WELCOME AND INTRODUCTIONS
PUBLIC COMMENT
RECAP OF SEPTEMBER
STEERING COMMITTEE MEETING
Our Charge

Legislative funding under *ESHB 2190* to

- Transportation Commission
  - “Solely to determine the feasibility of transitioning from the gas tax to a road user assessment system of paying for transportation”

- WSDOT
  - “Solely to carry out work related to assessing the operational feasibility of a road user assessment, including technology, agency administration, multistate and Federal standards, and other necessary elements”

Both efforts combined and under guidance of Steering Committee, which will make recommendations
Implementing Our Charge

January 2013:
Steering Committee recommendations to the Legislature and Governor

- Feasibility assessment…if feasible, then…
- Research and development plan
- Proposed budget for the 2013-15 fiscal biennium

June 2013:
Progress Report

- Policy Parameters
- Public opinion and consumer acceptance parameters
- Preliminary operational concepts
What we Heard at Steering Committee #1

- No decisions have been reached.
- Experience: Many more studies than implementations.
- Purpose:
  - Determine whether road usage charging is feasible in Washington,
  - If so, make recommendations about next steps
- Work products:
  - Recommendations on the feasibility of road usage charges
  - Research and development plan and proposed budget for the 2013-15 fiscal biennium
- Steering Committee direction on policy priorities and feasibility criteria
# Schedule through January 2013

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Primary Topics</th>
</tr>
</thead>
</table>
| 1       | September 13, 2012 | Steering Committee organization  
Definitions and report on road usage charge activities elsewhere  
Policy considerations in Washington State  
Potential technologies  
Public acceptance issues  
Steering Committee goal setting and criteria |
| 2       | October 30, 2012  | Technology, administrative, and standards assessment  
Preliminary assessment of policy issues  
Preliminary road usage charge concepts for consideration |
| 3       | December 4, 2012     | Draft Preliminary Feasibility Assessment Report  
Draft preliminary work plan and budget |
| 4       | January 11, 2013  
*Note revised date* | Final Preliminary Feasibility Assessment Report  
Final preliminary work plan and budget  
Draft communications materials for use at Legislative hearing |
POLICY OBJECTIVES
Policy Objectives and Feasibility Criteria – Relationship to this Assessment
## Policy Priorities – Survey Results

11 of 20 Committee members responded

<table>
<thead>
<tr>
<th>Policy Priorities</th>
<th>Very Important +2</th>
<th>Somewhat Important +1</th>
<th>Not Important 0</th>
<th>Should not be considered or included -2</th>
<th>Score</th>
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<tbody>
<tr>
<td>Slow/stop transportation revenue erosion due to improvements in vehicle fuel efficiency</td>
<td>9</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1.8</td>
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<tr>
<td>Improve equity in who uses and who pays for transportation</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
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<tr>
<td>Increase the transparency of what road use costs and how funds are spent</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
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<tr>
<td>Create a sustainable revenue source for roads</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1.4</td>
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<td>Create a sustainable revenue source for all surface transportation (roads and transit)</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1.3</td>
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<tr>
<td>Supplement the gas tax</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1.1</td>
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<tr>
<td>Use road usage charging to enable congestion pricing, where prices differ by road and/or time of day</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1.1</td>
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<tr>
<td>Reduce the amount of driving, and/or encourage alternatives to driving</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0.9</td>
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<tr>
<td>Maintain existing gas tax policy that generally links who uses and who pays for transportation</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0.6</td>
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<tr>
<td>Reduce energy usage</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>0.5</td>
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<tr>
<td>Reduce greenhouse gas emissions</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>0.5</td>
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<td>Replace the gas tax</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0.1</td>
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</table>
Policy Priorities from Committee Survey

Agreement on these policy priorities:

» Addressing erosion of fuel tax revenues and creating a sustainable revenue stream; and

» Resolving equity issues surrounding who pays and who benefits from (or uses) the system.

Using road usage charging for social objectives: second tier priority, but still considerable support

Issues regarding replacing/supplementing the gas tax more complex/confusing
Replace or supplement the gas tax
What does it mean?

Replace
• Repealing the gas tax and replacing it with a new charge
• Phasing in a new charge over time

Supplement
• Fill the revenue gap:
  • All vehicles
  • Only high mileage vehicles
  • Convert gas tax to environmental fee

Implications:
• Does not need to be resolved by December
• Ultimately – an important policy discussion
Improve Equity in
Who Uses and Who Pays For Transportation

Equity is complex.

Multiple dimensions of equity:

- Ability to pay;
- Geographic: Do people get back what they contribute;
- Whether people pay for the costs they impose on society; or
- Whether people were adequately involved in the decision making process.

To achieve greater equity, tradeoffs will be necessary.

Implications:
- No tax mechanism is perfectly equitable, including the gas tax
- Does not need to be resolved by December
- Ultimately – an important policy discussion
Accomplish Other Social Objectives

- Increase the transparency of what road use costs and how funds are spent.
- Reduce the amount of driving.
- Reduce energy usage.
- Reduce greenhouse gas emissions.
- Reduce congestion through pricing.

Implications:
- Steering committee divided over importance
- Other places found this reduced public acceptance
BREAK
FEASIBILITY CRITERIA
<table>
<thead>
<tr>
<th><strong>Criterion</strong></th>
<th><strong>Description</strong></th>
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<tbody>
<tr>
<td>Convenience</td>
<td>Convenient to users</td>
</tr>
<tr>
<td>Implementability</td>
<td>Ability to overcome implementation barriers and challenges</td>
</tr>
<tr>
<td>Transparency</td>
<td>Rate setting, customer billing, accounting</td>
</tr>
<tr>
<td>Stability and sustainability</td>
<td>Confidence in revenue expected relative to the gas tax.</td>
</tr>
<tr>
<td>Privacy</td>
<td>Actual and perceived</td>
</tr>
<tr>
<td>Equity (fairness)</td>
<td>Fair as possible across classes of users</td>
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<tr>
<td>Flexibility</td>
<td>Accommodate future options and evolutions.</td>
</tr>
<tr>
<td>Choice</td>
<td>Users can choose from a menu of options.</td>
</tr>
<tr>
<td>Collect Revenue from Out-of-State Travelers.</td>
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### Feasibility Criteria – Survey Results

11 of 20 Members Responding

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<td>7</td>
<td>4</td>
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<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Out-of-State Travel</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Collect Revenue from Out-of-State Travelers</td>
<td>2</td>
<td>8</td>
</tr>
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</table>
POTENTIAL ROAD USAGE CHARGE CONCEPTS
Core Elements of a Road Usage Charge (1 of 2)

Principal

- The responsible party—individual or entity such as a corporation or other organization—that is legally responsible to pay charges and fines. This party should be defined in law.

