

GTVP Transportation Revenue Options Primer:

Overview:

This primer provides an overview of the transportation funding concepts discussed in the first phase of the Governor’s Transportation Vision Panel.

- **Ten** main roadway funding options are explored in detail. They include: increasing the gas tax, indexing the gas tax, increasing *and* indexing the gas tax, a fixed-rate road user charge, a road user charge limited to high-efficiency vehicles, an indexed road user charge, traditional tolling, increasing existing driver and vehicle fees, new registration fees on electric vehicles, and excise taxes on new vehicle sales.
- These ten funding options are evaluated in terms of **seven** sets of criteria, including the adequacy of potential revenue, responsiveness to inflation, future revenue stability and predictability, appropriateness of dedication, administrative costs, equity by vehicle class, and equity by income group.
- An additional **four** revenue concepts are also considered, including a statewide sales tax, development charges, congestion pricing, and user fees for bicycles.

The chart below summarizes these transportation funding options in terms of these seven sets of criteria:

OPTIONS:	Adequacy of potential revenue	Responsive-ness to Inflation	Future revenue stability and predictability	Appropriate-ness of dedication: ('user pays' principle)	Admin. Costs (relative to revenue)	Equity by vehicle class	Equity by income group
1) State gas tax increase (fixed rate)	Good	Poor	Poor	Good	Very Good	Fair	Poor
2) State gas tax indexing (no increase)	Good	Very Good	Fair	Good	Very Good	Fair	Poor
3) Combined gas tax increase and indexing	Very good	Very Good	Fair	Good	Very Good	Fair	Poor
4) Per-mile road user charge	Good	Poor	Very Good	Very Good	Uncertain	Good	Fair
5) Road user charge for high-efficiency vehicles	Good	Poor	Very Good	Very Good	Uncertain	Good	Fair
6) Indexed per-mile road user charge	Very Good	Very Good	Very Good	Very Good	Uncertain	Good	Fair
7) Traditional tolling	Fair	Fair	Fair	Very Good	Poor	Good	Poor
8) increase existing driver and vehicle fees	Good	Poor	Very Good	Fair	Very good	Good	Fair
9) new registration fees for electric vehicles	Fair	Poor	Good	Good	Good	Good	Fair
10) Excise taxes on new vehicle sales	Fair	Good	Fair	Fair	Good	Fair	Very Good

Additional Resources:

There are several studies that this primer relies upon that provide further details on these funding concepts:

- [Transportation Policy and Revenue Study Commission: Final Report, Volume II, Ch. 5](#)
- [Paying Our Way: A new Framework for Transportation Finance](#)
- [Non-Highway Funding Task Force, Final Report](#)
- [Road Usage Charge Pilot Program, 2013 Final Report](#)
- [Final Report on Impacts of Road Usage Charges in Rural, Urban, and Mixed Counties](#)
- [Mileage-Based User Fees for Transportation Funding: A Primer for State and Local Decisionmakers](#)
- [TRB: Discerning the Pathway to Implementation of a National Mileage-Based Charging System](#)

Definition of Evaluation Criteria:

Adequacy of Revenue:	<p>This criterion considers the adequacy of the revenue option as a major funding source for transportation.</p> <p><i>While some revenue options may be limited in their capacity to fund non-roadway transportation modes, this criterion strictly considers overall revenue potential.</i></p>
Responsive to inflation?:	<p>Is the funding option responsive to future inflation which will increase the costs of roadway construction materials and labor?</p>
Future revenue stability and predictability?:	<p>This criterion considers the long-term stability of the revenue option due to factors <i>other than inflation</i>. This includes improvements in vehicle fuel economy as well as potential volatility in consumer behavior related to fuel consumption, vehicle purchases, and vehicle miles traveled.</p>
Appropriateness of dedication: (‘user pays’ principle)	<p>To what degree does the user of the system pay for their use? Is dedication of revenue to the transportation system an appropriate use of this funding source?</p>
Administrative Cost:	<p>What is the cost of administration (including infrastructure, collection and enforcement) relative to the potential revenue?</p>
Equity by vehicle class:	<p>Do various classes of vehicles (passenger vehicles, electric vehicles, SUVs, trucks, etc.) contribute revenue that is proportionate to their impact on the transportation system?</p>
Equity by income group:	<p>Does the revenue option disproportionately burden poorer individuals, particularly those who may be limited in their capacity to seek alternative transportation options?</p>

Option 1: Increase state gas taxes

The Oregon state gas tax is currently the primary source of revenue for State Highway Trust Fund. At 30-cents per gallon of gasoline, the gas tax was last increased by 6 cents in 2011. The gas tax as a highway revenue source currently faces major challenges due to inflation and increased fuel efficiency.

