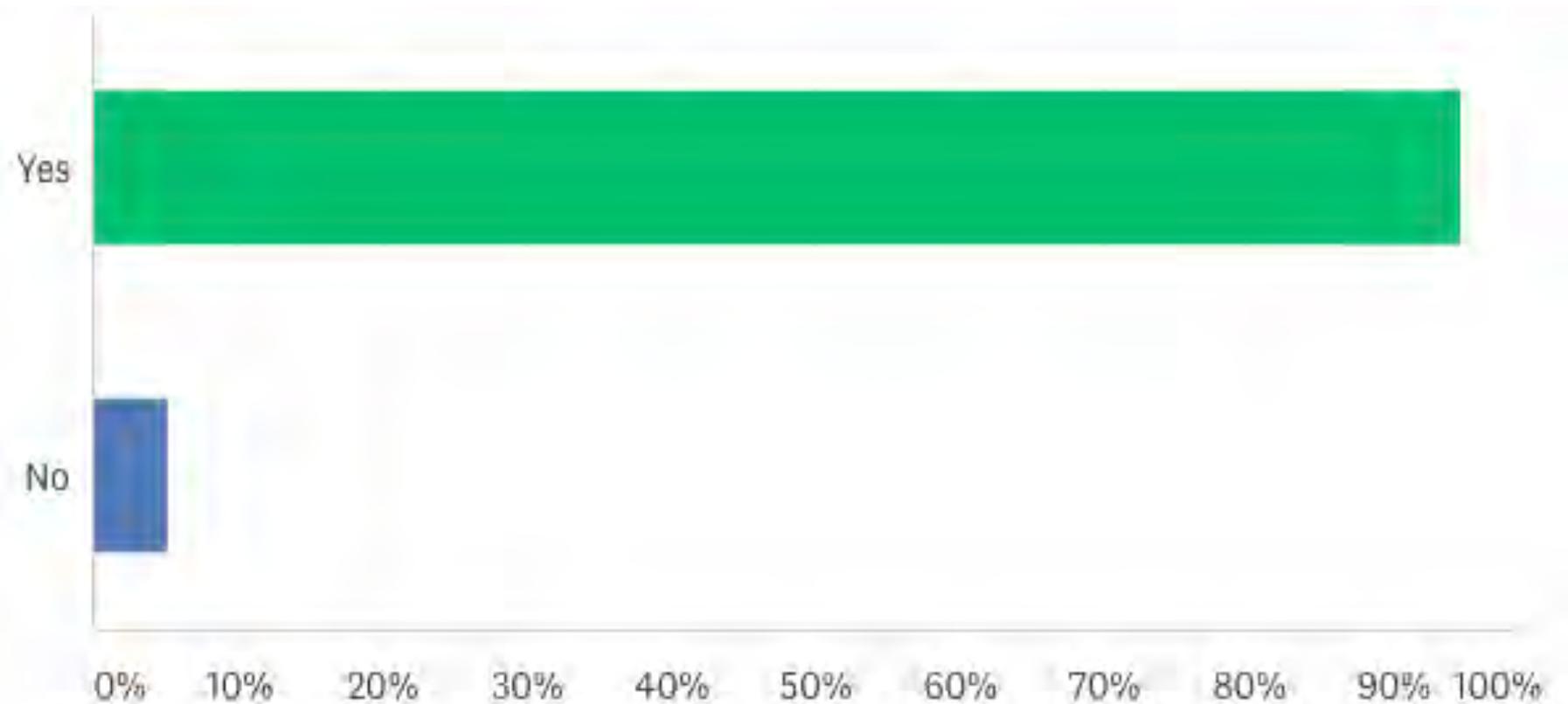
Based on your experience providing services at \$5 per transaction, do you think this is a fair fixed fee per transaction in comparison to other vehicle licensing fees?



## KEY RESULTS OF VEHICLE LICENSING OFFICE SURVEYS

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If a future system included VLO support for submitting odometer readings as an additional source of work and revenue, do you think your VLO would be interested?



# OTHER “QUICK TAKES” FROM PILOT SYSTEM OPERATIONS

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## WA RUC SYSTEM “QUICK-TAKES” FROM THE PILOT

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- The WA RUC system was able to accommodate multiple (5) mileage reporting methods, including a “staggered” start – which is what would likely happen in a real RUC system.
- The level of mileage reporting compliance was on average higher for automated methods than for the manual methods, which required the driver to intervene periodically to report miles.
- **Only 6% of the 2,033** participants switched mileage reporting methods during the pilot, and **only 1%** decided to switch their private Service Provider (who manages their RUC account).
- Private firms successfully carried out all system requirements, which would allow the state to maintain only a thin administrative layer at the government level.
- The WA RUC multi-jurisdictional interoperability HUB demonstrated how the WA RUC system can report miles and move funds across jurisdictions seamlessly.

## WA RUC SYSTEM “QUICK-TAKES” FROM THE PILOT

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- Keeping the gas tax in place during a transitional period has **operational advantages**:
  - Provides an easy way to collect from out-of-state drivers
  - Serves as “pre-payment” for any RUC owed at the end of the reporting period, allowing drivers’ total RUC balance due to be much lower than without “pre-payment”
- The average vehicle MPG in Washington during the WA RUC Assessment period increased from a fleetwide average of 20.5 MPG (2014) to an average of 23.1 MPG among WA RUC pilot participants (2018). This **12.6% increase in fleet MPG** does *not include* the effects of fully-electric vehicles.
- Fully-electric vehicles **drove 31% less** than gas-powered vehicles, while plug-in hybrid electric vehicles **drove 18% less**. This implies that under a RUC system, EV drivers would pay less than under a flat-fee system based on the average amount paid by gas vehicles.

