WELCOME AND INTRODUCTIONS
What We Need to Accomplish Today

• Reports:
  » Status report on the urban/rural equity analysis
  » Status report on cross-border issues and the Western RUCC
  » Report from our California guests
  » Report from the Treasurers office
  » Summary of the financial analysis
  » Summary of the concept of operations

• Discussion of direction and next steps
PUBLIC COMMENT
OVERVIEW AND SUMMARY OF WHERE WE ARE
## Meeting Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Topic</th>
</tr>
</thead>
</table>
| June 16, 2014 (Olympia) | Steering Committee | • Update on legislative activity  
                      |   • Phasing                                                  
                      |   • Outline of concept of operations                         
                      |   • Urban/rural analysis progress report                     
                      |   • Update on options for interjurisdictional travel        |
| June 17, 2014 (Olympia) | WSTC                | Same topics as Steering Committee from the day before, with less detail |
| September 25, 2014 (SeaTac) | Steering Committee | • Draft operational concepts  
                      |   • Draft financial analysis                                 
                      |   • Draft report outline                                     
                      |   • Update on urban/rural (WSTC lead)                        
                      |   • Update on bond analysis (WSDOT/State Treasurer’s Office lead)  
                      |   • Update on interstate travel (WSDOT lead)               |
### Meeting Schedule (continued)

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 17, 2014 (SeaTac)</td>
<td>Steering Committee</td>
<td>• Discuss work plan for next fiscal biennium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discuss any changes from the September meeting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review draft report and develop recommendations to WSTC</td>
</tr>
<tr>
<td>December 9/10, 2014 (Olympia)</td>
<td>WSTC</td>
<td>Review and finalize draft report</td>
</tr>
<tr>
<td>January or February 2015; date to</td>
<td>Transportation</td>
<td>Present final report and recommendations</td>
</tr>
<tr>
<td>be determined (Olympia)</td>
<td>Committees of Legislature</td>
<td></td>
</tr>
</tbody>
</table>
UPDATE ON URBAN/RURAL EQUITY ANALYSIS AND VOWS SURVEY RESULTS
CROSS-BORDER ISSUES AND WESTERN RUCC REPORT
FINANCIAL ANALYSIS
## Updated policy assumptions

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Last year</th>
<th>This year</th>
</tr>
</thead>
</table>
| Vehicles subject to road usage charges          | Only non-diesel vehicles pay road usage charges.                          | Two scenarios:  
(1) all light vehicles (<10k pounds);  
(2) vehicles above 2015 Washington fleet average fuel economy (21.0 MPG). |
| Fuel tax status                                 | Stop collecting the gasoline tax, but keep collecting the diesel tax.      | Keep collecting all fuel taxes (gasoline and diesel), but refund fuel taxes to vehicles that pay road usage charges. |
| Per-mile rate                                   | Rate is revenue neutral with gross gasoline tax revenues in 2015.          | Set the rate to be revenue neutral with gross fuel tax revenues from light vehicles in 2015. |
| Road usage charge start date                    | 2015                                                                      | July 1, 2018 (start of FY2019).                                           |
| Transition                                      | All-at-once.                                                              | Two scenarios:  
(1) enroll in road usage charge upon registration renewal;  
(2) enroll upon a title transaction. |
| Methods of collection                           | Consider Methods A, B, and C independently and in combination.             | All methods (A, B, C, and D) available. D treated similarly to B from a cost perspective. |
| Private account management                      | Not assumed.                                                              | Not assumed, but acknowledged as an option.                               |
| Evasion                                         | Evasion treated as a “cost” for road usage charge concepts.                | Evasion treated as a subtraction from gross revenues                      |
Relationship of key inputs and outputs

**Inputs**
- Number of vehicles
  - +
- Vehicle Miles Traveled
  - -
  - +
  - + +
- Fuel economy
  - no impact

**Outputs**
- Fuel tax revenues
- RUC revenues

+ indicates a positive correlation
- indicates a negative correlation
Light vehicle population scenarios

Historical
Baseline
Low
Light vehicle VMT scenarios

Billions

- Historical
- Baseline
- Low
- New WSDOT Methodology
Light vehicle fleet MPG scenarios

Miles per gallon

- Historical
- Baseline
- Low
We created scenarios that varied:

<table>
<thead>
<tr>
<th>Which vehicles would pay road usage charges:</th>
<th>Transition approaches:</th>
<th>Percent of Principals choosing charge methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>All light vehicles</td>
<td>Annual tab renewal</td>
<td>20% Method B</td>
</tr>
<tr>
<td>Light vehicles &gt;21 MPG</td>
<td>Title transaction</td>
<td>75% Method B</td>
</tr>
</tbody>
</table>

We created scenarios that varied:
Treatment of evasion

• Since fuel tax continues to be collected, motorists effectively prepay RUC via fuel tax
• Additional amount to collect for RUC will be small, thus reducing incentive to evade
• Low MPG vehicles have incentive to over-report miles
• Fines and penalties could turn evasion into a “profit center,” but we assume no fines or penalties
Net revenues from 36 scenarios
Net revenues from 36 scenarios, organized by economic assumptions

NPV (Billions)