Vehicle(s)

- Vehicles that need to pay a road usage charge should be identified in legislation, as should vehicles that might be exempted.

Road Network

- The road network defines the roads that are subject to the road usage charge. It is possible that some roads might be excluded from charges, such as roads on private land and toll facilities. A key issue is out of state travel and travellers.

Usage

- A measure of usage of the road system that can be based on distance or time (or both).
Core Elements of a Road Usage Charge (2 of 2)

Charge Rates
- How much is charged per unit of usage.

Charging Policy
- The set of laws, regulations, and rules that defines the road network, usage, rates, and approved methods of measurement.

Road Usage Charge Administration
- Includes account management, charge management, compliance and enforcement, and policy/administrative functions.
- A combination of governmental and private entities can carry out these functions.
Core Elements of a Road Usage Charge

[Diagram showing the core elements of a road usage charge: Principal, Vehicle(s), Public Road Network, Charges based on usage, Payment for usage, Road Usage Charging Administration, Charging Policy, Private Land, Out of State, One-to-Many relationship between Principal and Vehicle(s).]
Simple Road Usage Charge

Road Usage Charge = Rate Based on Vehicle Classification x Usage

- No. Axles
- L x W x H
- Drive Train
- Engine Type
- Engine Fuel Type
- Vehicle Class
- Combination

Distance
- Odometer
- Approximate (INS)
- Calculated (e.g. GPS)
- Segments
- Zone(s)
- Mileage blocks

Time
- Calendar (e.g. week, month, year)
- Engine Run Time (Telematics)
- Engine Run Time (Third Party OBU)

Example #2 –
Toyota Prius charged for 3,000 minutes @ 1¢ per minute of engine runtime

3,000 X 1¢ = $30.00
Environmental Road Usage Charge

Road Usage Charge = Rate Based on Vehicle Classification \times Usage \times Environmental Factor

- **Rate Based on Vehicle Classification**
  - No. Axles
  - L x W x H
  - Drive Train
  - Engine Type
  - Engine Fuel Type
  - Vehicle Class
  - Combination

- **Usage**
  - Distance
    - Odometer
    - Approximate (INS)
    - Calculated (e.g. GPS)
    - Segments
    - Zone(s)
    - Mileage blocks
  - Time
    - Calendar (e.g. week, month, year)
    - Engine Run Time (Telematics)
    - Engine Run Time (Third Party OBU)

- **Environmental Factor**
  - EPA Emissions (estimated)
  - Engine Type/Size/Fuel
  - ECO Factors (Classified)
  - Emissions (measured)
  - Noise (measured)

Example #4 –
Toyota Prius charged for 3,000 minutes @ 1¢ & Env Factor 0.5

3,000 \times 1¢ \times 0.5 = $15.00

Washington State Road Usage Charge Assessment
Congestion Charge & Road Usage Charge

Road Usage Charge = Rate Based on Vehicle Classification \( \times \) Usage \( \times \) Time of Day \( \times \) Location

- **Distance**:
  - Odometer
  - Approximate (INS)
  - Calculated (e.g. GPS)
  - Segments
  - Zone(s)
  - Mileage blocks
- **Time**:
  - Calendar (e.g. week, month, year)
  - Engine Run Time (Telematics)
  - Engine Run Time (Third Party OBU)
- **Geo-Political boundaries**
- **Co-ordinates (GPS)**
- **Area**
- **Zone**
- **Cordon**
- **Type of Road**
- **Road Segments**

**Example #6** –
Toyota Prius charged for 2,000 minutes @ 1¢ & 1,000 minutes @ 2¢

\[
2,000 \times 1\text{¢} + 1,000 \times 2\text{¢} = $40.00
\]

Washington State Road Usage Charge Assessment
Framework for Operational Concepts

Road Usage Charge

Basis of Charge
- Time
- Distance

Reporting Responsibility
- User
- System

Concept
- Time Permit
- Engine Run Time Charge
- Mileage Permit
- Estimated Annual Mileage Permit with Reconciliation
- Simple Odometer or Other Mileage Reading
- Automated Mileage Reporting
- Automated Mileage and General Location Measurement
- Automatic Mileage and Specific Location Measurement

Washington State Road Usage Charge Assessment
Technologies for Operational Concepts

Road Usage Charge

Basis of Charge  
- **Time** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
  8. Automatic Mileage and Specific Location Measurement

- **Distance** 
  1. Mileage Permit 

Reporting Responsibility  
- **User** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
  8. Automatic Mileage and Specific Location Measurement

- **System** 
  1. System

Concept  
- **User** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
  8. Automatic Mileage and Specific Location Measurement

- **System** 
  1. System

Technology  
- **In-vehicle Telematics Device** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
  8. Automatic Mileage and Specific Location Measurement