Adequacy of Revenue:	<i>Good</i>	Each cent that the gas tax is increased would raise an estimated \$25.8 million per year in the near-term. ¹
Responsive to inflation?:	<i>Poor</i>	A fixed gas tax increase provides a temporary increase in revenue. However, this revenue begins to disappear as inflation increases the cost of labor and construction materials
Future revenue stability and predictability?:	<i>Poor</i>	As vehicles become more fuel efficient and electric vehicles increase their market share, state revenue from the gas tax will continue to decline. Revenue from the gas tax may also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: (‘user pays’ principle)	<i>Good</i>	The gas tax is considered a revenue source that roughly follows the ‘user pays’ principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Trust Fund. In the past, vehicle size and weight (impact on road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative Cost:	<i>Very Good</i>	Because the gas tax already exists as a revenue source, there would be negligible costs in administering an increase in its rate.
Equity by vehicle class:	<i>Fair</i>	In the past, vehicle size and weight (impact on road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Equity by income group:	<i>Poor</i>	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

Other States:

Oregon’s current per-gallon taxes and fees on gasoline and diesel is average compared to other US states.² However, this rate is less than other west coast states, including California (42.3 cents per gallon) and Washington (which approved an increase from 37.5 cents to 44.5 cents in 2015). Six other states approved increases to their per-gallon gas tax rates in 2015.

¹ Based on estimates from 2015 draft legislation. (Note: confirm accuracy)

² <http://www.api.org/oil-and-natural-gas-overview/industry-economics/fuel-taxes/gasoline-tax>

Option 2: Index state gas taxes (with 30-cent baseline)

Because the purchasing power of gas taxes decreases with inflation and higher construction and materials costs over time, the state gas tax can be 'indexed' in variety of ways. The gas tax rate can be indexed to match the Consumer Price Index (CPI) or the Producer Price Index for highway and street construction.

While indexing as a stand-alone measure does little to increase transportation revenue in the near-term, it can be very effective long-term. If the Oregon state gas tax had been indexed in 1993 (at 24-cents per gallon), the gas tax today would be 39-cents per gallon.

For purposes of this overview, indexing the gas tax rate is reviewed as a stand-alone measure.

Adequacy of Revenue:	<i>Good</i>	As a stand-alone measure, indexing the gas tax (with a 30-cent per gallon baseline) does not increase revenue, but rather reduces future diminishment of the gas tax as a revenue source. Over time, this would provide greater revenue than a fixed-rate increase.
Responsive to inflation?:	<i>Very Good</i>	Whereas a fixed gas tax increase provides a temporary increase in revenue, indexing the gas tax rate helps to ensure that the purchasing power of gas tax revenue matches inflation and/or increased labor and construction costs.
Future revenue stability and predictability?:	<i>Fair</i>	While indexing ensures that available revenue will match inflation, it has no impact on diminishing gas tax revenue due to increased fuel efficiency. Revenue from the gas tax may also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: (‘user pays’ principle)	<i>Good</i>	The gas tax is considered a revenue source that roughly follows the ‘user pays’ principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Trust Fund. In the past, vehicle size and weight (impact on road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative Cost:	<i>Very Good</i>	Because the gas tax already exists as a revenue source, additional administrative costs of indexing would be limited to the need to recalculate rates based on a determined price index.
Equity by vehicle class:	<i>Fair</i>	In the past, a vehicle’s impact on road has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Equity by income group:	<i>Poor</i>	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

Florida, Maryland, and New Hampshire each adjust their gas tax for inflation based on the Consumer Price Index. Additional states have tied gas tax rates to the wholesale price of gas, leading to increases in revenue as the price of gas increases.³

³ <http://taxfoundation.org/blog/state-inflation-indexing-gasoline-taxes>

Option 3: Combined gas tax increase with indexing

Options 1 and 2 above could be combined to both increase the current gas tax rate and index the rate in the future. Such an approach could make up for lost revenue that has accrued due to inflation and increases in fuel efficiency to date. However, while indexing will make the gas tax responsive to inflation into the future, it will not address revenue impacts from increased fuel efficiency.