Baseline

Low VMT

Low MPG

Low Fleet Growth

Fuel Tax

All Vehicles, Title Transaction, 20% B

All Vehicles, Title Transaction, 75% B

Efficient Vehicles, Title Transaction, 20% B

Efficient Vehicles, Title Transaction, 75% B

All Vehicles, Tab Renewal, 20% B

All Vehicles, Tab Renewal, 75% B

Efficient Vehicles, Tab Renewal, 20% B

Efficient Vehicles, Tab Renewal, 75% B
Cost of collection of 36 scenarios

RUC cost of collection remains higher than fuel taxes (3-12% vs. <1%)
Implications of rate setting

Setting the rate in 2015 results in net RUC revenues exceeding net fuel tax in all years
Annual net revenues, best case of RUC and fuel tax

- Road Usage Charge - Best Case
- Fuel Tax - Best Case

Millions

<table>
<thead>
<tr>
<th>Year</th>
<th>Road Usage Charge</th>
<th>Fuel Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$750</td>
<td>$1,200</td>
</tr>
<tr>
<td>2023</td>
<td>$800</td>
<td>$1,150</td>
</tr>
<tr>
<td>2027</td>
<td>$850</td>
<td>$1,100</td>
</tr>
<tr>
<td>2031</td>
<td>$900</td>
<td>$1,050</td>
</tr>
<tr>
<td>2035</td>
<td>$950</td>
<td>$1,000</td>
</tr>
<tr>
<td>2039</td>
<td>$1,000</td>
<td>$950</td>
</tr>
<tr>
<td>2043</td>
<td>$1,050</td>
<td>$900</td>
</tr>
</tbody>
</table>
Takeaways

• RUC performance considerably stronger than last year, relative to fuel tax for several reasons
  » Set the per-mile rate for RUC based on fuel tax revenue neutrality in 2015
  » By program start in 2019, some collection costs decline considerably from today
  » Keep fuel tax in place to capture non-RUC vehicles and reduce RUC-related evasion

• Initial gap between fuel tax and RUC no longer an issue

• Fleet MPG remains the driving factor in the RUC business case
CONCEPT OF OPERATIONS
Concept of Operations Agenda

- What is a Concept of Operations (ConOps)?
- Policy Direction and Stakeholders
- Road Usage Charge System Components
- Methods of Road Usage Charge Collection (formerly Operational Concepts)
- System Usage Scenarios
- Going Forward
What is a Concept of Operations?

• Generally the first systems engineering document produced
• Description of how the system will be used
• Relatively nontechnical
• Presented from the viewpoints of the various stakeholders

• Reasons for Creating a ConOps:
  » Get stakeholder agreement on system operation
  » Describe system operation at a high-level
  » Define the environment in which the system will operate
  » Provide the basis for validation of the completed system
The Systems Engineering Process

Expected Technical Development Process

- Determine Feasibility
- Develop Methods
- Develop Concept of Operations
- Develop System Requirement Specifications (SRS) and Interface Control Document (ICD)
- Pilot / Market Demonstration
  - Includes procurement, setup, execution, and analysis

Recursion Expected!
Concept of Operations Agenda

• What is a Concept of Operations (ConOps)?

• Policy Direction and Stakeholders

• Road Usage Charge System Components

• Methods of Road Usage Charge Collection (formerly Operational Concepts)

• System Usage Scenarios

• Going Forward
Policy Direction

• Primary policy direction: identify a Sustainable, long-term transportation Revenue Source

• Guiding Principles:

<table>
<thead>
<tr>
<th>Transparency</th>
<th>Accountability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complementary policy objectives</td>
<td>Enforcement</td>
</tr>
<tr>
<td>Cost-effectiveness</td>
<td>System Flexibility</td>
</tr>
<tr>
<td>Equity</td>
<td>User Options</td>
</tr>
<tr>
<td>Privacy</td>
<td>Interoperability and Cooperation</td>
</tr>
<tr>
<td>Data Security</td>
<td>Phasing</td>
</tr>
<tr>
<td>Simplicity</td>
<td></td>
</tr>
</tbody>
</table>
Major Stakeholders

- Principals
- Policy and Operations Agency (Existing or new)
- Washington State Transportation Commission (WSTC)
- Washington State Department of Transportation (WSDOT)
- Washington State Department of Licensing (DOL)
- Law Enforcement Agencies
- Private Industry
Concept of Operations Agenda

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Road Usage Charge System Overview
Road Usage Charge System Overview with Private Account Management Entities

Diagram:
- Principal
- Vehicle(s)
- Road Network
  - Public
  - Private and Out of State (not charged in Method C)
- Value Added Services
- Commercial Service Provider(s) and/or Agents
- Certification Agent
- Policy and Operations Agency
- Law Enforcement
- Registration and Payment
- Department of Licensing
- Existing Driver Licensing, Vehicle Registration, Safety, Inspections, and Insurance Process
Concept of Operations Agenda

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The ConOps allows Principals to choose one of four charging methods:

- **A** Time Permit
- **B** Odometer Reading
- **C** Automated Distance Charge
- **D** Smartphone Application
Method A – Time Permit

- Principals buy a permit for an unlimited number of miles for a year, tied to vehicle registration transactions

- Principal perspective
  - User prepurchases a permit for unlimited usage
  - Permits are annual but can be paid in installments
  - Purchase tied to vehicle registration

