Implementing Alternative Transportation Funding Methods

Evaluation Criteria & Funding Method Implementation

Sept. 30, 2009

Cedar River Group
Berk & Associates
Fehr & Peers
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Purpose

• Joint Transportation Committee (JTC) directed to conduct a comprehensive analysis of mid-term and long-term transportation funding mechanisms and methods (Transportation Budget)

• Principal Objective – Identify specific steps to begin implementing viable mid-term and long-term transportation funding approaches

• Focus on state imposed and collected transportation taxes and fees
Schedule

July 30 JTC Meeting: Policy Initiatives and Data Collection

Sept. 9 JTC Meeting: Evaluation Criteria/Initial Screening

Sept. 30 JTC Meeting: Implementation Alternatives
- Taxpayer and revenue impacts
- Implementation alternatives for preferred funding methods
  - Fuel & Use

Nov. 18 JTC Meeting: Implementation Alternatives
- Implementation alternatives for preferred funding methods
  - Vehicle, Driver, & Other
- Funding scenarios

Dec. 2 JTC Meeting: Draft Report
Dec. 31: Draft Final Report
Goal: Package of funding tools that the legislature could consider to meet transportation funding objectives

- **Revenue Stream**: Provide a stream of revenue commensurate with transportation system funding needs.
- **Public Benefits/Reflects Use**: Provide a clear purpose and policy rationale linked to transportation system use, economic development, and other state policies and goals.
- **Equitable**: Funding burden is geographically equitable and equitably allocates the costs to those who benefit.
- **Local**: Allows for viable local transportation funding options that recognize the distinct needs of different local systems.

**Evaluation Criteria**

- Two thresholds – Is the funding method an appropriate state level fee or tax and does it have a nexus with transportation?
- Eighteen criteria to meet the four objectives
Funding Methods – High Priority for Further Analysis

• Fuel
  – Barrel Fee
  – Motor Vehicle Fuel Tax
    – Index
    – Add special sales tax
    – Add gross receipts tax
    – Add petroleum tax
    – Vary by county – increase in most populous counties for large infrastructure projects
  – Alternative Fuel Tax
    – Electric/natural gas fuel tax
Funding Methods – High Priority for Further Analysis

• Use
  – Highway Facility Tolls
    – Expand allowed uses of toll revenues
    – Expand facility tolling
    – Segment tolls
  – Highway Congestion Pricing
    – Expand HOT lanes
    – Variable tolls
    – Zone based or cordon tolls
  – Highway Systemwide Pricing – Vehicle Miles Traveled (VMT)
    – Vary with congestion/vehicle characteristics
    – Vary by road type
  – Highway Systemwide Pricing – Truck Weight/VMT Pricing
Funding Methods – High Priority for Further Analysis

• **Use**
  - Ferry Fares
    - Fuel surcharge
    - Adaptive management strategies
    - Non-resident pricing
    - Increase farebox recovery
    - Capital surcharge on fares
    - Reservation surcharge
    - Vessel naming
    - Lottery
  - Rail Fares (Cascade Amtrak Service)
    - Increase farebox recovery rate
    - Capital surcharge
  - Rail Fares (Freight TBD)
  - Off-Road Use Fees
Funding Methods – High Priority for Further Analysis

• Vehicles
  – Rental Vehicle Sales Tax
    – Locals allowed uniform rental vehicle sales taxes
  – Motor Vehicle Registration, Weight & Title Fees
    – Increase title fees
    – Increase weight fees
    – Index fees
  – Combined License Fee – Trucks
    – Index fee
    – Base on miles traveled
  – Motor Vehicle Excise Tax
    – Set rate to fund multi-modal transportation program
    – Vary with miles traveled
  – Tire Tax
    – Additional $1.00 for maintenance
    – Additional $5.00 for studded
Initial Screening

Funding Methods – High Priority for Further Analysis

• **Driver**
  – Driver’s Licenses
    – Increase fee
    – Index
    – Increase the number of years
  – Tax on Auto Insurance Premiums

• **Transportation Business**
  – Dealer/Manufacturer Business License
    – Index
  – State Impact Fee

• **Electric Generation from Highways**
Funding Methods – Not Considered for Further Analysis

- Vehicle engine & displacement fee
- Advertising
- Container freight fee
- Varying driver’s license fees by vehicle miles traveled