Adequacy of Revenue:	<i>Very Good</i>	Each cent that the gas tax is increased would raise an estimated \$25.8 million per year. ⁴ Combining a gas tax increase with an indexing of the gas tax would significantly increase overall revenue while ensuring that this revenue is responsive to future inflation and/or increased labor and construction costs.
Responsive to inflation?:	<i>Very Good</i>	Whereas a fixed gas tax increase provides a temporary increase in revenue, indexing the gas tax rate helps to ensure that the purchasing power of gas tax revenue matches inflation and/or increased labor and construction costs.
Future revenue stability and predictability?:	<i>Fair</i>	While a gas tax increase ensures increased revenue in the near-term, and indexing ensures that available revenue will match inflation, these combined options do not address the issue of diminishing gas tax revenue due to increased fuel efficiency. Revenue from the gas tax can also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: (‘user pays’ principle)	<i>Good</i>	The gas tax is considered a revenue source that roughly follows the ‘user pays’ principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Trust Fund. In the past, vehicle size and weight (impact on road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative Cost:	<i>Very Good</i>	Because the gas tax already exists as a revenue source, additional administrative costs of indexing would be limited to the need to recalculate rates based on a determined price index.
Equity by vehicle class:	<i>Fair</i>	In the past, vehicle size and weight (impact on road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Equity by income group:	<i>Poor</i>	The purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most impacted by increased gas prices. However, if increased wages are generally assumed to correspond with inflation, the additional impact of indexing would have a largely negligible impact.

Other states:

In 2015, Georgia passed legislation to increase the gas tax, and provide annual adjustments based on both inflation and fuel efficiency.⁵

⁴ Based on estimates from 2015 draft legislation.

⁵ <http://knowledgecenter.csg.org/kc/content/state-gas-tax-increases-2015>

Option 4: Per-mile Road User Charge:

In July 2015, Oregon launched the nation’s first statewide road user charge pilot program. Known as OReGO, the program provides the option for motorists across the state to pay a **1.55-cent per mile** road user charge in lieu of the 30-cent per gallon state gas tax. If a per-mile fee were widely adopted as a replacement to the state gas tax, transportation revenue would not be compromised by increases in fuel economy and an increasing market share of high efficiency vehicles.

The per mile road user charge can be adjusted by vehicle weight, class, or size, and can be indexed to inflation. However, for purposes of this overview, OReGO’s fixed rate of 1.55-cents per mile for personal occupancy vehicles is considered.

Adequacy of Revenue:	<i>Good</i>	A 1.55 cent per mile rate is designed to largely match the rate the average motorist currently pays in gas tax. At this fixed rate it would not lead to a significant increase in transportation revenue.
Responsive to inflation?:	<i>Poor</i>	At a fixed rate of 1.55 cents per mile, road user charge revenue is equally susceptible to declining purchasing power as compared to the gas tax. However, as with the gas tax, a per-mile rate could be established that is indexed with inflation.
Future revenue stability and predictability?:	<i>Very Good</i>	The road user charge solves the challenge of lost transportation revenue stemming from greater fuel efficiency. By replacing the gas tax with a per-mile charge, vehicles pay equally for use of the road regardless of vehicle type. A road user charge may still be impacted by economic downturns and global energy costs, both of which impact vehicle miles traveled.
Appropriateness of dedication: (‘user pays’ principle)	<i>Very Good</i>	Revenue from a per-mile road user charge would be constitutionally dedicated to the State Highway Trust Fund. As vehicles enter the market that use little to no gasoline, the road user charge more effectively follows the ‘user pays’ principle by charging for use of the road. This objective is slightly limited by the fact that the road use charge makes no distinction between vehicle efficiency (impact on air quality), and the construction and maintenance cost of the road driven (freeways vs. forest roads, etc.)
Administrative Cost:	<i>Un-determined</i>	Because it involves new technology, the future administrative cost of a road user charge system on a large scale remains somewhat uncertain. ODOT estimates that operation of the road usage charge system will cost about ten percent of revenue raised once the number of payers reaches 100,000 and under five percent with one million payers. ⁶ <i>Implementation of a road user charge could lead to cost savings if the mechanism were to replace other revenue mechanisms with high administrative costs such as registration fees.⁷</i>