- **Aftermarket Device with Cellular Reporting** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
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- **Aftermarket Device Using Principal's Smartphone** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
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- **OBD-II Dongle with Cellular Modem** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
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- **OBD-II Dongle with Bluetooth to Smartphone** 
  1. Time Permit 
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  4. Estimated Annual Mileage Permit with Reconciliation 
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- **Vehicle Telematics with GPS** 
  1. Time Permit 
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- **Existing Vehicle Telematics with OBD-II Backup Dongle** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
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- **Third-party GPS Device with Cellular Modem** 
  1. Time Permit 
  2. Engine Run Time Charge 
  3. Mileage Permit 
  4. Estimated Annual Mileage Permit with Reconciliation 
  5. Simple Odometer or Other Mileage Reading 
  6. Automated Mileage Reporting 
  7. Automated Mileage and General Location Measurement 
  8. Automatic Mileage and Specific Location Measurement

- **User-provided Smartphone + OBD-II Backup Dongle** 
  1. Time Permit 
  2. Engine Run Time Charge 
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  4. Estimated Annual Mileage Permit with Reconciliation 
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- **Third-party GPS Device with Cellular Modem** 
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Washington State Road Usage Charge Assessment
Technologies for Operational Concepts

Road Usage Charge

Basis of Charge
- Time
- Distance

Reporting Responsibility
- User
- System

Concept
- Time Permit
- Engine Run Time Charge
- Mileage Permit
- Estimated Annual Mileage Permit with Reconciliation
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Technology Options

Washington State Road Usage Charge Assessment
**Concept 1: Time Permit**

- Allows unlimited road usage in Washington for a specific period, such as a year, half year, month or week.
- European vignette systems apply this approach using windshield stickers.
- Some countries have migrated to electronic approaches (based on license plate).
- Other approaches involving smartphones, in-vehicle telematics, and cloud computing are also possible.
- Permanent Washington residents will likely buy yearly passes, unless they have cash flow issues, in which case they may purchase licenses that are good for a shorter period.
Concept 1: Time Permit

- **Estimate & Affordability**
- **Registration and Purchase of Weekly, Monthly, Quarterly or Yearly Operational Certificate**
- **Record & Provide Certificate**
- **Place Copy In Vehicle**
- **Usage**
- **Registration, Licensing, Insurance and Inspection Details**
- **Department of Licensing**
- **Public Road Network**
  - Private Land
  - Out of State
- **Road Usage Charging Authority**
- **Enforcement**
- **Citation**
- **Monitoring**
Concept 2: Engine Run Time Charge

- If a vehicle’s engine is running, it is likely using the road system. Engine run time, therefore, is a reasonable proxy for road usage.

- It is similar to a simple system of recording mileage, but uses engine run time instead.

- Uses engine vibration sensors installed in vehicle to determine if engine is running.

- People will pay more when they sit in congestion or on slower roads. Paying more for sitting in congestion can be thought of as a proxy for congestion pricing.

- Some have expressed concerns that people might choose lower their bill by speeding. While this might be the case, the savings are likely to be low and there are existing ways to discourage speeding.
Concept 2: Engine Run Time Charge

Registration, selection of Automatic engine run time reporting And pre/post-payment of invoices Invoice and report engine run time

Install ERT technology In vehicle

Automatic engine run time & reconcile with account base

Registration, Licensing, insurance and vehicle inspection details

Department of Licensing

Road Usage Charging Authority

Public Road Network

Private Land | Out of State

Public Road Network

Private Land | Out of State

Monitoring

Citation

Enforcement
Concept 3: Mileage Permit

Similar to Concept 1, the Time Permit, except principals purchase blocks of miles instead of blocks of time.

Similar to the paper system that operates in New Zealand

Mileage blocks could be small or large, at the option of the principal, and in line with their cash flow constraints.

Principal must provide an odometer reading.
Concept 3: Mileage Permit

- **Estimate & Affordability**
  - Registration and pre-purchase of 1,000, 5,000, 10,000 or 15,000 mile Operational Certificate
  - Record & Provide Certificate

- **Road Usage Charging Authority**
  - Public Road Network
  - Private Land
  - Out of State
  - Usage

- **Department of Licensing**
  - Registration, Licensing, Insurance and Inspection Details

- **Enforcement**
  - Citation
  - Monitoring

- **Monitoring**
  - Place Copy in Vehicle
  - Monitor Odometer
Concept 4: Estimate Annual Mileage Permit with Reconciliation

- Similar to income taxes, principals estimate how many miles they drive per year and pay in advance based on that amount.

- At the end of the year, principals reconcile the difference between the estimated and actual amounts driven, through a refund, account credit, or additional payment.
Concept 4: Estimate Annual Mileage Permit with Reconciliation

Estimate

Registration and pre-purchase of an annual estimate of mileage certificate plus any supplements

Record & Provide Certificate

Place Copy in Vehicle

Monitor Odometer

Read Odometer
At end of driving year & reconcile account

Road Usage Charging Authority

Public Road Network

Private Land | Out of State

Enforcement

Registration, Licensing, Insurance and Inspection Details

Department of Licensing

Citation

Monitoring

Usage
Concept 5: 
Simple odometer or other mileage reading

- A simple system whereby principals pay for the miles they drive at the end of a specified term, such as a month or a year.
- Most likely manual odometer reading.
- Could also be advanced technology such as an OBD-II port device that provides electronic reading.
- Regardless of method, the principal would self-report the mileage to be used as the basis for payment, subject to auditing.

US Income Tax Form
Concept 5: Simple odometer or other mileage reading

Registration, Licensing, Insurance and Inspection Details

Place Copy in Vehicle

Monitor Odometer

Read Odometer At end of driving year & reconcile account

Registration

Record & Provide Certificate

Department of Licensing

Road Usage Charging Authority

Public Road Network

Private Land | Out of State

Usage

Citation

Enforcement

Washington State Road Usage Charge Assessment
Concept 6: Automated Mileage Reading

- Vehicles have equipment that measures and reports mileage automatically to a service provider—either government or private contractor.
- A bill for usage is sent periodically (e.g., monthly or quarterly) to the Principal.
- No location information is collected under this concept.
Concept 6: Automated Mileage Reading

Road Usage Charging Authority

Registration, selection of Automatic mileage reporting And pre/post-payment of Invoices Invoice and report usage Automatically read & transmit odometer reading & reconcile with account base Install technology In vehicle

Usage

Public Road Network

Private Land Out of State

Registration, Licensing, Insurance and Inspection Details

Department of Licensing

Citation Monitoring Enforcement
**Concept 7: Automated Mileage & General Location Measurement**

Vehicles are charged for distance with a rate that varies by general location.