Funding Methods – Lower Priority for Further Analysis

- Will be reviewed at subsequent meetings
State Fees and Taxes by Vehicle Type

**GOAL:** Measure implications of funding scenarios on both total revenues and individual tax payers

**APPROACH:** Estimate state fees and taxes by representative vehicle types at different levels of vehicle use

<table>
<thead>
<tr>
<th>VEHICLE TYPE:</th>
<th>Compact</th>
<th>Mid-Size</th>
<th>Pick-up/ Light Truck</th>
<th>Hybrid</th>
<th>Electric</th>
<th>Motorcycle</th>
<th>Freight (Medium)</th>
<th>Freight (Heavy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (lbs)</td>
<td>&lt; 4,000</td>
<td>4,001-6,000</td>
<td>6,001-8,000</td>
<td>&lt; 4,000</td>
<td>&lt; 4,000</td>
<td>&lt; 4,000</td>
<td>22,001-24,000</td>
<td>40,001-42,000</td>
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<tr>
<td>Miles Per Year</td>
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<td></td>
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<tr>
<td>Low</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>13,500</td>
<td>13,000</td>
</tr>
<tr>
<td>Medium</td>
<td>11,500</td>
<td>11,500</td>
<td>11,500</td>
<td>11,500</td>
<td>11,500</td>
<td>11,500</td>
<td>27,000</td>
<td>32,500</td>
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<tr>
<td>High</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
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<td>15,000</td>
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<td>45,000</td>
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<tr>
<td>Miles Per Gallon</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>32.5</td>
<td>23.1</td>
<td>14.8</td>
<td>48.8</td>
<td>230.0</td>
<td>55.6</td>
<td>7.8</td>
<td>5.7</td>
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<tr>
<td>2025</td>
<td>52.8</td>
<td>40.2</td>
<td>32.8</td>
<td>78.8</td>
<td>230.0</td>
<td>100.0</td>
<td>14.0</td>
<td>6.3</td>
</tr>
</tbody>
</table>
Mid-Size Sedan Owner

- Baseline assumes no changes in existing transportation tax structure
- Over time, increasing fuel efficiency results in decreasing taxes paid

Total Annual Transportation Related Taxes and Fees – Mid-Size Sedan

<table>
<thead>
<tr>
<th>Miles Per Year:</th>
<th>8,000</th>
<th>11,500</th>
<th>15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>$210</td>
<td>$272</td>
<td>$335</td>
</tr>
<tr>
<td>2009</td>
<td>$196</td>
<td>$253</td>
<td>$310</td>
</tr>
<tr>
<td>2014</td>
<td>$173</td>
<td>$219</td>
<td>$265</td>
</tr>
<tr>
<td>2019</td>
<td>$157</td>
<td>$196</td>
<td>$235</td>
</tr>
<tr>
<td>2025</td>
<td>$145</td>
<td>$177</td>
<td>$210</td>
</tr>
</tbody>
</table>
# State Fees and Taxes by Vehicle Type

## Summary of Annual Baseline Transportation Taxes/Fees for All Vehicle Types (mid-level usage)

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>2007</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
<th>2025</th>
<th>% Change 2009-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Car</td>
<td>$197</td>
<td>$186</td>
<td>$165</td>
<td>$150</td>
<td>$137</td>
<td>-26%</td>
</tr>
<tr>
<td>Mid-Size Sedan</td>
<td>$272</td>
<td>$253</td>
<td>$219</td>
<td>$196</td>
<td>$177</td>
<td>-30%</td>
</tr>
<tr>
<td>Light Trucks (SUVs / Pick-ups)</td>
<td>$437</td>
<td>$368</td>
<td>$275</td>
<td>$237</td>
<td>$211</td>
<td>-43%</td>
</tr>
<tr>
<td>Hybrid</td>
<td>$151</td>
<td>$144</td>
<td>$130</td>
<td>$121</td>
<td>$113</td>
<td>-22%</td>
</tr>
<tr>
<td>Electric Car</td>
<td>N/A</td>
<td>$77</td>
<td>$77</td>
<td>$79</td>
<td>$80</td>
<td>5%</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>$138</td>
<td>$129</td>
<td>$114</td>
<td>$104</td>
<td>$96</td>
<td>-26%</td>
</tr>
<tr>
<td>Freight (Medium)</td>
<td>$1,683</td>
<td>$1,544</td>
<td>$1,285</td>
<td>$1,114</td>
<td>$972</td>
<td>-37%</td>
</tr>
<tr>
<td>Freight (Heavy)</td>
<td>$2,854</td>
<td>$2,794</td>
<td>$2,641</td>
<td>$2,502</td>
<td>$2,351</td>
<td>-16%</td>
</tr>
</tbody>
</table>
Implementation Focus

