WELCOME AND INTRODUCTIONS
What We Need to Accomplish Today

- Feedback from the July Commission meeting
- Update on Oregon’s road usage charge efforts
- Review the operational concepts for which we will evaluate a simplified business case
  » Indicate to consultants whether these are acceptable to advance to business case evaluation
- Walk through the administrative functions of implementing and operating a road usage charge system
- Review the business case evaluation approach
  » Indicate to consultants whether this is an acceptable approach
PUBLIC COMMENT
JULY COMMISSION MEETING: COMMENTS AND RESPONSES
Commission Comments

Individual Commissioners asked the following questions:

1. Why wouldn’t we consider government as a potential certified service provider?

2. Why have we not included a pay-at-the-pump option in our three operational concepts?

3. Shouldn’t we be working towards the quickest possible implementation of a road usage charge pilot or demonstration?
1. Why wouldn’t we consider government as a potential certified service provider?

- For purposes of the simplified business case analysis, we have to make certain reasonable assumptions
  - Private handling of certain aspects of the three road usage charge concepts is reasonable based on experience elsewhere

- Our analysis does not preclude government as a certified service provider

- If the Legislature and Governor direct further work, an important element will be to develop the most effective, and cost-effective approaches
2: Why have we not included a pay-at-the-pump option in our three operational concepts?

- Pay-at-the-pump refers to paying road usage charges, and getting gas tax refunds at the time drivers refuel
  - Similar to the first Oregon demonstration

- The simplified business case analysis evaluates the three concepts in their “end state” – not the transition phase

- Pay-at-the-pump is a function that would work well in a transition period, but might also be possible as part of Concept B (Odometer Charge) or C (Differentiated Distance Charge)

- Transition strategies can be evaluated if there is a positive business case – in the next phase of work
3: Shouldn’t we be working towards the quickest possible implementation of a road usage charge pilot?

- The Legislature directed an incremental, methodical process, considering first the policy, conceptual, and business case aspects of road usage charging.
- A pilot might emerge from this effort.
- No funding was provided for a pilot test, nor for any outreach.
- Based on the outcome of the business case evaluation, the Steering Committee and the Commission can recommend a pilot test, if desired.
FINAL OPERATIONAL CONCEPTS FOR BUSINESS CASE EVALUATION
Purpose and Context

- Provide details of the operational concepts to enable:
  - More detailed Steering Committee understanding of how these concepts would work
  - Consultants to develop cost and net revenue estimates

- Two Subcommittees were consulted:
  - Business Case
  - Operational Concepts

- Three operational concepts:
  - A: Time Permit
  - B: Odometer Charge
  - C: Differentiated Distance Charge
General Operational Concept Overview
Concept A: Time Permit
Overview

Principal perspective

» User purchases a permit
  – Annual, or shorter periods (month, quarter, half-year)
  – Combined with registration process
  – Easy to enforce: valid tabs = valid permit

» Relatively easy to implement for out-of-state vehicles

Agency perspective

» Similar to Department of Revenue current handling of vehicle registration, except adds functions for account and customer relations management (CRM)
Concept B: Odometer Charge

Overview

Principal perspective

» User estimates annual mileage and purchases a permit to cover estimated miles

» Reconciles actual number of miles at the end of the year

» Installment plans available

Agency perspective

» Accounting and CRM would need to be significantly scaled up from current functions at State agencies
Concept C: Differentiated Distance Charge

Overview

Principal perspective
» User has a location-based device and pays for road usage on Washington State public roads
» Technology and revenue risk eased with certified service providers
» Enforcement through technical certification and odometer reading
» Monthly, quarterly, half-year or annual payment options

Agency perspective
» Requires extensive account and customer relations management
» Similar to tolling, but scale of accounts would be much more than current capabilities
Concept A: Time Permit
Principal’s Experience

- **Acquisition:**
  - Purchase one-year permit at the time of vehicle registration
  - Option for shorter periods to address Principal cash flow concerns: one-, three-, or six-months