- The zone may be the entire state of Washington (but distinct from bordering states and provinces).
- There could be an additional zone for the Puget Sound Region.
- There could be additional zones—for example, central Seattle or other congested areas.
Concept 7: Automated Mileage & General Location Measurement

Registration, selection of automatic mileage reporting and pre/post-payment of invoices. Invoice and report usage.

Installation technology in vehicle automatically reads and transmits mileage by zone & reconciles with account base.

Road Usage Charging Authority

- Public Road Network
- Private Land
- Out of State

Department of Licensing

Registration, Licensing, Insurance and Inspection Details

Citation Monitoring

Enforcement

Usage

Cell Tower Triangulation

GPS Satellite Array

Washington State Road Usage Charge Assessment
Concept 8: Automated Mileage & Specific Location Measurement

- Identical to Concept 7, except the system uses specific location on roadway—not just the location within a large zone.

- Per-mile rates are differentiated by facility
  - Rates are different, even if the facilities intersect
  - For example, a highway crossing over a local road might be charged at a higher rate than the local roads.

- Requires all vehicles to be equipped with a location-determining device, which include the same alternatives as for Concept 7:
  - Technology 8A: Existing Vehicle Telematics with GPS
  - Technology 8B: User-provided Smartphone + OBD-II Backup Dongle
  - Technology 8C: Third-party GPS Device with Cellular Modem
Concept 8: Automated Mileage & Specific Location Measurement

Road Usage Charging Authority

Registration, selection of Automatic mileage reporting And pre/post-payment of Invoices
Invoice and report usage

Automatically read & transmit mileage by facility/road
& reconcile with account base

GS Satellite Array

Public Road Network
Private Land
Out of State

Department of Licensing

Registration, Licensing, Insurance and Inspection Details

Trade

Usage

Citation

Enforcement
Administrative Functions & Processes

Principal Account Management
1. Principal Register/Account Initiation or Additions
2. Maintain/Support Customer (CRM)
3. Usage & Account Handling
4. Change Service Provider / Replace Equipment
5. Handle Enquiries, Complaints & Usage Disputes
6. Modify, Transfer or Close Account
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

Usage Management

Compliance & Enforcement
13. Determine & Verify Infraction
14. Manage Compliance
15. Enforce
16. Recover Fines & Penalties
17. Handle Appeals
18. Manage Repeat Offenders
19. Comply with Policy/Legislation
20. Manage Master Set of Accounts
21. Audit (Prevent Fraud / Enhance Compliance)
22. Set/Recommend Changes to Charge Rates
23. Evaluate & Measure Operational Performance
24. Manage System Performance (Monitor, inspect & Verify)
25. Provide Stakeholder Comms, PR, & Marketing

Road Usage Charge Authority
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 Multistate, International and Toll Interoperability
32. DOL Interface
33. Manage GIS / Map Data
34. Reconcile Transactions to Usage/Zones & Principal Account
35. Distribute Technology & Inventory Management
36. Recover Usage Charge Demands
37. Process Usage Charge Payments
38. Adjudicate Appeals & Privacy
Government-Centric Delivery of Administrative Functions

Road Usage Charging Administration

- Enforcement
- Status & Data
- Charging Policy

Public Road Network
- Private Land
- Out of State

One-to-Many

Usage

Charges based on usage

Payment for Usage

Citations & Monitoring

Responsibility Person

Vehicle(s)

One-to-Many

Driver Licensing, Vehicle Registration, Safety, Inspections & Insurance
Market-Centric Delivery of Administrative Functions

- Value Added Services
  - Charges based on usage
  - Payment for Usage

Public Road Network
- Private Land
- Out of State

Road Usage Charging Administration
- Enforcement
- Status & Data

Certification Agent
- Service Agreement & Reconciliation
- Standards

Road Usage Charging Authority
- Enforcement & Monitoring
- Status

Trusted Third Party "Service Provider(s)", Agents & Value Added Service Provider(s)
- Standards

Usage

Responsible Person
- One-to-Many

Vehicle(s)

Driver Licensing, Vehicle Registration, Safety, Inspections & Insurance

Washington State Road Usage Charge Assessment
## Rating Approach

### Rating Scale

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Representative Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely Satisfies Criteria</td>
<td>4</td>
</tr>
<tr>
<td>Mostly Satisfies Criteria</td>
<td>3</td>
</tr>
<tr>
<td>Moderately Satisfies Criteria</td>
<td>2</td>
</tr>
<tr>
<td>Minimally Satisfies Criteria</td>
<td>1</td>
</tr>
<tr>
<td>Does Not Satisfy Criteria</td>
<td>0</td>
</tr>
</tbody>
</table>

- Subjective judgment of the consultant team
- Starting point intended to prompt further discussion
Some criteria scored identically across the concepts

- Implementability.
  - We only proposed concepts that were technically implementable.

- Transparency.
  - Transparency in rate setting, customer billing, and accounting is possible with all concepts, but success depends on the quality of the implementation.

- Stability and Sustainability.
  - All concepts address declining revenue yield from the gas tax, but risk from declining value due to inflation remains across all concepts.