Implementation:

• **Administration** – Can the public understand and comply with tax or fee

• **Cost of collection**

• **Funding constraints** – Subject to 18th amendment or legislative restrictions

Broad Implementation Issues

• **Index** - Basis and frequency

• **Computer system** - DOL
Barrel Fee

Revenue

16 years - $1.9 billion assuming:
  • $1.00 per barrel fee indexed to the CPI
  • Cost per gallon at retail – 2.4 cents
  • For each $0.05 increase – revenues increase $94 million over 16 years

Implementation

Administration – DOL
  • Rule making – expected to be controversial and somewhat complicated per 2009 fiscal note
  • Public able to understand and comply once in place

Funding Constraints – Could be subject to 18th Amendment
Motor vehicle fuel taxes

- 38 percent of all state transportation funding
- 51 percent of all earned revenue

Five options for restructuring

Option 1: Index the motor vehicle fuel tax rate

- Ten states index their motor vehicle fuel tax
- Question 1: How frequently to adjust the tax?
  - Five states adjust annually, 4 semi-annually, 1 quarterly
- Question 2: What index to use?
  - Two states index by CPI, 4 by the whole fuel price, 1 by the producer price index, 1 by the average cost of fuel, 1 by the retail price of fuel, 1 by alternative fuels sold
  - Federal studies have recommended indexing to the transportation construction cost index
Motor Vehicle Fuel Tax

Option 2: Add a special sales tax to retail sales
- Eleven states add sales tax to retail purchases at rates ranging from 2 percent to 7 percent or 4 to 8 cpg
- Question 1: What is the sales tax applied to?
  - Four states apply sales tax after state and federal taxes are deducted
- Question 2: Should it be a sales tax or a different tax?
  - One state has a motor fuel infrastructure assessment – 2 percent of the retail price

Option 3: Add a gross receipts tax as a percentage of the wholesale price
- Connecticut applies a 7.53 percent gross receipts tax
Motor Fuel Tax

Option 4: Add a petroleum company tax as a flat rate to the wholesale price
  • New York has a 16.4 cpg petroleum business tax

Option 5: Increase sales tax only in largest counties for large infrastructure projects
  • One state applies the sales tax only in areas served by mass transit systems
## Motor Fuel Tax

### Revenue – 16 Years ($ billion)

<table>
<thead>
<tr>
<th></th>
<th>Index – Seattle CPI</th>
<th>Index – WSDOT CCI</th>
<th>Special Sales Tax</th>
<th>Gross Receipts Tax (per 1%)</th>
<th>Petroleum Company Tax (per 5 cpg)</th>
<th>Increase Seven Counties (per 5 cpg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$5.4</td>
<td>$10.9</td>
<td>$12.2</td>
<td>$1.3</td>
<td>$2.4</td>
<td>$1.8</td>
</tr>
<tr>
<td>% Increase</td>
<td>31%</td>
<td>62%</td>
<td>69%</td>
<td>7%</td>
<td>14%</td>
<td>10%</td>
</tr>
</tbody>
</table>

### Assumes

- Index annually
- Sales tax at 6.5 percent, applied after state and federal taxes deducted
- State revenues net of distributions to cities and counties
- Could add local option sales tax
Motor Vehicle Fuel Tax

Implementation

Administration:
- DOR would administer sales tax, gross receipts tax, petroleum company tax options
  - A gross receipts tax should be applied separately from B&O tax
  - Sales tax deductible on federal taxes
- DOL administers the motor vehicle fuel tax
  - DOL systems are an implementation concern for all DOL collections
- Public able to comply with motor fuel taxes – limited understanding

Collection Costs
- DOR would incur increased audit and compliance costs for special sales tax
- To minimize collection costs, sales tax should be reflected in pump price

Funding Constraints
- Special sales tax not subject to 18th amendment
- All others are subject to 18th amendment
Alternative Fuels Tax

Tax on plug in hybrid electric (PHEV) or natural gas vehicles

• Charging infrastructure three location types
  – Single family residences with garages
  – Multi-family apartments or condominiums with shared garages
  – Commercial/public venues

• U.S. Department of Energy report concluded that most charging stations would be separately metered
  – Utilities offering deep discounts for off-peak use
  – PG&E Northern California lowest rate is for a separately metered electric vehicle or natural gas fueling station to which PG&E adds a time clock that limits the time spent charging and allows PG&E to choose the charging time.