# SUMMARY OF KEY RUC ISSUES

- Legal, Operational, Policy, and Fiscal
- Identification of issues for further examination by WSTC at October 2019 meeting

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Project Manager  
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# STEERING COMMITTEE'S CONSIDERATION OF KEY ISSUES

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## Before the pilot:

- ✓ [O] How to operationalize the RUC mileage reporting approaches
- ✓ [O] Whether and how to charge out-of-state drivers
- ✓ [P] Exemption from RUC charges
- ✓ [P] Refunds of RUC charges

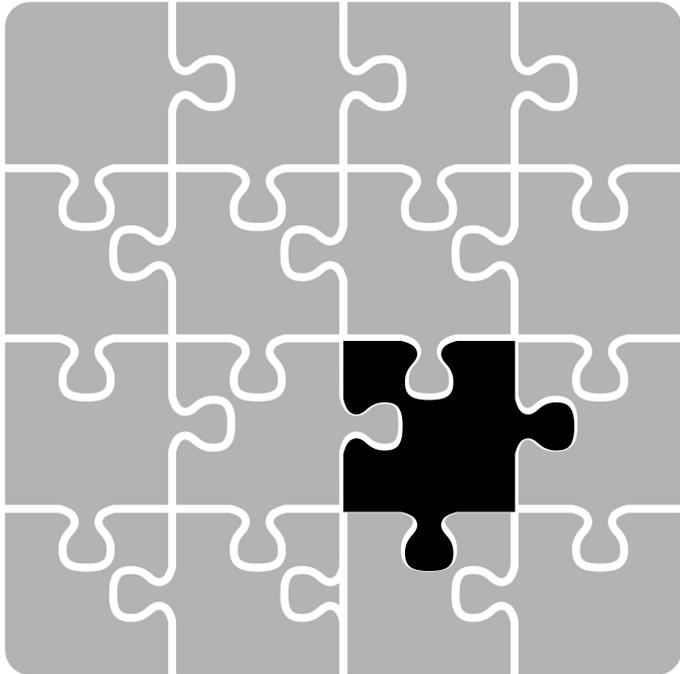
## Anytime:

- ✓ [O] RUC compatibility with tolls
- ✓ [L] Commerce Clause impacts on RUC
- ✓ [L] 18th Amendment impacts on RUC
- ✓ Per-mile rate setting
- ✓ [L] Motor fuel tax bond requirements
- ✓ [P] Permanent exemptions from RUC
- ✓ [P] Use or dedication of RUC revenue
- ✓ [F] Rate-setting basis for time-based permit
- ✓ [O] Interoperability of RUC with other states

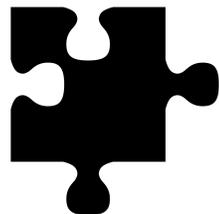
## After the pilot:

- ✓ [P] Whether and how best to use private sector service providers
- ✓ [P] Drivers' reaction to the proposed RUC system
- ✓ [P] Public understanding and acceptance of a RUC system
- ✓ [O] State IT needs to support RUC
- ✓ [O] Institutional roles in implementing a RUC system
- [F] **Transition strategy: which vehicles would pay RUC, how, and when**

# ISSUES WITHIN CONTEXT: WHAT WOULD THE LEGISLATURE NEED IF IT DECIDES TO MOVE AHEAD?



Each of the 18 issues (and more) have a unique place within this RUC framework

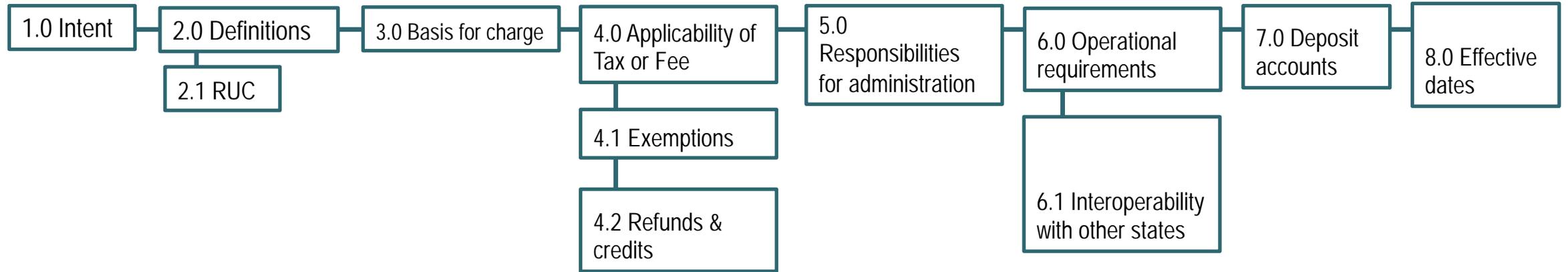


## Framework for an (imaginary) RUC authorization requires:

- Legislative Intent
- Definitions
- Tax basis (what is taxed)
- Applicability of tax (who is taxed)
- Exemptions (who is not taxed)
- Refunds and credits
- Responsibilities for tax collection
- Operational requirements
- Interoperability with other states
- Deposit accounts (effects uses)
- Effective dates
- Report-back requirements

# CONTEXT FOR STEERING COMMITTEE'S FINDINGS & DECISIONS

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# INTENT



Does the legislature **intend** RUC revenues to be used exclusively for highway purposes?

- *18<sup>th</sup> Amendment effects on RUC*
- *Uses of revenues from RUC*

Does the legislature **intend** that RUC eventually replace the gas tax over a period of time?

- *Transition strategy*

# INTENT



- ✓ The Steering Committee has conducted the pilot project and analysis consistent with the legislative direction requiring that RUC be implemented as a full replacement for the gas tax.
- ✓ RUC must be structured and administered consistent with the Washington state Constitution in order to carry forward the same legal and fiscal attributes as the gas tax. The effect of this structuring is that the revenue would be restricted for highway purposes.
- ✓ Due to legal restrictions and financial constraints, RUC would need to be implemented gradually, over a period of time to ensure that sufficient gas tax revenues exist at all times to repay all outstanding Motor Vehicle Fuel Tax (gas tax) bonds.



# DEFINITION OF RUC



- ✓ A road usage charge (RUC) is a variable-rate vehicle license fee (VLF).
- ✓ If implemented consistent with the legislative direction for the pilot project, RUC would be imposed as a revenue intended to be used solely for highway purposes, consistent with Amendment 18.

