WELCOME AND INTRODUCTIONS
What We Need to Accomplish Today

- **Restart our work from last year**
  - Update on the legislation that’s directing this work
- **Provide direction to the consultants**
  - Types of vehicles that we should consider charging
  - How we transition from today’s gas tax to a system that includes road-usage charging
- **Get an understanding of the concept of operations work**
- **Updates on other pieces of work**
  - Urban/rural equity analysis (WSTC)
  - Options for charging motorists for interjurisdictional travel (WSDOT)
  - Treasurer’s debt analysis (WSDOT/WSTC)
PUBLIC COMMENT
UPDATE ON LEGISLATIVE DIRECTIVE AND SCHEDULE
Key Points from the 2014 Budget Proviso

• Keep the Steering Committee as it is

• Develop refined initial policy inputs
  » Phasing and staging
    - Types of vehicles
    - Nature and manner of transition period

• Develop concept of operations
  » NOT for a pilot (potentially in 2015)
  » Incorporate WSDOT work on interjurisdictional travel
    - Recommend how to use Oregon technology and procedures
  » "In addition to a time permit and an odometer charge, the concept of operations recommendation must be developed to include a means for periodic payments based on mileage reporting utilizing methods other than onboard diagnostic in-vehicle devices."

More...
Key Points from the 2014 Budget Proviso (continued)

• Financial analysis
  » Assume exemptions same as motor vehicle fuel and special fuels taxes
  » Use financial analysis to look at more favorable transition options – as determined by the Steering Committee and WSTC

• Supplemented by
  » Evaluation of impacts on fuel tax bond holders by WSDOT and the State Treasurer’s Office
  » Urban/rural financial impact and equity, “within existing resources” by WSTC
# Meeting Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Topic</th>
</tr>
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</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>
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<tr>
<td></td>
<td></td>
<td>• Discuss any changes from the September meeting</td>
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<tr>
<td></td>
<td></td>
<td>• Review draft report and develop recommendations to WSTC</td>
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<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 be</td>
<td>Transportation Committees</td>
<td>Present final report and recommendations</td>
</tr>
<tr>
<td>determined (Olympia)</td>
<td>of Legislature</td>
<td></td>
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</table>
PHASING OF A ROAD-USAGE CHARGE
Phasing in Road-Usage Charging
Types of Vehicles and the Transition Period

• Legislative directive to look at “phasing and staging”

• When evaluating, we considered
  » Net revenue
  » Mechanics
  » Politics
Revenue Sustainability and Political Acceptability
How Much Will I Pay?

- High-MPGe vehicles pay more than low-MPGe vehicles
- We aimed for outcomes that address both revenue and fairness

### Per-Mile Fuel Tax Revenue by Fuel Efficiency At 37.5 Cents per Gallon

- Fuel tax/gallon: 37.5¢
- Average MPGe: 20
- Average fuel tax/mile: 1.875¢
Options for the Vehicles that Would Be Subject to Road-Usage Charges

- All nondiesel vehicles
- All passenger cars
- Vehicles below 26,000 pounds gross vehicle weight rating (GVWR) regardless of fuel type
- Vehicles below 10,000 pounds GVWR regardless of fuel type
- Highly fuel efficient vehicles
- Vehicles above the average fuel economy rating

Gross Vehicle Weight Rating (GVWR) System Categories

<table>
<thead>
<tr>
<th>Class</th>
<th>Gross Vehicle Weight Rating</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt;6,000</td>
<td>Light Duty (primarily cars, SUV, pickups)</td>
</tr>
<tr>
<td>2</td>
<td>6,001 to 10,000</td>
<td>Light Duty (primarily SUV, heavy pickups)</td>
</tr>
<tr>
<td>3-6</td>
<td>10,001 to 26,000</td>
<td>Medium Duty</td>
</tr>
<tr>
<td>7-8</td>
<td>&gt;26,001</td>
<td>Heavy Duty</td>
</tr>
</tbody>
</table>
Assumptions from Last Year’s Business Case
Not All Carry Through This Year

- Big-bang transition in 2015
  - Rationale
    - First – Is a system desirable?
    - Then – How to handle the transition?
  - This year’s work we’re addressing transition

- All nondiesel vehicles
  - Rationale
    - Simplifying assumption to focus attention on cars
  - Revisiting this year
What if We Charged All Nondiesel Vehicles?

