The Oregon Road User Fee Concept and Pilot Program

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Road User Fee Task Force

Legislative Mandate:

“To develop a design for revenue collection for Oregon’s roads and highways that will replace the current system for revenue collection.”
The Gas Tax – A Nearly Perfect Tax

Raises substantial revenue

Easy to pay

Easy to collect

Easy to administer

Minimal evasion

Protects privacy

Minimal burden on business
The Gas Tax – A Not So Perfect Tax

Revenue erosion

Disconnected from highway system

# LIGHT VEHICLE FUEL TAX REVENUE

- Revenue Without MPG Improvement
- Small Fuel Economy Increase
- Medium Fuel Economy Increase
- Large Fuel Economy Increase
Solution: A Mileage Fee

An electronically collected charge on in-state mileage

Replaces state fuel tax
Mileage Fee Collection Challenges

- Start up and operations costs
- Collection enforcement
- Integration with current system
- Seamless transition
- System redundancy
- Ease of use by motoring public
Collection Possibilities for Data and Payment

Centralized collection
- Operations costly
- Collection enforcement problematic
- No gas tax integration
- No system redundancy
- Not motorist friendly

✓ Collection at fuel pump
- Solves all structural issues
Oregon’s Mileage Fee Concept: Two Purposes

1. Create a reliable, broad-based charge to replace fuel tax as principal road funding mechanism

2. Create an electronically collected charge to assist management of road congestion levels
Creation of Zones

Charge on miles driven within Oregon by zone

Zone 1 = in state
Zone 2 = out of state
Zone 3 = local option
Zone 4 = rush hour
Steps Required

1. Data generation
2. Data upload
3. Data management
4. Payment
Data Generation and Upload

- GPS Satellite
- GPS Satellite Signals
- On-Vehicle Device
- Mileage reader
Process Data and Charge the Proper Fee

Point of Sale System -> Modem -> VMT Data -> Modem -> VMT fee -> Central Database

Service Station Building

Central Computer
The Receipt

Leathers Fuels
11421 SE Powell Blvd
Portland, OR 97266

Pump# 1 Unleaded
19.50 @ 2.549 49.71
ST Fuel Tax @ .24 (4.68)
VMT Fee : 5.12
Rush Hour : 40
In-Oregon : 28.6
Non-Oregon: 0
No Signal : 0
Subtotal 50.15
Total 50.15
Cash 50.15
Thank You!

Fuel tax deducted from fuel purchase price
Mileage fee imposed as part of fuel purchase
What About…

Heavy trucks?
Non-equipped cars?
Integration with the gas tax?
Integration with Fuel Tax

Bulk of mileage fees \textit{pre-paid} by distributors

Mileage fee gradually becomes predominant

Fuel tax retained to guard against system failure and tampering
Capitol Costs for Full Implementation in Oregon

Vehicles
No retrofitting
Components installed in new vehicles prior to sale

Service Stations
Capital costs: $35 m
Annual operating costs: $1.6 m
Privacy

No vehicle location data stored in vehicle

No data transferred except mileage totals within zones

Data transferred only at time of fueling via short range radio frequency
Multi-Jurisdictional and Variable Pricing Applications

Local Option
- Defined boundaries
- Differing rates

Area Pricing
- Higher rates at peak periods
How Oregon Mileage Fee Compares with Gas Tax

- Raises substantial revenue
- Easy to collect
- Easy to administer
- Easy to pay
- Minimal evasion potential
- Protects privacy
- Minimal burden on business
- Directly connected to highway use
- No revenue erosion for fuel efficiency
Road User Fee Pilot Program

April 1, 2006 to March 25, 2007
Pilot Program Field Test

260 participant vehicles
Compensation of $300 per vehicle
Control phase & experiment phase

Three test groups

*Control group* paid state gas tax
*VMT group* paid 1.2 cents per mile but no state gas tax
*Rush hour group* paid 10 cents per mile within congestion zone and .43 cents per mile for regular travel but no state gas tax
On-Vehicle Device
Pilot Program Results

Successes

Zone differentiation
Mileage counting
Transaction administration
85% Vehicle identification
100% Transmission accuracy
22% Reduction in Peak Driving
91% Acceptance

Needs More Work

Perfect vehicle identification
Improve cash transaction time

Lessons Learned

Retrofitting extremely difficult
Technology refinement required
Key Steps to Implementation of Mileage Fee

- Refine technologies and investigate alternatives
- Define manufacturing standards
- Address concerns of fuel distribution industry
- Study effects
  - Sociological
  - Economic
  - Environmental
  - Income
  - Energy
Additional Uses: Facility Pricing

Tolling new bridges or roads
Additional Uses: Cordon Pricing

Point charges without cameras, back room operations or central billing
Additional Uses: Pricing On-Ramps

Managing traffic flow on limited access highways without additional physical infrastructure

Point charge or distance charge
Obtaining Public Acceptance

Direct communication necessary

The public must understand the problem

Gas tax loss may have to be obvious
Road User Fee Pilot Program Website

www.oregon.gov/ODOT/HWY/OIPP/mileage.shtml
The Oregon Concept Privacy Continuum

Privacy vs. Audit-ability

Absolute Privacy
- No records maintained
- No ability to audit
- No ability for customer validation

The Oregon Concept

No Privacy
- Detailed trip data maintained
- Full ability to audit
- Full ability for customer validation
Key Policy Issue – The Rate Structure

Possibility # 1: Flat mileage charge

FLAT VMT CHARGE VS. FUEL TAX

- Flat VMT Charge
- Gas Tax
Key Policy Issue – The Rate Structure

Possibility # 2: Add fuel inefficiency penalty to mileage charge
Key Policy Issue – The Rate Structure

Possibility # 3: Fuel efficient vehicles pay mileage charge & Low fuel efficiency vehicles pay gas tax
The Oregon Concept
Fuel Cost Per Mile Comparison

NET FUEL COST $2.00

Source: B. Starr McMullen, Lei Zhang, Kyle Nakahara, *Socio-economic Impacts of a Vehicle Mile Tax*