⁶ Road Usage Charge Pilot Program 2013, ODOT

⁷“Rather than solely replacing fuel taxes, mileage fees could be structured as a general-purpose road-funding mechanism that replaces most state and local transportation revenue sources currently in use. Beyond increasing the mileage-fee revenue base and thus reducing the ratio of system costs to gross receipts, this could also reduce or eliminate the administrative costs associated with other revenue mechanisms, many of which are far less efficient than fuel-tax collection. Shifting a greater share of road funding to per-mile fees would also provide a greater incentive for reducing total vehicle travel, which would be helpful in mitigating traffic congestion and air quality challenges.” RAND Corporation: Mileage-Based User Fees for Transportation Funding

Equity by vehicle class:	<i>Good</i>	At a fixed rate of 1.55 cents per-mile, personal occupancy vehicles pay equally for use of the road regardless of vehicle type. <i>(not considering commercial trucks)</i>
Equity by income group:	<i>Fair</i>	At a fixed rate of 1.55 cents per-mile, drivers of personal occupancy vehicles pay equally for use of the road regardless of vehicle type. While poorer residents would pay a larger percent of their income than wealthier residents, and people in rural areas often need to drive more miles, these costs inequities are already borne by existing gas taxes. Poorer residents and people in rural areas who drive lower-efficiency vehicles could actually see cost savings in a scenario where a road user charge replaces state gas taxes. ⁸

Other States: Oregon is the first state in the nation to pilot a statewide road user fee program. A number of other states are developing and evaluating strategies that could set the stage for near-term implementation of mileage fees.⁹ Oregon is also part of a consortium of western states developing, testing, and studying road user fee systems.

Option 5: A Road User Charge for High Efficiency Vehicles:

Rather than establishing a road user charge for all vehicles, a road user charge could be applied to electric and other high efficiency vehicles (over 55 miles per gallon of gasoline). This approach has been recommended by the Road User Fee Task Force, and would help satisfy a central objective of the road user charge concept; ensuring that high-efficiency vehicles contribute adequately to their roadway system impacts.

*This analysis considers a 1.55-cent per mile road user charge similar to **Option 4** that is mandatory for electric and other high-efficiency vehicles (over 55 miles per gallon of gasoline).*

Adequacy of Revenue:	<i>Good</i>	A 1.55 cent per mile rate is designed to closely match the amount an average motorist currently pays in gas tax. Given the current market share of high efficiency vehicles, this would not bring a significant near-term increase in transportation revenue. However, as these vehicles increase market share, this road user charge would capture lost revenue.
Responsive to inflation?:	<i>Poor</i>	At a fixed rate of 1.55 cents per mile, road user charge revenue is equally susceptible to declining purchasing power as compared to the gas tax. However, as with the gas tax, a per-mile rate could be established that is indexed with inflation. <i>(see option 6)</i>
Future revenue stability and predictability?:	<i>Very Good</i>	Coupled with the existing gas tax on regular vehicles, a road user charge on high-efficiency vehicles solves the challenge of lost transportation revenue stemming from increase vehicle fleet efficiency. High efficiency vehicles would contribute at a rate similar to average efficiency vehicles. A road

⁸ For Further details, see ODOT's *Final Report on Impacts of Road Usage Charges in Rural, Urban, and Mixed Counties*

⁹ See: Rand Corporation: *Mileage-Based User Fees for Transportation Funding: A Primer for State and Local Decisionmakers*

user charge may still be impacted by economic downturns and global energy costs, both of which impact vehicle miles traveled.

Appropriateness of dedication:
(‘user pays’ principle)

Very Good

Revenue from a per-mile road user charge would be constitutionally dedicated to the State Highway Trust Fund. As vehicles enter the market that use little to no gasoline, the road user charge more effectively follows the ‘user pays’ principle by charging for use of the road.

Administrative Cost:

Undetermined

Because it involves new technology, the future administrative cost of a road user charge system on a large scale remains somewhat uncertain.

While a road user charge involving a smaller number of high-efficiency vehicles may be easier to implement, there may be lost economies of scale as compared to Option 4.

Equity by vehicle class:

Good

At a fixed rate of 1.55 cents per mile, high efficiency vehicles would contribute transportation revenue at a similar rate to average efficiency vehicles.