- Agency perspective
  - Easy to enforce – valid tabs = valid permit
  - Similar to Department of Licensing (DOL) current handling of vehicle registration
Method B – Odometer Charge

- **Principals prepay for number of miles estimated for next year**
  - At year end, actual miles reported and reconciled with prepaid miles
  - In-state and out-of-state miles treated the same

**Principal perspective:**
- Annual mileage estimated
- Prepurchase permit to cover estimated miles
- At end of year, report actual miles traveled and reconcile payment
- Pay in advance for following year
- Periodic payment/reporting possible

**Agency perspective**
- Accounting and CRM would need to be significantly scaled up from current functions at state agencies
Method C – Automated Distance Charge

• In-vehicle electronics counts miles traveled in state only
  » Could be operated fully by a state agency or outsourced
  » For the business case we assumed a state agency will operate

• Principal perspective
  » User pays for road usage in Washington State at end of quarter

• Agency perspective
  » Enforcement through device certification, compliance analytics, and odometer reading
  » Requires extensive account management and CRM
Method D – Smartphone Application
Road Usage Charge Measurement

• To begin, the Principal:
  » installs application on smartphone
  » Sets up an account
  » Pairs the device with the vehicle’s Bluetooth network.

• After initial Setup:
  » Phone automatically pairs with vehicle when turned on & in vehicle
  » When vehicle moves, application computes distance traveled
  » Application updates miles traveled over the cellular connection

• Principals may not have smartphone (or not charged). To cover:
  » Initial odometer image is required at first pairing
  » Principals must provide regular photos of their odometers, taken using the application on the smartphone
Method D – Smartphone Application
Road Usage Charge Measurement (Continued)

- The State can invoice for mileage similarly to Method B.
- The smartphone application can also be used with Method C:
  - Smartphone uses GPS location data
  - Principal can enable/disable use of location data
- Principal perspective
  - Requires smartphone
  - Most likely prepay, like Method B
- Agency perspective
  - Applications are currently offered by two private vendors who may wish to operate as service providers
  - Requires extensive account management and CRM
Concept of Operations Agenda

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• Going Forward
Road Usage Charging System
Usage Scenarios

- Identify vehicles that should pay road usage charge
- Enroll a vehicle in the road usage charge
- Enforce
- Drive
- Change road usage charge method
- Invoice and pay
- De-enroll a vehicle from the road usage charge

- Provide Public Information
- Enroll a Vehicle Newly Purchased from an Auto Dealer in the RUC
- Enroll a Vehicle Newly Purchased from a Private Seller in the RUC
- Vehicle Owner Opt's in to Paying the Road Usage Charge
- Vehicle Becomes Liable for Road Usage Charge after Initial Purchase
- Person Moves into State and Registers Vehicle Liable for Road Usage Charge

- Principal Does Not Set Up Account
- Principal Provides False Odometer Reading (Method B)
- Principal Rolls Back Odometer Reading (Method B)
- Principal Tampers with or Removes Device (Method C)
- Principal Does Not Pay Invoice

- Vehicle Sold (Private Sale)
- Vehicle Moved out of state
- Vehicle Stolen
- Vehicle Destroyed

- Road Usage Charge Calculation
- Road Usage Charge Invoicing
- Road Usage Charge Payment and Reconciliation
For each scenario / sub-scenario

• Context
• Principal Activities
• Policy and Operations Agency Activities
• Private Account Management Entity Activities
• Issues
• Possible Changes Over Time
Concept of Operations Agenda

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• Going Forward
Key Takeaways

• The ConOps:
  » Fulfills Legislative and Steering Committee guidance
  » Is the technical basis for the financial model
  » Provides the technical framework for a pilot or revenue generating road usage charging system

• All four methods work well together and would be implemented in parallel

• There are still several major issues to resolve
Major Remaining Issues: Method A

- What number of miles should used for the base price for Method A for one year?
- Should Principals be allowed to transition in and out of Method A within a registration year?
- Should official odometer readings be required before entering Method A?
Major Remaining Issues: Method B

- Should official odometer readings be required before entering Method B?
- What percentage of Principals in Method B have official odometer readings every year?
- Who would carry out official odometer readings?
- Other enforcement mechanisms and penalties?
- Who should estimate annual mileage—Principal or State?
- When estimated mileage is used up, should principals have to buy additional miles?
Major Remaining Issues: Methods C & D

• Method C:
  » Should private account management entities should be engaged?
  » Should this method should be prepay or postpay?

• Method D:
  » If smartphone supports method B, all issues for Method B apply.
  » If smartphone supports Method C, all issues for Method C apply.
DISCUSSION OF DIRECTION AND NEXT STEPS
Next Steps

- Discuss work plan for next fiscal biennium
- Discuss any changes from the today’s meeting
- Review draft report and develop recommendations to WSTC
- Next meeting at SEATAC on Monday, November 17, 2014
THANK YOU
Fuel Consumption / Vehicle Miles of Travel: Vehicle-Based Model Development

Contributors: Staff from Transp. Commission, WSDOT, DOL, Legislature
September 25, 2014
Model Development: Process

• Model is part of a 3-pronged approach to evaluating the impacts of a potential road usage charge and comparing to the fuel tax:
  • VOWS survey;
  • WSDOT “On-the-Map” Commuting Pattern analysis; and
  • Fuel consumption / vehicle miles traveled model.