- **Usage (driving):**
  - No special reporting: valid tabs = valid permit

- **Paying (refreshing):**
  - With registration renewal
  - In installments, online, or through agents

- **Cancelling (selling car, switching):**
  - Refunds available
A. Time Permit
Agency’s Experience

Distribution:
» At time of registration

Operation:
» Monitoring of usage. None
» Collection of payments. With vehicle registration; installments possible through agents

Cancelling (car sale, transfer out-of-state):
» Principal notifies State, and State issues refund

Accounting:
» Verifying vehicles. No permit – no registration
» Verifying payments. Payments would be verified for accuracy at time of registration
A. Time Permit Compliance and Enforcement

Detecting fraud:
- Database analysis
- Traffic stops – as today with registration
- Automated enforcement possible, especially if out-of-state vehicles are charged
- Fake permits can be detected in the same way as fake tabs

Grace period:
- A policy choice – perhaps 10-15 days

Issuing penalties:
- Similar to registration penalties, but in addition
A. Time Permit
Handling Out-of-State Vehicles

Distribution to out-of-state vehicles:
» Signs and kiosks at the borders
» Many permit lengths possible
» Gas stations, convenience stores, etc.
» Online and through smartphone applications

Operation (monitoring and collection):
» None, beyond distribution

Accounting:
» Tally the number, value, and duration of permits purchased
» Compare to revenue paid to the State, minus fees to distributors

Enforcement:
» Automated enforcement cameras (roadside or in police vehicles)
» Checks by: parking officers on foot, routine traffic stops
A. Time Permit
Privacy Considerations

- No new information collected
- Screening for potential violators will only retain information on potential violators—not on compliant vehicles
- Out-of-state vehicle enforcement could use automated enforcement cameras, checks by parking officers on foot in cities, or via checks during routine traffic stops
B. Odometer Charge
Principal’s Experience

**Acquisition:**
- Prepay for estimated road usage
- Option for shorter periods to address Principal cash flow concerns

**Usage (driving):**
- No special reporting: valid tabs = valid permit

**Paying (refreshing):**
- Self-report miles at time of vehicle registration renewal
  - Random audits for odometer inspection
- Reconcile *under-* or *over-* estimates
  - Significant under-estimates could result in penalties
  - Purchase of additional miles could avoid penalty

**Cancelling (selling car, switching):**
- Refunds available
B. Odometer Charge
Agency’s Experience

Distribution:
» At time of registration
» Official “start” odometer reading taken by an agent

Operation:
» Monitoring of usage.
  – Annual self-reports
  – Spot odometer checks
» Collection of payments. With registration; installments possible

Cancelling (car sale, transfer out-of-state):
» Principal notifies State, and State issues refund

Accounting:
» Verifying vehicles. No permit – no registration
» Verifying payments. Odometer reconciliation and spot checks
B. Odometer Charge

Alternative Approaches

- Mandatory annual inspection of the odometer
  - Similar to concept described here, but no self-reporting
  - All odometers required to be inspected by an agent each year

- Purchase of mileage blocks in increments of miles
  - Principal pre-purchases the miles in the mileage blocks and provides the odometer reading
  - Periodic odometer checks

- Pay-at-the-Pump
  - Payment when refueling or recharging the vehicle
  - Mileage self-reported by keypad at station
  - Periodic spot checks

- Basic on-board mileage recording device
  - In-vehicle device records, store and communicates the mileage to the agency with periodic inspection of the odometer
B. Odometer Charge
Compliance and Enforcement

Compliance:
» Impossible to register vehicle without paying

Detecting fraud:
» Spot enforcement
» Cross-referencing odometer with other sources (e.g., CARFAX)
» Large deviations from predicted mileage

Grace period:
» Reconcile difference at end of year
» Significant under-reporting subject to penalty

Issuing penalties:
» Odometer tampering is already illegal
» Non-payment similar (and in addition to) non-payment of registration
B. Odometer Charge
Handling Out-of-State Vehicles

Options:

» Concept A (time permit) for out-of-state vehicles
» Let out-of-state vehicles travel without charge
  – If the gas tax is not phased out, out-of-state vehicles continue to pay the gas tax
B. Odometer Charge

Privacy Considerations

- No recording of vehicle location data
- No in-vehicle hardware
- Principals subject to odometer spot checks
C: Differentiated Distance Charge
Principal’s Perspective

- **Acquiring:**
  - Registers with a certified service provider
  - Acquires an on-board unit

- **Usage (driving):**
  - On-board unit differentiates travel in priced and non-priced zones
  - Free to change certified service providers

- **Paying (refreshing):**
  - Certified service providers invoice Principals along with other potential services (navigation, telematics, etc.)
  - Principal pays provider
  - Certified service providers pays State and guarantees revenue

- **Cancelling (selling car, moving out-of-state):**
  - Principal closes account with certified service provider
  - Principal de-registers vehicle through the State
C: Differentiated Distance Charge
Agency’s Perspective

Distribution:
» Advise Principals of certified service provider options
» Certified Service Provider handles the transaction
» Vehicle dealers notifies State of new/used car sale

Operation:
» Certified service provider sends data and money (monthly)

Cancelling (car sale, transfer out-of-state):
» Principal informs the certified service provider of account closure
» Principal de-registers vehicle with State

Accounting:
» Verifying vehicles. Certified service providers report to State
» Verifying payments. Certified service providers include data in reports allowing State to verify correct payments
» Certification. Certified service providers and on-board units
C: Differentiated Distance Charge
Compliance and Enforcement

Detecting fraud by Principals:
  » On-board units include anti-tampering measures
  » Certified service providers report suspected fraud

Detecting fraud by certified service providers:
  » Certified service providers subject to initial certification, periodic recertification, monthly reporting, and periodic focused auditing

Issuing penalties:
  » Principals subject to penalties by certified service providers and the State
  » Certified service providers subject to certification being revoked and financial penalties
C: Differentiated Distance Charge Handling Out-of-State Vehicles

Requiring out-of-state motorists to use road usage charge equipment probably not acceptable

Three potential approaches:

- Charge out-of-state vehicles using another Concept, such as Concept A – time permit
- Out-of-state vehicles continue to pay gas tax
- Let out-of-state vehicles travel without charge
C: Differentiated Distance Charge
Privacy Considerations

- Some people will perceive the differentiated distance charge as an invasion of personal privacy
- Necessary to include one concept that does not identify location
- Strict privacy policy needed for certified service providers
Potential Combinations

- Time Permit (A) + Odometer Charge (B)
- Odometer Charge (B) + Differentiated Distance Charge (C)
- Time Permit (A) + Differentiated Distance Charge (C)
- Time Permit (A) + Odometer charge (B) + Differentiated Distance Charge (C)
ADMINISTRATIVE CONSIDERATIONS
Universe of Administrative Functions

Principal Account Management
1. Principal Register/Initiate Account or Add Vehicles
2. Account Maintenance & Customer Support
3. Usage & Account Handling
4. Change Service Provider/Replace Equipment
5. Handle Enquiries, Complaints & Disputes
6. Modify, Transfer or Close Account

Usage Charge Management
7. Principal Declare
8. System Detect
9. Process Transaction Data
10. Calculate Charge Demands
11. Reconcile Usage to Mileage and Zones
12. Calculate & Process Refunds

Compliance & Enforcement
13. Determine & Verify Infractions
14. Manage Compliance
15. Enforce
16. Recover Fines & Penalties
17. Handle Appeals
18. Manage Repeat Offenders

Road Usage Charge Authority
19. Comply with Policy/Legislation
20. Manage Master Set of Accounts
21. Audit (internal and external)
22. Set/Recommend Changes to Rates
23. Evaluate & Measure Operational Performance
24. Manage System Performance
25. Provide Stakeholder Comms, PR & Marketing
26. Trusted Third Party Contract Management
27. Provide Planning & Controls
28. Manage Assets
29. Manage IT/Comms & Security
30. Road Usage Charge Management
31. Manage Interoperability
32. DOL Interface
33. Manage GIS / Map Data
34. Reconcile Transactions to Usage & Principal Accounts
35. Distribute Technology & Inventory Management
36. Recover Charge Demands
37. Process Charge Payments
38. Adjudicate Appeals & Privacy
Approach to our Evaluation

- Identified the administrative functions
- Interviewed existing State agencies with potential to take on some or all of the functions
  - Concepts A, B, and C
- Evaluated these capabilities for purposes of cost estimating
- Made no recommendations regarding which agency should handle which function
Overview of Entities Researched

- **Department of Licensing (DOL)**
  - Handles vehicle and driver licensing – one-stop-shop
  - Owns registry of all vehicles and vessel records in Washington
  - Oversees extensive network of customer service agents and subagents

- **Department of Transportation (DOT)**
  - Collects tolls on several highway and bridge facilities
  - Manages accounts with 600k+ motorists

- **Department of Revenue (DOR)**
  - Collects 40 taxes with focus on retail sales, business and occupations, and property

- **Certified Service Providers**
  - Private entities with customer relationships for other services, but not for road usage charges
  - Potential combination with any of the above agencies
Department of Licensing

Principal Account Management and Usage Management

» Concept A: Time Permit
  – Could integrate with existing tab renewal process
  – Adjustments to IT system necessary for calculating and processing additional transaction at time of renewal
  – Periodic billing would require IT and process changes

» Concept B: Odometer Charge
  – Like time permit, could be integrated with tab renewal
  – Timing of odometer reporting and renewal could conflict
  – Additional workload for DOL employees and agents
  – Periodic billing would require IT and process changes

» Concept C: Differentiated Distance Charge
  – DOL does not currently manage accounts or hardware
  – Integrate with IT modernization over next 0-10 years
Department of Licensing

- Compliance and enforcement
  - Capabilities would need to be built
  - Concept A could be enforced via tabs, although new methods required for motorists paying in installments
  - No enforcement methods currently exist for Concepts B and C

Road Usage Charge Authority

- Some needed administrative functions already exist:
  - Management of third party agents and subagents
  - Management of vehicle registry (master set of records)
  - Policy compliance, analytics, system performance monitoring

Key gaps include

- Interface with DOT to support interoperability with tolling
- Audit of individual customers
- Vehicle technology acquisition and certification (if necessary)
Principal Account Management

- Accounts managed with 600k+ toll payers, but not full coverage of all Washington motorists
- Expansion to include road usage charging and more customers would require investment in existing systems and lead time to phase-in, for any concept

Usage Management

- Existing toll processing systems provide transparent transactions processing and records
- Road usage charging would require expansion of capabilities to include a new type of transaction and more volume, regardless of concept
Department of Transportation (cont’d)

Compliance and Enforcement

» Front-end enforcement system for road usage charging differs from tolling and would need to be built
  – Example: analytics and detection of more vehicles across the entire State rather than just at tolling points

» Back-end enforcement functions could be more easily combined with existing tolling functions
  – Examples: vehicle owner lookup, recovering fines, handling appeals, managing repeat offenders
Road Usage Charge Authority

» Many of the functions already exist for tolling
  – audit, accounting, performance measurement, budgeting, planning, DOL interface, third party contract management, managing master set of toll accounts, IT communications and security

» Interoperability with tolling would be a central consideration to simplify customer experience
Department of Revenue

- Principal Account Management
  - Need to establish relationships with Washington motorists

- Usage Management
  - New division could be established devoted to road usage charging
  - Use separate IT and accounting

- Compliance and Enforcement
  - Some enforcement exists, but for taxes that are very different in nature from road usage charging
  - Analytics, fine recovery, and appeals process could be built

- Road Usage Charge Authority
  - Many similar functions exist for other taxes, but would be built anew for road usage charging
  - DOL interface would need to be expanded considerably to allow link into vehicle registry
Certified Service Providers

Private companies can handle some of the road usage charging functions

» Principal account management
» Usage management
» Agent for routine transactions (e.g., permit purchase by out-of-state vehicles)

Compliance and enforcement and Road Usage Charge Authority functions would remain with the State regardless of the degree of involvement of certified service providers

Example

» DOL agents and subagents – an outside entity providing a service to customers on behalf of DOL, along with other services
Certified Service Providers (continued)

- **Range of possible involvement**
  - Zero
  - Limited by a single vendor
  - Substantial involvement by a single vendor
  - Substantial involvement by vendors in an open market

- **Policy choice may include**
  - Cost
  - Performance (e.g., customer service)
  - Accountability
  - Assessment of whether the private sector is interested in providing the service
Other Agencies with Potential Roles

- **Washington State Transportation Commission**
  - Rate-setting
  - Policy analysis and legislative guidance

- **Washington State Patrol**
  - Roadside enforcement

- **Office of Financial Management**
  - Overall responsibility for State budget and financial data and planning
Summary of Administrative Evaluation

Customer service

- Integrate with existing processes where possible
- Operations should promote equitable treatment of customers
- Implementation of road usage charging should complement and reinforce – not disrupt – agencies’ existing processes and improvement efforts

Impact on IT

- Coordinate road usage charging implementation and IT modernization
- Road usage charging as an impetus for IT modernization

Cost

- Integration with existing processes
- Outsourcing only where sensible (i.e., where cost savings are compelling and accountability not compromised)
Summary of Administrative Evaluation (cont’d)

Accountability

» Ensure revenue integrity, transparency, and accountability whether road usage charges collected by division of a State agency, outsourced vendor, or certified service provider

» Ensure accountability for road usage charging transactions, especially with third parties

Agency cooperation

» Participating agencies have welcomed this conversation with open ears, frank feedback, and few preconceptions about road usage charging policy, operations, and administration
  – Thank You!

» Continue outreach and cooperation with all potentially affected agencies as road usage charging conversation evolves
BUSINESS CASE FRAMEWORK
Business Case Purpose and Outcomes

Is there a compelling business case for road usage charging?
  » Under what scenarios is the case compelling?
  » Do the results warrant deeper analysis and exploration of unresolved issues?

Quantitative evaluation of revenues and costs of road usage charges vs. fuel taxes
  » Compare net revenues of road usage charges vs. fuel taxes
  » 2015-2040 (cash flows and net present values)

Qualitative evaluation
  » Compare expected performance against policy objectives
  » Identify and assess business risks
Business Case – Quantitative Model

- Revenues from road usage charges and fuel taxes, 2015-2040
- Costs to collect road usage charges and fuel taxes, 2015-2040
  - Road usage charge cost categories:
    - Program administration costs (management, staff, performance measurement, evaluation, and policy compliance)
    - Audit costs
    - Enforcement costs
    - IT costs (internal and external)
    - Cash flow disruption costs and other miscellaneous financial costs
    - Public relations/outreach costs
    - Account management costs (including electronic device communications costs, transaction costs)

- Compare net present value of revenue - cost
Business Case Model – Inputs and Assumptions

Existing forecasts and data sources

» Vehicle registrations
» Vehicle miles travelled (average per vehicle and aggregate statewide) and fleet fuel efficiency
» Fuel consumption
» Gas tax collection costs
» Out-of-state travel by Washington residents

Assumptions

» One phase-in strategy resulting in all vehicles paying road usage charge within several years
» Baseline road usage charge rate based on existing gas tax rates (average motorist per-mile equivalent)

Sensitivity analysis on rate per mile, operational concepts chosen, administrative alternatives, compliance strategy, fleet fuel efficiency, VMT
Road Usage Charging Model Schema

- Vehicle Registrations
- Transition/Phase-in Strategy
- Gross RUC Revenues
- Number of Road Usage Charge Eligible Vehicles
- Road Usage Charge Rates
- Anticipated Evasion
- Net RUC Revenues
  2015-2040 and NPV

Sensitivity Analysis

- Other Fixed Inputs (Parameters)
- Operational Concept and Administrative Choices

COST EVALUATION

- Program Admin Costs
- IT Costs (Internal and External)
- Electronic Comms Costs (If Applicable)
- Audit Costs
- Cash Flow Disruption and Misc Financial
- Transaction Costs
- Enforcement Costs
- PR/Outreach Costs
- Account Management Costs
- Rolled-up RUC Costs
Gas Tax Model Schema

- VMT
- Vehicle Registrations
- Gas Tax Collection Costs
- Fleet Fuel Efficiency
- Fuel Consumed
- Gas Tax-Eligible Vehicles
- Gas Tax Rates
- Gross Gas Tax Revenues
- Net Gas Tax Revenues 2015-2040 and NPV
- Transition/RUC Phase-in/Gas Tax Phase-out Strategy

*a* If RUC phase-in corresponds with phase-out of gas tax, we may reflect that as a separate gas tax revenue projection.
Business Case – Qualitative Analysis

- Performance criteria to evaluate how well each potential road usage charge system achieves policy objectives

- Risk assessment
  - Cost risks and revenue risks
  - Others categories to be identified for future analysis
Qualitative Analysis – Initial Risk Assessment

**Cost Risks**

» Technical difficulties resulting in a poorly performing system
» Delays in system development
» Over-specification
» Procurement process leads to vendor lock-in and technology obsolescence
» Systems that rely on private sector participation fail to garner (or lose) private sector interest
» Private sector unable or unwilling to participate in road usage charge service provision
» Washington State agencies unable to provide the necessary organizational support to implement and operate road usage charging effectively
» Interoperability with tolling and other ITS services becomes problematic

**Revenue Risks**

» Inability to determine a road usage charge rate at the policy level that provides sustainable revenues
» Inability to determine a measureable manner to adjust the rate periodically to maintain a reasonable revenue stream
» Policy decreases annual VMT to the point that mileage charged is insufficient to fund maintenance and rehabilitation needs of the network
» Revenues are not protected for road/transportation use
» Policy fails to specify necessary enforcement measures such as insufficient fines and penalties resulting in widespread evasion or impacts operational costs adversely
Issues Not Addressed at this Time

- Transition strategies and their implications
  - Gas tax bonds
    - Can they be refunded using another revenue source? If so, at what cost?
  - 18th Amendment
- Detailed administrative challenges
- Public perception and attitudes
NEXT STEPS
Legislatively Directed Dates

- Progress reports to Joint Transportation Committee and Governor
  - Mandated by November 1, 2013
  - Scheduled with Joint Transportation Committee: October 9, 2013

- Final Report
  - December 15, 2013
## Work Plan

**June 2013 through February 2014 — As of Today 9/12/13**

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
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<tbody>
<tr>
<td>1 - Develop Road Usage Charge Policy Statements</td>
<td>Develop road usage charge policy statements for use in refining road usage charge concepts in Task 2. (100%)</td>
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<td>2 - Refine Operational Concepts</td>
<td>Develop operational concepts that reflect the policies developed in Task 1. (90%)</td>
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<td>3 - Evaluate the Business Case</td>
<td>Evaluate the value proposition of potential road usage charging systems developed in Task 2 compared to the existing gas tax. (30%)</td>
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<td>4 - Documentation and Budget Preparation</td>
<td>Document the findings resulting from the work conducted in Tasks 1 through 3, culminating in a final report from the Commission to the Governor and Legislature, including a workplan and budget for the next year.</td>
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### Meeting Schedule

**June 2013 through February 2014**

<table>
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<tr>
<th>Date</th>
<th>Topic</th>
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<tr>
<td>October 14, 2013</td>
<td>Review business case and policy/other issues</td>
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<td>(SeaTac)</td>
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<tr>
<td>November 18, 2013</td>
<td>Draft report and draft proposed workplan/budget for next year, potentially including a pilot</td>
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<td>(SeaTac)</td>
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- **Continued involvement of Steering Committee Subcommittees**
  - To meet by phone or web conference
    - Business Case Concept Model – at key points in September 2013
    - Final Report – likely to occur the week of November 4-8, 2013
ACTION ITEMS