Oregon’s Road User Fee Pilot Program and the Future of Road Funding

2009 National Rural ITS Conference
Seaside, Oregon
August 24, 2009

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Content of Today’s Presentation

- Oregon’s Initial Pilot Program – A Closed System
- New Pilot Program - An Open System
- Recommendations to Congress
- Status of VMT Fee Investigations Nationally
Rationale for New Road Funding System

- Market-driven fleet fuel efficiency improvements
- Policy-driven fleet fuel efficiency improvements
- Congestion management
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.”
Task Force Selection

A Vehicle Miles Traveled Fee
RUFTF Policy Directives to ODOT

- Not charge out-of-state travel
- Protect motorist privacy
- Provide gas tax credit
- Low capital costs
- Low relative operating costs
- Enforceability
- System reliability
- Seamless transition
- Minimal private sector burden
- Allow congestion pricing
Fundamentals of Mileage Fees

Six Things A Mileage Fee System Must Do

1. Calculate miles driven
2. Access mileage data
3. Apply mileage fee rates
4. Provide a billing
5. Collect payment
6. Enforce payment

[300 miles x 1.2 cents = $3.60]
VMT Data and Fee Collection Systems

**Pay-at-the-pump**
- Inexpensive to operate
- Integrates with gas tax
- No electric vehicles
- Slow evolution

**Central Billing**
- Covers all vehicles
- Integrates poorly with gas tax
- High operational costs
- High Enforcement costs
Mileage Charge System Configuration
Mileage Charge Collection System

GPS Satellite Signals

On-Vehicle Device
VMT Data Processing and Fee Charging

- **Data Transferred:**
  1. Vehicle Device Identification
  2. Mileage Totals for Each Zone
  3. Fuel Purchase Amount

- **Mileage Fee Rates Applied**
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 = 5.05
Rush Hour = 40
In-Oregon = 364.6
Non-Oregon = 0
No Signal = 0

Subtotal = 50.08
Total = 50.08
Cash = 50.08

The Receipt

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

Thank You!
Adaptability for Congestion Pricing

Area Pricing Method

- Identifies separate temporal “rush hour” zone
  - 7 to 9 a.m.
  - 4 to 6 p.m.
  - On work days

- Higher rates during peak periods
  - 10 cents per mile (as opposed to 1.2 cents for regular travel)
Assessing Oregon’s Mileage Fee Concept

**Pluses**
- **Meets Policy Directives**
  - Charges only in-state travel
  - Provides gas tax credit
  - Cost effective
  - Protects motorist privacy
  - Enforceable
  - Reliable
  - Seamless transition
  - Burdens private sector minimally
  - Allows Congestion Pricing
- **Successful One Year Pilot Demonstration**

**Minuses**
- **Long period for development and implementation**
- **Does not cover vehicles not visiting commercial fueling stations**
- **Does not have public acceptance - Privacy concerns paramount**
Public Concerns

- Privacy & fear of technology
- Efficiency of system
- Confidence in system
- Rate structure
- Rate equity
- Road pricing
- Perceptions of large bureaucracy

For A Mandate

- Public must understand problem
- Public must understand solution
- Actual proposal may be necessary
Obtaining Public Acceptance

Three *Big* Issues:

- Privacy
- Rate Structure
- Rural Driving
Receiving Not Transmitting Location Data

GPS Satellite

Satellite Signals

On-Vehicle Device

mileage reader
No Detailed Travel Map Involved
No Travel History Developed
Mileage Fee Rate Structure

Consequences of a Flat Rate

FLAT VMT CHARGE VS. FUEL TAX

Charge Per 100 Miles

winners

losers

Flat VMT Charge
Gas Tax
### A Multiplier

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#### VMT Fee By Externality Multiplier

![Graph showing VMT fee by externality multiplier]

- **Flat VMT Charge**
- **Multiplied VMT Charge**

The graph illustrates the cost per 100 miles decreasing as the MPG increases.
Rural Driving

- Subsidizing rural motorists for driving longer distances
- Rural motorists already pay distance-based charge – the gas tax
- Rural subsidization premature until affect of rate structure known
- Can charge different rate for driving in rural zones
VMT Data and Fee Collection Systems

Pay-at-the-pump
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+ Gas tax integration
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Central Billing
+ Covers all vehicles
+ No gas tax integration
- High operations costs
- High enforcement costs

Integrated approach
+ Does it all?
+ Evolves over time
Integrating Pay-at-the-Pump With Central Billing

1. VIN and Fuel Purchase Amount
2. Wireless Communication (VIN)
3. Service Station POS System
4. VIN and Fuel Purchase Amount
5. Central Database

Service Station Building

Central Computer
An Open System for VMT Fee Collection

- Open technology platform
- Options for data development
- Options for data transfer
- Options for payment
- Market-provided on-vehicle devices
- Availability of other market-provided applications
Market-Provided On-Vehicle Devices

• Meet minimum standards
  1. Mileage metering
  2. Data generation
  3. Data transfer
  4. Vehicle identification
  5. Anti-tampering and secure cryptography

• Self-selected by motorist
  1. Various levels of privacy protection
  2. Various levels of data generation and retention
  3. Various payment options
  4. Various ways to obtain gas tax credit
Market-Provided On-Vehicle Devices (cont’d)

• Attractive Suite of Service and Product Applications
  • Real time traffic incident reporting
  • Real time highway conditions reporting
  • Real time traffic speed data for specific facilities
  • Traffic speed predictions for specific facilities
  • Dynamic travel route time estimates
  • Congestion avoidance alternatives
  • Parking availability identification
  • Pay-As-You-Drive Insurance
  • Electric charging station identification
  • Electric vehicle grid integration
  • Tolling or congestion pricing payment
  • Other applications provided by the marketplace
Future Open System Pilot Program

- 5,000 motorists
- Portland metropolitan area
- Voluntary participation by contract
- OTC adopts VMT fee rates by rule
- Participating motorists select on-vehicle devices, options and product and service applications at no charge
- Motorist obligation: Pay VMT fee in lieu of state gas tax
- Private sector develops, implements and operates system
Recommendation to Congress

A National Investigation
- Vital federal role in state implementations
- Technology standardization
- Cooperation of national industries

Approach for National Development
- Timeline for completing development
- An agency mandate
- National-level project teams
- Concurrent investigations
- Reports to Congress
- **Targeted** pilot programs
Puget Sound (2007)

Nation’s Initial VMT Fee Pilot Programs

2007
Boise, ID (2009)
Eastern IA (2009)

San Diego, CA (2009)

Baltimore, MD (2009)
Research Triangle, NC (2009)

Austin, TX (2009)

U of Iowa’s Completed VMT Fee Pilot Tests
Planned VMT Fee Pilot Programs
U of Iowa’s New VMT Fee Pilot Tests
Puget Sound

- Billings, MT
- Boise, ID
- Eastern IA
- Chicago, IL
- Wichita, KS
- San Diego, CA
- Albuquerque, NM
- Austin, TX
- Tyler, TX
- Miami, FL

Total Activity for VMT Fee Pilot Tests
Oregon’s Final Report