- Consistent with last year’s business case
- Revenue
  - Same as business case last year
- Mechanics
  - Easy to identify vehicles
  - If gas tax continues, lots of refunds
  - Gas tax elimination possible
- Politics
  - 45% of medium trucks use gas = 40% of gallons
  - 10% of heavy trucks use gas = 4% of gallons
  - Ignores fuel efficient diesels
What if We Charged All Passenger Cars?

• Solves the problem of not charging diesel cars

• “Passenger cars” not defined
  » Compliance and enforcement difficult

• Easier to define “cars” by other characteristics such as vehicle weight and fuel economy
What if We Charged Vehicles Below 26,000 Pounds GVWR Regardless of Fuel Type?

- Captures all light-duty and medium-duty vehicles
  - Most gasoline vehicles plus many diesel and alternative

- Revenue
  - Relatively easy to make revenue neutral
  - Revenue-neutral rate higher than last year’s business case

- Mechanics
  - Straightforward to ID vehicles by weight
  - If the gas tax were retained, almost all of the gasoline tax collected would be refunded

- Politics
  - Medium-duty vehicles pay less than now
  - Light-duty vehicles would pay more
What if We Charged Vehicles Below 10,000 Pounds GVWR Regardless of Fuel Type?

- Captures all pickups and SUV, but not trucks
  - Aligns closely with “cars”
- Good break point for vehicles that cause more damage than cars
- Revenue
  - Similar to last year’s business case
- Mechanics
  - Straightforward to ID vehicles by weight
  - If the gas tax were retained, almost all of the gasoline tax collected would be refunded
- Politics
  - Avoids the heavy truck segment altogether
What if We Only Included Highly Fuel-Efficient Vehicles?

- **Similar to first Oregon proposal revenue**
  - Each vehicle pays much less in fuel taxes
  - Very few of these
  - Continued revenue erosion in much larger 20-54 MPGe range

- **Mechanics**
  - Easy to identify vehicles

- **Politics**
  - Currently all electric – may welcome elimination of $100 flat fee
  - Potentially out of sync with environmental objectives
  - Edge effect unfair
  - In Oregon, automakers objected targeting of electrics
What if We Required Vehicles with Above-Average Fuel Economy of All Fuel Types to Pay a Road-Usage Charge?

- Designed to solve revenue erosion problem directly
- Revenue
  - Above average-MPGe vehicles pay more
  - Low-MPGe vehicles pay less, but could opt in for lower tax
- Mechanics
  - Easy to identify vehicles
- Politics
  - Less challenging than others because it does not target a small group and preserves incentives for fuel-efficient vehicles
  - No edge effect
We Suggest One of These Two Alternatives

<table>
<thead>
<tr>
<th>Approach</th>
<th>Pros</th>
<th>Cons</th>
</tr>
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<tbody>
<tr>
<td>Charge all nondiesel vehicles</td>
<td>• Consistent with “transition from the gas tax”</td>
<td>• Medium-duty trucks to pay less than proportionate share of road damage</td>
</tr>
<tr>
<td></td>
<td>• Eases elimination of motor fuel tax</td>
<td>• Fuel-efficient diesel light duty vehicles – revenue erosion</td>
</tr>
<tr>
<td></td>
<td>• If we ignore out-of-state drivers</td>
<td></td>
</tr>
<tr>
<td>Charge vehicles above average MPGe, regardless of fuel type</td>
<td>• Targets revenue erosion from a large class of vehicles</td>
<td>• Contrary to transition from “gasoline tax”</td>
</tr>
<tr>
<td></td>
<td>• Addresses efficient diesels</td>
<td>• Calculating a revenue-neutral rate could be a challenge as less fuel efficient vehicles choose to opt in (if allowed to)</td>
</tr>
<tr>
<td></td>
<td>• No edge effects</td>
<td>• Does not eliminate the gas tax by 2040</td>
</tr>
<tr>
<td></td>
<td>• No one pays less than today</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Except for electric vehicles with low mileage (flat $100 charge)</td>
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</table>
POTENTIAL TRANSITION APPROACHES
A Pilot Test or Demonstration Should Precede and May Become Part of A Transition

• A pilot test or demonstration may
  » Be conducted with a small number of vehicles then stopped
  » Continue as an operational program, without interruption

• In either case, the Legislature must decide how to proceed

• A pilot/demonstration could include
  » Recruited members and/or volunteers
  » All-electric vehicles and eliminate the $100 flat fee
  » State-owned fleet vehicles

• Earliest pilot for Washington – January 2016

• Suggest a Washington pilot include an odometer-based approach
  » Oregon does not have an odometer-based option
We Would Never Want A True “Big Bang,” i.e., All Vehicles Converting on the Same Day

- Would overwhelm any new system
- We considered alternatives
- IN ALL CASES
  » Convert the flat electric vehicle charge to a road-usage charge during the first year, either as an option or as a requirement
  » Could allow volunteers
Simple Approach
All Subject Vehicles Enroll Upon Their Next Registration

- Everyone registers once per year
- Includes new/used, dealers/private sales
- Fast transition – One year
Gradually Phase in Subject Vehicles at Registration, Using MPGe Ratings and/or Model-Year Cutoffs

• MANY potential options
  » Start with vehicles greater than a particular MPGe (e.g., 2016 CAFE standard of 34.5)
  » Start with vehicles of a specific model year (e.g., 2016 or newer)
  » Criteria can change over time

• Transition – One year to many years – could take decades
All Subject Vehicles Enroll Upon A Title Transaction

- Title transactions – new/used, dealers/private
- 10 to 15 years, with 100 percent transition several decades
- Could be perceived as unfair since some Principals would not be required to enroll for many years
CONCEPT OF OPERATIONS
The “Concept of Operations” Will Define A Complete System By Expanding on the “Operational Concepts”

- Over the last two years, we evaluated many operational concepts
- ConOps will combine all three of last year’s operational concepts
  - Document the mechanics from a user’s perspective
  - Formal systems engineering document
  - Use IEEE standard 1362-1998
  - Accessible to lay readers
  - Guide system specification/procurement
  - Easily updatable
Concept A – Time Permit Overview

- Principals buy a permit for an unlimited number of miles for a given period of time (such as one year), tied to vehicle registration transactions

- Principal perspective
  - User prepurchases a permit for unlimited usage
  - Permits are annual but can be paid in semiannual or quarterly installments
  - Purchase and renewal is tied to vehicle registration
  - Easy to enforce – valid tabs = valid permit
  - Relatively easy to implement for out-of-state vehicles

- Agency perspective
  - Similar to Department of Licensing (DOL) current handling of vehicle registration, except adds functions for account and Customer Relations Management (CRM)
Principal perspective

- User estimates annual mileage and prepurchases a permit to cover estimated miles
- At end of year, user reports actual miles traveled and reconciles payment (additional payment required or credit applied to next period), and pays in advance for following year
- Reporting periods can be annual, semiannual, or quarterly

Agency perspective

- Accounting and CRM would need to be significantly scaled up from current functions at state agencies
Concept C – Differentiated Distance Charge Overview

• Principals use in-vehicle electronics to count miles traveled in state only
  » Represents the most technically involved of the three concepts and would require a sophisticated accounting and CRM system
  » Could be operated fully by a state agency, outsourced, or left to consumers to select methods of reporting and payment using existing service providers (Note: for the business case we assumed a state agency will operate all aspects)

• Principal perspective
  » User pays for road usage on Washington State at the end of each quarter, semester, or year
  » Enforcement through device certification, compliance analytics, and odometer reading

• Agency perspective
  » Requires extensive account and CRM
  » Similar to tolling, but scale of accounts would be much more than current capabilities
Component Activities Summary

- **Preparatory Accounting Activities**
  - Principal Acquires Vehicle
  - Chooses among reporting and payment options
  - Prepays (if applicable)

- **Compliance/Enforcement**

- **Driving**

- **Invoicing, Payment, and Payment Processing**

- **Disposal of Vehicle**

**Failure Conditions**
Outline of the ConOps

- Introduction and background
- Policy basis for system
- Principals will be given a choice of three road-usage charge concepts
  - A. Time permit
  - B. Odometer charge
  - C. Differentiated distance charge
- A system usage scenario refers to all the ways that the Principal might interact with the road-usage charging system
- System components
- System usage scenarios
  - Preparatory accounting activities (identifying subject vehicles; certifying compliant hardware)
  - Acquire/register vehicle; make road-usage charge measurement and reporting choices
  - Driving of vehicle
  - Invoicing and payment
  - Disposal or transfer of vehicle
  - Compliance/enforcement
  - Failure conditions
Our Thinking on Phasing Suggests Particular Directions for the ConOps

- Legislature-directed combination of Concepts A, B, and C
  - Users of the odometer charge (Concept B) would have their bill capped at the level of an annual time permit (Concept A)
  - Set the time permit at 95th or 98th percentile of miles driven in WA

- Concept A easiest for out-of-state drivers without an interstate system

- The Legislature also directed study for other means for periodic payments based on mileage reporting utilizing methods other than onboard diagnostic in-vehicle devices
  - We can investigate these options
    - Smartphones to take pictures of the odometer
    - Buying blocks of prepaid mileage
    - Pay at the pump approaches
(7) Within existing resources, the commission shall undertake a study of the urban and rural financial and equity implications of a potential road-usage charge system in Washington. The commission shall work with the department of transportation and the department of licensing to conduct this analysis. For any survey work that is considered, the commission should utilize the existing voice of Washington survey panel and budget to inform the study. The results must be presented to the Governor and the Legislature by January 15, 2015.
The study will provide an analysis of the financial and equity outcomes of a potential road-usage charging system in Washington State compared to the gas tax for urban, suburban, and rural residents.

We interpret the legislative intent to consider road-usage charging as a potential replacement for the gas tax.

All work described in this document will be completed by December 2014.
### Staff Workgroup

- Transportation Commission staff
- House and Senate Transportation Committee Staff (caucus staff welcome too)
- Department of Licensing
- Department of Transportation
- Research Assurance (VOWS)
- Road-Usage Charge Assessment Consulting Team
Work Plan

- Develop a survey instrument to use the Voice Of Washington State (VOWS) survey panel
- Gather data from VOWS and from state/national sources on
  - Estimated miles per gallon for vehicles, households, and by location (e.g., urban, suburban, and rural)
  - Estimated VMT by vehicle and household, and by location (e.g., urban, suburban, and rural)
- Analyze data and evaluate equity impacts of a RUC versus the gas tax, by urban/suburban/rural areas
Urban/Rural Equity Analysis
VOWS Data Gathering

• The VOWS survey panel currently has 118,000 members statewide, with 27,000 active members (has completed one or more surveys)

• Launched the first RUC VOWS survey on June 20th and will have results by mid-July
The June survey will collect data from Washington State residents on:

- All vehicles owned by household (make/model) – includes motorhomes and motorcycles
- Total miles driven by household – all vehicles
- Percent of miles driven in-state, out-of-state, and on nonpublic roads
- Year, engine type, and transmission for each vehicle in household
- Miles per gallon for each vehicle in household
- Miles driven for each vehicle in household
- Number of licensed drivers in household
- Describe area you live in (urban, suburban, rural)

A second round of RUC data collection via VOWS will occur in September:

- RUC questions will focus on trip purpose by urban/suburban/rural, conceptual RUC acceptance, and other possible areas yet to be determined
In addition to the VOWS, there are two principal state data sources for the purposes of this study:

- The Washington Department of Transportation (WSDOT) traffic counts and vehicle miles of travel (VMT) data
  - Represents estimates of travel on state and local roads
  - The VMT totals will be used to model the potential impact of RUC

- The Department of Licensing (DOL) Vehicle Headquarters System data
  - Represents vehicular data (e.g., make, model, model year, etc.) based on registration location
There are several national datasets that will be used to provide context and supplemental data:

- The Environmental Protection Agency (EPA) maintains a web site that includes vehicle fuel economy data.
- The National Household Travel Survey (NHTS) covers comprehensive travel and transportation patterns in the United States; the most recent effort was in 2009.
- OnTheMap, a GIS-based U.S. Census application for mapping the travel patterns of workers.
Urban/Rural Equity Analysis
Using the Data

• The state and national data will be used to develop a model that can be used to evaluate a potential change to a RUC according to urban/rural geographies and by selected vehicle characteristics.

• National data will also be used to provide context and to evaluate the change according to urban/rural geographies by selected household characteristics.

• When the VOWS results become available, the results will be used to supplement the other data so as to enhance the model. Some of the VOWS information may supersede other data and be used instead.
VMT Profile Data from 2009 NHTS

Average Annual Vehicle Miles of Travel per Vehicle (Best Estimate)

- Best estimate of annual miles
- Final HH weight
- PCTSUM.

- Less than 2,000 miles: 19,145,916
- 2,000 - 3,999 miles: 20,073,005
- 4,000 - 5,999 miles: 22,568,575
- 5,000 - 7,999 miles: 24,390,688
- 8,000 - 9,999 miles: 22,863,293
- 10,000 - 11,999 miles: 20,957,896
- 12,000 - 13,999 miles: 17,737,997
- 14,000 - 15,999 miles: 13,858,977
- 16,000 - 17,999 miles: 10,956,783
- 18,000 - 19,999 miles: 7,983,981
- 20,000 - 21,999 miles: 6,086,133
- 22,000 - 23,999 miles: 4,143,542
- 24,000 - 25,999 miles: 3,260,326
- 26,000 - 27,999 miles: 2,483,218
- 28,000 - 29,999 miles: 1,749,466
- 30,000 - 31,999 miles: 1,419,406
- 32,000 - 33,999 miles: 1,044,305
- 34,000 - 35,999 miles: 838,642
- 36,000 - 37,999 miles: 637,022
- 38,000 - 39,999 miles: 415,087
- 40,000 miles and above: 2,793,092

Number of Vehicles
OPTIONS FOR CHARGING MOTORISTS FOR INTERJURISDICTIONAL TRAVEL AND TREASURERS DEBT ANALYSIS
Interjurisdictional Travel
Legislative Direction

• $21,000 to WSDOT’s Public/Private Partnerships to partner with Oregon and other states

• Develop strategies and methods for reporting, collecting, crediting, and remitting RUC from interjurisdictional travel

• Results due September 2014
Interjurisdictional Travel
Progress

• Oregon DOT agreed to matching contributions of $21,000

• The Western Road-Usage Charge Consortium (WRUCC) created an “enhanced” scope of work (Phase 2) that would specifically examine issues related to international motorists (travel to/from Mexico and Canada) Cost – $50,000

• This SOW enticed additional funding contributions from California and Texas DOTs (and potentially others – final funding decision on June 13)

• All work is now fully funded and ready to proceed (total project cost – $92,000)

• Oregon DOT is the contracting entity for all work, because they serve as the designated Program Administrator (financial fiduciary) for the Western RUC Consortium. They will issue the contract for the work (ETA – June 2014)
Western Road-Usage Charge Consortium

- WRUCC Member State
- WRUCC Participant and Future Member
- WRUCC Invited State
Interjurisdictional Travel

Next Steps

• Progress Report at WRUCC Board Meeting on July 15, 2014 (at WASHTO’s Annual Meeting)

• Progress Report to Washington State RUC Steering Committee at September 2014 meeting
NEXT STEPS
Next Steps

• Fully develop the ConOps
• Conduct financial analysis of fully elaborated ConOps and up to two transition strategies
• Next Steering Committee meeting – September 25 at SeaTac
THANK YOU