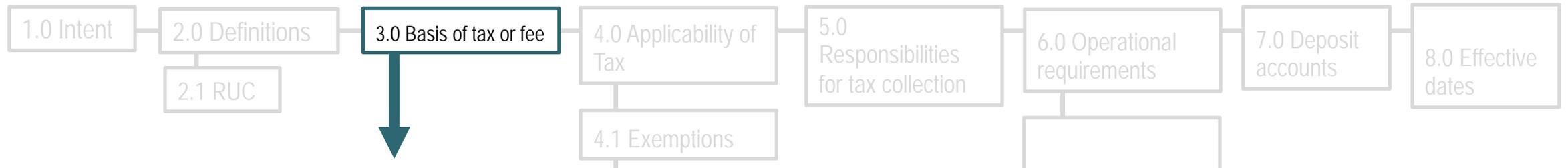
# BASIS OF THE TAX OR FEE



Will the tax be assessed for each exact mile driven, or applied to mileage “brackets”?

- *Driver reaction to the proposed RUC system*
- *Rate-setting in a RUC system*
- *Rate-setting basis for time-base permit*

# BASIS OF THE TAX OR FEE



- ✓ A Road Usage Charge (RUC) varies based on the number of vehicle miles driven on taxable roadways.
- ✓ The fee is based on a cents-per-mile rate that would be set and adjusted by the Legislature.
- ✓ Other rate factors are possible: vehicle weight, MPR (or MPGe) rating, emissions rating, etc. However, the Steering Committee has not decided whether any of these additional factors should be applied to set the per-mile rate.
- ✓ The Steering Committee has not considered whether a mileage “bracket” system should be employed to charge RUC
- ✓ The Steering Committee believes that a RUC system must also include at least one option to pay for road use without reporting any mileage information. This means a Time Permit should be offered (a high flat annual fee to drive unlimited miles during the period – month, quarter or year).

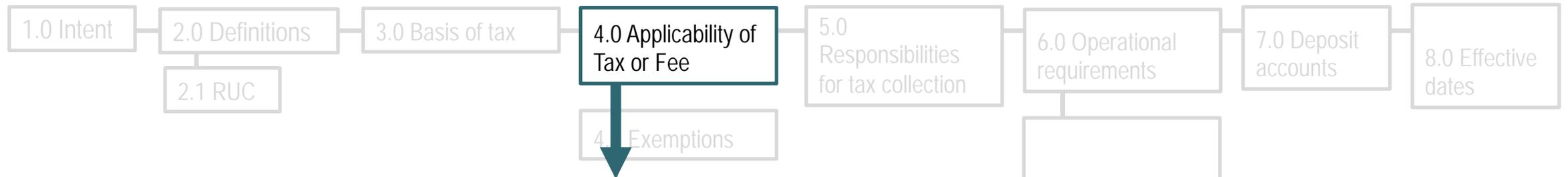
# APPLICABILITY OF TAX



Who will be required to pay RUC?

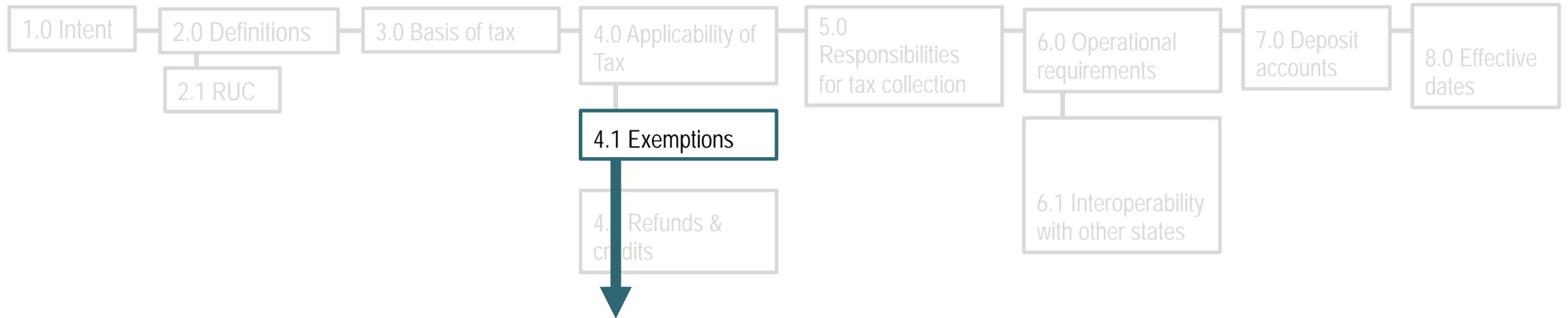
- *Vehicles subject to RUC*
- *Transition strategy*
- *Out-of-state drivers*
- *Interstate Commerce Clause considerations*

# APPLICABILITY OF TAX OR FEE



- ✓ Steering Committee work reflects legislative assumption that RUC is intended only for light duty passenger vehicles; heavier trucks (commercial vehicles) would not be subject to RUC.
- ✓ Only vehicles registered in Washington are potentially subject to RUC during a transition period.
- ✓ During a transition period, out-of-state vehicles would continue to pay Washington's gas tax in lieu of RUC
- ✓ An interoperable RUC system as demonstrated in Washington would allow out-of-state vehicles paying RUC in their home state to opt in to pay Washington's RUC instead of the gas tax.
- ✓ Decisions about the specific class of Washington-registered vehicles that would pay RUC will be considered by the Steering Committee in September 2019).

