Mileage-Based Fee
Advantages and Disadvantages

Scenario One - Mileage Fee (Data & Fee Collection Center). Mileage data is uploaded to data & fee collection center for fee calculation and monthly billings to owners of passenger vehicles using Oregon's road system. If this system is based on an a electronic odometer in the form of GPS, current estimated cost would be about $500 installed. If the system is instead based on an electronic odometer in the form of an Odometer Tag, the current estimated cost would be about $125 installed.

Advantages

- *Technology. Exists for gathering accurate VMT data in this fashion.*
- *VMT Accuracy. Mileage traveled could be precisely calculated.*
- *Collection. Independent billing allows complete separation from gas tax collection.*
- *Congestion Pricing. Enabled after full phase in.*
- *Other Rate Adjustments. Allows other overlays (e.g. fuel efficiency).*

Disadvantages.

- *Phase in Period. If GPS-based, the phase in would be necessarily long because of fleet turnover (e.g. 20+ years). If Odometer Tag technology is used, phase in would be less than ten years. Phasing in requires tax credit mechanism to avoid double taxation during the phase in period.*
- *Start Up Costs. Likely to be high.*
- *Overhead Costs. Likely to be very high.*
- *Data Transmission Costs. Likely to be high, especially if cellular transmission is the preferred mode of transmission.*
- *Collection. Erratic because nonpayment is more likely than under the gas tax or the other scenarios.*
- *Enforcement. Dramatic increase in costs likely for enforcement and collection.*
- *Public Acceptance. Requires moderate change in user tax payment habits.*

Scenario Two- Mileage Fee (Service Station Collection/Actual VMT with Credit). Actual mileage data is uploaded to service stations for fee calculation and payment. All operators of vehicles containing necessary technology would be charged mileage fee based on mileage since last fueling. Tax credit given for fuel tax paid. If this system is based on an electronic odometer in the form of GPS, current estimated cost would about $500 installed. If the system is instead based on an Odometer Tag technology, the current estimated cost would be about $125 installed.

Advantages

- *Technology. Exists for gathering accurate VMT data in this fashion.*
- *VMT Accuracy. Mileage traveled could be precisely calculated.*
- *Collection. Gas tax would continue to be collected at the distributor level. Mileage fee payment occurs at point of retail gasoline sale and thus associated with a necessary purchase.*
- *Public Acceptance. Requires no change in user tax payment habits.*
- *Congestion Pricing. Enabled after full phase in.*
- *Other Rate Adjustments. Allows other overlays (e.g. fuel efficiency).*

Disadvantages.

- *Phase in Period. If GPS-based, the phase in would be necessarily long because of fleet turnover (e.g. 20+ years). If Odometer Tag technology is used, phase in would be less than ten years. Phasing in requires tax credit mechanism to avoid double taxation during the phase in period.*
- *Tax Administration. If high fuel consumption vehicles pay at gas tax rate, service stations would be required to remit the amount of mileage fee revenue above the gas tax credit to the Highway Fund thus increasing enforcement issues.*
- *Public Acceptance. The gas tax and mileage fee would be integrated, possibly resulting in consumer confusion*
- *Private Sector Burden. The technology requirements imposed on service stations could be significant.*

Scenario Three - Mileage Fee (Service Station Collection/ Switch at Pump with No Credit). Mileage data is uploaded to service stations for fee calculation and payment. Switch at gas pump (electronic or manual) determines which users pay mileage fee and which pay gas tax. Shifts incidence of taxation from distributor level to service station level. If this system is based on an electronic odometer in the form of GPS, current estimated cost would be about $500 installed. If the system is instead based on Odometer Tag technology, the current estimated cost would be about $125 installed.

Advantages

Technology. Exists for gathering accurate VMT data in this fashion.

- *VMT Accuracy. Mileage traveled could be precisely calculated.*
- *Collection. Mileage fee payment occurs at point of retail gasoline sale, and thus associated with a necessary purchase, but separated from gas tax.*
- *Public Acceptance. Requires no change in user tax payment habits.*
- *Congestion Pricing. Enabled after full phase in.*
- *Other Rate Adjustments. Allows other overlays (e.g. fuel efficiency).*

Disadvantages.

- *Phase in Period. If GPS-based, the phase in would be necessarily long because of fleet turnover (e.g. 20+ years). If Odometer Tag technology is used, phase in would be less than ten years.*
- *Tax Administration. If high fuel consumption vehicles pay at gas tax rate, service stations would be required to remit the amount of mileage fee revenue above the gas tax credit to the Highway Fund thus increasing enforcement issues.*
- *Collection. Mileage fee payments would be erratic because wrong payment or nonpayment owing to employee error (i.e. failure to properly flip switch if manual) more likely than under the other scenarios.*
- *Enforcement. The incidence of taxation would more to the gas pump from the distributor level and thus increase administration and enforcement costs dramatically and lower compliance. (note: None of the 50 states currently tax gasoline purchases at the pump.)*
- *Private Sector Burden. The technology requirements imposed on service stations could be significant.*

Scenario Four - Mileage Fee (Service Station Collection/ Estimated VMT with Credit). Mileage data is estimated through electronic calculation at service stations for fee calculation and payment. Mileage data estimate is determined as a function of the amount of gasoline purchased and the EPA fuel efficiency rating for the vehicle. User receives credit for gasoline tax paid. This system is based on an Automatic Vehicle Identification (AVI device with current estimated cost of $20 installed) and would facilitate "stand alone" congestion pricing..