Equity by income group:

Fair

This type of road user charge would primarily impact individuals who can afford to invest in high efficiency vehicles. However, this would have no impact on other vehicle drivers who currently pay a regressive gas tax.

Option 6: An Indexed Road User Charge:

As with the gas tax, a road user charge could be indexed to match the Consumer Price Index (CPI) or the Producer Price Index for highway and street construction. An indexed per-mile road user charge would have the effect of creating a transportation revenue source that is responsive to both inflation as well as improvements in fuel economy.

Adequacy of Revenue:

Very Good

A 1.55 cent per mile rate is designed to largely match the rate the average motorist currently pays in gas tax. If this rate is indexed it would be responsive to both inflation as well as improvements in fuel economy.

Responsive to inflation?:

Very Good

An indexed road user charge would be responsive to inflation

Future revenue stability and predictability?:

Very Good

The road user charge solves the challenge of lost transportation revenue stemming from greater fuel efficiency. By replacing the gas tax with a per-mile charge, vehicles pay equally for use of the road regardless of vehicle type. An indexed road user charge could still be impacted by economic downturns and global energy costs, both of which impact vehicle miles traveled.

Appropriateness of dedication:

Very Good

(‘user pays’ principle)

Revenue from a per-mile road user charge would be constitutionally dedicated to the State Highway Trust Fund. As vehicles enter the market that use little to no gasoline, the road user charge more effectively follows the ‘user pays’ principle by charging for use of the road. This objective is slightly limited by the fact that the road use

charge makes no distinction between vehicle weight (impact on pavement), vehicle efficiency (impact on air quality), and the construction and maintenance cost of the road driven (freeways vs. forest roads, etc.)

Administrative Cost:	<i>Undetermined</i>	Because it involves new technology, the future administrative cost of a road user charge system on a large scale remains somewhat uncertain. ODOT estimates that operation of the road usage charge system will cost about ten percent of revenue raised once the number of payers reaches 100,000 and under five percent with one million payers. ¹⁰
Equity by vehicle class:	<i>Good</i>	At an indexed per-mile rate, personal occupancy vehicles pay equally for use of the road regardless of vehicle type. (<i>not considering commercial trucks</i>)
Equity by income group:	<i>Fair</i>	At an indexed per-mile rate, drivers of personal occupancy vehicles pay equally for use of the road regardless of vehicle type. While poorer residents would pay a larger percent of their income than wealthier residents, and people in rural areas often need to drive more miles, these costs inequities are already borne by existing gas taxes. Poorer residents and people in rural areas who drive lower-efficiency vehicles will actually see cost savings when comparing an indexed per-mile charge with an indexed state gas tax.

Additional Road User Charge Options:

In addition to the Options 4, 5, and 6 outlined above, a road user charge could be implemented in a number of different ways:

- **A Graduated Road User Charge:** A road user charge could be applied to all vehicles, but set at variable or graduated per-mile rates. These rates could be varied by vehicle class, fuel economy, weight, emissions, and other factors to support further policy goals. While a fixed-rate road user charge improves upon the 'user pays' principle by charging for vehicle usage rather than fuel purchased, graduated road user charges could more perfectly align vehicle charges with vehicle environmental impacts and other externalities.¹¹
- **A Road User Charge above 20MPG:** A flat 1.55 cent per mile road user charge that replaces the existing gas tax (option 4) would result in drivers of fuel efficient vehicles contributing more to transportation revenue, with drivers of low-efficiency vehicles (below 20mpg) contributing less to transportation revenue. In order to ensure that drivers of low-efficiency vehicles continue to contribute to transportation revenue at current rates, the gas tax could be maintained for vehicles below 20 mpg, and a road user charge could be implemented on vehicles above 20 mpg. (see appendix A comparing Option 4 with this 'top-half' option)

For further details on these additional Road User Charge options, see: Whitty, James M., and John R. Svadlenak. "Discerning the Pathway to Implementation of a National Mileage-Based Charging System." Transportation Research Board (n.d.): 61-69. Web. <<http://onlinepubs.trb.org/onlinepubs/sr/SR299Mileage.pdf>>

¹⁰ Road Usage Charge Pilot Program 2013, ODOT

¹¹ See: [Discerning the Pathway to Implementation of a National Mileage-Based Charging System](#), Page 61

Option 7: Traditional Road and Bridge Tolling:

Currently, there are no public roads within the state of Oregon that levy a toll. However, two bridges crossing the Columbia River (Bridge of the Gods and Hood River Bridge) levy tolls. Other states have made greater use of tolling as a revenue source for new transportation infrastructure, including bridge tolling, existing lane tolling, and new lane tolling.