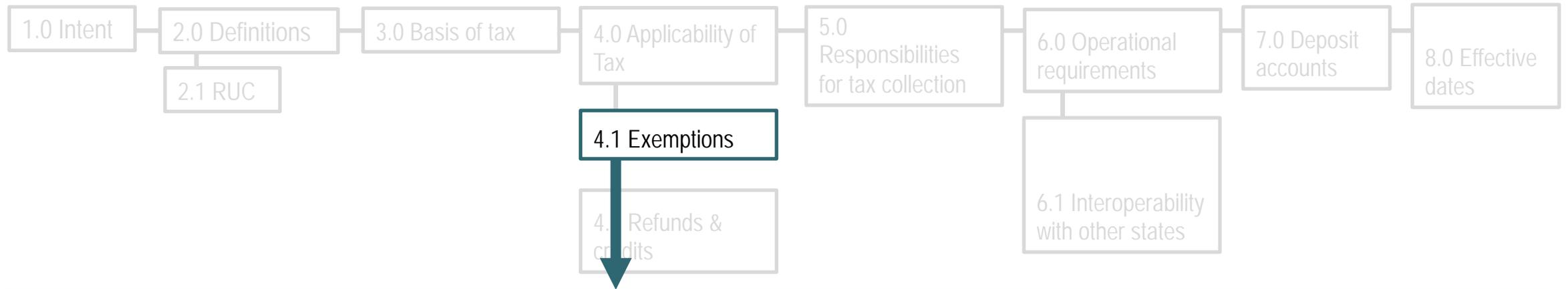
# EXEMPTIONS



Who will be exempt from RUC?

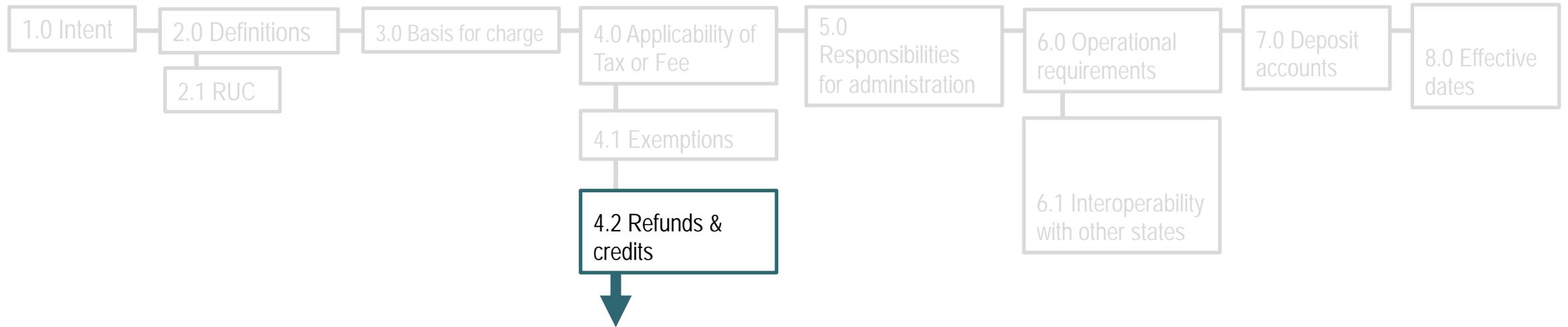
- *Permanent exemptions from RUC*
- *Out-of-state drivers*
- *Transition strategy*

# EXEMPTIONS



- ✓ The Steering Committee assumes that all vehicles currently exempt from paying the state gas tax would continue to be exempt from paying RUC

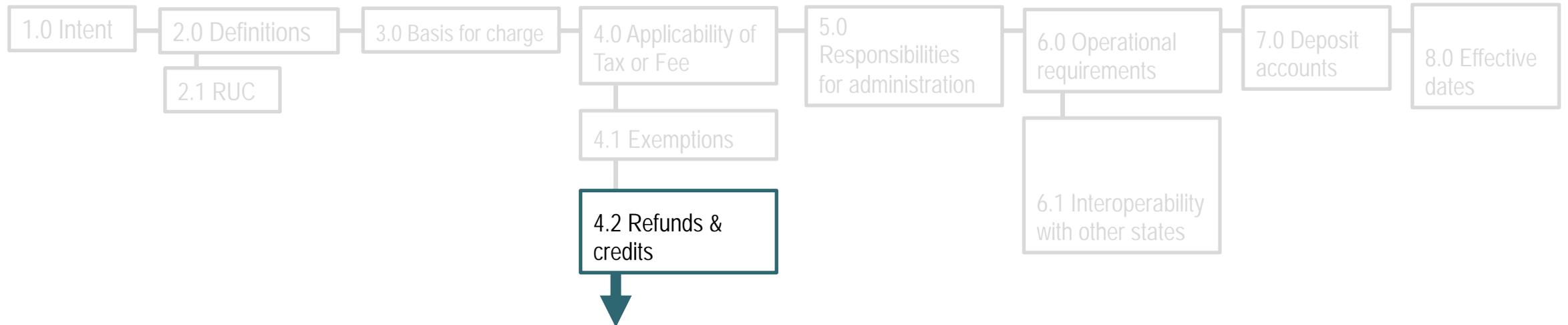
# REFUNDS AND CREDITS



Who will be entitled to refunds and credits?

- *Transition strategy – September 2019*
- *Impact of Commerce Clause on RUC system*

# REFUNDS AND CREDITS



- ✓ During a transitional period from the gas tax, the Steering Committee finds that current state policies allowing refunds of gas taxes for non-highway use should be extended to RUC.
- ✓ Once a transition to RUC is complete and the gas tax is fully repealed, allowing a distribution of RUC revenue to programs that were originally created to provide funds for non-highway programs should be reconsidered.
- ✓ Vehicles subject to RUC should be credited for any amounts already paid in gas taxes

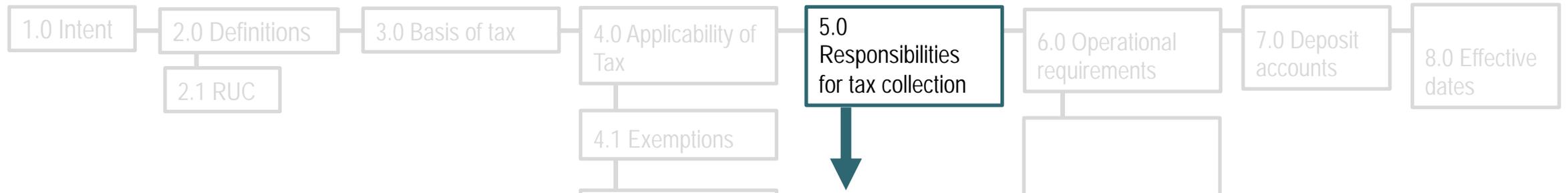
# ADMINISTRATIVE RESPONSIBILITIES



How would a RUC system be administered?