Advantages

- *Technology. Exists for gathering good estimates of VMT data in this fashion. Cost of retrofitting for all vehicles relatively low (but may exceed $60 million).*
- *Phase in Period. Very short.*
- *Collection. Mileage fee payment occurs at point of retail gasoline sale and thus associated with a necessary purchase. The incidence of gas taxation could remain at the distributor level. Gas tax credit built into mileage fee payment mechanism.*
- *Public Acceptance. Requires no change in user tax payment habits*
- *Congestion Pricing. Would facilitate "stand alone" system because AVI devices would be installed in every resident vehicle.*
- *Other Rate Adjustments. Would enable overlays based on vehicle characteristics (e.g. fuel efficiency).*

Disadvantages

- *VMT Accuracy. Mileage traveled would only be approximated.*
- *Tax Administration. If high fuel consumption vehicles pay at gas tax rate, service stations would be required to remit the amount of mileage fee revenue above the gas tax credit to the Highway Fund thus increasing enforcement issues.*
- *Public Acceptance. The gas tax and mileage fee would be integrated, possibly resulting in consumer confusion.*
- *Congestion Pricing. Enables only a "stand alone" system.*
- *Private Sector Burden. The technology requirements imposed on service stations could be significant.*

Scenario Five - Mileage Fee (Department of Motor Vehicles Collection). Mileage data is uploaded to Department of Motor Vehicles locations for fee calculation and payment as a condition of registering passenger vehicles. If this system is based on an electronic odometer in the form of GPS, current estimated cost would be about $500 installed. If the system is instead based on Odometer Tag technology, the current estimated cost would be about $125 installed.

Advantages

- *Technology. Exists for gathering accurate VMT data in this fashion.*
- *VMT Accuracy. Mileage traveled could be precisely calculated.*
- *Collection. Mileage fee payment occurs at DMV locations as a condition of registration renewal. Mileage fee would not be integrated with the gas tax collection thus resulting in less consumer confusion.*
- *Enforcement. Manageable increased enforcement and collection costs.*

- *Congestion Pricing. Enabled after full phase in.*
- *Other Rate Adjustments. Allows other overlays (e.g. fuel efficiency).*

Disadvantages.

- *Phase in Period. If GPS-based, the phase in would be necessarily long because of fleet turnover (e.g. 20+ years). If Odometer Tag technology is used, phase in would be less than ten years. Phasing in requires tax credit mechanism to avoid double taxation during the phase in period.*
- *Tax Efficiency. There might be a loss of revenue to the state during the phase in period if registration fee payment schedule is maintained at two to four years. Residents moving into and out of state might avoid mileage fee payment.*
- *Public Acceptance. Require a small change in user tax payment habits.*
- *Public Behavior. Mileage fee assessed might not be charged in "real time" (i.e. monthly) if registration fee payment schedule is maintained at two to four years and thus less likely to impact user behavior.*

Scenario Six - System-wide Tolling. System-wide spot tolling calibrated to reflect approximate VMT based on AVI devices. Payment of tolls is primarily electronic through on board devices. Could apply to the state highway system only or also to combined state and local road systems together. Gas tax could be swiftly eliminated if applied to whole state and local road systems or gas tax could be reduced 60 percent if applied to state highway system only.

Advantages.

- *Technology. Exists for collecting high levels of revenue in this fashion.*
- *Collection. Would either replace gas tax or toll payment would not be integrated with gas tax collection (if gas tax reduced 60 percent).*
- *Phase in Period. Relatively short following construction of infrastructure for roadside reading devices.*
- *Congestion Pricing. Would easily enable implementation without additional infrastructure expense or phase in.*

Disadvantages.

- *VMT Accuracy. Would operate as a proxy for mileage traveled.*
- *Start Up Costs. Infrastructure costs could be immense. [Note: This issue is the currently under research.]*
- *Administration Costs. Moderate, as system must be developed for electronic passes and noncompliance measures. [Note: This issue is the currently under research.]*
- *Public Acceptance. Requires a large change in public tax payment habits.*
- *Other Rate Adjustments. Would not allow rate adjustment overlays other than congestion pricing.*
- *Partial Coverage. For reasons of cost and practicality, it is likely that county roads and perhaps city streets would not be included in the tolling system, resulting in shift of traffic patterns and burden to counties and cities.*