- Choice.
  - Concepts by themselves do not allow for choice. Combining concepts would allow for choice.
All concepts share these characteristics

- Solve the revenue erosion
- Need rate-setting rationale
- Administrative costs will be higher than gas tax
- More inconvenient than the gas tax
- Enforcement is critical
- Infrequent users problematic
# 1. Time Permit

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
<th>Out-of-State Travel</th>
<th>Out-of-State Travelers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

- Frequent need to purchase blocks is an inconvenience to drivers unless there is automatic replenishment.
- Since the basis of the charge is time, not miles, there is no need to identify out-of-state travel.
- Personal travel information not collected or disclosed.
- No differentiation between high and low mileage users.
- Upfront payments can be done in small amounts, so lower income people can afford them.
- Simple system cannot handle charging by location.
- However, can be a stepping stone to more advanced systems.
- Since there is no differentiation between high and low mileage drivers, there is no need to differentiate out-of-state travel.
- Can capture out-of-state travelers, like the European vignette system.
- Stopping at the border to purchase a time license is a significant departure from U.S. culture.
- Could choose to ignore out-of-state travelers.
## 1. Time Permit (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proven implementation in Europe (vignette system).</td>
<td>Upfront payment inconvenient and needs to be repeated. With an electronic system, however, automatic replenishment is possible.</td>
</tr>
<tr>
<td>Simple system that can be implemented with no advanced technology, if there is no enforcement for out-of-state vehicles.</td>
<td>Cross-border issues though solvable, create a significant departure from current practice.</td>
</tr>
<tr>
<td>Potential stepping stone to more advanced approaches.</td>
<td></td>
</tr>
<tr>
<td>Privacy, both actual and perceived, is completely mitigated.</td>
<td></td>
</tr>
<tr>
<td>Cross border issues can be solved.</td>
<td></td>
</tr>
<tr>
<td>Enforcement is relatively simple for in-state vehicles, requiring only seeing a valid sticker (no odometer match needed).</td>
<td></td>
</tr>
<tr>
<td>Out-of-state travel not an issue, since miles are not charged.</td>
<td></td>
</tr>
</tbody>
</table>
## 2. Engine Run Time Charge

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
<th>Out-of-State Travel</th>
<th>Out-of-State Travelers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Convenience**
  - Convenient for newer model vehicles that have in-vehicle telematics system with location determination capabilities.
  - Can view charges in real-time.
  - Can switch between location-based and non-location based technology.
  - Less convenient for vehicles without in-vehicle telematics system.

- **Privacy**
  - On-board measurement equipment can be perceived as intrusive to privacy.

- **Fairness**
  - Those that use vehicles more pay more.
  - Time stuck in traffic charged at the same rate as free flow.
  - Older vehicles need a more cumbersome system.
  - Greater convenience comes only with a more complex (expensive) system.
  - Smartphone data plan limitations may mean some users are impacted by data consumption.

- **Flexibility**
  - Simple system cannot handle charging by location.
  - However, can be a stepping stone to more advanced systems.
  - Allows principals to view charges in real-time.

- **Out-of-State Travel**
  - Relatively simple systems will not have location detection capability, meaning similar out-of-state issues to the simpler systems.

- **Out-of-State Travelers**
  - Can capture out-of-state travelers, like the European vignette system, but the estimated/reconciliation model would be an extra burden for out-of-state travelers.
  - Stopping at the border to purchase a mileage license is a significant departure from U.S. culture.
  - Could choose to ignore out-of-state travelers.
### 2. Engine Run Time Charge (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automates collection of road use data, with a simpler system than collecting mileage data.</td>
<td>Relationship between payment and benefit received not as close as with mileage.</td>
</tr>
<tr>
<td>More convenient for road users.</td>
<td>Upfront equipment and costs for users.</td>
</tr>
<tr>
<td>Provides more immediate feedback to drivers on amount of driving they do (amount of time their engine is running).</td>
<td>Some vehicles may not have technology capabilities – creates a two-tiered system – those that can afford (or are willing to use) an automated system, and those that don't.</td>
</tr>
<tr>
<td>Offers customer choices in technology.</td>
<td>Automated equipment in cars may lead to perception of loss of privacy (though there are ways to handle this).</td>
</tr>
<tr>
<td>Opportunity to piggyback on existing service providers.</td>
<td>Will not work the same on hybrid-electric and electric vehicles.</td>
</tr>
<tr>
<td>Reflects not only cost of miles, but also environmental costs and costs of congestion (since time spent idling is charged the same as time spent moving)—similar to the gas tax.</td>
<td></td>
</tr>
</tbody>
</table>
# 3. Mileage Permit

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
<th>Out-of-State Travel</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

- Frequent need to purchase blocks is an inconvenience to drivers.
- If allowance is made for out-of-state travel, proof is likely burdensome.
- Personal travel information not collected or disclosed.
- All miles treated equally.
- Upfront payments can be done in small amounts, so lower income people can afford them.
- High mileage drivers pay more, in proportion to their use.
- Simple system cannot handle charging by location.
- However, can be a stepping stone to more advanced systems.
- Systems can be set up to allow out-of-state travel to be exempt.
- However, the burden of proof lies with principal. This burden of proof may be difficult to create.
- Can capture out-of-state travelers, like the European vignette system.
- Stopping at the border to purchase a mileage license is a significant departure from U.S. culture.
- Could choose to ignore out-of-state travelers.
### 3. Mileage Permit (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proven implementation in New Zealand.</td>
<td>Upfront payment inconvenient and needs to be repeated.</td>
</tr>
<tr>
<td>Simple system that can be implemented with no advanced technology.</td>
<td>Enforcement is burdensome, requires seeing both the distance license and the odometer.</td>
</tr>
<tr>
<td>Potential stepping stone to more advanced approaches.</td>
<td>Cross-border issues though solvable, create a significant departure from current practice.</td>
</tr>
<tr>
<td>Privacy, both actual and perceived, is completely mitigated.</td>
<td>Out-of-state travel not easily refunded.</td>
</tr>
<tr>
<td>Cross border issues can be mitigated.</td>
<td></td>
</tr>
</tbody>
</table>
## 4. Estimated Annual Mileage Permit with Reconciliation

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
<th>Out-of-State Travel</th>
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<td>4</td>
<td>4</td>
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<td>1</td>
</tr>
</tbody>
</table>

- Estimation, then reconciliation is a concept used in income tax. It takes effort.
- Less inconvenient than the prepaid distance blocks, as fewer transactions are potentially needed.
- Compared to automated mileage recording systems, probably of equal burden to paying a monthly bill.
- Personal travel information not collected or disclosed.
- All miles treated equally.
- Upfront payments could be done in smaller installments, so lower income people can afford them.
- High mileage drivers pay more in proportion to their use.
- Simple system cannot handle charging by location.
- However, can be a stepping stone to more advanced systems.
- Systems can be set up to allow out-of-state travel to be exempt.
- However, the burden of proof lies with principal. This burden of proof may be difficult to create.
- Can capture out-of-state travelers, like the European vignette system, but the estimated/reconciliation model would be an extra burden for out-of-state travelers.
- Stopping at the border to purchase a mileage license is a significant departure from U.S. culture.
- Could choose to ignore out-of-state travelers.
4. Estimated Annual Mileage Permit with Reconciliation (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple system that can be implemented with no advanced technology.</td>
<td>Upfront payment inconvenient, needs to be repeated, and introduces reconciliation process, another step.</td>
</tr>
<tr>
<td>Privacy, both actual and perceived, are completely mitigated.</td>
<td>Cross-border issues though solvable, create a significant departure from current practice.</td>
</tr>
<tr>
<td>Potential stepping stone to more advanced approaches.</td>
<td>Out-of-state travel not easily refunded.</td>
</tr>
<tr>
<td>Cross border issues can be solved.</td>
<td></td>
</tr>
</tbody>
</table>
5. Simple Odometer or Other Mileage Reading

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
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<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Convenience**
  - Users will have to fill out a statement and pay a bill, at some periodic basis. Automated equipment can mitigate this.
  - Audits of travelers will be needed to ensure compliance, which could be an inconvenience.

- **Privacy**
  - On-board measurement equipment can be perceived as intrusive to privacy.
  - Those that choose to manually report have the same privacy as the fully user-reported systems.

- **Fairness**
  - All miles treated equally.
  - High mileage drivers pay more, in proportion to their use.
  - Those willing or able to opt in to an automated system can get a more convenient system than those who don’t.

- **Flexibility**
  - Simple system cannot handle charging by location.
  - However, can be a stepping stone to more advanced systems.

- **Out-of-State Travel**
  - Relatively simple systems will not have location detection capability, meaning similar out-of-state issues to the simpler systems.

- **Out-of-State Travelers**
  - Can capture out-of-state travelers, like the European vignette system, but the estimated/reconciliation model would be an extra burden for out-of-state travelers.
  - Stopping at the border to purchase a mileage license is a significant departure from U.S. culture.
  - Could choose to ignore out-of-state travelers.
5. Simple Odometer or Other Mileage Reading (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple system that can be implemented with no advanced technology.</td>
<td>Government cash flow – revenue not received until after travel is completed.</td>
</tr>
<tr>
<td>Potential stepping stone to more advanced approaches.</td>
<td>Cross-border issues though solvable, create a significant departure from current practice.</td>
</tr>
<tr>
<td>Privacy, both actual and perceived, is completely mitigated.</td>
<td>Out-of-state travel not easily refunded.</td>
</tr>
<tr>
<td>Cross border issues can be solved.</td>
<td></td>
</tr>
<tr>
<td>No need for reconciliation, saves a step.</td>
<td></td>
</tr>
</tbody>
</table>
# 6. Automated Mileage Reporting

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
<th>Flexibility</th>
<th>Out-of-State Travel</th>
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<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
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<td>1</td>
</tr>
</tbody>
</table>

- **Convenience**: Convenient for those with post-1995 vehicles with an OBD-II port, and smartphones or existing vehicle telematics.
  - Inconvenient for principal of some older model vehicles and electric vehicles without an OBD-II port.
- **Privacy**: On-board measurement equipment can be perceived as intrusive to privacy.
  - Potential for privacy breach of cellular accounts.
- **Fairness**: High mileage drivers pay more, in proportion to their use.
  - Older vehicles need a more cumbersome system.
  - Many vehicles will not have in-vehicle telematics system, and some people may not have smartphones necessitating additional equipment or opting for a self-declare alternative that may be more expensive.
  - Smartphone data plan limitations may mean some users are impacted by data consumption.
- **Flexibility**: Cannot handle charging by location.
  - However, can be a stepping stone to more advanced systems.
  - Offers drivers several options for deployment.
- **Out-of-State Travel**: More complex system than self-declaration, but without general location detection, cannot identify out-of-state travel.
  - Burden of proof lies with principal.
- **Out-of-State Travelers**: Technology requirement means that capturing out-of-state drivers would be nearly impossible.
  - Mitigated if deployed within neighboring states and/or with multistate interoperability and reconciliation.
### 6. Automated Mileage Reporting (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automates collection of road use data.</td>
<td>Upfront equipment and costs for some users.</td>
</tr>
<tr>
<td>More convenient for road users.</td>
<td>Some vehicles may not have technology capabilities – creates a two-tiered system – those that can afford (or are willing to use) an automated system, and those that don’t.</td>
</tr>
<tr>
<td>Provides more immediate feedback to drivers on amount of driving they do and related costs.</td>
<td>Automated equipment in cars may lead to perception of loss of privacy (though there are ways to handle this).</td>
</tr>
<tr>
<td>Offers customer choices in technology.</td>
<td></td>
</tr>
<tr>
<td>Opportunity to piggyback on existing service providers.</td>
<td></td>
</tr>
</tbody>
</table>

---

*Washington State Road Usage Charge Assessment*
## 7. Automated Mileage and General Location Measurement

<table>
<thead>
<tr>
<th>Convenience</th>
<th>Privacy</th>
<th>Fairness</th>
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<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Convenience**
  - Convenient for newer model vehicles that have in-vehicle telematics system with location determination capabilities.
  - Can view charges in real-time.
  - Can switch between location-based and non-location based technology.
  - Less convenient for vehicles without in-vehicle telematics system with location determination capabilities or vehicles that will require installation of a GPS-based device.

- **Privacy**
  - Location-detection may be perceived as intrusive to privacy.
  - There are reliable ways to protect privacy of location data.

- **Fairness**
  - High mileage drivers pay more, in proportion to their use.
  - Good connection between use and benefits received/impacts imposed.
  - Older vehicles need a more cumbersome system.
  - Smartphone data plan limitations may mean some users are impacted by data consumption.
  - Cost of GPS-based equipment and installation by a professional mechanic could impact low-income users.

- **Flexibility**
  - Offers several options for deployment.
  - Provides functionality to incorporate social objectives that depend on location (such as time of travel in a congested region).
  - Allows principals to view charges in real-time.

- **Out-of-State Travel**
  - Can distinguish out-of-state travel and travel on private lands.

- **Out-of-State Travelers**
  - Technology requirement means that capturing out-of-state drivers would be nearly impossible.
  - Mitigated if deployed within neighboring states and/or with multistate interoperability and reconciliation.
### Advantages

| Adds ability to differentiate miles driven in different locations to address in-state/out-of-state concerns and rudimentary congestion pricing. |
| Automates collection of road use data. |
| More convenient for road users. |
| Provides more immediate feedback to drivers on amount of driving they do and costs. |
| Offers customer choices in technology. |
| Opportunity to piggyback on existing service providers. |

### Disadvantages

| Upfront equipment and costs for users. |
| Some vehicles may not have technology capabilities – creates a two-tiered system – those that can afford (or are willing to use) an automated system, and those that don’t. |
| Automated equipment in cars may lead to perception of loss of privacy, especially with general location component (though there are ways to handle this). |
| General location component allows for differential pricing by region—something that some populations may not appreciate. |
# 8. Automatic Mileage and Specific Location Measurement

<table>
<thead>
<tr>
<th>Convenience</th>
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<tr>
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<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Convenient for newer model vehicles that have in-vehicle telematics system with location determination capabilities.</td>
<td>• Specific location-detection may be perceived as intrusive to privacy.</td>
<td>• High mileage drivers pay more, in proportion to their use.</td>
<td>• Offers several options for deployment.</td>
<td>• Can distinguish out-of-state travel and travel on private lands.</td>
<td>• Technology requirement means that capturing out-of-state drivers would be nearly impossible.</td>
</tr>
<tr>
<td>• Can view charges in real-time.</td>
<td>• There are reliable ways to protect privacy of location data.</td>
<td>• Good connection between use and benefits received/impacts imposed.</td>
<td>• Allows principals to view charges in real-time.</td>
<td>• Can stratify rates based on facility, time of day, etc.</td>
<td>• Mitigated if deployed within neighboring states and/or with multistate interoperability and reconciliation.</td>
</tr>
<tr>
<td>• Can switch between location-based and non-location based technology.</td>
<td>• Older vehicles need a more cumbersome system.</td>
<td>• Smartphone data plan limitations may mean some users are impacted by data consumption.</td>
<td>• Cost of GPS-based equipment and installation by a professional mechanic could impact low-income users.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Less convenient for vehicles without in-vehicle telematics system with location determination capabilities or vehicles that will require installation of a GPS-based device.</td>
<td>• Smartphone data plan limitations may mean some users are impacted by data consumption.</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>


## 8. Automatic Mileage and Specific Location Measurement (continued)

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adds ability to differentiate miles driven on specific roads to allow for differential pricing by road or congestion pricing. Also handles in-state/out-of-state concerns and rudimentary congestion pricing.</td>
<td>Upfront equipment and costs for users.</td>
</tr>
<tr>
<td>Automates collection of road use data.</td>
<td>Some vehicles may not have technology capabilities – creates a two-tiered system – those that can afford (or are willing to use) an automated system, and those that don’t.</td>
</tr>
<tr>
<td>More convenient for road users.</td>
<td>Automated equipment in cars may lead to perception of loss of privacy, especially with general location component (though there are ways to handle this).</td>
</tr>
<tr>
<td>Provides more immediate feedback to drivers on amount of driving they do.</td>
<td>Specific location component allows for differential pricing by specific road—something that some populations may not appreciate – potentially even more than general location.</td>
</tr>
<tr>
<td>Offers customer choices in technology.</td>
<td></td>
</tr>
<tr>
<td>Opportunity to piggyback on existing service providers.</td>
<td></td>
</tr>
</tbody>
</table>
POTENTIAL ROAD USAGE
CHARGE COMBINATIONS
Guiding Principles to Combining Concepts

- Combinations provides user choice
- Meshes advantages and disadvantages of different concepts, recognizing different people have different needs
- Should achieve the policy objectives

We want to ask ourselves:
- Are there opportunities to match up components of individual concepts?
- How can we balance concepts’ strengths and weaknesses?
- Would adding in time horizons (1 to 5 years, 5 years and beyond) help?

Tradeoffs are inevitable
How Operational Concepts may be combined

Road Usage Charge

Basis of Charge
- Time
- Distance

Reporting Responsibility
- User
- System

Concept
1. Time Permit
2. Engine Run Time Charge
3. Mileage Permit
4. Estimated Annual Mileage Permit with Reconciliation
5. Simple Odometer or Other Mileage Reading
6. Automated Mileage Reporting
7. Automated Mileage and General Location Measurement
8. Automatic Mileage and Specific Location Measurement

Range of options offered within the permitting concepts depends on other concepts chosen.
Can combine with time permit, but does not combine well with other concepts.
Choose one non-technology, annual distance-based concept.
Combines well with everything except for “engine run time.”
Choose one automated concept with distance measurement.

Washington State Road Usage Charge Assessment
A. Basic System

Road Usage Charge

Basis of Charge
- Time
  - User
  - System
- Distance
  - User
  - System

Reporting Responsibility
- User
- System

Concept
- Time Permit
- Time Charge
- Estimated Annual Mileage Permit Reconciliation
- Simple Odometer or Other Mileage Reading
- Automated Mileage
  - Simple Location Measurement
  - Specific Location Measurement

Washington State Road Usage Charge Assessment
B: Distance with automated reporting

Road Usage Charge

Basis of Charge

Reporting Responsibility

Concept

User

System

Distance

Time

Permit

Engine Run

Time Charge

Estimated Annual

Mileage Permit

with Reconciliation

Mileage

Permit

Simple

Odometer

or Other Mileage Reading

Automated

Mileage Reporting

Automated

Mileage and

General Location Measurement

Road Usage Charge
**C: Basic time, distance, with automation option**

<table>
<thead>
<tr>
<th>Basis of Charge</th>
<th>Time</th>
<th>Distance</th>
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<tbody>
<tr>
<td>Reporting</td>
<td>User</td>
<td>System</td>
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<tr>
<td>Responsibility</td>
<td>User</td>
<td>System</td>
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</table>

### Concept

<table>
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<tr>
<th>Concept</th>
<th>Time Permit</th>
<th>Estimated Annual Mileage Permit Reconciliation</th>
<th>Simple Odometer or Other Mileage Reading</th>
<th>Automated Mileage and General Location Measurement</th>
<th>Automated Mileage and Specific Location Measurement</th>
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</table>
D: All mileage-based systems, plus vignette for out-of-state users

Road Usage Charge

- **Basis of Charge**
  - Distance

- **Reporting Responsibility**
  - System

- **Concept**
  - Timeline
  - Permit
  - Mileage Permit
  - Estimated Annual Mileage Permit Reconciliation
  - Simple Odometer or Other Mileage Reading
  - Automated Mileage Reporting
  - Automated Mileage and General Location Measurement
  - Automated Mileage and Specific Location Measurement

*Washington State Road Usage Charge Assessment*
E: Oregon proposal (time permit, mileage permit, or automated reporting with or without general location)
OTHER IMPORTANT CONSIDERATIONS
Toll Interoperability

Integration with road usage charge may be possible or desirable

Existing systems at much smaller scale – scaling up may be difficult

Tolls with road usage charge system would need to be capable of distinguishing specific locations
» Adds cost and privacy concerns

Existing system—gas tax and toll collection—also in two parts
Data Standards

- Data standards needed for all systems between
  - Principals (and their vehicles)
  - Organizations that process the data
  - Organizations that generate invoices
  - Organizations responsible for collection
  - Map data (if used)

- Could include government and contractors

- Government’s needs to set data standards
Rate Setting

- For all systems, rates will need to be set
- Ideally, rate-setting should be transparent, with oversight and guidance by a working group.
- Should address all system costs
- A cost allocation model is a useful tool, considering...
  - vehicle type,
  - roadway classification,
  - time of day
Legal

The instrument for measurement would need to be legally recognized.

» Odometers, GPS systems, cell phones or other devices may or may not qualify as legal measurement instruments, unless specifically recognized as such.

18th Amendment,

» “all fees collected by the State of Washington as license fees for motor vehicles and all excise taxes collected by the State of Washington on the sale, distribution or use of motor vehicle fuel and all other state revenue intended to be used for highway purposes, shall be paid into the state treasury and placed in a special fund to be used exclusively for highway purposes.”

Commerce Clause of the Constitution
How to spend road usage charge revenue

Important, but does not need to be decided right now
Burden of proof of out of state travel

- Burden of proof for out-of-state travel lies with the principal.

Possible to overcome this issue, but public acceptance complications are likely. Options:
  - Charge miles driven regardless of where they are driven.
  - Refunds could potentially be subject to:
    - Exact odometer reading when exiting and re-entering the state.
    - Receipts
  - Mileage can be cross-checked using a trusted reference
Types of vehicles subject to charge

Some examples:

» Have fuel economy above a set threshold;
» Are newer than a certain model year;
» Are newer than a certain model year and have fuel economy above a set threshold; and
» Have a certain power train type or types (e.g., electric vehicles and/or plug-in hybrid electric vehicles).
A “big bang” conversion to road usage charging has never happened. All existing road usage charge programs moved in small, evolutionary steps rather than large, revolutionary leaps.
PRELIMINARY FINAL REPORT OUTLINE
Feasibility Assessment, Work Plan and Budget

Outline

**Introduction and Summary**
- Legislative Directive
- Objective
- Road usage charging – overview of experience and potential concepts
- Steering Committee feasibility recommendation
- Work plan and budget

**Feasibility Assessment**
- Policy Objectives
- Feasibility Criteria
- Potential Operational Concepts
- Feasibility assessment

**Issues needing further study and discussion**

**Work Plan**

**Budget**

**Appendices**
- Report 1: Domestic and International Review and Policy Context
- Report 2: Potential Road Usage Charge Concepts for Washington
SUMMARY OF ACTION ITEMS AND NEXT STEPS
### Schedule through January 2013

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Primary Topics</th>
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<tr>
<td>1</td>
<td>September 13, 2012</td>
<td>Steering Committee organization&lt;br&gt;Definitions and report on road usage charge activities elsewhere&lt;br&gt;Policy considerations in Washington State&lt;br&gt;Potential technologies&lt;br&gt;Public acceptance issues&lt;br&gt;Steering Committee goal setting and criteria</td>
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<td>2</td>
<td>October 30, 2012</td>
<td>Technology, administrative, and standards assessment&lt;br&gt;Preliminary assessment of policy issues&lt;br&gt;Preliminary road usage charge concepts for consideration</td>
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<td>3</td>
<td>December 4, 2012</td>
<td>Draft Preliminary Feasibility Assessment Report&lt;br&gt;Draft preliminary work plan and budget</td>
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<tr>
<td>4</td>
<td>January 11, 2013</td>
<td>Final Preliminary Feasibility Assessment Report&lt;br&gt;Final preliminary work plan and budget&lt;br&gt;Draft communications materials for use at Legislative hearing</td>
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*Note revised date*