Adequacy of Revenue:	<i>Fair</i>	Tolling of selected highways and bridges is proven to be a reliable generator of revenue for specific transportation projects. However, unless tolling is deployed broadly, it is an inadequate source of revenue for the transportation system as a whole.
Responsive to inflation?:	<i>Fair</i>	Unless increased over time, traditional tolling is unresponsive to inflation. However, toll rates can be increased by the Oregon Transportation Commission without a legislative vote, making them easier to adjust for inflation.
Future revenue stability and predictability?:	<i>Fair</i>	Tolling facilities are proven to be major generators of revenue. However, economic downturns, changes in VMT, and changes in driver behavior brought about by tolling, including evasion, rerouting, and shifting development patterns can make tolling volatile as a revenue source.
Appropriateness of dedication: (‘user pays’ principle)	<i>Very Good</i>	Toll revenue on public roads in Oregon would be constitutionally dedicated to the transportation system. Tolling can easily capture user fees for a particular asset or segment. However, evasion and rerouting can have the unintended consequence of significantly impacting transportation assets outside a tolled area. Several States allow tolls from one project to be used to provide front-end financing for other toll roads or transit facilities.
Administrative Cost:	<i>Poor</i>	Tolling comes with high administrative costs including the costs of collection and enforcement. The widespread use of electronic toll collection systems can significantly reduce operation and administrative costs. However, current tolling technology still requires extensive roadway infrastructure.
Equity by vehicle class:	<i>Good</i>	Tolls can be set to reflect system impacts from multiple vehicle classes.
Equity by income group:	<i>Poor</i>	Tolls are highly regressive, and tolls that are levied on particular assets rather than system-wide create unequal burdens on roadway users to contribute to the transportation system at large.

Other States:

A total of 42 states have some form of statewide or regional tolling facilities, with 20 states having privately operated toll facilities. In recent years, several states have developed high-occupancy-toll (HOT) lanes, wherein single-occupancy vehicles can be pay for travel in underutilized High-occupancy vehicle (HOV) lanes.¹²

¹² <http://www.ncsl.org/research/transportation/toll-facilities-in-the-united-states.aspx>

Option 8: Increase Existing Driver and Vehicle Fees:

Oregon's vehicle registration fees for passenger vehicles (\$43 per year) are among the lowest in the nation. Increasing registration fees (as well as licensing and title fees) can provide revenue for transportation infrastructure. However, these fees are often lump-sum costs and do not reflect the actual road use tax. Furthermore, because they are generally flat-rate costs, they may be considered a regressive tax.

Adequacy of Revenue:	<i>Good</i>	A \$10 annual increase in registration fees for passenger vehicles would raise roughly \$67.2 million per year in revenue. ¹³
Responsive to inflation?:	<i>Poor</i>	Unless increased over time, registration, licensing, and title fees are not responsive to inflation
Future revenue stability and predictability?:	<i>Very Good</i>	Registration fee revenue reflects the number of vehicles registered in the state. Barring fundamental changes in vehicle ownership, it is a very predictable and stable source of revenue.
Appropriateness of dedication: (‘user pays’ principle)	<i>Fair</i>	Dedication of registration fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative Cost:	<i>Very Good</i>	The cost of administering registration, licensing and title fees is already established. Additional revenue from fee increases come with a negligible administrative cost.
Equity by vehicle class:	<i>Fair</i>	Registration fees can be set at variable rates by class of vehicle. However, driver and vehicle fees function as an ‘access fees’ that do not reflect actual roadway impacts.
Equity by income group:	<i>Fair</i>	Registration fees do not reflect the value of a vehicle within a particular class. Furthermore, they do not reflect vehicle miles traveled. Lower income residents therefore pay the same in registration regardless of the vehicle’s value or level of use.

¹³ Based on estimates from 2015 draft legislation.

Option 9: New (additional) Registration Fees for Electric Vehicles:

Currently, both electric and gas-powered passenger vehicles pay the same amount in registration fees (\$43 annually). In addition to registration fees, the average gas-powered passenger vehicle pays \$135 annually into the state highway trust fund through state gas taxes. In contrast, electric vehicles contribute no additional revenue to the highway trust fund. To ensure an equal contribution into the trust fund, registration fees for electric vehicles could be increased by \$135 annually.