Two options

Option 1: Tax fuel where separately metered
  – Could consider requiring separate meters

Option 2: Tax charging stations, if not separately metered
Alternative Fuels Tax

Revenue

• Could be set to replace average fuel tax

Implementation

Administration

• DOR likely to administer the tax
• If separately metered, possible to apply tax
• If not, it will be difficult to tax charging systems – unclear how unmetered plugs would be tracked and how to enforce
• Complicated by:
  – Vehicle to grid technologies
  – Pricing intelligence technology – vehicle or charging station
  – Off grid recharging systems – i.e. solar systems

Funding Constraints

• May be subject to 18th amendment – which covers excise taxes collected on the sale, distribution or use of motor vehicle fuel
Highway Facility Tolls

Toll Policies

- RCW 47.54.830 restricts the use of toll revenues to the tolled facility
- Tolling in place Tacoma Narrows Bridge
- Authorized 520
- WSDOT to report on toll options for Viaduct and Columbia River Crossing

Toll Options

Option 1: Expand allowed use of tolls

- Recommendation of Climate Action Team to use for transit, carpooling
- Federal government allows use of tolls for transit if a state certifies annually that the highway is being fully maintained
- Pennsylvania Turnpike Act 44 revenues used for rural and urban transit
- London – imposition of cordon tolling tied to increase in transit
- Legislature could consider allowing toll revenues to be used for transit that serves a state highway, facility or ferry terminal within the tolled facility’s core service area
Highway Facility Tolls

Option 2: Expand facility tolling
- Six other options identified in 2006 tolling study

Option 3: Segment tolls
- Toll portions of extended systems, such as I-5 as segments
- 24 states have toll facility agreements for portions of the interstate

Revenue
- Tacoma Narrows Bridge & SR 167 toll revenue in 16 year plan

Implementation
Administration
- Public can understand and comply with tolls
- Anticipate all electronic tolling

Cost of Collection
- High when compared to administering motor fuel tax or licenses

Funding Constraints
- Not subject to 18th amendment, but subject to legislative constraints
Current Congestion Pricing
  • SR 167

Three Options
  
  **Option 1: Expand HOT lanes in congested areas**
  • HOT lane studies underway for the I-405 corridor
  • Seven states have HOT lanes and studies are underway in 6 more states

  **Option 2: Variable tolls on tolled roads/bridges**
  • Being done on SR 167
  • Anticipated on the 520 bridge

  **Option 3: Zone or cordon tolls**
  • London, Singapore and Stockholm

Revenues
  • SR 167 tolls in 16-year plan
  • Done primarily to improve system performance
VMT Fee Recommendations

- Recommended as primary long-term funding method in 2007 JTC study
- Recommended in three federal commission studies
- Subject of pilot study in Oregon & a six state study by University of Iowa

Three options

Option 1: Impose state VMT fee
- 2007 study recommended timing of transition from motor vehicle fuel tax to VMT fee based on the development of technology to collect the fee
- Should be indexed if imposed
- Netherlands 2014/Denmark 2016

Option 2: Vary VMT fee by congestion and/or vehicle characteristics
- Help reduce congestion by variable pricing
  - Could also apply portion of VMT fee to transit
- Encourage transition to low or zero emission vehicles
VMT Fee

Option 3: Vary VMT fee by road type/location

– Non-urban drivers concerned about equity of VMT where there is limited access to transit

Revenue

• Can set to be revenue neutral or to replace taxpayer fuel tax payments
• A flat VMT fee of $0.01 per mile would yield approximately $10 billion over the 16-year period

Implementation

Administration: Major issue with VMT fee

• Absent federal action or structure
  – Hard to charge out-of-state users
  – Could consider inter-state compact

• Two collection choices
  – Self-reporting
    – Would have to include all miles, including out-of-state, to audit when title changes
    – Could consider just for PHEV vehicles
VMT Fee

Administration: Major Challenge

- On Board Technology/GPS System
  - Oregon – pump collection - less viable with PHEV vehicles
  - Iowa – monthly billing statements

- Issues with Either Collection Method
  - Privacy
  - Collection cost absent federal action
  - Public acceptance
  - Local distributions
Truck Weight/VMT Pricing

Current Fees
• Annual license fee based on weight
• Prorated for trucks involved in interstate commerce – based on miles

Option
• Truck weight/vehicle miles traveled fee
  – Oregon VMT weight fee rather than diesel tax
  – Illinois optional for trucks that drive low miles & are only operated in the state
  – Three states have a mileage fee, plus fuel tax
    – In 2 of the 3 states, the fuel tax for diesel is lower than for gasoline
    – In 1 (New Mexico), the fuel tax for diesel is higher than for gasoline

Implementation
• DOL
• Require mileage reporting for intra-state trucks
Ferry Fares

Ferry Accounts

- 16 year plan - $1.06 billion dollar deficit by 2023-25 biennium
- 88% from capital account – due to vessel replacement
- 12% from operations account

Options

Operations Funding Options

Option 1: Increase rates to increase farebox recovery
- Plan assumes annual 2.5% increases

Option 2: Fuel surcharge
- Under review

Option 3: Adaptive management
- Six options identified in WSF Long-Range Plan

Option 4: Non-resident pricing

Option 5: Reservation surcharge
- If vehicle reservation system approved
Ferry Fares

Capital Funding Options

Option 6: Capital surcharge on fares
- RCW 47.60.290 requires that capital support be separately identified in fares
- Could be dedicated to a vessel replacement fund

Option 7: Naming rights vessel
- Washington State Transportation Commission study

Option 8: Special purpose lottery
- Alternative could be to direct baseball stadium and football stadium lottery proceeds to vessel construction when expire

Option 9: Non-resident pricing

Option 10: Reservation surcharge
- If vehicle reservation system approved
## Ferry Fares

### Revenue – 16 Year

<table>
<thead>
<tr>
<th>Options</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations Funding Methods</strong></td>
<td></td>
</tr>
<tr>
<td>Increase farebox recovery</td>
<td>$42 million for each 1%</td>
</tr>
<tr>
<td>Fuel surcharge</td>
<td>$108 million</td>
</tr>
<tr>
<td>Adaptive management</td>
<td>Intended to be revenue neutral</td>
</tr>
<tr>
<td>Non-resident pricing</td>
<td>Uncertain, likely small revenue impact</td>
</tr>
<tr>
<td>Reservation surcharge</td>
<td>$13M for each 1% (50% of vehicles w/ res.)</td>
</tr>
<tr>
<td><strong>Capital Funding Methods</strong></td>
<td></td>
</tr>
<tr>
<td>Capital surcharge (vehicles)</td>
<td>$347 million</td>
</tr>
<tr>
<td>Capital surcharge (passengers)</td>
<td>$347 million</td>
</tr>
<tr>
<td>Vessel naming rights</td>
<td>TBD</td>
</tr>
<tr>
<td>Lottery</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Passenger Rail – Amtrak Cascades Service

Current

- One of 14 states to support Amtrak service
- Washington uses multi-modal fund for rail
  - No dedicated fund source
- California
  - Amtrak subsidy through sales tax on motor vehicle fuel
  - Voter approved bonds for rail improvements
  - Motor vehicle fuel taxes – for rail projects in state transportation plan
- New York
  - Amtrak subsidy through general fund
  - Voter approved bonds for rail improvements
  - Multi-modal program – bond sales from Thruway Authority & Dormitory Authority
- General fund – provide Amtrak subsidy in 4 states
- Multi-modal funds – provide Amtrak subsidy in other states
Passenger Rail – Amtrak Cascades Service

Options

Operation Funds

Option 1: Increase fares to increase farebox recovery
- Fares set by Amtrak and WSDOT
- Based on a “revenue neutral policy”
- Projected improvements in farebox recovery to 75% from 54%
- Based on increased ridership

Capital Funds

Option 2: Capital surcharge on fares
- WSDOT grant applications for portion of ARRA capital funding for rail