- *Institutional roles in implementing any future RUC system*
- *State information technology needs*
- *Use of private sector account managers*

# ADMINISTRATIVE RESPONSIBILITIES



- ✓ A new state agency is not required to implement RUC. All functions can be carried out by existing agencies with some support from private vendors. DOL is best suited to implement and operate RUC.
- ✓ Private sector firms can help minimize technology delivery risk and more affordably provide select services in a RUC program, particularly related to mileage reporting.
- ✓ Private Vehicle Licensing Offices (subagents) and similar small businesses should be considered for providing walk-in service to vehicle owners needing to report mileage or pay RUC.
- ✓ Continue independent evaluation of RUC through WSTC, to support policy and performance advice to the Legislature

# OPERATIONAL REQUIREMENTS



What are the basic RUC system requirements?

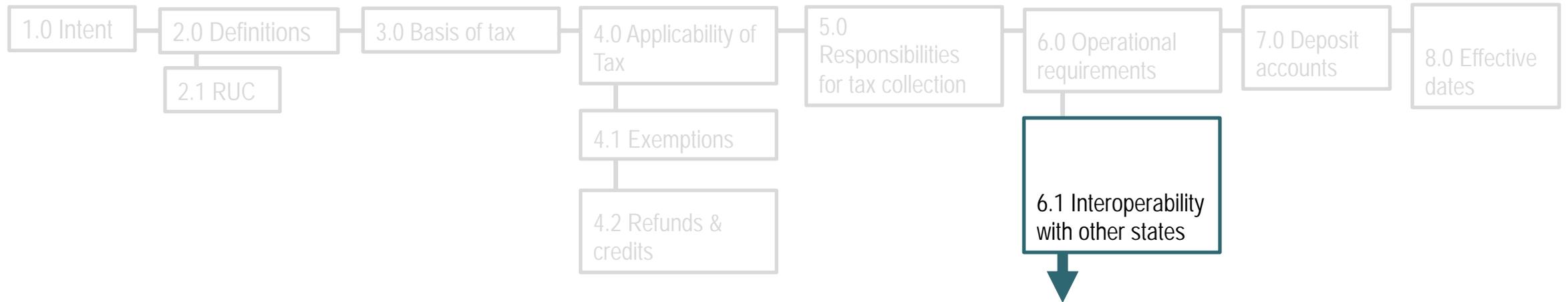
- *How to operationalize the RUC mileage reporting approaches*
- *Model privacy policy for RUC in Washington*
- *State IT needs*
- *RUC compatibility with GoodToGo toll system*

# OPERATIONAL REQUIREMENTS



- ✓ Offering drivers a choice among multiple mileage reporting options is critical. At least one option must allow the ability for out-of-state miles to be deducted, and at least one option must be a Time Permit (unlimited mileage for a higher flat fee).
- ✓ Privacy protections appeared to work well in the pilot. Privacy protections specific to RUC should be enacted, particularly related to use of location-related information.
- ✓ “Value-added” services must be completely optional, and this choice better communicated to drivers. Better user controls are needed over apps or devices that offer these features.
- ✓ RUC and tolling should remain separate systems, just as the gas tax and tolling are separate. Coordination between the programs is needed to ensure best levels of customer service for each.

# INTEROPERABILITY WITH OTHER STATES

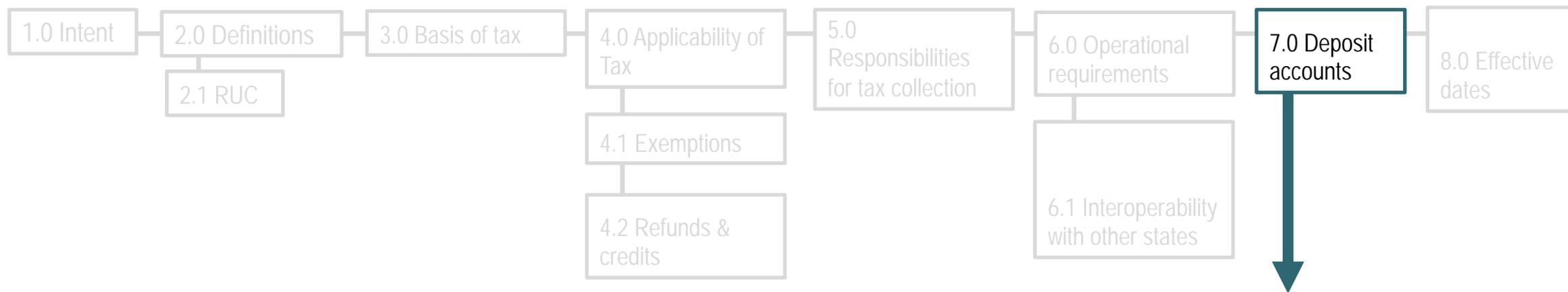


How will RUC be applied to cross-state travel?

- *Whether and how to charge out-of-state drivers*
- *Interoperability with other states*
- *Interstate Commerce Clause requirements*



# DEPOSIT ACCOUNTS (HOW MONEY WILL BE SPENT)



Where should the proceeds of RUC be deposited?

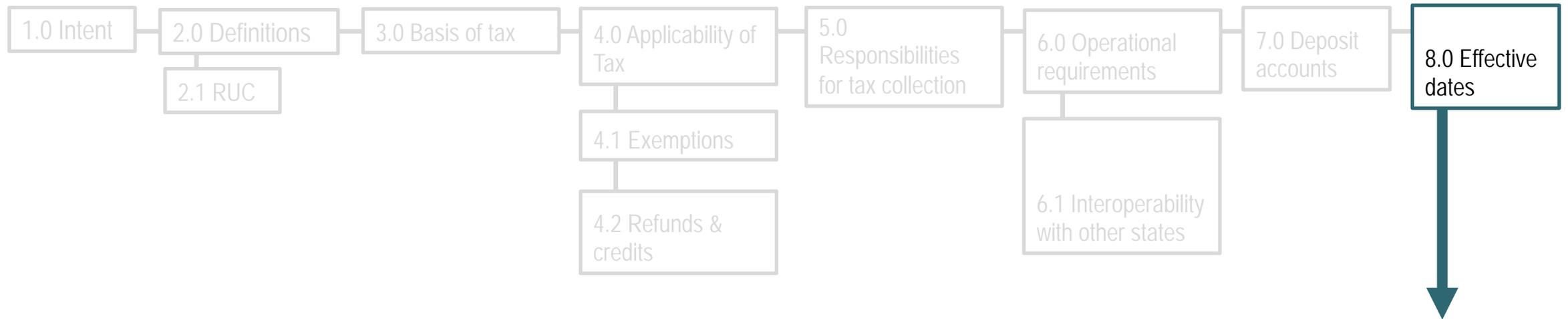
- *18<sup>th</sup> Amendment restrictions on RUC*
- *Use or dedication of RUC revenue*
- *Motor fuel tax bond requirements*
- *Public understanding and acceptance of the proposed system*

## DEPOSIT ACCOUNTS (HOW MONEY WILL BE SPENT)



- ✓ If RUC is structured to retain the characteristics of the gas tax, the revenues must be deposited into the Motor Vehicle Fund (restricted to highway uses).
- ✓ Additionally, RUC must be structured to reflect current law, where a portion of the revenue collected from PEV drivers is deposited into the Electric Vehicle account that provides alternative fuel vehicle purchase incentives and fueling infrastructure.
- ✓ During a transitional period, gas tax revenues attributable to off-road vehicle use should continue to be deposited into accounts that support boating and other outdoor recreation programs.

# EFFECTIVE DATES



When (or in what stages) could RUC take effect?

- *Public understanding and acceptance of the proposed system*
- *Transition strategy – vehicles subject to paying RUC*
- *Motor fuel tax bond requirements*
- *State IT needs*

# EFFECTIVE DATES



□ **The Steering Committee will consider this issue in September** to decide over what time period RUC could be implemented. Results from the financial modeling will inform their deliberations.

## Example of factors that will be considered:

- There must be a transition period of 10 to 25 years where the gas tax and RUC would each be collected (although vehicles subject to RUC would only owe RUC).
- The rate of change in fleet MPG must be taken into account, as this will continue to depress gas tax collections for the state.
- RUC advancements in other states, nationally and within private industry may also affect when RUC could be uniformly implanted.

# SCENARIOS TO BE MODELED FOR RUC TRANSITION OPTIONS

# REFRESHING THE FINANCIAL MODEL AND BUSINESS CASE ANALYSIS

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Identify a range of options for the type, number, and timing of vehicles that would transition to RUC.

- **June 27:** Steering Committee reviewed options for the initial start-up phase of RUC – (the number and type of vehicles).
  - **July 22- August 30:** Project team conducts financial modeling of these various options over the next 5 weeks. The range of options identified by the SC will be modeled in a Business Case Analysis (estimating gross revenue, costs, and net revenue over time)
1. **September 10:** Steering Committee examines the results; suggests any changes to the start-up scenarios; and considers the analysis in making any RUC transition findings

# STARTING ASSUMPTIONS

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- Maintain a system where the gas tax remains in place. Vehicle owners would owe either RUC or the gas tax (but not both)
- Focus on a phased transition to RUC, as opposed to rapid fleet-wide deployment for all light-duty vehicles
- Assume a RUC rate of 2.4 cents per mile, and fuel tax rate of 49.4 cents per gallon
- Run the financial model out to 2040
- Provide all cost assumptions (reporting options, payment frequencies, administrative responsibilities, etc.) along with results in September
- Assume a private sector service provider supports technology-based reporting options

## 3 BASE SCENARIOS WILL BE ANALYZED, PLUS VARIATIONS ON EACH (11 TOTAL OPTIONS)

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### Base Scenario 1: RUC based on propulsion technology

- **1A:** Mandatory RUC applied to all PEVs and hybrids in lieu of the portion of the flat fee that goes to the highway fund
- **1B:** Mandatory RUC applied to PEVs and hybrids, in lieu of the portion of the flat fee that goes to the highway fund (with the annual RUC total capped at the portion of the flat fee that goes to the highway fund)
- **1C:** RUC applied to PEVs and hybrids in lieu of the portion of the flat fee that goes to the highway fund, unless vehicle owner chooses to purchase a Time Permit (unlimited annual miles with rate set at equivalent to 90<sup>th</sup> percentile miles driven) (several per-mile rates to be modeled)

## 3 BASE SCENARIOS WILL BE ANALYZED, PLUS VARIATIONS ON EACH (11 TOTAL OPTIONS)

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### Base Scenario 2: RUC based on vehicle MPG (or MPGe)

- **2A:** RUC applied to all vehicles with 40 MPG or MPGe and above
- **2B:** RUC applied in phases to vehicles above 30 MPG based on a graduated MPG or MPGe basis. PEVs and hybrids pay RUC in CY 2022; 50+ MPG in 2023; 40+ MPG in 2024; etc.

## 3 BASE SCENARIOS WILL BE ANALYZED, PLUS VARIATIONS ON EACH (11 TOTAL OPTIONS)

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### Base Scenario 3: RUC based on Model Year

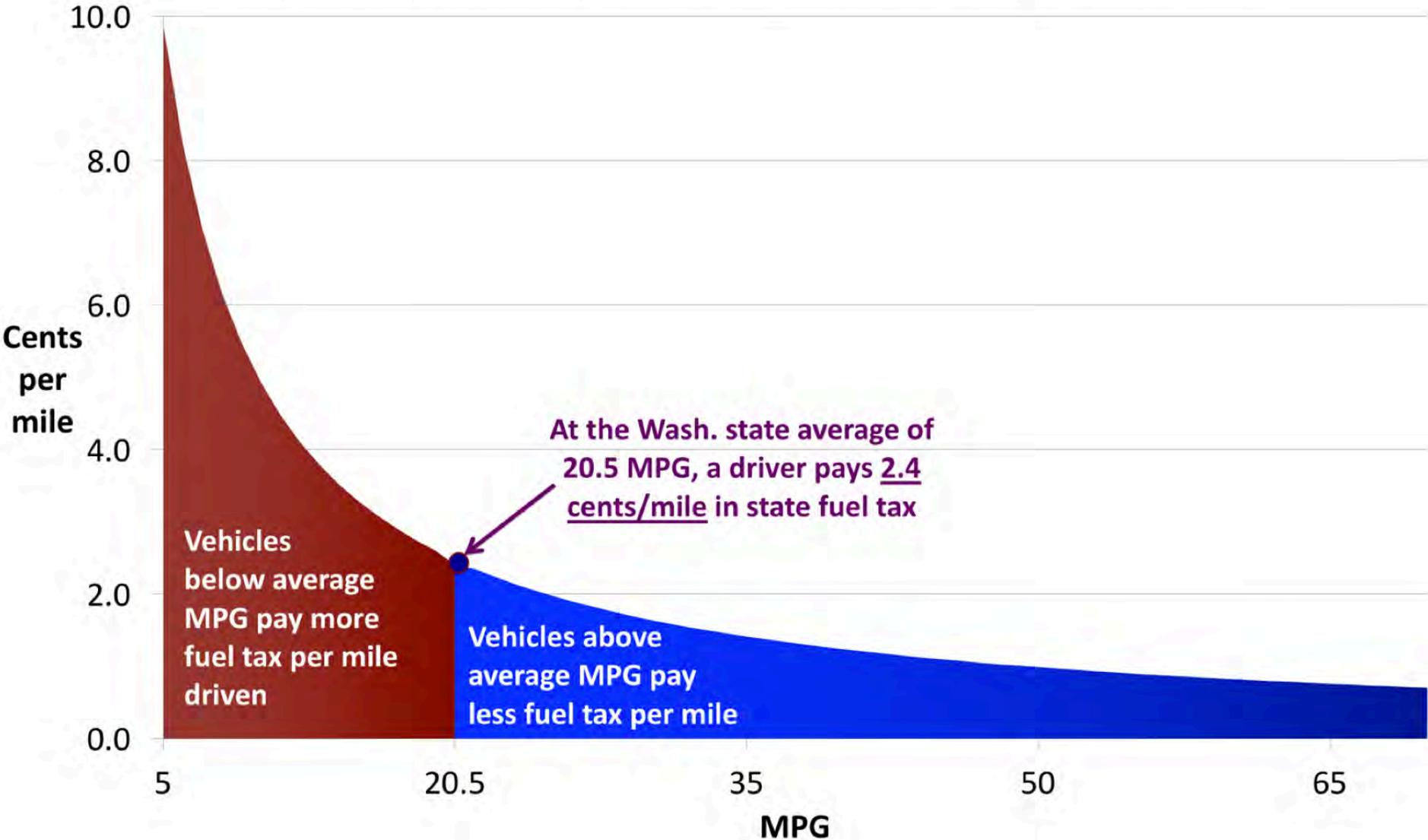
- **3A-C:** New PEVs and hybrids (Scenarios 1A-1C) beginning in CY 2022; all others pay PEV/hybrid fee in current law
- **3D-E:** New vehicles above MPG threshold (Scenarios 2A-B) beginning in CY 2022
- **3F:** All new vehicles beginning in CY 2022

## RATES TO BE MODELED

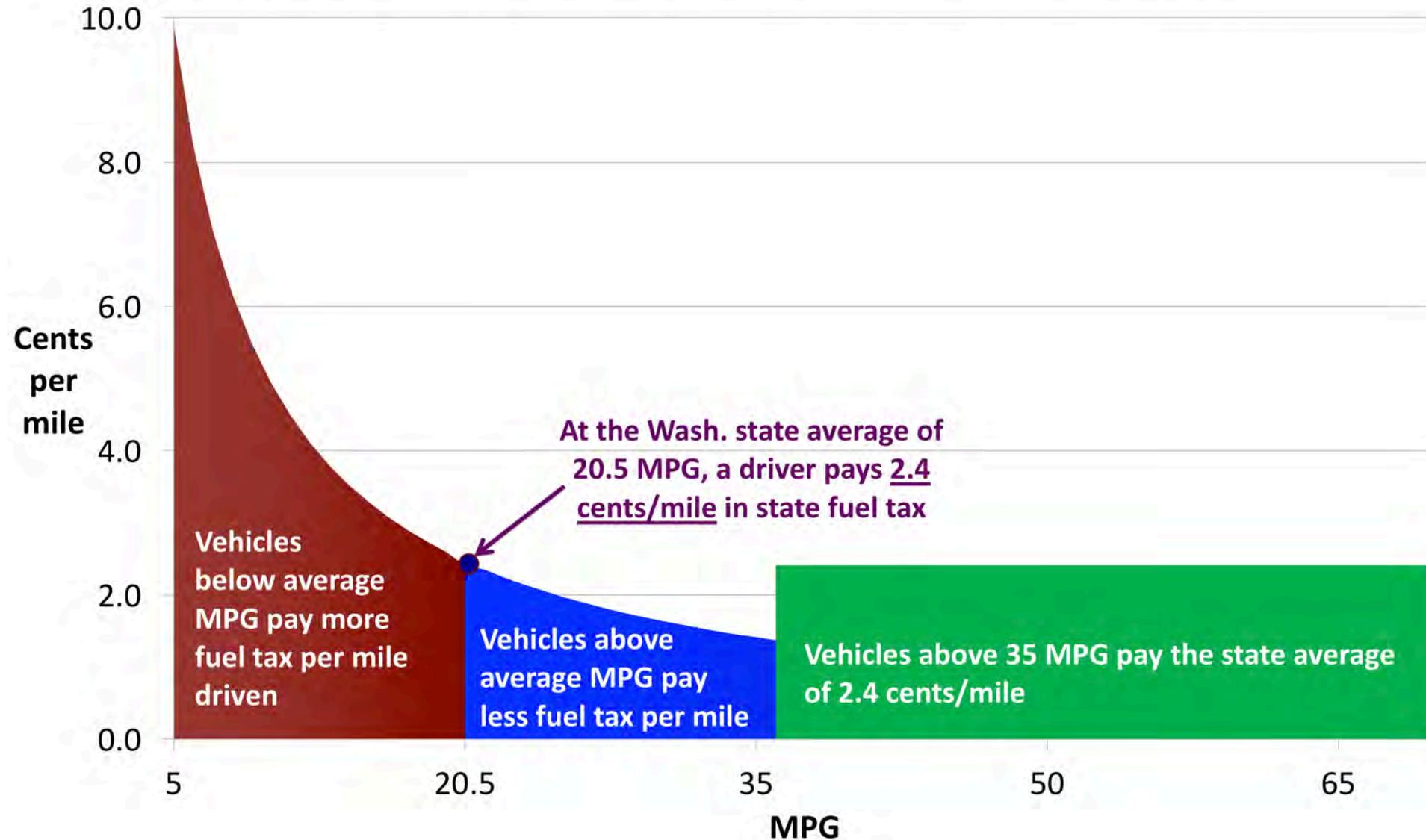
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- Will model a flat rate of 2.4 cents
- Will model rate glidepath based on MPG (e.g., vehicles subject to RUC pay same equivalent rate as highest most efficient gas car pays in gas tax per mile).

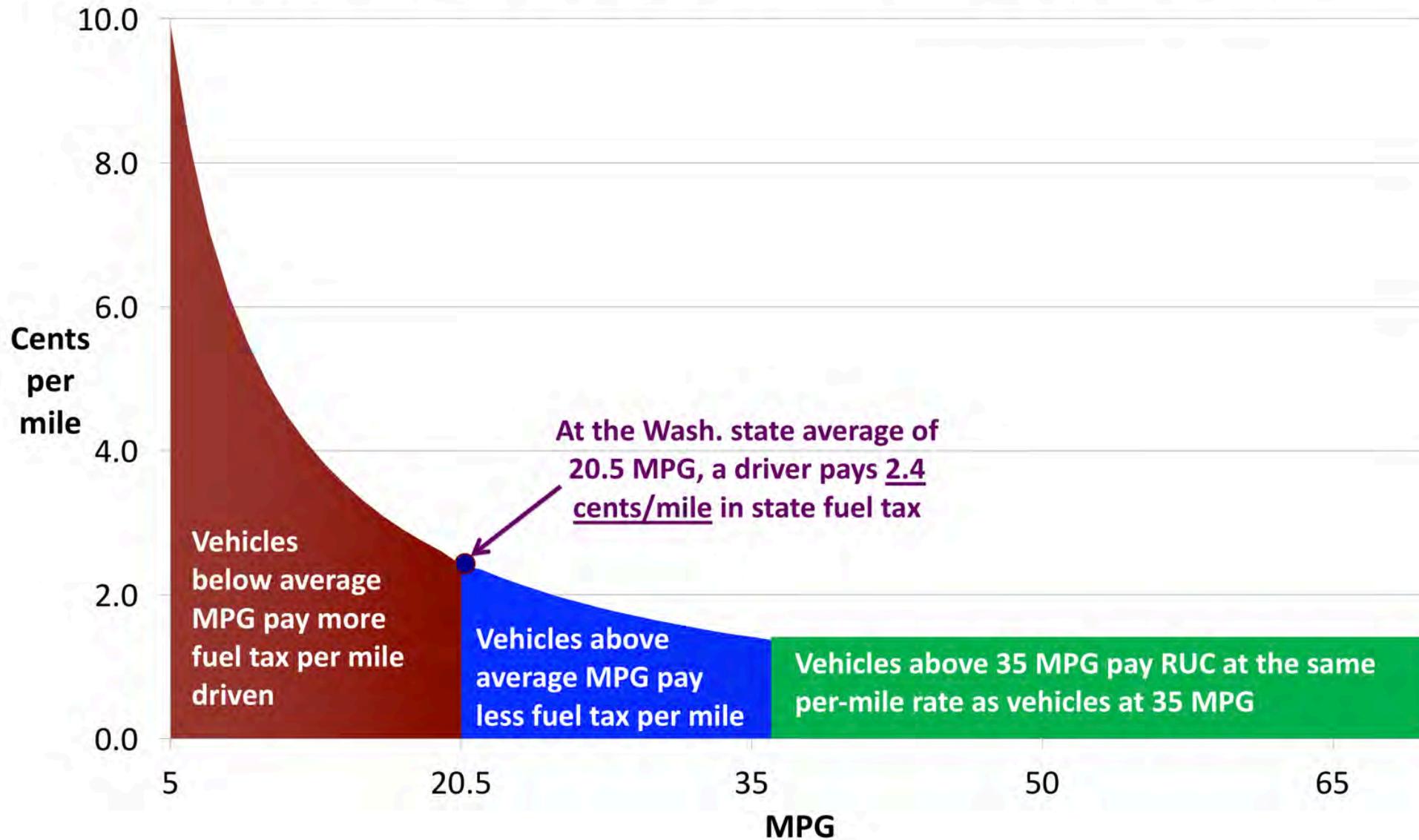
# Per-mile revenue from 49.4 cents/gallon fuel tax, by vehicle MPG



## Per-mile revenue from 49.4 cents/gallon fuel tax, by vehicle MPG



### Per-mile revenue from 49.4 cents/gallon fuel tax, by vehicle MPG



# THANK YOU!

Consultant support provided by:

