

WASHINGTON STATE ROAD USAGE CHARGE

BRIEFING BOOK

Steering Committee
Meeting #2
December 1, 2015



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INTRODUCTION

Briefing Book for SC Meeting #2

Purpose of This Briefing Book

This briefing book is provided to RUC Steering Committee members in preparation for the December 1, 2015 meeting. The reading materials within this document are aligned with the Agenda for the meeting and provide details on each of the topics to be reviewed and discussed.

During the meeting, slide presentations will provide a summary of each of these topics (but not repeat everything), so it will be helpful for members to have read the content of the briefing book prior to the meeting.

The project team encourages discussion of questions that may arise prior to or during the meeting.

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Overview of Briefing Book Contents

- ▶ **Section 1** contains a refresh of the business case analysis from last year, focusing on three questions posed by the Steering Committee: RUC cost of collection, scenarios for fuel tax revenue decline, and how fuel tax and RUC funding policy alternatives compare.
- ▶ **Section 2** provides an overview of the status of the Federal Transportation Authorization bill that is currently being worked on and possibly enacted by the end of 2015. Details are provided on both the Senate and House provisions for establishing a federal grant program to enable states or research institutions to test user-fee alternatives to the fuel tax on their own or with multiple states.
- ▶ **Section 3** contains a “Roadmap” that depicts the sequence of events for Washington in its consideration of road usage charges. Washington State’s progress and remaining steps are described in the text. Most attention is given to the recommended next steps for Washington, which build toward a demonstration project.
- ▶ **Section 4** revisits the proposal for a RUC demonstration from 2014 and provides a new perspective on the purpose and value of a demonstration: as a vehicle for the Steering Committee to gather, measure, and evaluate the pilot to determine whether a proposed RUC framework satisfies the goal of a sustainable, long-term revenue source for Washington State’s transportation system to transition from the current gas tax system. A framework for evaluating a demonstration can be developed by the Steering Committee’s based on its guiding principles.
- ▶ **Section 5** provides the suggested outline for the Steering Committee’s report to the Legislature on the work that has been accomplished in 2015, including the findings of the Steering Committee and recommendations for future work in both the short and medium terms (reflecting the Roadmap).

SECTION 1: REVISED BUSINESS CASE ANALYSIS

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The Business Case Analysis Addresses Three Steering Committee Questions

1. What is the cost to the state of collecting a road usage charge?
 - > Cost of collection varies depending on the operational concept offered by the state and chosen by the public. The Steering Committee is currently considering a time permit, odometer charge, smartphone charge, and automated distance charge.
 - > A road usage charge system fully operated by the state would have distinct (likely higher) costs from a system operated in part by commercial partners, because they may bear some costs on their own.
2. When does the buying power of fuel taxes go away?
 - > There is no single moment at which the buying power of fuel taxes “goes away.” Instead, there is an erosion of buying power over time unless fuel tax rates are increased to compensate.
 - > The steepness of the declining trend in fuel tax revenues depends on fuel economy improvements, fleet electrification, and other technological and economic factors.
3. What are the policy alternatives? The Steering Committee requested three illustrative alternatives for analysis, summarized below. Implications of each are explored in of this section.
 - > **Flat Fuel Tax** at 49.4 cents per gallon.
 - > **Index the Fuel Tax** in a way that reflects its historical trend of being increased periodically.
 - > **Washington RUCs** by transitioning to a distance-based user fee.

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Question 1: What is the Cost to the State of Collecting RUC?

Few benchmarks exist for the cost of collecting RUC from light vehicles. In past years, effort has focused on estimating bottom-up costs based on functions to be fulfilled in building a RUC system. Several considerations are important in estimating collection costs:

- ▶ One-time setup vs. ongoing annual operational costs are distinct:
 - > Setup costs vary by operational concept, transition approach, level of commercial partner involvement, and level of DOL effort required.
 - > Ongoing annual operational costs vary by operational concept, transition, and level of commercial partner involvement.
- ▶ Costs vary by operational concept. The Steering Committee has recommended four concepts for analysis:
 - > Time permit
 - > Odometer charge
 - > Smartphone distance charge
 - > Automated distance charge
- ▶ Costs also vary by transition strategy. The Steering Committee has considered several:
 - > Model Year (the focus of this analysis)
 - > Title transaction (a viable second option)
 - > Tab renewal (likely too fast)
- ▶ Experience suggests commercial partners can reduce costs. The Steering Committee has asked:
 - > Where and how does the private sector bring efficiency?
 - > What are the essential roles of the state in a scenario where commercial partners are involved?

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Two Approaches to RUC Cost of Collection

The ranges of potential costs to the state associated with RUC collection are projected for two approaches to implementing RUC:

- ▶ State of Washington Account Management: A state agency handles all four operational concepts.
- ▶ Commercial Account Management: Commercial partners handle the smartphone distance charge and automated distance charge operational concepts, while the state handles only the time permit and odometer charge operational concepts as well as program oversight.



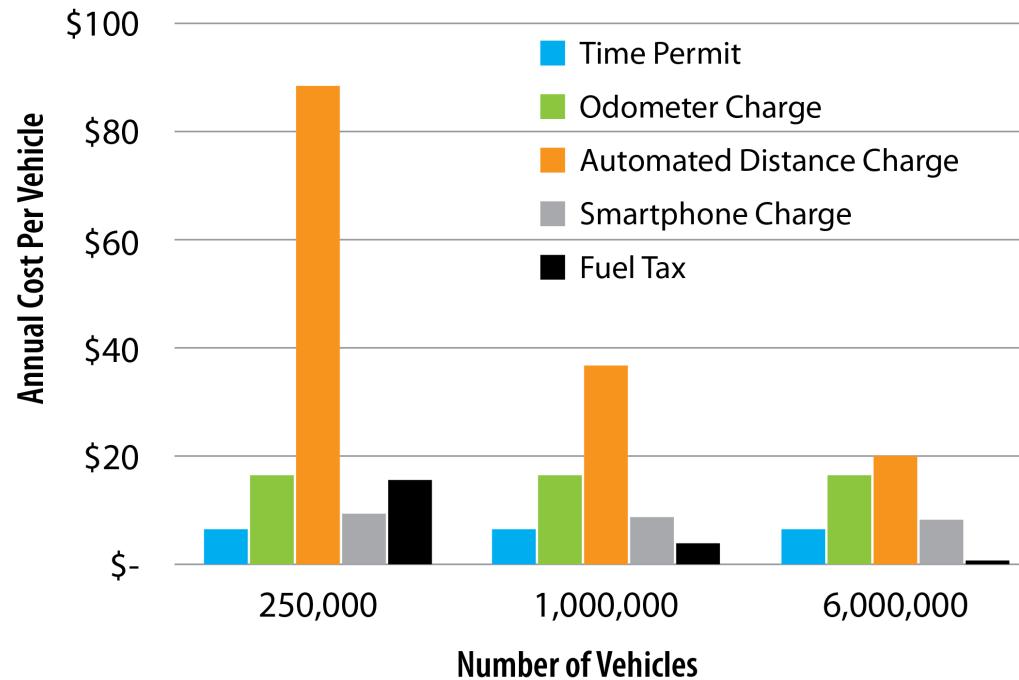
For each approach we provide annual ongoing operational costs to the state, assuming a start date of January 1, 2019 in which all Model Year (MY) 2019 and newer vehicles are subject to RUC. Ongoing annual costs to the state reflect growth in volume based on new vehicles (MY 2019 and newer) enrolling in the RUC system. Older vehicles remain on the fuel tax.

In order to facilitate comparisons, we also demonstrate the annual cost of fuel tax collection on a per-vehicle basis.

Approach #1: State of Washington Account Management

Figure 1 illustrates the annual cost to the state of collecting RUC per vehicle, assuming the state manages all accounts. The costs vary by operational concept, with the automated distance charge being the costliest in the short term; however, technology acquisition and utilization costs decline with volume. The time permit and odometer charge concepts do not vary much with volume, since most of the costs associated with these concepts are associated with labor and financial transactions, which do not decline with scale. Overall program management costs are also factored into the cost per operational concept; under this approach these costs are driven by enforcement.

Figure 1: Ongoing annual cost to the state per vehicle, assuming state manages accounts

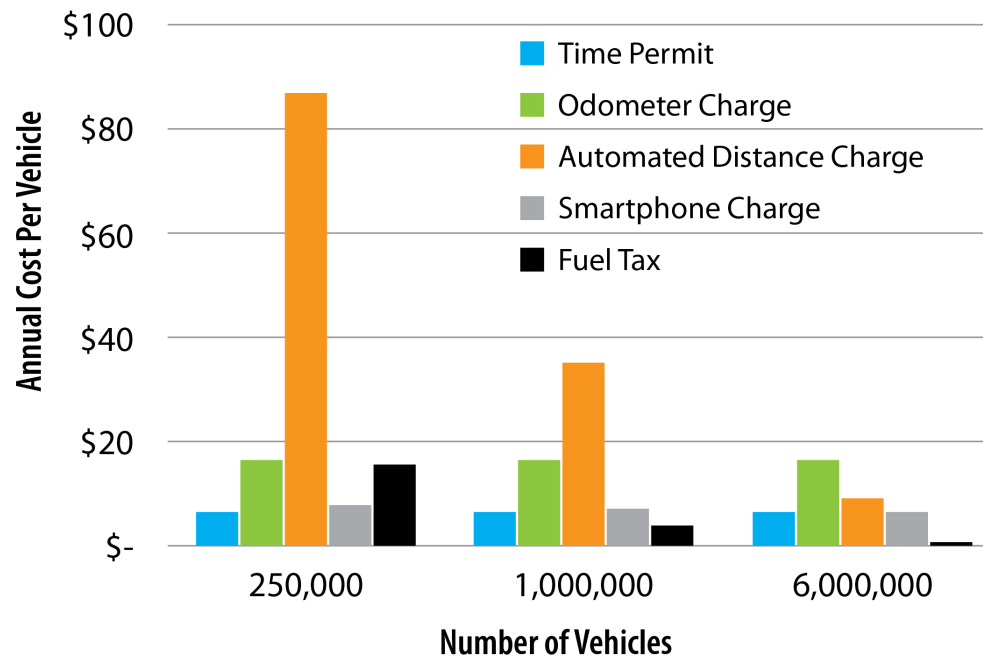


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Approach #2: Commercial Partner Account Management

Figure 2 provides similar information as above, only it assumes that commercial partners manage the two technology-based concepts. The state provides the odometer charge and time permit as well as oversight and program management, including enforcement. All of these costs are included below. The overall cost per vehicle is lower than in approach #1 because it is assumed that commercial partners can sell value-added services to offset the costs associated with RUC, and they have better, cheaper access to technology and data than the state for mileage reporting and built-in incentives to lower costs.

Figure 2: Ongoing annual cost to the state per vehicle, assuming commercial account managers for technology concepts

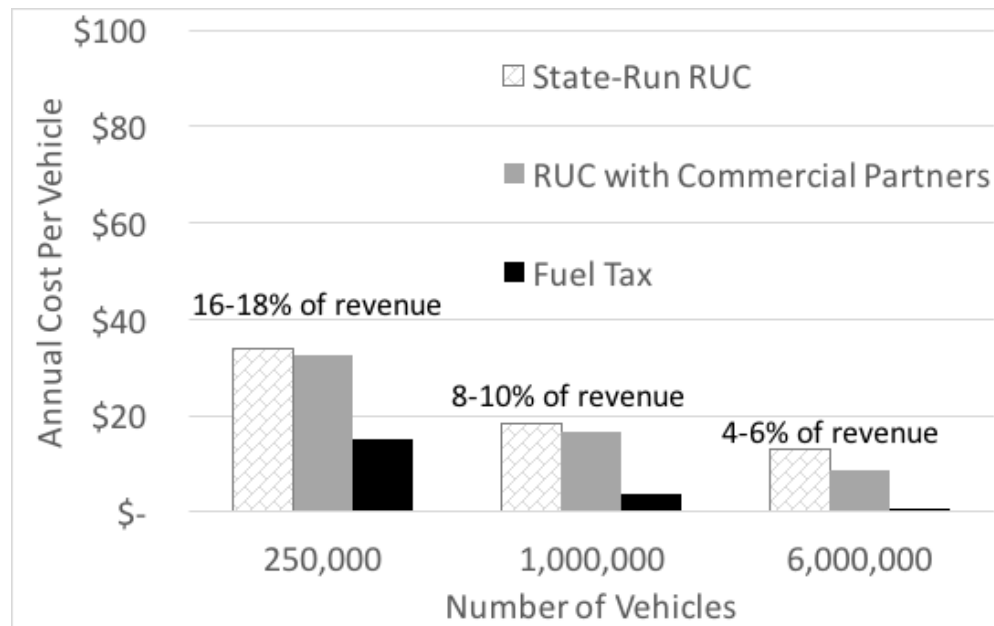


Comparison of State vs. Commercial Approach

The comparison below assumes the following split of customer choices across the four operational concepts: 10% time permit, 15% odometer charge, 40% automated distance charge, and 35% smartphone distance charge.

Although costly to collect at initial enrollment volumes, RUC collection costs as a proportion of total revenue fall to 4-6% at large volumes. The financial benefits of commercial partners are modest at the outset but likewise grow with volume.

Figure 3: Cost of RUC at Various Volumes, Compared to Fuel Tax



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Setup Costs

In addition to ongoing annual operational costs, it is important to consider and understand the initial costs of setting up a RUC system.

The only benchmark for a RUC system in the U.S. is the OReGO program, which was implemented from 2013-2015 at a cost of about \$8 million to the state. These costs included the following:

- ▶ Procurement, contract implementation, vetting, testing, and certification of commercial partners and their technology and billing systems as fit for RUC collection in Oregon
- ▶ Personnel costs for the state to develop and/or procure IT systems necessary to operate the back end of the RUC system and oversight of commercial partners, and train staff to operate the system
- ▶ Communications and outreach activities associated with early launch of the program, and setup of customer service facilities

Although the Oregon program currently has a cap of 5,000 volunteers, it was built with the flexibility to accommodate a mandatory program with hundreds of thousands or even millions of vehicles and accounts. Commercial partners have not only the flexibility to expand the program but also the incentive to do so, as larger volumes lead to greater revenues and more opportunities to provide value-added services.

Based on the Oregon experience and our independent consultation with industry regarding off-the-shelf IT systems for tax collection, our estimate of the approximate cost to set up a RUC program for Washington State based on a Model Year transition is about \$15 million. Once set up and running, program costs would be annual operating costs described earlier.

Benefits of Commercial Partners

The lower estimated cost for commercial partners to operate RUC reflects several assumptions.

- ▶ *Commercial partners are better placed to keep pace with evolving technology.* Due to easier development and procurement processes and economies of scale across state boundaries, commercial partners will more quickly and easily adapt to evolving technologies available in the marketplace to report mileage, deliver invoices, and conduct transactions with RUC payers.
- ▶ *Competition drives efficiency and value-added services.* Commercial partners ultimately will compete with one another to provide value-added driving services to their customers such as insurance discounts, driving tips, safety enhancements, security features, and more. By competing for customers, commercial partners not only lower their costs but they also are able to offset the costs of operating a RUC system by using pre-existing platforms built for other commercial services. Offering such services may be beyond the scope and legal capability of state agencies.
- ▶ *Interoperate and share with other jurisdictions.* One commercial partner may be present in multiple states, allowing for easy interoperability. Washington's public agencies may work with counterparts in other jurisdictions to develop standards and requirements for commercial partners that allow for flexible adoption of various policies and hopefully interoperability for end customers. This joint development activity could allow states to share RUC development and collection costs rather than Washington having to develop these elements on its own.
- ▶ *Focus on core state functions.* By leaving mileage reporting and RUC collection to commercial partners (functions which already exist in the marketplace using a variety of means), the state may focus its efforts on core functions, including: (1) negotiating and enforcing contracts with commercial partners; (2) developing, updating, and applying standards and requirements on commercial partners that reflect core state needs; (3) audit and oversight of commercial partners and individual RUC payers; (4) enforcement of RUC and penalties on non-compliant commercial partners and individual RUC payers; and (5) communicating with the public and policy makers about the program.

Question 1 Take-Away: RUC Is Costlier to Collect Than Fuel Tax, but Costs Decline at Scale

The key takeaways from this analysis are that RUC is costlier to collect than fuel tax at any volume. Few revenue collection systems can match the efficiency of fuel taxes, which are collected for <1% of revenues. At scale, however, the full cost of collecting RUC can fall below 5% of revenues.

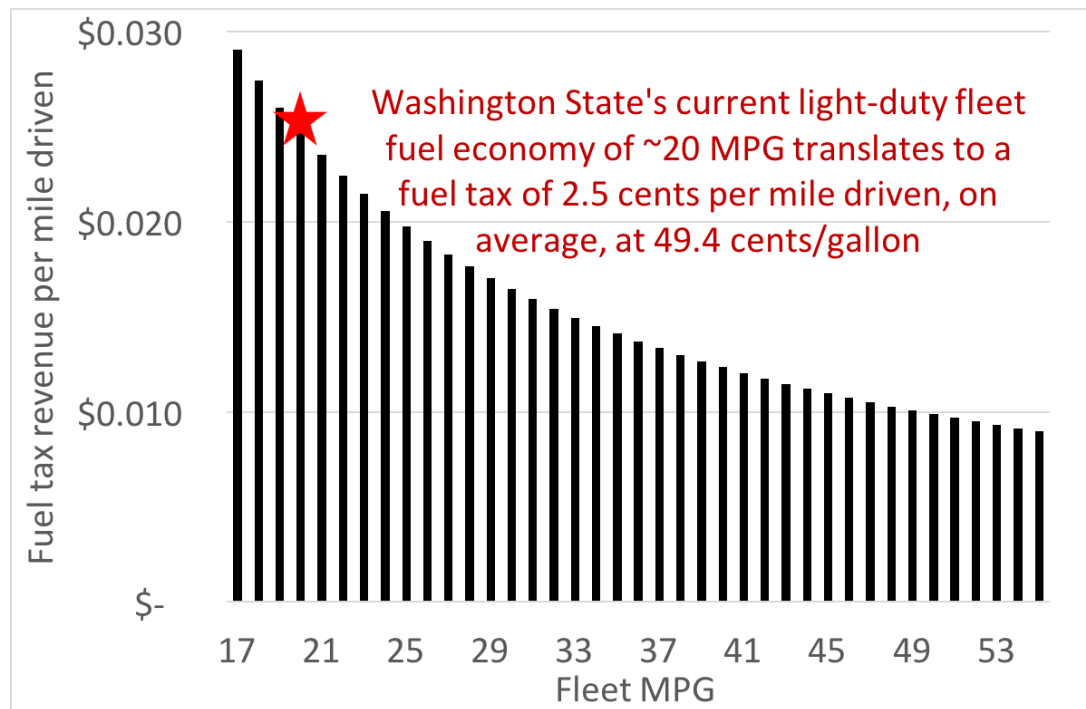
- ▶ Scale can be achieved by Washington alone or by a combination of states. If states are willing to work together to certify commercial partners in more than one jurisdiction, those partners will enjoy economies of scale more quickly, and those savings can be captured in turn by all participating states.
- ▶ It is very unlikely to achieve a fully commercial system for several reasons.
 - > First, some customers may prefer to deal directly with the state.
 - > Secondly, commercial partners may reject some customers who (e.g., customers who habitually do not pay or pay late, customers without access to banking services). Such customers must have recourse ultimately to a state-provided RUC reporting and payment avenue.
 - > Finally, commercial partners may have little or no interest in offering some operational concepts such as the manual options (time permit and odometer charge) unless they see associated commercial opportunities.

Question 2: When Does Fuel Tax Buying Power Go Away?

Fuel tax is a viable revenue source in the short and medium terms for at least two reasons. First, the majority of vehicles will continue to burn gasoline, diesel, and other taxable forms of fuel for several decades.

Secondly, fuel tax is efficient to collect and easy to comply with. However, as fleet fuel economy grows, fuel tax revenues on a per-mile basis will decline. The chart below depicts fuel tax revenue collected per mile driven by light vehicles, based on 49.4 cents/gallon tax.

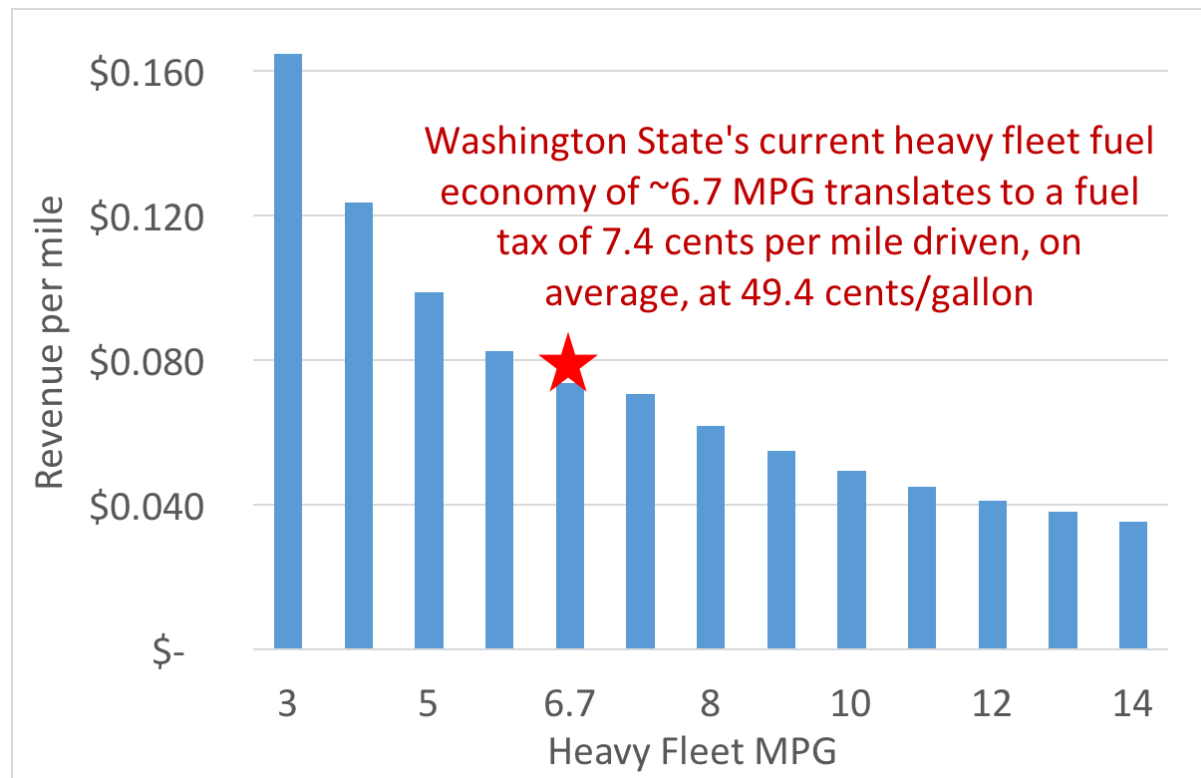
Figure 4: Per-Mile Fuel Tax Revenue from Light Vehicles by MPG



Question 2: When Does Fuel Tax Buying Power Go Away? (continued)

The same phenomenon holds true for heavy vehicles. Presently, heavy vehicles average between 5-6 MPG, which translates to between 8-10 cents in fuel tax per mile driven. As fleet fuel economy grows, revenue per mile falls.

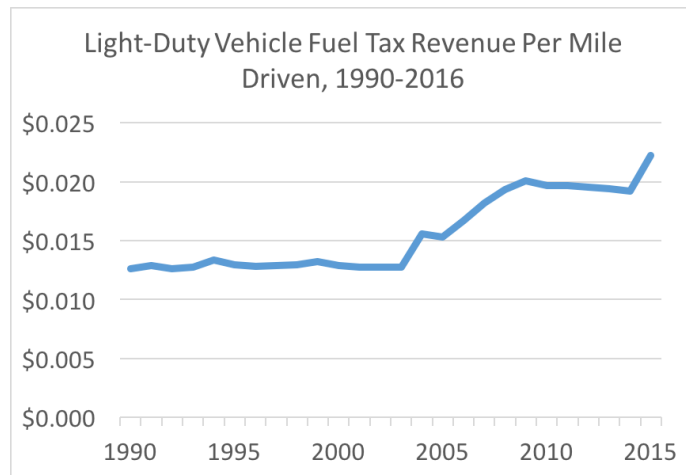
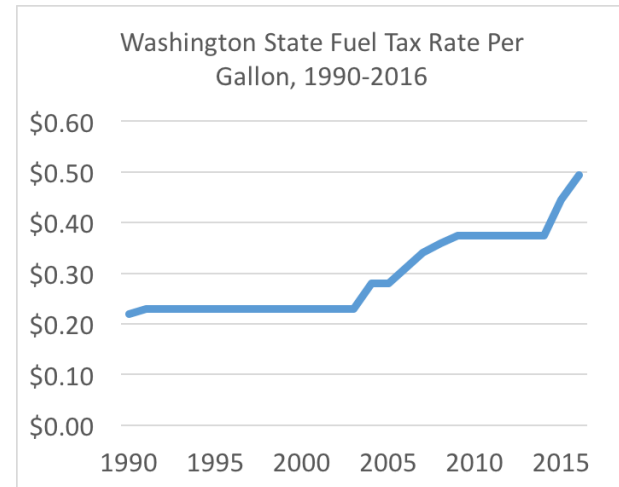
Figure 5: Per-Mile Fuel Tax Revenue from Heavy Vehicles by MPG



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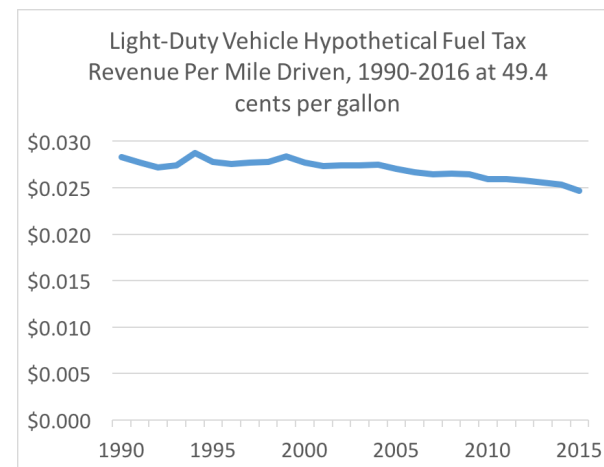
Recent History of Fuel Economy and Fuel Tax

As shown in the image at right, the Washington State fuel tax rate has increased since 1990 from 22 cents/gallon to 49.4 cents/gallon (as of July 1, 2016). This is an average of 1.1 cents per gallon per year, or about 3% average annual growth over the past 26 years. →



The image at left ← depicts fuel tax revenue from light vehicles per mile driven. Because fleet fuel economy was relatively flat from 1990-2010, this curve has a similar shape to the fuel tax rate curve. Starting around 2010, the revenue per mile driven begins to decline as fuel economy improvements erode fuel tax revenue.

Finally, the recent decline in fuel tax revenue per mile driven become more clear in the chart at right. This chart illustrates what the per-mile revenue from fuel tax would have been going back to 1990 if the fuel tax rate had been 49.4 cents per gallon over that entire period. In this chart, the decline owing to fleet fuel economy begins in 2000 but steepens around 2010. →



Three Scenarios for Future Fuel Economy and Fuel Tax Trends

As the previous charts illustrate, fuel tax “buying power” does not suddenly go away. Rather, it erodes with improving fuel economy as motorists purchase more fuel-efficient cars (and some purchase alternate fuel vehicles. In order to illustrate possibilities, we created three scenarios:

► Scenario 1: “Stuck In Traffic” (slow on-road fuel economy improvement)

- > Light vehicles: This scenario assumes the lowest growth in fuel economy. To create this scenario, the project team took the lowest available published forecast of fuel economy from any source and adjusted it downward by 5-10%. This was based on last year’s Business Case Analysis.
- > Heavy vehicles: The MPG forecast for heavy vehicles is based on the 2015 EIA Reference Case, which projects fairly flat MPG.

► Scenario2: “CAFE Detroit” (reference on-road fuel economy improvement)

- > Light vehicles: The project team adopted the EIA Reference Case (similar to the Global Insight forecast used by Washington’s Transportation Revenue Forecast Council), which assumes less than 2% of new sales by 2040 are all-electric, plug-in electric, and fuel cell vehicles.
- > Heavy vehicles: The project team adopted the 2015 EIA Reference Case and improved MPG by 10% to reflect CAFE standards for medium-duty and heavy-duty trucks for MY 2014-2018.

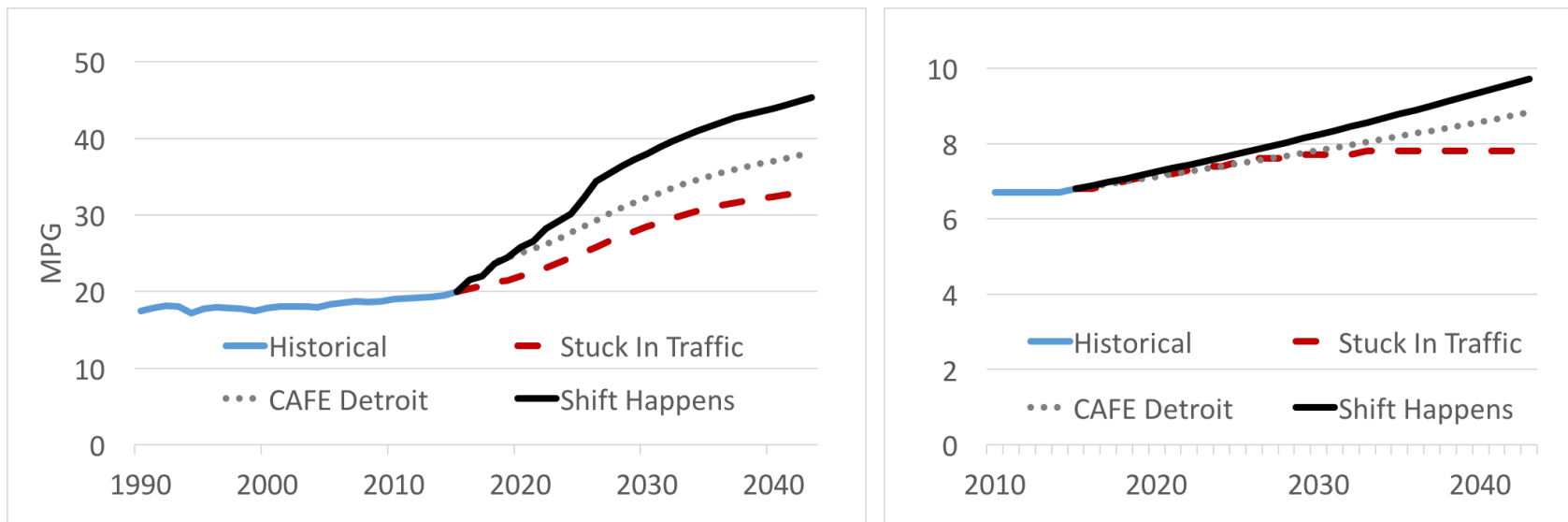
► Scenario 3: “Shift Happens” (fast on-road fuel economy improvement)

- > Light vehicles: This scenario adopts the EIA High Oil Price scenario and more aggressive electric and plug-in adoption of up to 20% of new sales by 2040, in line with assumptions used by the Office of Financial Management in a study of future emissions scenarios.
- > Heavy vehicles: The project team adopted the EIA High Oil Price Scenario and added a 20% improvement to reflect proposed CAFE standards for heavy vehicles beyond MY 2018.

Three Future Fuel Economy Scenarios Illustrated

The figure below illustrates possible improvements in fuel economy for the Washington State fleet under the three scenarios described above. Historical fleet fuel economy has been relatively flat since 1990, improving from about 18 MPG to about 20 MPG by 2016. Light vehicles are shown at left, and heavy vehicles are shown at right.

Figure 6: Three Fleet Fuel Economy Scenarios for Light (left) and Heavy (right) Vehicles

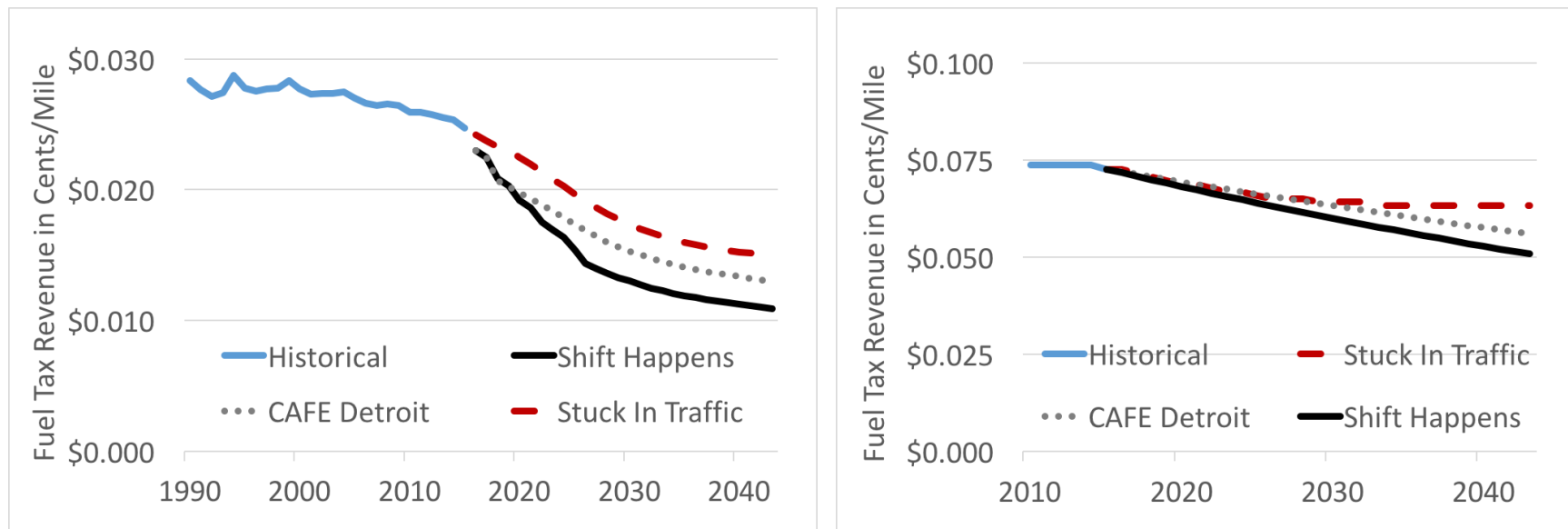


Three Corresponding Future Fuel Tax Revenue Scenarios Illustrated

The faster fuel economy increases, the faster fuel tax revenue declines. This logic is reflected in the charts below, which translate the three fuel economy scenarios presented above into fuel tax per mile scenarios for light and heavy vehicles (at left and right, respectively).

The reason for presenting revenue on a per mile driven basis is to remove the uncertainty associated with total vehicle miles traveled (VMT). If total VMT declines, then total revenue will decline more sharply than the curves presented below. On the other hand, if total VMT increases, then total revenue will decline less sharply than presented below. Refer to Appendix B to see total revenue charts under various VMT assumptions.

Figure 7: 49.4 Cent/Gallon Fuel Tax Revenue Per Mile Driven for Light (left) and Heavy (right) Vehicles Under Three Scenarios



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Question 2 Take-Away: Fuel Economy Threatens Fuel Tax Revenue Sustainability Under All Scenarios Considered

The three fuel tax scenarios analyzed all result in substantial revenue losses per mile driven by 2040, ranging from 40-55% over current levels from light vehicles and 15-30% from heavy vehicles. How this translates into aggregate revenue depends on the number of miles driven by Washingtonians. Appendix B explores the impact of the various fuel economy scenarios on aggregate revenues as a function of various VMT possibilities. Regardless of aggregate VMT and aggregate revenue, the decline in revenue per mile driven threatens the ability of fuel tax revenue to keep up with revenue needs imposed by motorists and by inflation of maintenance and construction costs.

Question 3: What Are the Policy Alternatives?

The Steering Committee provided guidance in October to explore three distinct policy scenarios as follows:

- ▶ **Flat Fuel Tax.** Keep the fuel tax at 49.4 cents per gallon in order to provide a baseline comparator. The results presented above to Question 2 provide this baseline.
- ▶ **Index the Fuel Tax.** Increase the fuel tax in line with historical trends. Since 1990, Washington State fuel tax has increased an average of 1.1 cents per gallon per year, or about 3% annually, on average over the period 1990-2016, roughly tracking inflation. For comparative purposes, we assumed future fuel tax increases would be 2.5% per year over the period 2019-2043, which is also in line with inflation and roughly reflects the historical trend. The result is a fuel tax of 57.3 cents/gallon by 2025, 73.3 cents/gallon by 2035, and 89.4 cents/gallon by 2043.
- ▶ **Washington RUCs.** Analyze what occurs to net revenue if RUC is implemented. To analyze this alternative, the project team assumed implementation along the same lines as the cost of collection analysis: beginning on January 1, 2019 only with new vehicles (Model Year 2019 and newer) at 2.5 cents per mile. Vehicles 2018 and older remain on the fuel tax of 49.4 cents/gallon. Neither rate changes from 2019-2043. All costs of collection are subtracted to provide a net-to-net comparison with the two fuel tax alternatives. In reality, this approach may have cost advantages since newer vehicles could be better equipped with technology to provide low-cost mileage reporting, but we ignored those potential cost advantages for RUC for purposes of this analysis.

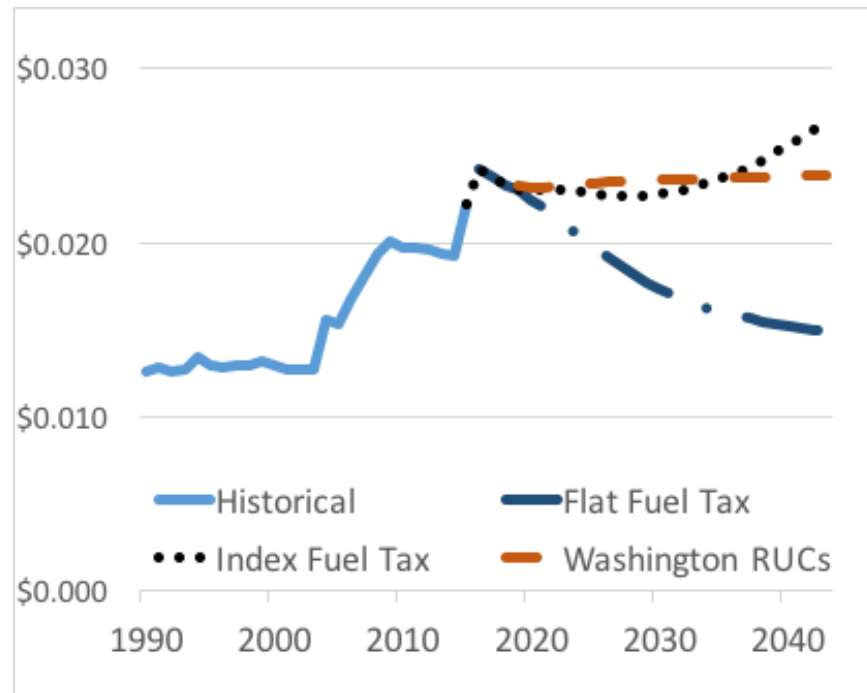
For each of the three alternatives above, we provide results that address the overarching goal of the Steering Committee (“sustainable, long-term revenue source”) as well as two guiding principles: fairness (“all road users should pay a fair share”) and cost-effectiveness (“of a RUC system should be cost-effective and cost efficient”).

Stuck In Traffic Scenario

The chart below depicts the comparison of net revenue per mile driven under three alternatives assuming the *Stuck In Traffic* scenario, which involves the slowest improvement in fuel economy of the three scenarios. All three policy alternatives are net of collection costs. They include:

- ▶ **Flat fuel tax** of 49.4 cents/gallon
- ▶ **Index fuel tax** by 2.5% annually, increasing to 57.3 cents/gallon by 2025 and 89.4 cents/gallon by 2043.
- ▶ **Washington RUCs** by transitioning to RUC with new vehicles only, beginning in Model Year 2019 at 2.5 cents per mile. Vehicles 2018 and older remain on a fuel tax of 49.4 cents/gallon.

Under the Stuck In Traffic scenario, RUC results in more sustainable revenue in the short term, but because it is not indexed, it does not increase over time. The “index the fuel tax” alternative, by contrast, results in more revenue per mile driven beginning in 2035. The RUC alternative, although not indexed, provides similar net revenue sustainability as indexing the fuel tax under this scenario, at least in the short- and medium-term.

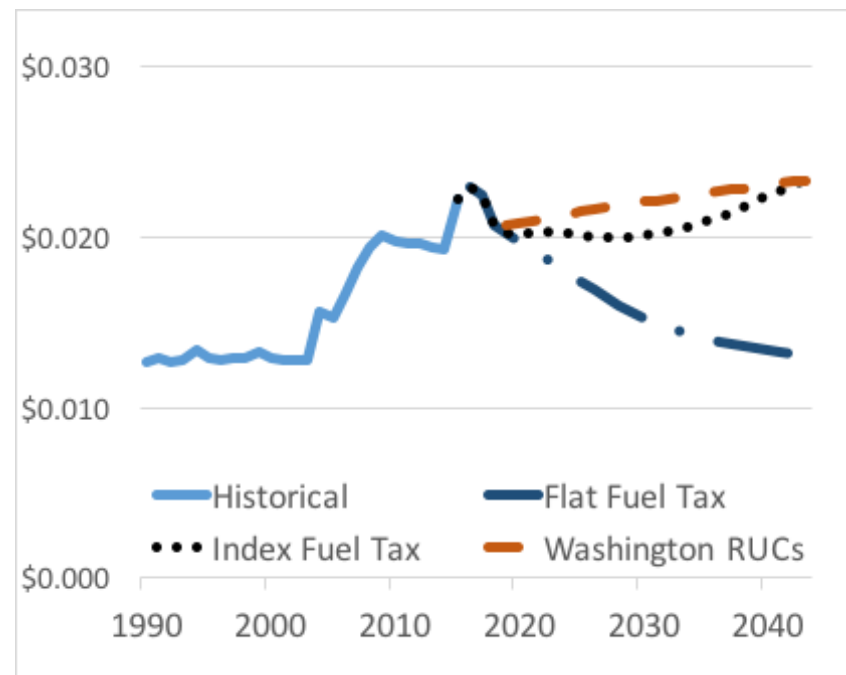


CAFE Detroit Scenario

The chart below depicts the comparison of net revenue per mile driven under three alternatives assuming the *CAFE Detroit* scenario, which assumes the Washington vehicle fleet improves its fuel economy in line with CAFE standards as projected by the U.S. All three policy alternatives are net of collection costs. They include:

- ▶ **Flat fuel tax** of 49.4 cents/gallon
- ▶ **Index fuel tax** by 2.5% annually, increasing to 57.3 cents/gallon by 2025 and 89.4 cents/gallon by 2043.
- ▶ **Washington RUCs** by transitioning to RUC with new vehicles only, beginning in Model Year 2019 at 2.5 cents per mile. Vehicles 2018 and older remain on a fuel tax of 49.4 cents/gallon.

Under the *CAFE Detroit* scenario, fuel economy improvements more than outweigh increases in the fuel tax rate by indexing it. The RUC alternative, although not indexed, is the more sustainable net revenue policy under this scenario.



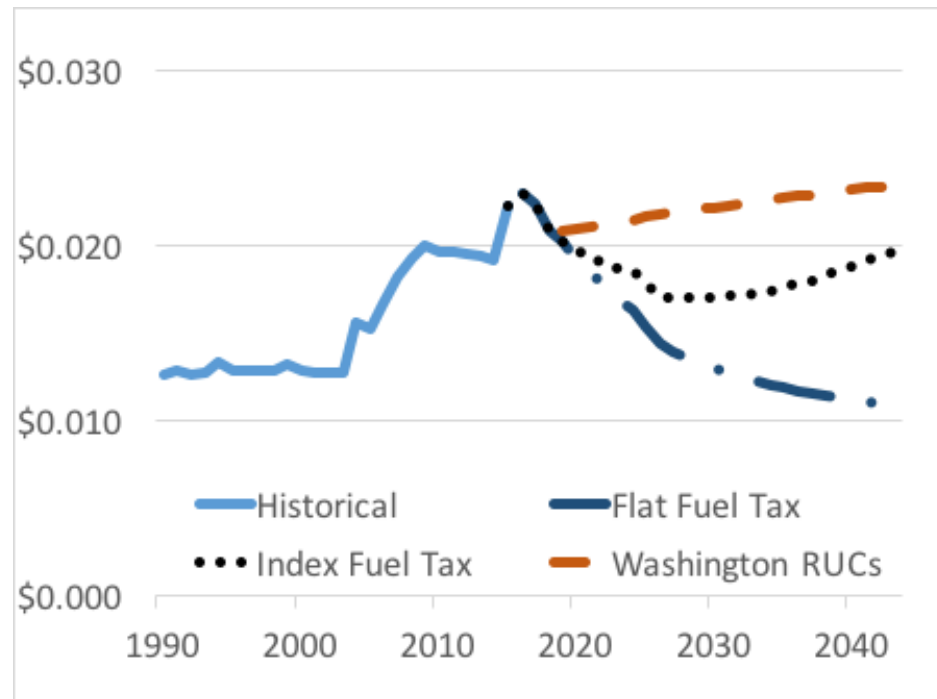
Shift Happens Scenario

The chart below depicts the comparison of net revenue per mile driven under three alternatives assuming the *Shift Happens* scenario, which assumes the Washington vehicle fleet improves its fuel economy faster than in other scenarios. All three policy alternatives are net of collection costs. They include:

- ▶ **Flat fuel tax** of 49.4 cents/gallon
- ▶ **Index fuel tax** by 2.5% annually, increasing to 57.3 cents/gallon by 2025 and 89.4 cents/gallon by 2043.
- ▶ **Washington RUCs** by transitioning to RUC with new vehicles only, beginning in Model Year 2019 at 2.5 cents per mile. Vehicles 2018 and older remain on a fuel tax of 49.4 cents/gallon.

Under the Shift Happens scenario, indexing the fuel tax does not provide short-term protection against revenue erosion from fuel economy improvements.

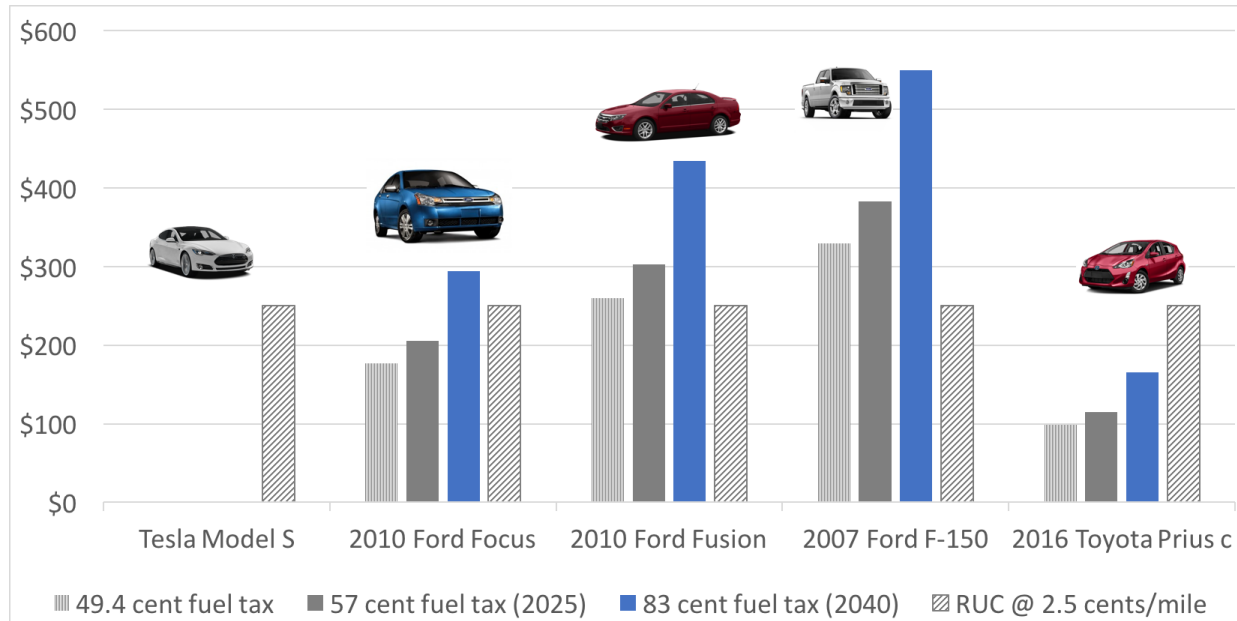
The RUC alternative, although not indexed, is the more sustainable net revenue policy under this scenario.



Tax Fairness Across Vehicles by Road Use

The Steering Committee defines its guiding principle of “equity” as “all road users should pay a fair share.” Last year, the Committee analyzed the rural vs. urban dimension of equity. The chart below summarizes the estimated annual tax burden across vehicle types, using five illustrative vehicles. The chart shows amount paid for 10,000 miles of driving under the following policy alternatives:

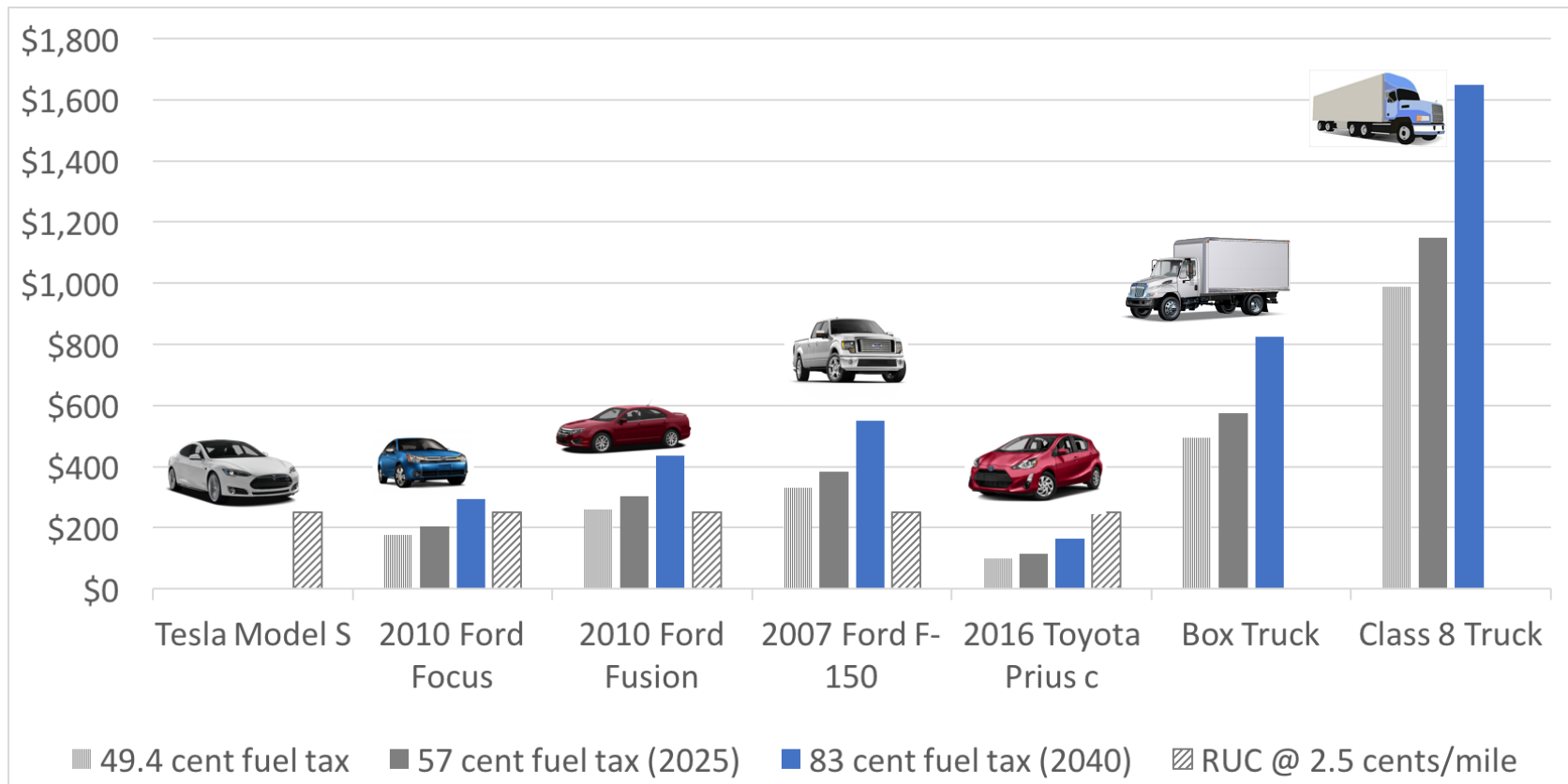
- ▶ Current fuel tax rate of 49.4 cents per gallon.
- ▶ Possible future fuel tax rates of 57 cents per gallon (by 2025 under the *Increase the Fuel Tax* alternative) or 83 cents per gallon (by 2040 under the *Increase the Fuel Tax*).
- ▶ Possible road usage charge of 2.5 cents per mile.



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Tax Fairness Across Vehicles by Road Use (continued)

The chart below is the same as shown on the previous page, only now we include medium-duty and heavy-duty trucks to illustrate the implications of continued fuel tax rate increases on those vehicle types. Although RUC is not contemplated in Washington for heavy vehicles (thus it is not shown in the right two categories), the increasing fuel tax scenarios place an increasingly large share of the tax burden on trucks relative to light-duty vehicles since trucks pay a diesel tax equivalent per gallon to the gasoline tax.



Question 3 Take-Away: The Three Policy Alternatives Partially Address the Steering Committee’s Goal and Guiding Principles

The three policy alternatives presented in this section provide useful discussion points for Steering Committee consideration.

The table below provides a very high-level summary of the takeaways of this business case analysis for the three policy alternatives. Each of the three alternatives partially satisfies the Steering Committee’s goal (revenue sustainability) and guiding principles related to the business case (fairness and cost effectiveness).

Alternative	Goal: Long Term Revenue Sustainability vs. MPG vs. Inflation Overall	Guiding Principle: Fairness	Guiding Principle: Cost Effectiveness
Flat Fuel Tax	○ ○ ○	◐	●
Index Fuel Tax	○ ● ◐	○	●
Washington RUCs	● ○ ◐	●	◐ → ◐ → ◐ short → medium → long

SECTION 2: FEDERAL REAUTHORIZATION ACT GRANT FUNDING FOR RUC PILOT PROJECTS

Overview of Federal Reauthorization Act Provisions for A RUC Grant Program

On November 20, 2015, the most recent Federal long-term transportation act extension expired, and Congress passed a 36th extension through December 4. The latest act allows more time to complete work toward a final passage of a long-term bill and appropriation. Congress has made significant progress toward passing a new reauthorization, with both the US House and US Senate's passage of their individual versions of a 5-year transportation bill: the Senate DRIVE Act, and the House STRRA.

While Congress has assembled a conference committee to negotiate a final resolution, we have continued to monitor each bill's provisions for the creation of a grant program to support one or more testing of alternatives to the fuel tax through a user-based funding source. Both houses' bills provide for a grant program of \$15-20 million per year of the act, and have many similarities, but the bills have some differences in how the programs will be established, monitored and reported.

Key Differences:

- ▶ The Senate bill focuses on promoting research of user-based alternative revenue mechanisms, while the House bill focuses on providing grants for demonstration of such mechanisms.
- ▶ The Senate bill establishes a RUC Advisory Council, while the House bill does not.
- ▶ The Senate bill establishes a Recipient-Council-Secretary-Congress reporting cycle, while the House bill establishes annual reporting to the US Secretary of Transportation.
- ▶ The Senate Bill does not mention congestion pricing, while the House bill requires it as a consideration in demonstration.
- ▶ The House bill establishes a 50% revenue match rule, while the Senate Bill does not.

Senate Bill's RUC-Relevant Section: Researching Surface Transportation System Funding Alternatives

- ▶ Authorizes the Secretary of Transportation to promote research of user-based alternative revenue mechanisms that preserve a user fee structure to ensure the solvency of the Highway Trust Fund.
- ▶ Requires the Secretary to provide grants to States or other appropriate entities to conduct research to support this effort.
- ▶ Requires the Secretary of Transportation in consultation with the Secretary of the Treasury to establish a Surface Transportation Revenue Alternatives Advisory Council to inform the selection and evaluation of user-based alternative revenue mechanisms. Council Members will include representatives from US DOT, the Department of the Treasury, State Departments of Transportation, users of the surface transportation system, and technology and public privacy experts.
- ▶ Tasks the Council with defining the functionality of two or more user-based alternative revenue mechanisms, identifying technological, administrative, institutional, privacy and other issues associated with the mechanisms, collecting information through public outreach, and providing recommendations on a process and criteria used for selecting research activities identified by the Council.
- ▶ Authorizes funding at \$15 million in FY 2016 and \$20 million annually for fiscal years 2017-2021.

House Bill's RUC-Relevant Section: Surface Transportation System Funding Alternatives

- ▶ The Secretary of Transportation shall establish a program to provide grants to states to demonstrate user-based alternative revenue mechanisms that utilize a user fee structure to maintain the long-term solvency of the Highway Trust Fund.
- ▶ A state or group of states is eligible to receive funds to test the design, acceptance and implementation of a user-based revenue alternative.
- ▶ The Federal share shall not exceed 50% of the cost of the activity.
- ▶ The Secretary shall consider geographic diversity in the award of the grants.
- ▶ Activities must meet the following objectives:
 - > Test the design, acceptance, and implementation of two or more future user-based alternative revenue mechanisms.
 - > Improve the functionality of such user-based alternative revenue mechanisms.
 - > Conduct outreach to increase public awareness regarding the need for alternative funding sources for surface transportation programs and to provide information on possible approaches.
 - > Provide recommendations regarding adoption and implementation of user-based alternative revenue mechanisms.
 - > Minimize the administrative cost of any potential user-based alternative revenue mechanisms.

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House Bill's RUC-Relevant Section (continued)

- ▶ A state or group of states receiving funds to test the design, acceptance, and implementation of a user-based alternative revenue mechanism shall address:
 - > The implementation, interoperability, public acceptance, and other potential hurdles to the adoption of the user-based alternative revenue mechanism;
 - > The protection of personal privacy;
 - > The use of independent and private third-party vendors to collect fees and operate the user-based alternative revenue mechanism;
 - > Market-based congestion mitigation, if appropriate;
 - > Equity concerns, including impacts of the user-based alternative revenue mechanism on income groups, geographic areas, and the relative burdens on rural and urban drivers;
 - > Ease of compliance for different users of the transportation system; and
 - > The reliability and security of technology used to implement the user-based alternative revenue mechanism;

And may address:

- > The flexibility and choices of user-based alternative revenue mechanisms, including the ability of users to select from various technology and payment options;
 - > The cost of administering the user-based alternative revenue mechanism; and
 - > The ability of the administering entity to audit and enforce user compliance.
- ▶ Grant recipients must report to the Secretary annually on the use of the funds and lessons learned.
 - ▶ Authorizes funding at \$15 million in FY 2016 and \$20 million annually for fiscal years 2017-2021.

Important Take-Aways for Washington State

- ▶ Washington is well-positioned to compete for a federal grant under the objectives of the House bill because it has:
 - > Completed more research than any state aside from California and Oregon, which already have completed or are implementing demonstrations.
 - > As a result of that research, have plans ready to finalize a demonstration proposal that will address implementation, interoperability, public acceptance, and other potential hurdles.
 - > Well-positioned and demonstrated collaboration with Oregon, California and possibly other states.
 - > Direct involvement in and active member of the Western Road Usage Charge Consortium.
- ▶ Washington can pursue its own pilot, or in combination with others, and potentially both.
- ▶ Note the 50% match requirement of the House bill may be offset with 'soft match' funding.
- ▶ Previous work has addressed:
 - > Protection of personal privacy
 - > Equity concerns, including relative burdens on rural and urban drivers
 - > Business case
 - > Operational concepts

SECTION 3: ROADMAP FOR CONSIDERING RUC IN WASHINGTON STATE

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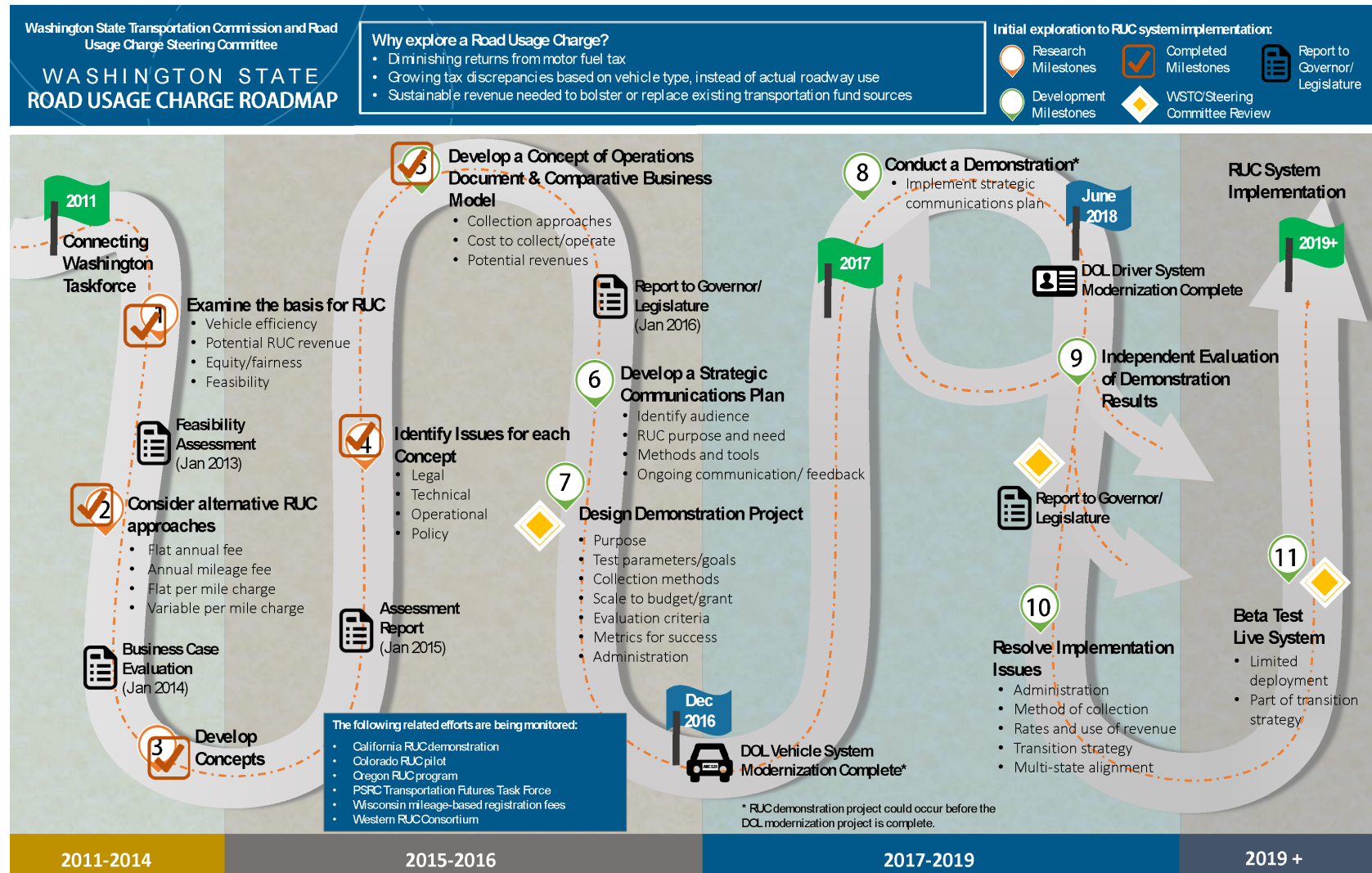
A Roadmap Outlines Necessary Steps in Developing a RUC System

During the October 2015 Steering Committee meeting, the Committee introduced the idea of a RUC Roadmap, a useful metaphor for the sequential steps that must be taken to successfully investigate, design, test and consider a RUC system for the state of Washington.

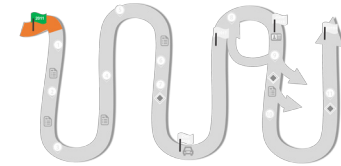
This section is intended to provide the more detailed descriptions for the various waypoints along the path to developing and potentially implementing a RUC.

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Illustration of the Washington State RUC Roadmap



Pre-2012: Exploration



Washington effectively began RUC exploration in 2007, as public officials began to consider the potential revenue impacts of alternative fuel vehicles.

About this same time, transportation economists and planners in the central Puget Sound region became intrigued with the possibility of reducing and managing congestion through distance and time-of-day roadway pricing, a distinct departure from facility-based tolls typically imposed solely to fund a specific bridge or roadway project.

The **Exploration** phase was marked by initial issue identification, scanning existing data and knowledge bases, developing initial hypotheses, and considering various policy aspects of transportation revenue. Washington's motivations for exploring transportation alternatives and eventually Road Usage Charges in particular were driven primarily by:

- ▶ Potential shortfalls in motor fuel taxes caused by improving vehicle MPG,
- ▶ Growing discrepancies in roadway taxes paid by individual drivers based on vehicle technology type, rather than actual roadway use, and
- ▶ Desire to identify a more sustainable transportation funding source that more accurately responds to vehicle miles traveled on state roadways.

Pre-2012: Exploration (continued)

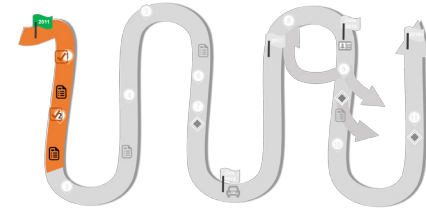
Exploration and research actions taken in Washington include:

- ▶ **2007** – Long-Term Transportation Financing Study: the Joint Transportation Committee studied existing and potential new methods for funding Washington’s transportation needs.
- ▶ **2008** – Puget Sound Regional Council’s Traffic Choices study (2007): this federally-funded pilot tested ways that drivers might change their travel behavior in response to mileage-based fees that varied by time of day and location of travel.
- ▶ **2009** – Implementing Alternative Transportation Funding Methods: the Joint Transportation Committee analyzed the practicality of implementing mid-term and long term alternative transportation funding methods. The study documented the risk to state transportation revenues presented by increased fuel economy and the since-adopted federal CAFE standards.
- ▶ **2011** – Washington State Transportation Commission held joint meetings with the Oregon and California Transportation Commissions to discuss, pledge cooperation and provide early support for examination of mileage-based fees.
- ▶ **2011** – Governor’s *Connecting Washington* Blue Ribbon Task Force: while recommending a 10-year transportation revenue and investment package, this panel of business leaders and government officials also found the state’s reliance on motor fuel taxes is unsustainable over the longer term and recommended the legislature test a mileage fee system and prepare for such a transition.



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2012-14: Investigation



The **Investigation** phase includes a more formal definition and validation of the revenue problem and the fiscal and policy impacts likely to result if the problem is not addressed; identification of a defined set of road charging alternatives that show promise for effectively mitigating or solving the problem; and a scan for state-specific conditions that would render RUC impractical or undesirable to implement.

In 2012, the legislature directed the Washington State Transportation Commission (WSTC) to convene a special committee of elected and appointed officials, private industry and stakeholder groups to investigate the feasibility of a road usage charge in Washington. The Steering Committee ensures a broader examination of RUC, beyond what could be provided if a single office or division of an agency conducted the assessment.

Feasibility Assessment

The investigation of road usage charges was summarized into a single, precise question: is a Road Usage Charge *feasible* given the unique factual circumstances and conditions present in Washington? Feasibility assesses demographics, physical geography, the existing transportation network, funding requirements and restrictions that are in place, and measures whether a RUC is reasonably attainable with currently available technologies. To be clear: basic feasibility does not take into account current public or political support for a new method of taxation; that assessment (Acceptability) will be conducted much later down the road, as part of the Demonstration and Evaluation phases.

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2012-14: Investigation (continued)

Desirability Assessment

Once basic feasibility had been determined, the next step in the progression was to assess whether RUC was a *desirable* funding alternative worthy of further pursuit by policymakers. This required an assessment of whether the public policy benefits to be gained from RUC outweigh the tradeoffs and drawbacks. The fiscal benefits of instituting RUC were determined by conducting a financial analysis comparing the expected revenues to be gained from a RUC system against the forecasted revenues if the state remains with the status quo, the motor vehicle fuel tax. The policy-related benefits, tradeoffs and potential drawbacks of RUC have also been identified and documented during this stage.

To improve the likelihood that fiscal and policy goals of a RUC will be realized, the Steering Committee adopted policy parameters that must accompany any future RUC system. These RUC “Guiding Principles” effectively act as the policy framework for any further consideration, development, testing or implementation of a RUC system. By establishing this policy framework at an early stage, Washington is less susceptible to allowing technologies to dictate consideration and development of RUC in the state.

2012-14: Investigation (continued)...

Washington’s investigation of RUC was completed in 2014, and included the following activities:

- ▶ **2012** – Legislature directs the Washington State Transportation Commission (WSTC) to “determine the feasibility of transitioning from the gas tax to a road usage charge system of paying for transportation.”
- ▶ **2013** – WSTC concurs in the Road Usage Charge Steering Committee’s determination that a RUC is a feasible option for funding Washington’s transportation system, and presents these findings to the Legislature.
- ▶ **2013** – Steering Committee considered various alternative approaches to a RUC system, and decided that a flat rate, per-mile charge would best serve the current fiscal and policy objectives of the state.
- ▶ **2014** – Steering Committee recommended a policy framework to guide the business case evaluation. The policy framework sets one goal (sustainable, long-term revenue source to allow a transition away from the gas tax) and 13 Guiding Principles (see page 58 of this Briefing Book for details). This policy framework can be used to guide future development of RUC in Washington.
- ▶ **2014** – A business case evaluation is completed, with results showing that a RUC system would generate more significantly more revenue for the state – even after deducting the cost of collections – than would be generated by the current motor fuel tax.



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2014-15: Design



The **Design** phase is where the Steering Committee has made some initial decisions about the type of RUC system that could be employed to achieve the overarching goal (revenue sustainability), in accordance with the established policy framework.

The Steering Committee has completed both types of RUC design activities: first, a higher, sketch-level description of the various operational concepts that were considered; and later, a more detailed Concept of Operations (ConOps), which is essentially the blueprint for how a RUC system would operate, as viewed from the motorists' perspective.

Issues Registry (“Policy Parking Lot”)

Throughout the design process, the Steering Committee identified the most important legal, technical, operational, and policy issues raised by each of the operational concepts. All identified issues are recorded in a registry (or “policy parking lot”). The Steering Committee has made distinctions between issues that must be resolved in order to advance to the next major step in the RUC roadmap – a demonstration– versus issues that do not need resolution until the legislature considers enacting a RUC.

Detailed Business Case Evaluation

Once the formal Concept of Operations document was adopted, work began to conduct a more detailed business case evaluation that reflects the choices made regarding a future RUC system. This detailed business case evaluation zeroes in on the various mileage collection approaches and technologies proposed for use, the expected costs to operate and collect revenue for each operational concept, and the potential revenue.

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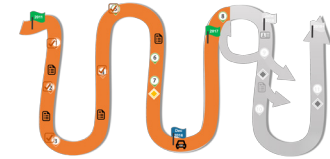
2014-15: Design (continued)

Washington State is emerging from the Design phase and is poised to move into the RUC Demonstration phase. The following Design phase activities have been completed:

- ▶ **2014** – Operational concepts were developed by the RUC Steering Committee. Of all the concepts presented to the Committee, only the hubodometer concept (measuring distance traveled based on wheel rotation) was discarded.
- ▶ **2014/2015** – Legal, technical, operational and policy issues were identified and documented for each of the operational concepts under consideration. Resolution of these issues are major elements of the Committee’s work plan.
- ▶ **2015** – Developed a Concept of Operations document that details how a RUC system would work in Washington.
- ▶ **2015** – Conducted a detailed Business Case Evaluation to more precisely estimate the expected costs and revenues of a RUC system that reflects the Steering Committee’s recommended design recommendations.



2016 and Beyond: Demonstration Preparation



The **Demonstration** phase culminates in a live test of a road usage charge concepts (a pilot or demonstration project). Many purposes can be served by a demonstration, including testing new technologies, developing organizational experience in administering a new roadway tax, highlighting for motorists the inherent problem with the motor fuel tax, etc., (see page 59 of this Briefing Book for a more comprehensive list of demonstration project purposes). While all of these are legitimate reasons to conduct a pilot test, the overriding purpose that transcends is to determine how a RUC can be designed to be *acceptable* to elected officials and the public.

Acceptability

Acceptability does not assess whether the public would immediately embrace a major change in road tax policy; no broadly applied taxes would be supported by general public opinion, including the existing gas tax. Rather, *acceptability* is intended to assess if the RUC policy framework, operational concepts and mileage reporting methods can be structured in a way that engenders acceptance by elected officials and ultimately, the public. In essence, the demonstration project tests what matters most to drivers who are actually participating in a RUC system.

Early RUC tests relied on mandated mileage reporting methods and devices that were found to be unacceptable to the public. Media reports – especially television – still tend to reflect and amplify fears that tracking devices will be mandated for installation in all personal vehicles. Not one state in the US is contemplating such an approach, yet GPS-mandated tracking devices remain prominent in the public’s mind. Therefore, public’s current understanding of potential RUC systems is rather low, which in turn affects their views and sentiments toward a transition to such a system in the future.

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2016 and Beyond: Demonstration Preparation (continued)

The most effective way to measure consumer acceptance factors is to allow consumers to experience the product, in this case, to participate in a live test of a RUC system. For policymakers, this provides essential insight into how motorists respond when provided with RUC concepts.

Next Steps for a Demonstration

Below are the general steps in the Demonstration Preparation phase of the RUC Roadmap (not all of these items are illustrated on the RUC Roadmap graphic). These steps are covered in greater detail in Section 5.

- ▶ **Articulate Purpose and Need:** Identify and clearly articulate the purpose and need for a unique statewide demonstration project in Washington.
- ▶ **Prioritize Unresolved Issues:** The remaining unresolved policy issues should be triaged and addressed in logical sequence. A proposed prioritization is found on page 65.
- ▶ **Develop Evaluation Criteria:** To ensure the demonstration test is effective in its purpose, a post-project evaluation should be conducted. A post-pilot evaluation will give policymakers critical information related to core acceptability factors for any future RUC system. The Demonstration Evaluation is given special attention on page 66 of this Briefing Book.
- ▶ **Develop Strategic Communication Plan:** A strategic communications plan should be in place to ensure that potential participants, elected officials, and the general public are provided with accurate and timely information about the demonstration. See 67 of this Briefing Book for details.
- ▶ **Design the Demonstration Project:** The design of the demonstration project must be in complete alignment with the adopted policy framework; and it must ensure that the primary purpose of the pilot is achieved. See page 68 of this Briefing Book.



2016 and Beyond: Demonstration Preparation (continued)

- ▶ **Leverage Other Resources:** Before settling on a final design for the demonstration project, an assessment should be made of following opportunities potentially available in 2016:
 - > **Approaches in other states:** at least three other western states will be operating a RUC pilot project in 2016 (Oregon, California, and Colorado), which presents opportunities to test features of mutual interest (for example, cross-jurisdictional travel between RUC states).
 - > **Western RUC Consortium (WRUCC):** work to be undertaken by WRUCC might benefit a Washington demonstration project.
 - > **Federal Grant Funding:** as of December 2015, both the US House of Representative and the Senate have approved nearly identical provisions that would provide funding to states for RUC pilot projects.
 - > **DOL's Vehicle System Upgrades:** a demonstration project may provide the Department of Licensing with a test bed to determine, in a low-risk environment, how their forthcoming new Vehicle Field System might be adapted for RUC purposes in the future.

2017+: Live Demonstration

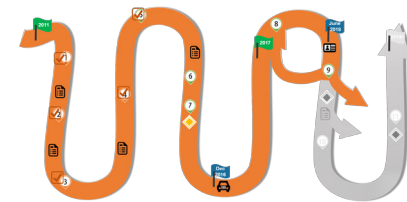
The Steering Committee and the WSTC have both recommended that a statewide demonstration project be conducted. The live demonstration will move forward only if funding is approved.

- ▶ **Implement the Strategic Communications Plan:** While considering sustainable, equitable alternatives to the gas tax and developing recommendations for a road charge demonstration project, the Steering Committee and Legislature have the opportunity to drive a narrative that portrays the recommendations of the Steering Committee and design of any pilot as the culmination of a deliberative, robust, transparent, and inclusive stakeholder engagement process. Developing, adopting and executing a Strategic Communications Plan allows the State to be proactive, rather than reactive, and allows the Committee to guide conversation around the road charge to emphasize that RUC is being studied as one of many possible solutions to the state's long-term transportation funding issues.
- ▶ **Implement the Demonstration Project:** Implementation has many elements, which have been detailed in Steering Committee meetings throughout 2014 and in the Washington State Road Usage Charge Assessment – Phase 3 Final Report. The activities range from pre-implementation work such as development of technical documents, procurement of RUC vendors to provide the services and technologies, recruiting volunteers to participate, testing equipment, etc., to conducting the RUC demonstration project and finally, closing accounts and decommissioning equipment.



2017+: Evaluation and Revisions

The Evaluation results will provide unique insights into whether or how a RUC system can achieve acceptability. One of the most important methods of measuring is through questionnaires from demonstration project volunteers at key intervals of the project. The research can reveal factors that tend to make RUC more acceptable (or even desirable) to the public. Similarly, the Evaluation can discover factors that make RUC less acceptable or even generate strong opposition.

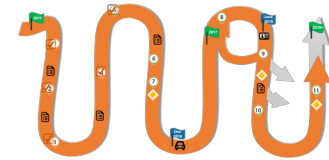


With the results of the Evaluation in hand, the original RUC prototype can be revised in ways to improve the likelihood of acceptance. This process of evaluation and revision was successfully used in Oregon's first RUC pilot project. Although that pilot was generally viewed as a technology and operational success, their evaluation revealed that drivers had very strong negative reaction to the requirement that their vehicle be equipped with a GPS device. As a result, Oregon Department of Transportation used this information to modify their RUC program so that no government-mandated devices were required, and no GPS-enabled devices are required. When revised system was tested in their second pilot project, user acceptance was very high.

- ▶ **Evaluate:** Once the demonstration project has been complete, a post-project evaluation report should be prepared that provides a full assessment of the project's performance against the evaluation criteria and performance measures that were established back in the Demonstration Preparation phase (see above). More detail on Evaluation is found on pages 58-59.



Future RUC System: Pre-Implementation Activities



The **Pre-Implementation** phase is predicated on having conducted a successful demonstration project, and receiving legislative approval to implement a RUC in whatever scale decided by the legislature. In contrast, if the demonstration project did not provide encouragement that a RUC system is acceptable or could be made so through revisions to the prototype, then it is unlikely that the legislature would authorize implementation of a RUC in the near future. During this phase attention should be given to organizational design, and resolving the remaining implementation issues.

Organizational Design

While many of the RUC mileage reporting technologies and account services will have been tested during the demonstration, it's unlikely that major institutional changes were made in order to carry out a limited duration demonstration project. Therefore, the major task of the Pre-Implementation phase is to finalize *Organizational Design*, which calls for mapping current institutional processes (especially among various state agencies that would be required to participate in a fully-implemented RUC system) and build necessary capacity for these organizations to effectively carry out RUC-related functions, at the scale required. This task will also require similar process mapping and organizational structuring to enable private sector firms that are providing RUC services or technologies to seamlessly transfer information and interact with state government.

Future RUC System: Pre-Implementation Activities (continued)...

10

Resolve Remaining Implementation Issues

In addition to the administrative and organizational design issues, there may be several other policy, legal, technical, and/or operational issues that must be resolved prior to RUC implementation. These issues may include the method of mileage collection, compliance and enforcement measures,

establishing the initial RUC rates and the process by which adjustments will be made, how the RUC revenue will be spent, and a host of other issues. Many of these issues are identified as Tier 3 issues found on page 65 of this Briefing Book.

11

Beta Test Live RUC System

Adequate time must be provided to conducted live tests of the RUC system. Changes will have been made since the demonstration project; new organizations and vendors will have been authorized to collect taxes and administer accounts; and more robust accounting, auditing and data security measures are likely required in a full-scale tax collection system.

In designing the transition strategy, it may be useful to considering phasing in the RUC over a period of a year or more. The early phase-in period functions much like a limited scale beta test, where feedback from drivers, agencies and vendors can be taken into account and any final adjustments made to the RUC system before full-scale implementation.

SECTION 4: REVISITING A RUC DEMONSTRATION PROJECT

2014 Demonstration Proposal

Although the Washington State Road Usage Charge Steering Committee has progressed through each of the RUC development milestones, a number of unresolved policy, legal, operational and technical questions remain (see Section 5, page 65 for list of unresolved issues).

Addressing Unresolved Questions Through a Demonstration.

The Steering Committee recognized that some of these questions (e.g., rate setting, refunds, other legal issues) could be answered through further research and analysis, or by the Legislature, if Washington decides to move forward with a RUC system. However, other information needed to adequately address some of these questions can only be answered with additional data based on real-world demonstration. The proposed a demonstration plan was designed to address:

- ▶ How will people react to the proposed RUC system?
- ▶ Public understanding and acceptance of a proposed system.
- ▶ State IT needs
- ▶ Institutional roles

Issues with the 2014 Demonstration Plan

In debriefings with key legislators, many felt that the purpose and need for a demonstration project had not been clearly made and as a result, was not funded.

One weakness of the proposed demonstration plan was that it did not clearly tie the execution of the demonstration project to the overriding goal set forth by the Steering Committee, nor was it designed to *evaluate* how well various approaches to resolving the “parking lot” questions (e.g. how to operationalize RUC, what are the various institutional roles within a RUC system) perform with respect to the Committee’s guiding principles for RUC.

In response, the RUC Steering Committee has directed the 2015 work plan to (1) clearly articulate the reasons why a demonstration project is needed, and why Washington should carry out its own statewide demonstration instead of relying on operational test results from Oregon, California, or elsewhere; and (2) provide a full explanation of the steps Washington state would need to take to implement a RUC in the future (See Section 3, Roadmap, and covered in more detail in Section 5).

The remainder of this section is focused on the first Steering Committee directive. This section:

- ▶ Revisits the Guiding Principles adopted by the Steering Committee for implementing a replacement to the gas tax, to help with articulating the purpose of a demonstration, and
- ▶ Proposes a framework for evaluating the performance of a demonstration project against criteria drawn from those principles as well as other sources.

Thus, this section simultaneously ties the demonstration plan purpose to the guiding principles, and it proposes a framework for evaluating the demonstration project.

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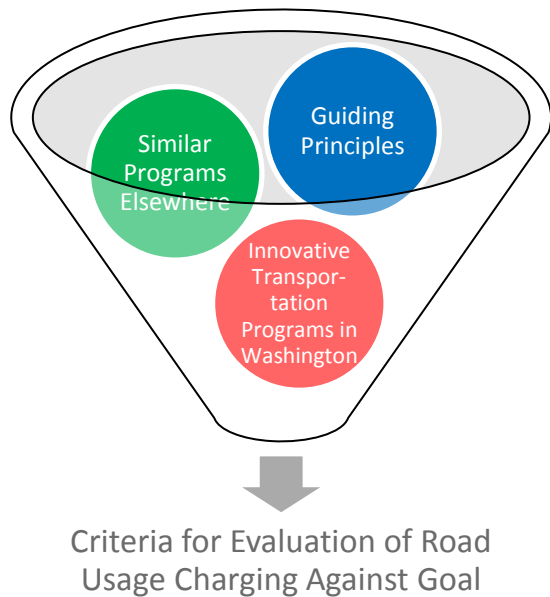
Principles Should Guide the Development and Demonstration of RUC

Early in its work, the Steering Committee articulated that its goal was to *identify and develop a sustainable, long-term revenue source for Washington State’s transportation system to transition from the current gas tax system*. The Steering Committee then adopted 13 Guiding Principles (not listed in priority order) on how to implement the goal:

Transparency	A road usage charge system should provide transparency in how the transportation system is paid for.
Complementary policy objectives	A road usage charge system should, to the extent possible, be aligned with Washington’s energy, environmental, and congestion management goals.
Cost-effectiveness	The administration of a road usage charge system should be cost-effective and cost efficient.
Equity	All road users should pay a fair share with a road usage charge.
Privacy	A road usage charge system should respect an individual’s right to privacy.
Data Security	A road usage charge system should meet applicable standards for data security, and access to data should be restricted to authorized people.
Simplicity	A road usage charge system should be simple, convenient, transparent to the user, and compliance should not create an undue burden.
Accountability	A system should have clear assignment of responsibility and oversight, and provide accurate reporting of usage and distribution of revenue collected.
Enforcement	A road usage charge system should be costly to evade and easy to enforce.
System Flexibility	A road usage charge system should be adaptive, open to competing vendors, and able to evolve over time.
User Options	Consumer choice should be considered wherever possible.
Interoperability and Cooperation	A Washington road usage charge system should strive for interoperability with systems in other states, nationally, and internationally, as well as with other systems in Washington. Washington should proactively cooperate and collaborate with other entities that are also investigating road usage charges.
Phasing	Phasing should be considered in the deployment of a road usage charge system.

Enhanced Approach to a Demonstration Project: Setting Performance Criteria and Measuring Results

A demonstration project serves the purpose of providing data that will allow the Steering Committee



to address several of the questions that remain in the “parking lot,” and to evaluate the program as a whole. It does so by providing data from a context-sensitive and real-world operational experience, but also *by providing the opportunity to **evaluate the effectiveness** of various elements (operational, organizational, financial) **against criteria** defined by the Committee.* In other words, the demonstration project provides a vehicle for the Steering Committee to gather, measure, and evaluate data to determine whether a proposed RUC framework satisfies the goal of a *sustainable, long-term revenue source for Washington State’s transportation system to transition from the current gas tax system.*

While the Steering Committee has not yet defined the full set of demonstration project evaluation criteria, the guiding principles established at the beginning of the Committee’s work serve as a starting point. Table 1 illustrates how the Steering Committee’s guiding principles can serve as the foundation for demonstration performance criteria.

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Using the Steering Committee’s Guiding Principles to Guide Evaluation of a Demonstration

Table 1. Sample remaining question: How to operationalize the four road usage charge methods

Relevant Steering Committee Guiding Principles	Example Demonstration Evaluation Criteria
Equity	Costs incurred under each operational concept, by household income or vehicle type
Cost-effectiveness	Cost of collecting RUC relative to revenue collected
User options	Acceptability of methods tested based on user surveys
System Flexibility	Adaptability of methods tested to incorporate other services beyond RUC
Simplicity	User perceptions of the ease of use of the RUC reporting methods
Enforcement	Effectiveness of enforcement in discouraging evasion
Privacy	Adequacy of safeguards to protect personal privacy
Data security	Ability of system to withstand breaches

Each of the “parking lot” questions identified by the Steering Committee can similarly be tied to one or more of the Committee’s guiding principles, which form the foundation of one or more criteria against which to evaluate the demonstration’s performance as it generates data to answer the question. Once the criteria are established, an evaluation effort would assess performance relative to the criteria established.

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Clearly Articulating the Purposes of a RUC Demonstration

The Guiding Principles on page 56 have informed the feasibility study, development of operational concepts and analysis of the business case for RUC during the first three phases of the Steering Committee’s work. These principles can be reflected in the purpose and design of a demonstration project as well.

The Steering Committee will be asked to confirm and **clearly articulate the primary purpose** to be served by a revised RUC Demonstration that would likely occur beyond 2016.

Purpose of Demonstration Project	Intended to Address...
Gauge Washington motorists’ preferences and reaction to RUC policy and concepts	Acceptability of RUC to fund future transportation needs
Test ease of use of RUC mileage reporting methods as recommended in Washington	Simplicity: User perceptions of the ease of use of the RUC reporting methods
Collect data on operational costs of RUC system in Washington state	Cost-effectiveness: Cost of collecting RUC relative to revenue collected
Identify agency capabilities, challenges and needs	Washington state government’s capacity to implement RUC
Assess flexibility of a RUC system to be adapted for other services in Washington state	Adaptability of methods tested to incorporate other services beyond RUC
Test the enforceability of Washington’s recommended RUC methods	Effectiveness of enforcement in discouraging evasion
Test Washington motorists’ privacy preferences	Privacy: Adequacy of safeguards to protect personal privacy
Assess potential differential impacts of RUC on Washington residents	Equity: Costs incurred under each operational concept, by geography, household income or vehicle type

SECTION 5: STEERING COMMITTEE RECOMMENDATIONS FOR 2016 LEGISLATURE

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Per the 2015 Legislative Proviso, a report is due to the Legislature and the Governor in December, 2015 on the Steering Committee's work accomplished in 2015 and RUC recommendations for the future. The following outline has been developed for the Steering Committee to discuss at the December 1st meeting. The key focus will be the recommendations of the Roadmap developed for RUC in Washington, including short and longer term work plan necessary to engage the public on this program, test through a future demonstration project, and resolve the longer term policy, legal and operational issues for a possible RUC Implementation.

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2015 Report to the Legislature: Outline

2014 Steering Committee

- > Members and affiliations

Prologue / Executive Summary

- > Summary of where we are, what lies ahead and how the Steering Committee recommends we get there.

Section 1: Introduction

Section 2: Work done to date in Washington on Road Usage Charge

Section 3: Legislative Direction and 2015 Work Plan

Section 4: Recent and Emerging Transportation Funding and Policy issues at the Federal, State and Local Level related to Road Usage Charge

Section 5: RUC Business Case Analysis Update

- > Recap of 2014 Business Case
- > 2015 Economic Scenarios
- > 2015 Policy Alternatives
- > Cost Assumptions
- > Results/Findings

Briefing Book for SC Meeting #2

2015 Report to the Legislature: Outline (continued)

Section 6: Status of Road Usage Charging Initiatives in the US and Other Countries

- > Oregon
- > California
- > Wisconsin
- > Western State Road Usage Charge Consortium
- > Other countries

Section 7: Moving forward to explore RUC in Washington: The ROADMAP

Section 8: Work Program Priorities for 2016

- > Addressing prioritized unresolved policy questions
- > Developing an evaluation framework for a demonstration
- > Designing a strategic outreach and communications effort
- > Revising the 2014 demonstration plan in line with the principles and outcomes of the above work

Demonstration Preparation Tasks for 2016

The Steering Committee recommends the following tasks for 2016 to build a foundation for a demo.

1. **Prioritize Unresolved Policy Issues:** The remaining unresolved policy issues should be triaged and addressed in logical sequence.
 - > The top tier of questions are those that must be addressed prior to a demonstration
 - > A second tier of questions can be addressed through evaluation of the demonstration itself
 - > A third tier of questions can be addressed through other analysis outside of a demonstration.
2. **Develop an evaluation framework to guide a demonstration project**
 - > A demonstration is most valuable if the Steering Committee sets out specific evaluation criteria to help to focus the design of the test around its interests and needs
 - > Decide *how* the demonstration will be evaluated, including mechanisms for providing feedback from the evaluation of the demonstration to the Steering Committee
3. **Design a strategic communications plan**
 - > Given the prominence of a demonstration, it will be important to engage with the public in a meaningful way to provide education on the need for RUC, and ensure that the demonstration achieves its purpose of accurately measuring acceptance factors.
 - > Proactive outreach and communications can avoid unnecessary pitfalls and setbacks
4. **Revise the Demonstration proposal to address unresolved RUC questions**
 - > Finally, after addressing the above three points, refining the demonstration proposal from 2014 to create a new proposal that more robustly addresses the unresolved RUC questions

1. Prioritize Unresolved Policy Questions

During the Steering Committee meeting, there will be a moderated discussion of next steps. One of the items to cover during this discussion is the prioritization of unresolved policy questions. Below is a proposed prioritization as a starting point for discussion.

Tier 1: address prior to a demonstration

- > How to operationalize the four road usage charge operational concepts
- > Whether and how to charge out-of-state drivers
- > Exemptions
- > Refunds
- > Private account managers

Tier 2: questions to address at least in part as part of a demonstration

- > How will people react to the proposed RUC system?
- > Public understanding and acceptance of a proposed system.
- > State IT needs
- > Institutional roles

Tier 3: questions to address outside the scope of a demonstration

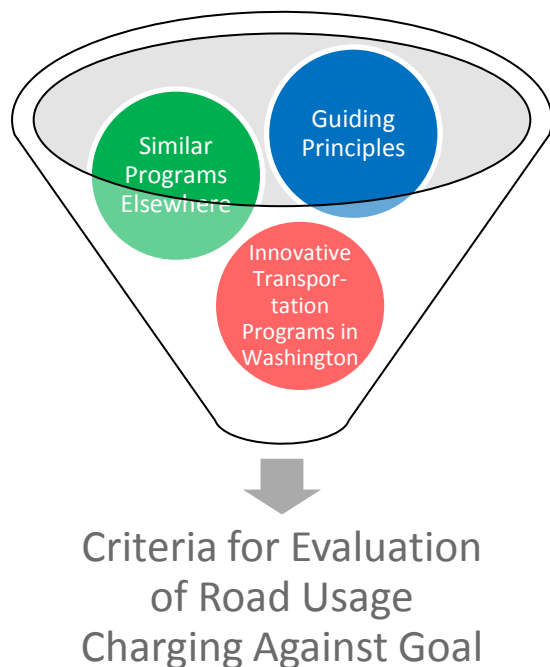
- > Per-mile rate setting
- > Dedication of RUC revenue
- > Interoperability with toll system
- > Rate setting for time-based permit.
- > Motor fuel tax bonds
- > Vehicles subject to charge
- > Legal issues
- > Interoperability with other states

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2. Develop an Evaluation Framework to Guide a Demonstration Project

Based on the Steering Committee's guiding principles and the list of unresolved questions, develop an evaluation framework to guide a demonstration project. This framework should feature the following:

- > A clear articulation of the objectives of the demonstration
- > A list of criteria by which to assess the performance of the demonstration



A demonstration project serves the purpose of providing data that will allow the Steering Committee to address several of the questions that remain in the “parking lot.” It does so by providing data from a context-sensitive and real-world operational experience, but also *by providing the opportunity to evaluate the effectiveness of various elements (operational, organizational, financial) against criteria* defined by the Committee. In other words, the demonstration project provides a vehicle for the Steering Committee to gather, measure, and evaluate data to determine whether a proposed RUC framework satisfies the goal of a *sustainable, long-term revenue source for Washington State’s transportation system to transition from the current gas tax system.*

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3. Design a Strategic Outreach and Communication Effort

In preparation for developing a demonstration of RUC in Washington, a communication strategy is necessary to identify and prepare for actions for education and engagement with the public, media, communities and elected officials. Prior to advancing a RUC demonstration project or policy, there are a number of steps that need to be taken to assess and advance the public's understanding and develop communications that support a demonstration project. Activities include:

- ▶ Establish goals and objectives
- ▶ Identify target audience(s)
- ▶ Assess public attitudes and level of knowledge regarding transportation funding
- ▶ Baseline public acceptance and impressions of methods of collection
- ▶ Develop key messages/information related to RUC in Washington
- ▶ Prepare for demonstration project with public communications and engagement strategy
 - > Build database
 - > Develop social media/web materials
 - > Create visibility plan: speakers' bureau, media, and stakeholder briefings
 - > Stimulate and monitor public engagement in participating in demonstration
 - > Deliver ongoing updates, progress reports, and results of demonstration

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4. Refine the 2014 Demonstration Proposal

The revised Demonstration proposal should begin by articulating the need for and purpose of a demonstration. Next, key parameters for the demonstration should be designed. These parameters, such as the location, number, and type of participants; degree of agency involvement; concepts to test; duration; and other factors should reflect the demonstration's purpose and need as well as the guiding principles and evaluation criteria developed by the Steering Committee.

To the extent that other opportunities are in alignment with the purpose and need of a demonstration for Washington, the proposal should leverage other activities that may be ongoing in the timeframe beyond 2016, including:

- ▶ **Approaches in other states:** at least three other western states will be operating a RUC pilot project in 2016 (Oregon, California, and Colorado), which presents opportunities to test features of mutual interest (for example, cross-jurisdictional travel between RUC states).
- ▶ **Western RUC Consortium (WRUCC):** work to be undertaken by WRUCC might benefit a Washington demonstration project.
- ▶ **Federal Grant Funding:** as of December 2015, both the US House of Representative and the Senate have approved nearly identical provisions that would provide funding to states for RUC pilot projects.
- ▶ **DOL's Vehicle System Upgrades:** a demonstration project may provide the Department of Licensing with a test bed to determine, in a low-risk environment, how their forthcoming new Vehicle Field System might be adapted for RUC purposes in the future.

APPENDIX MATERIALS

Additional information

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Appendix A - 2014 Demonstration Plan

The RUC Steering Committee developed a proposed Demonstration work plan that was scalable, in terms of work streams, development stages and cost:[appendix at best]

Stage of the Work Plan	Stage 1: Planning	Stage 2: Setup	Stage 3: Execution	Stage 4: Evaluation	Estimated Cost (millions)
Demonstration	Develop budget and detailed demonstration plan, including technical documents.	Procure technology vendors and set up necessary systems.	Conduct demonstration and collect evaluation data.	Evaluation, analysis, and reporting, including findings and recommendations.	\$2.4 to \$4.5
Public Attitude Assessment	Baseline assessment via web surveys, focus groups, and stakeholder interviews.	Attitudinal surveys.	Participant surveys.	Comprehensive report on attitude assessment.	\$0.4 to \$0.6
Communications and Engagement	Prepare communications plan, manage communications, and begin media outreach.	Recruit demonstration participants and engage media.	Proactive communications during demonstration.	Continue media engagement and report on findings.	\$0.3 to \$0.5
Project Management	Coordinate and manage the project deliverables. Direct and provide policy interface, reports and presentations.	Coordinate and prepare the agreed plans for executing and testing the demonstration plan.	Manage and monitor the execution of the demonstration and reporting status to Legislature.	Prepare and present final reports and analysis.	\$0.3 to \$0.4
<i>Estimated Timeframe</i>	<i>6 to 8 months</i>	<i>6 to 12 months</i>	<i>6 to 12 months</i>	<i>6 to 9 months</i>	<i>24 to 41 months</i>
<i>Estimated Cost (millions)</i>	<i>\$0.8 to \$1.0</i>	<i>\$0.6 M to \$1.2</i>	<i>\$1.4 to \$3.0</i>	<i>\$0.6 to \$0.9</i>	<i>\$3.4 to \$6.0</i>

Note: Totals may not add due to rounding



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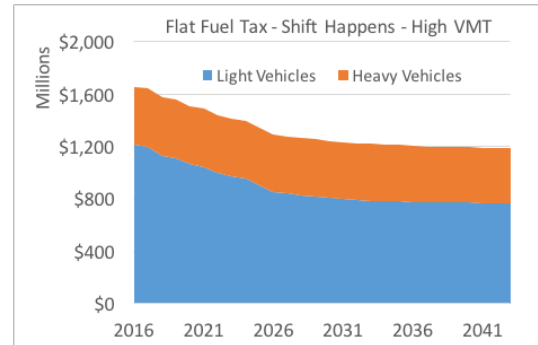
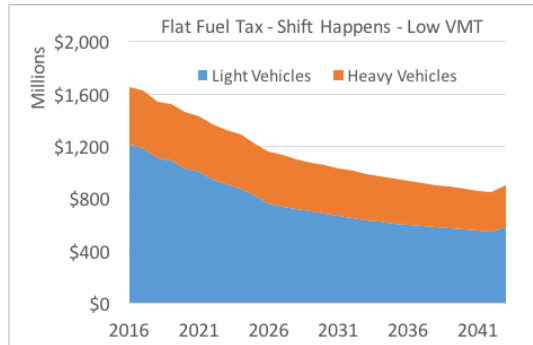
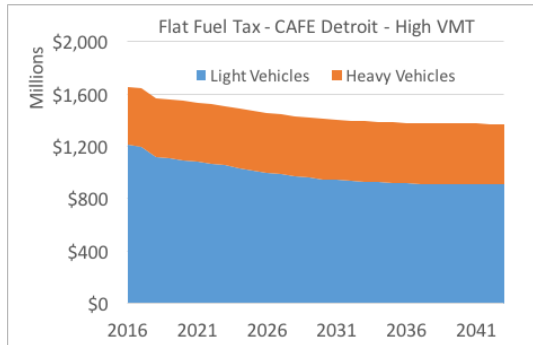
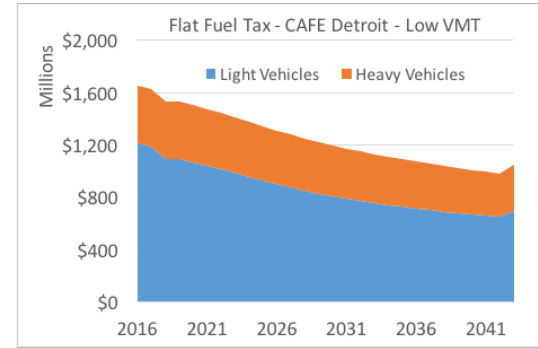
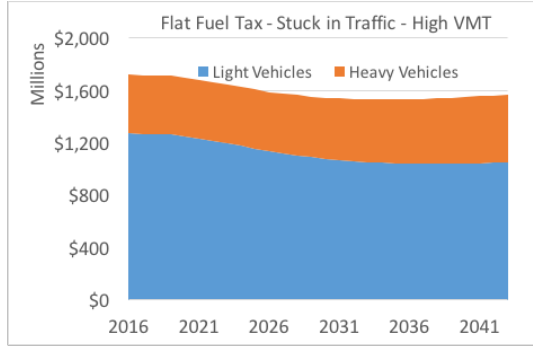
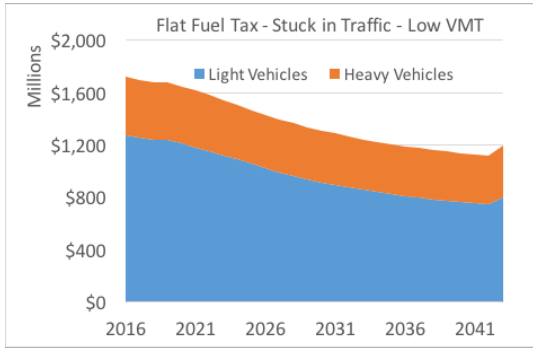
Appendix B – Total Revenue Charts

This appendix contains charts depicting total revenue under the three policy alternatives (flat fuel tax, indexed fuel tax, and Washington RUCs) under each of the three scenarios (Stuck In Traffic, CAFE Detroit, and Shift Happens) for two VMT growth scenarios. In all, there are 18 charts for each combination of the above (e.g., flat fuel tax – Stuck In Traffic – low VMT growth is one chart). Each chart shows aggregate revenue from both light and heavy vehicles. The two VMT scenarios were created as follows:

- ▶ The “low” VMT scenario is based on the Transportation Revenue Forecast Council’s September 2015 VMT forecast through 2043, assuming a split of 89.5% VMT for light vehicles and 10.5% for heavy vehicles.
- ▶ The “high” VMT scenario is based on the U.S. EIA Reference Case VMT for 2015-2040, which is a national projection. Annual VMT growth rates from the EIA projections for 2016-2040 were applied to Washington VMT from 2015.

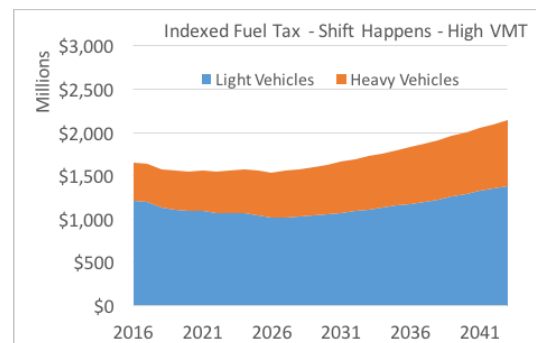
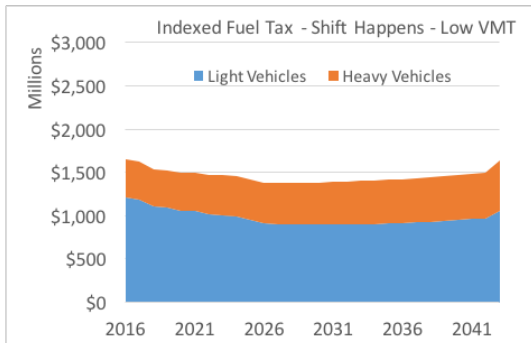
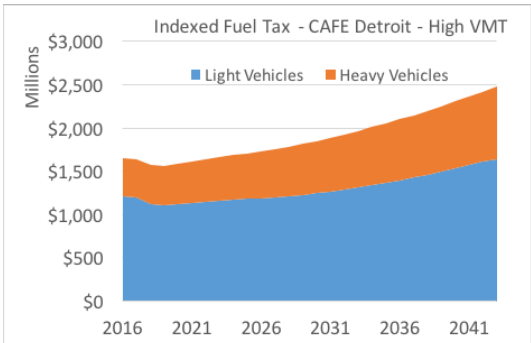
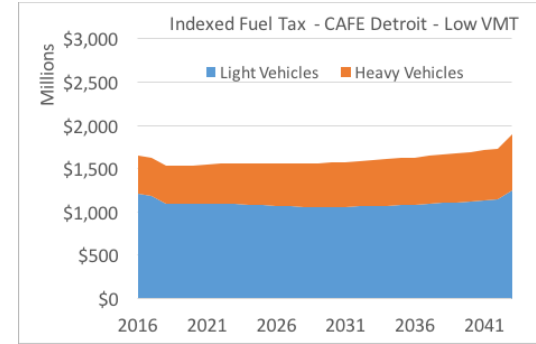
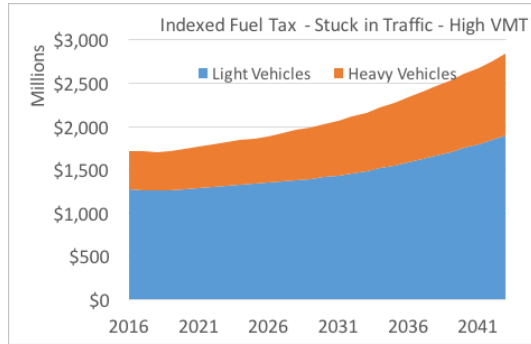
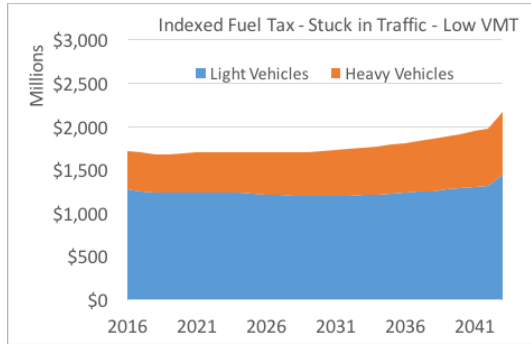
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Flat Fuel Tax Policy Alternative



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Indexed Fuel Tax Policy Alternative



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Washington RUCs Policy Alternative