• The model is fundamentally based on:
  • Light-duty household-based vehicle records from the Washington Department of Licensing (DOL) central database for vehicles; and
  • Washington Department of Transportation (WSDOT) estimates of light-duty vehicle miles of travel statewide.
Model Development: Process, cont.

• The DOL data, for each vehicle model, was matched with the U.S. Environmental Protection Agency (EPA) data on fuel economy.
• The data was further modified with the help of WSDOT Geographic Information Systems staff to identify each vehicle household as urban or rural.
• The resulting vehicle records were then assigned an estimate of vehicle miles of travel based on the 2009 National Household Travel Survey and common vehicle characteristics between the survey and the DOL data.
• The model was calibrated using two known independent data points:
  • WSDOT estimates of vehicle miles of travel; and
  • DOL estimates of total gasoline and diesel fuel consumption.
Important Model Assumptions

• The distribution of VMT across the vehicle fleet at the national level from 2008 mirrors the 2011-13 distribution at the state level.

• WSDOT’s estimate of daily vehicle miles of travel for CY 2011-13 is accurate, as is their estimate of the split between light-duty and heavy-duty travel.

• For simplifying purposes, the road usage charge (RUC) rate is based on a aggregate revenue-neutral policy with respect to estimated fuel tax collections for the light-duty fleet from FY 2011-14.

• In-state travel (in terms of VMT) by out-of-state drivers is roughly the same as out-of-state travel by Washington drivers.
No. WA Household Light-Duty Vehicles by MPG Range

Nominal Average Fuel Economy: 20.3 mpg
Actual Average Fuel Economy: 19.1 mpg
No. WA Household Light-Duty Vehicles By VMT Range

Annual Total Statewide VMT driven by Household Light-Duty Vehicles: 49.6 billion miles

Average Annual VMT driven by Household Light-Duty Vehicles: 9,670 mi

Median Annual VMT driven by Household Light-Duty Vehicles: 7,910 mi
No. WA Households By Annual Fuel Tax Payment

Annual Total Statewide Household Fuel Tax Payments: $972.2 million
Average Individual Household Fuel Tax Payment: $374
Median Individual Household Fuel Tax Payment: $285
Comparison of Fuel Tax and Hypothetical RUC Payments For Washington Light-Duty Household Vehicles

- VMT and Fuel Consumption figures are actual annual averages from FY 2011-2014.
- The base RUC rate of 1.96 cents/mile is revenue-neutral with respect to LDV activity during the time period.
- Information is also provided for a second and higher RUC rate, for context, given the expected higher administrative costs for RUC versus fuel tax. The 10% adjustment is within the range identified in the Business Case Analysis of 2013.

| Statewide Vehicle Miles of Travel | 49,612,331,167 |
| Gallons of Fuel Consumed          | 2,592,417,220  |
| Avg. Fuel Tax Receipts (Rate: 37.5 cents/gal) | $972,156,458 |
| Hypothetical Road Usage Charge Receipts (Rate: 1.96 cents/mile) | $972,401,691 |
| Hypothetical RUC Receipts with 10% Admin Surcharge (Rate: 2.16 cents/mile) | $1,071,626,353 |
Washington Light-Duty Household Vehicles, Fuel Tax and Hypothetical RUC Payments: Rural and Urban Comparison

<table>
<thead>
<tr>
<th>By Urban/Rural Location:</th>
<th>Avg. Annual Miles Driven (miles)</th>
<th>Avg. Annual Fuel Consumption (gallons)</th>
<th>Avg. Annual Fuel Tax Paid @ 37.5 cents/gal</th>
<th>Avg. Annual Equivalent Road Usage Charges @ 1.96 cents/mile</th>
<th>Above RUC, but with 10% Additional Admin Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>10,133</td>
<td>539</td>
<td>$202</td>
<td>$199</td>
<td>$219</td>
</tr>
<tr>
<td>Urban</td>
<td>9,343</td>
<td>481</td>
<td>$180</td>
<td>$183</td>
<td>$202</td>
</tr>
<tr>
<td>Overall</td>
<td>9,671</td>
<td>505</td>
<td>$189</td>
<td>$190</td>
<td>$209</td>
</tr>
</tbody>
</table>

- The overall, or statewide averages, for VMT and fuel consumption are based on actuals in FY 2011-2014.
- The base RUC rate of 1.96 cents/mile is revenue-neutral with respect to LDV activity during the time period.
- Information is also provided for a second and higher RUC rate, for context, given the expected higher administrative costs for RUC versus fuel tax. The 10% adjustment is within the range identified in the Business Case Analysis of 2013.
Washington Light-Duty Household Vehicles, Fuel Tax and Hypothetical RUC Payments: Comparison by Type of Vehicle

<table>
<thead>
<tr>
<th>By Vehicle Type</th>
<th>Avg. Annual Miles Driven (miles)</th>
<th>Avg. Annual Fuel Consumption (gallons)</th>
<th>Avg. Annual Fuel Tax Paid @ 37.5 cents/gal</th>
<th>Avg. Annual Equivalent Road Usage Charges @ 1.96 cents/mile</th>
<th>Above RUC, but with 10% Additional Admin Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Car/Station Wagon</td>
<td>9,418</td>
<td>415</td>
<td>$155</td>
<td>$185</td>
<td>$203</td>
</tr>
<tr>
<td>Pickup Truck</td>
<td>9,072</td>
<td>603</td>
<td>$226</td>
<td>$178</td>
<td>$196</td>
</tr>
<tr>
<td>Sport Utility Vehicle</td>
<td>10,588</td>
<td>605</td>
<td>$227</td>
<td>$208</td>
<td>$229</td>
</tr>
<tr>
<td>Van or Minivan</td>
<td>9,803</td>
<td>545</td>
<td>$204</td>
<td>$192</td>
<td>$212</td>
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<tr>
<td>Overall</td>
<td>9,671</td>
<td>505</td>
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<td>$190</td>
<td>$209</td>
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</tbody>
</table>

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# Washington Light-Duty Household Vehicles, Fuel Tax and Hypothetical RUC Payments: Comparison by Fuel Economy Range

<table>
<thead>
<tr>
<th>By Fuel Economy Range:</th>
<th>Avg. Annual Miles Driven (miles)</th>
<th>Avg. Annual Fuel Consumption (gallons)</th>
<th>Avg. Annual Fuel Tax Paid @ 37.5 cents/gal</th>
<th>Avg. Annual Equivalent Road Usage Charges @ 1.96 cents/mile</th>
<th>Above RUC, but with 10% Additional Admin Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10 MPG</td>
<td>6,755</td>
<td>751</td>
<td>$281</td>
<td>$132</td>
<td>$146</td>
</tr>
<tr>
<td>10 - 15 MPG</td>
<td>8,353</td>
<td>853</td>
<td>$245</td>
<td>$164</td>
<td>$180</td>
</tr>
<tr>
<td>15 - 20 MPG</td>
<td>9,777</td>
<td>577</td>
<td>$216</td>
<td>$192</td>
<td>$211</td>
</tr>
<tr>
<td>20 - 25 MPG</td>
<td>9,678</td>
<td>448</td>
<td>$168</td>
<td>$190</td>
<td>$209</td>
</tr>
<tr>
<td>25 - 30 MPG</td>
<td>10,244</td>
<td>385</td>
<td>$145</td>
<td>$201</td>
<td>$221</td>
</tr>
<tr>
<td>30 - 40 MPG</td>
<td>11,094</td>
<td>351</td>
<td>$131</td>
<td>$217</td>
<td>$240</td>
</tr>
<tr>
<td>40 - 50 MPG</td>
<td>10,590</td>
<td>243</td>
<td>$91</td>
<td>$208</td>
<td>$229</td>
</tr>
<tr>
<td>50 MPG and above</td>
<td>12,337</td>
<td>222</td>
<td>$83</td>
<td>$242</td>
<td>$266</td>
</tr>
<tr>
<td>Overall</td>
<td>9,671</td>
<td>505</td>
<td>$189</td>
<td>$190</td>
<td>$209</td>
</tr>
</tbody>
</table>
Road Usage Charge Inter-jurisdictional Travel Study

Jeff Doyle
(Former) Director, Public/Private Partnerships, Washington State Department of Transportation
(Former) Chair, WRUCC Steering Committee

Washington Road Usage Charge Steering Committee Meeting
September 25, 2014
Seattle, Washington
WRUCC is a multi-state research consortium of western state DOTs

**MEMBER STATES**
- Arizona
- California
- Colorado
- Idaho
- Hawaii
- Montana
- Nevada
- Oregon
- Texas
- Utah
- Washington

**ELIGIBLE STATES**
- Alaska
- Nebraska
- New Mexico
- North Dakota
- Oklahoma
- South Dakota
- Wyoming

**STATES PARTICIPATING IN THIS STUDY:**
- Washington
- Oregon
- California
- Montana
- Colorado
- Texas
Study of Inter-jurisdictional Road Usage Charge Issues

Issues to address:
- How does the Motorist interact with the RUC system?
- How does the RUC state deal with the out-of-state motorist?
- How do the states interact with each other (reconciliation of revenues, etc.)?
- How might private sector RUC service providers participate or assist?

Initial policy options for states to handle out-of-state motorists:
- No charge
- Shadow charge (i.e., state-to-state transfers of revenue – not individuals)
- Fuel-based charge
- Time-based charge
- Distance-based charge
Task 2.1: Approaches for Addressing Out-of-State Travel

Summary of Policy Alternatives

| Policy alternatives available to host jurisdiction for charging visitor | Visitor’s status in home state |  
|---|---|---|
|  | Fuel tax | Undifferentiated RUC | Differentiated RUC |
| No charge | ✓ | ✓ | ✓ |
| Shadow charge | ✓ | ✓ | ✗ |
| Fuel charge | ✓ | ✓ | ✓ |
| Time charge | ✓ | ✓ | ✓ |
| Distance charge | odometer-based only | odometer-based only | ✓ |

How the out-of-state traveler’s mileage is captured may depend upon whether that driver’s home state also collects a road usage charge.
## Task 2.1: Approaches for Addressing Out-of-State Travel

### Summary of Operational Concepts

<table>
<thead>
<tr>
<th>Policy alternative</th>
<th>Manual concept</th>
<th>Automated concept</th>
<th>Other concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>No charge</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Shadow charge</td>
<td>Any method of measurement or estimation mutually agreed by jurisdictions, with automated periodic reconciliation</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Fuel charge</td>
<td>Collect tax at pump from all motorists who do not pay RUC</td>
<td>Collect at terminal rack; make automated refunds to distance-based charge payers</td>
<td>N/A</td>
</tr>
<tr>
<td>Time charge</td>
<td>Manual, enforced via ALPR and at roadside</td>
<td>Electronic, enforced via ALPR</td>
<td>N/A</td>
</tr>
<tr>
<td>Distance charge</td>
<td>Manual (odometer-based distance) enforced via ALPR</td>
<td>Electronic (differentiated distance)</td>
<td>Hybrid</td>
</tr>
</tbody>
</table>
Task 2.2: Approaches for Multi-State Road Usage Charge Reporting and Reconciliation

Principal issues to be addressed in Task 2.2:

Describes and summarizes alternative approaches for multi-state road usage charge (RUC) **reporting** and **reconciliation** from two perspectives:

- *Individual motorists*, including motorists adopting both automated (e.g., in-vehicle devices) and manual (e.g., odometer readings or distance licenses) approaches to RUC reporting and payment

- *States*, which can adopt bilateral or multilateral approaches for reporting, collection, and reconciliation of RUC revenue
Project Schedule and Next Steps:

- **Task 1**: Project Kickoff: July 3

- **Task 2.1**: Summarize approaches for accounting for out-of-state mileage, including unique issues for participating states.
  - **Deliverable**: Memo on approaches for imposing RUC for out-of-state driving

- **Task 2.2**: Summarize approaches for multi-state RUC reporting for individuals and for states.
  - **Deliverable**: Memo on approaches for state reporting and tax reconciliation.

- **Task 3**: Document findings in a report for presentation at WRUCC Fall Quarterly Meeting in October, 2014;

- **For Washington State RUC Steering Committee**: final report will be presented and incorporated into the Steering Committee’s final Concept of Operations in November, 2014.
Presentation to:

Washington State Road Usage Charge
Assessment Steering Committee
California Transportation Commission

Established in 1978 as an independent state body to:

- Public review body of the Transportation Program
- Program and allocate State & Federal funds
- Advise and assist the Secretary of Transportation and the Legislature
- Participate in the development of State and Federal legislation
- Adopt policies to implement enacted laws
Eleven voting members:
- Nine appointed by the Governor, with advise & consent of Senate
- One appointed by the Speaker of the Assembly
- One appointed by the Senate Rules Committee

Two non-voting ex-officio members:
- One appointed by the Senate
- One appointed by the Assembly

Commissioners

CARL GUARDINO, Chair
LUCY DUNN, Vice Chair
BOB ALVARADO
DARIUS ASSEMI
YVONNE BURKE
JAMES EARP
DARIO FROMMER
JAMES GHIELMETTI
FRAN INMAN
JAMES MADAFFER
JOSEPH TAVAGLIONE

Ex-Officio Members:

SENATOR MARK DESAULNIER
ASSEMBLYMEMBER BONNIE LOWENTHAL
Role in Transportation Delivery

- Set funding targets & investment priorities
- Develop and Adopt Guidelines
- Develop multi-year transportation programs
- Responsible Agency under CEQA
- Approve Right of Way transactions
- Adopt Resolutions of Necessity
- Approve public road connections
- Approve Public Private Partnerships
- Allocate Funds
- Track and monitor
- Report
Statewide Transportation Funding

FY 2014/15
Approximately $28.0 Billion

Source: LAO Overview of Trans Funding March 2014
Since 1984, when voters in Santa Clara County - the heart of Silicon Valley - passed a countywide initiative, Measure A, to tax themselves for a 10-year period, 20 "Self-Help" counties, 81% Californians, passed local transportation sales tax measures.
2011 Statewide Transportation System Needs Assessment

- “Surveys” of each of the state’s 18 MPOs, the 26 rural RTPAs, and Caltrans
- “Fiscally constrained” project lists from the most recently adopted Regional Transportation Plan (RTP)
- “Special studies” for Local Roads and Public Transit
Federal, State and Local revenue projected at $242 billion over the next decade.

Source: 2011 Statewide Transportation System Needs Assessment
### Projected Needs

<table>
<thead>
<tr>
<th></th>
<th>Preservation</th>
<th>Management</th>
<th>Expansion</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highways</td>
<td>$79,660</td>
<td>$7,545</td>
<td>$78,740</td>
<td>$165,945</td>
</tr>
<tr>
<td>Local Roads</td>
<td>$102,900</td>
<td>$2,295</td>
<td>$24,156</td>
<td>$129,351</td>
</tr>
<tr>
<td>Public Transit</td>
<td>$142,357</td>
<td>$1,270</td>
<td>$30,904</td>
<td>$174,531</td>
</tr>
<tr>
<td>Inter-city Rail</td>
<td>$170</td>
<td>$94</td>
<td>$6,144</td>
<td>$6,408</td>
</tr>
<tr>
<td>Freight Rail</td>
<td>$64</td>
<td>$387</td>
<td>$21,924</td>
<td>$22,376</td>
</tr>
<tr>
<td>Seaports</td>
<td>$4,600</td>
<td>$403</td>
<td>$7,097</td>
<td>$12,100</td>
</tr>
<tr>
<td>Airports</td>
<td>$10,420</td>
<td>$954</td>
<td>$4,554</td>
<td>$15,928</td>
</tr>
<tr>
<td>Land Ports</td>
<td>$935</td>
<td>$0</td>
<td>$34</td>
<td>$969</td>
</tr>
<tr>
<td>Intermodal Facilities</td>
<td>$0</td>
<td>$0</td>
<td>$5,947</td>
<td>$5,947</td>
</tr>
<tr>
<td>Bike / Ped</td>
<td>$0</td>
<td>$578</td>
<td>$3,936</td>
<td>$4,513</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$341,106</strong></td>
<td><strong>$13,526</strong></td>
<td><strong>$183,435</strong></td>
<td><strong>$538,067</strong></td>
</tr>
</tbody>
</table>

|                      | $147,707     | $94,693    | $242,400  |
| **Total Revenues**   | **($193,399)**| **($102,268)**| **($295,667)**|

|                      | 43%          | 48%        | 45%        |
| **% Funded**         |              |            |            |

* Excludes the California High Speed Rail Project

Source: 2011 Statewide Transportation System Needs Assessment
Regional Transportation Plans

Assumed Funding Scenarios:

- Traditional levels of State & Federal Funding
- Increased and Indexed Gas Tax
- **Mileage-Based User Fees**
- Cap & Trade
- Transportation Bonds
- Extended Local Sales Tax
- Private Revenue (PPP)
- Congestion Pricing
- HOT Lanes (Tolling)

Source: Adopted Regional Transportation Plans
Commission’s Annual Reports

Annual Reports to the Legislature

- Gas Tax Increase and Index to Inflation
- Road User Charge
- Pricing & Tolling
- Reforms
- Efficiencies
Road Usage Charge – Senate Bill 1077

- Creates a Road Usage Charge Technical Advisory Committee
- The Committee consists of 15 members (with consideration given to a list of relevant stakeholders)
- Study mileage-based revenue as an alternative to the gas tax
- Make recommendations to the Secretary of Transportation on the design of a pilot program
- Requires the Transportation Agency to implement a pilot program by January 1, 2017
- Requires the Transportation Agency to prepare and submit a report of its findings to the legislature, the Committee, and the Commission, by June 30, 2018
- Requires the Commission to include recommendations regarding the pilot program in its annual report to the Legislature
- Sunset date of January 1, 2019, unless modified by statute
Thank You

California Transportation Commission
http://www.catc.ca.gov/
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Presentation to:
Washington State Road Usage Charge Assessment Steering Committee

Norma Ortega, Acting Chief Deputy Director
September 25, 2014
California Department of Transportation

Caltrans...

- Designs and oversees the construction of state highways
- Operates and maintains the highway system
- Consists of 12 Local District offices statewide
- Maintains 50,000 road and highway lane miles & 12,559 bridges
- Inspects 402 public-use and special-use airports and heliports
- Funds three intercity passenger rail routes
- Provides funding for local transportation projects
- Has 326 billion annual vehicle miles traveled on the system
Revenue Loss Due to Fuel Efficiency
What is California Doing?

- **California Transportation Infrastructure Priorities (CTIP) Workgroup**
  - Road Usage Charge (RUC) Identified for Exploration
  - Developing High-Level Goal and Guiding Principles
  - Make Recommendations to California State Transportation Agency (CalSTA)

- **Coordinating Research**
  - In support of a California RUC Demonstration Program

- **Senate Bill 1077 (DeSaulnier)**
Tentative RUC Activity Timeline

• Key Dates:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Investigation</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Technical Advisory Committee</td>
<td>January 2015</td>
</tr>
<tr>
<td>Development of Demonstration</td>
<td>January 2016</td>
</tr>
<tr>
<td>Kickoff RUC Demonstration</td>
<td>January 2017</td>
</tr>
<tr>
<td>Evaluation &amp; Report</td>
<td>June 2018</td>
</tr>
</tbody>
</table>

• Public Engagement
Thank You

Norma Ortega, Acting Chief Deputy Director
Norma.Ortega@dot.ca.gov
(916) 654-3986
Washington State Road Usage Charge Assessment Steering Committee

Fiscal Implications of a Potential Transition to Road Usage Charges: Preliminary Analysis

Office of the State Treasurer
September 25, 2014
# Table of Contents

I. Budget Proviso  
II. How Does the MVFT-GO Pledge Work?  
III. How Might the State Leverage Road Usage Charges?  
IV. Assessing Projected Revenues for Bonds  
V. Transition
I. Budget Proviso
Consider a transition from MVFT-GO bonds for transportation projects

In its 2013-15 transportation budget, the Legislature directed the Office of the State Treasurer to:

“…explore the fiscal implications with respect to outstanding motor vehicle fuel transportation bonds and to future transportation bond sales, relating to any reduction, refunding, crediting, or repeal of the motor vehicle fuel tax, in whole or in part, that may occur in a transition to a potential road usage charge by which transportation activities may be funded in the future. The exploration of fiscal implications must examine possible effects on the state credit rating, interest rates, and other factors that affect the cost of financing transportation projects…”
II. How Does the MVFT-GO Pledge Work?
Increase in MVFT Issuance

- Issuance accelerated with 2003 and 2005 authorizations
- $7.1 billion currently outstanding
- Maturities through 2043

*MVFT GO bonds shown for FY 2010 and FY 2011 were all sold in FY 2010.*
How Does the MVFT-GO Pledge Work?

Article VIII, Section 1(g) of the constitution says the state may:

“...pledge its full faith, credit, and taxing power to guarantee the payment of any obligation payable from revenues received from any of the following sources:

(1) Fees collected by the state as license fees for motor vehicles;
(2) Excise taxes collected by the state on the sale, distribution or use of motor vehicle fuel; and
(3) Interest on the permanent common school fund

Provided, that the legislature shall, at all times, provide sufficient revenues from such sources to pay the principal and interest due on all obligations for which said source of revenue is pledged.”

“Notwithstanding the limitation contained in subsection (b) of this section” MVFT-GO bonds are outside of debt limit

Legislative bond authorizations for MVFT-GO bonds include statutory commitment to continue to impose excise taxes on motor vehicle and special fuels to pay, when due, the principal of and interest on all bonds issued under the authority of such legislation.

State Finance Committee bond resolutions and offering documents to investors repeat these constitutional and statutory commitments.
Debt Service on MVFT-GO Bonds

Principal and Interest payments – Past and Future

Bonds are contracts with investors to provide sufficient revenues from gas taxes to pay principal and interest when due.

MVFT-GO bonds outside of the debt limit only if there are MVFT revenues to pay the debt service

Therefore, any transition from MVFT framework must proceed cautiously
Reduce, Refund, Credit or Repeal?

Constitutional, Statutory and Contractual Constraints

**Not legally feasible** to significantly reduce MVFT revenues until all MVFT-GO obligations have been met.

MVFT-GO bonds can only be repaid with MVFT revenues.

**Repealing the state’s gas tax would be an unconstitutional impairment** of the state’s bond contract with investors. It would violate Article VIII, Section 1(g) of the constitution which conditions the state’s ability to issue MVFT-GO bonds outside of the debt limit on the requirement that the legislature will provide revenues from such sources to pay debt service.

**Refunding the entire portfolio of MVFT-Go bonds would be prohibitively expensive:**

- Increasing the principal and interest payments due on the portfolio
- Some of the refunding bonds would have to be taxable due to IRS restrictions
III. How Might the State Leverage Road Usage Charges?
Constitutional Constraints

Article VIII, Section 1(g) of the state constitution: the state may “…pledge its full faith, credit, and taxing power to guarantee the payment of any obligation payable from revenues received from any of the following sources:

1. Fees collected by the state as license fees for motor vehicles;
2. Excise taxes collected by the state on the sale, distribution or use of motor vehicle fuel; and
3. Interest on the permanent common school fund:

Provided, that the legislature shall, at all times, provide sufficient revenues from such sources to pay the principal and interest due on all obligations for which said source of revenue is pledged.”

One approach:

- Structure Road Usage Charges as Motor Vehicle License Fees
- Transition to GO bonds backed by both motor vehicle license fees and MVFT
- Outside the debt limit
- Lowest cost of funds
Road Usage Charges as Motor Vehicle License Fees

New Bond Resolution

General obligation (GO) bonds backed by both motor vehicle license fees and MVFT

- Motor Vehicle License Fees not taxes
- Determine whether new fees are subject to 18th Amendment (Article II Section 40)
- Determine which license fees produce substantial and reliable revenues
- New bond capacity to the extent that new license fee revenues exceed any declines in MVFT
Revenue Bonds

Alternatively, the state could issue revenue bonds backed by road usage charges

Ratings and Cost of borrowing would depend on

- Predictability and size of revenue stream (basket of fees and taxes?)
- Coverage (ratio of revenues to principal and interest payments)
- Other credit enhancements (debt service reserves)

Amount of new bond capacity depends on

- Predictability and size of revenue stream
- Coverage
IV. Assessing Projected Revenues for Bonds
Assessing Future Revenues for Bonds

Goal: Identify reliable, predictable revenues to finance transportation capital projects

Priorities:
1. Meet Obligations on Outstanding Debt
   - Refunds may be problematic, may impact RUC pricing strategy
2. Structure new borrowings within constitutional and statutory framework
3. Plan new borrowings on realistic (conservative) estimates of new revenues
4. Focus on Net Revenues and factors that impact Net Revenues
   - Underlying level of road usage rates
   - Realistic implementation of new revenue collection modes
   - Costs of collection
   - Costs of Evasion
   - Appropriate leverage
5. Transparency and Investment Grade Projections
Focus on Net Revenue Projections

- Phase 2 Gross and Net RUC revenues (Scenario C)
  - Expensive to collect revenues, and
  - Requires patience – breakeven in 2024
- Phase 3 projections *net revenue neutral with fuel taxes in 2015?*
- Net of MVFT refunds?
V. Transition
**Potential Transition**

**Recommendations:**

- **Continue to meet obligations on MVFT-GO Bonds with MVFT revenues.** MVFT has been a reliable revenue source that has financed over $7 billion in projects, many others on pay-go basis, AND is inexpensive to collect.

  - Be cautious.

- **Continue to develop realistic, reliable projections of net road usage revenues.**

  - Benefit from experiences of others.

  - Ask hard questions.

  - Forecasting tough job, but state bears responsibilities and costs if the forecasts are wrong.

  - Lots of what-if scenario analysis.