However, the \$135 fee is based on average vehicle miles traveled, and does not reflect actual roadway use. Furthermore, this fee can be considered a disincentive to the wider policy goal of promoting greater market share of electric vehicles.

Adequacy of Revenue:	<i>Fair</i>	An increase of \$135 in registration fee for electric vehicles would raise roughly \$600,000 per year. While this amount could rapidly increase with a broad deployment of electric vehicles, overall revenue would not increase as registration fees would be offset by the decline in gas tax revenue.
Responsive to inflation?:	<i>Poor</i>	Unless increased over time, registration fees are not responsive to inflation
Future revenue stability and predictability?:	<i>Good</i>	While the future market share of electric vehicles remains uncertain, a higher fee for electric vehicles ensures predictability for a state highway trust fund that is losing gas tax revenue from the rollout of electric vehicles.
Appropriateness of dedication: (‘user pays’ principle)	<i>Good</i>	Dedication of registration fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative Cost:	<i>Good</i>	The cost of administering registration fees on vehicles is an already established fixed cost. Furthermore, the Oregon DMV already identifies hybrid-electric and electric powered passenger vehicles as a distinct vehicle class. The administrative cost of increasing this fee would be negligible.
Equity by vehicle class:	<i>Good</i>	Increasing registration fees on electric vehicles helps reduce the gap between what high-efficiency and low-efficiency vehicles contribute to the State Highway Trust Fund.
Equity by income group:	<i>Fair</i>	This type of road user charge would primarily impact individuals who can afford to invest in high efficiency vehicles. However, this would have no impact on other vehicle drivers who currently pay a regressive gas tax.

Option 10: Excise taxes on new vehicle sales

Over twelve US states levy excise taxes on vehicles, with revenue dedicated to transportation. Oregon could levy an excise tax on the sale of new vehicles and dedicate this revenue to the State Highway Fund. Similarly, a title fee based on a vehicle's value could be levied on new vehicles registered in Oregon.

A vehicle excise tax could also be expanded beyond motorized vehicles, and include bicycles and other non-motorized vehicles that rely on the transportation system. *(see concept 4)*

Adequacy of Revenue:	Good	Vehicle excise taxes can be adequate sources of transportation revenue. A 2006 study showed that if a 1% vehicle excise tax were implemented nationwide, it would raise an additional \$7.2 billion per year in transportation revenue. ¹⁴ The adequacy of revenue would be contingent on the excise tax rate set. While an excise tax could be a significant additional source of revenue, it would likely not be sufficient to replace existing sources of revenue like the gas tax.
Responsive to inflation?:	Good	The cost of new vehicles can be expected to roughly match increases in overall economic inflation over time. A new vehicle excise tax would therefore likely be responsive to inflation.
Future revenue stability and predictability?:	Fair	Stability of vehicle excise taxes can be impacted by trends toward the purchase of smaller, more fuel efficient vehicles that cost less than large cars and SUVs
Appropriateness of dedication: (‘user pays’ principle)	Fair	Under current Oregon law, all revenue collected from a vehicle excise tax would be constitutionally dedicated to the state highway trust fund. However, as with registration fees, there is no direct relation between the amount of revenue collected per vehicle and the per-mile impact of that vehicle on public roadways.
Administrative Cost:	Good	The administrative cost of collecting excise taxes would be relatively low. However, there could be issues concerning what specialized equipment should be exempt from taxation.
Equity by vehicle class:	Fair	Excise taxes levied on new vehicles would function as an ‘access fee’ similar to registration or title fees. The fees would not reflect miles driven or actual roadway impacts.
Equity by income group:	Very Good	An excise tax on new vehicles is a highly progressive tax compared with the other revenue options outlined. They would primarily impact Oregonians who can afford new vehicles with rates that reflect the value of the vehicle sold.

¹⁴ NCHRP: Future Financing Option to Meet Highway and Transit Needs
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w102.pdf

Additional Revenue Concepts:

The following revenue concepts have been identified by the Transportation Vision Panel. Determining their adequacy, appropriateness, or viability as a transportation revenue source may require further evaluation.

Concept 1: Statewide Sales Tax

The political feasibility and administrative costs of establishing an Oregon sales tax is outside the scope of this Transportation Revenue Options Primer. However, if Oregon were to establish a statewide sales tax, taxes from the sale of vehicles would be constitutionally dedicated to the State Transportation Trust Fund under current Oregon law. This tax from the sale of vehicles could provide transportation revenue similar to *Option 10: Excise taxes on new vehicle sales*.

Concept 2: Development Charges

Some type of development charge could be levied on businesses and developers that directly benefit from highway system improvements.

One type of development charge that was considered in the *Governor's Non-Roadway Task Force* was an Urban Growth Boundary (UGB) expansion windfall tax. This tax would capture the increases in property values that occur when land is added to the region Urban Growth Boundaries in metro areas and dedicate this revenue to surface transportation enhancements. The adequacy and stability of this windfall tax as a transportation revenue source has not been analyzed.

Concept 3: Congestion Pricing

Oregon's Road User Charge program does not have the capacity to determine the type of road being driven on or the time of day that a road is being used. However, a future road user charge regime could apply variable pricing based on congestion and the type(s) of road being driven. This would have the major benefit of managing demand on congested roadways, and send strong pricing signals to users. Furthermore, pricing could be implemented to cover facility construction and operations costs (in a similar manner to bridge tolling but with potentially lower administrative costs). Congestion-related fees could effectively manage demand. However, congestion pricing may be an extremely volatile and unpredictable source of revenue depending on how user behavior responds to congestion price signals.¹⁵

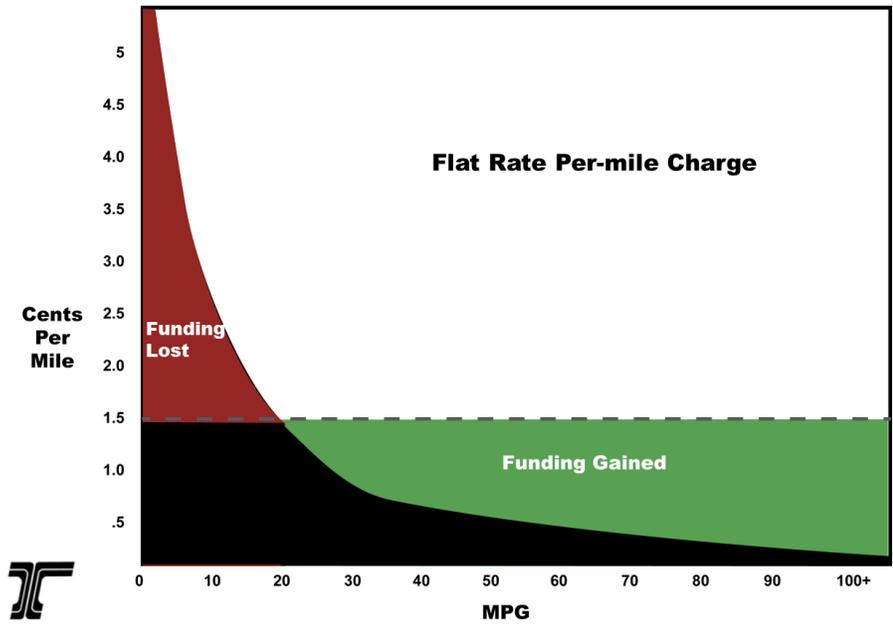
Concept 4: User Fees for Bicycles

A tax on bicycle operation or purchase could be dedicated to bicycle improvements in existing roadways as well as non-roadway transportation. A user fee for bicycles could involve some form of registration or licensing fee, or an excise tax on new bicycles and bicycle equipment. Past efforts to create local bicycle licensing requirements have been shown to have prohibitively high administrative costs relative to revenue. In contrast, an excise tax on new bicycle and/or bicycle equipment would likely have lower administrative costs. However, bicycle excise taxes alone would be fairly limited as a revenue source for the transportation system.

¹⁵ Further details on Oregon's Congestion Pricing Pilot Project can be found at:
http://www.oregon.gov/ODOT/HWY/REGION1/congestionpricing/otc_cpmemo_040611.pdf

Appendix A:

Visualization of revenue gained and lost by switching from the 30-cent per gallon gas tax of 1.55 cent per mile Road User Charge (Option 4):



A Road User Charge for vehicles above 20 mpg: vehicles below 20 mpg retain gas tax, and vehicles above 20 mpg pay the 1.55-cent per-mile charge:

