JAMES M. WHITTY

BIOGRAPHY:

James Whitty is the manager of Oregon Department of Transportation's Office of Innovative Partnerships and Alternative Funding. He obtained his bachelor's degree and Juris Doctorate from the University of Oregon. Through the Office of Innovative Partnerships and Alternative Funding, he manages the development of transportation projects as public-private ventures and the Road User Fee Pilot Program.

James joined the department in 2001 to manage several task forces with "cutting edge" missions for innovative transportation funding, including the Road User Fee Task Force to develop a mileage fee to ultimately replace the fuels tax, and the Innovative Finance Advisory Committee.

James has led all aspects of development and implementation of Oregon's visionary Road User Fee Pilot Program. After joining ODOT in 2001, James's leadership of the Road User Fee Task Force led to the development of an innovative proposal for testing a distance-based road user fee. After defining the potential alternatives and determining the outline of the program, James has led development and implementation of the Road User Fee Pilot Program. In this role, James has spearheaded the design of a sophisticated yet elegant system for tracking vehicle miles traveled and collecting revenue from drivers and service stations, while minimizing disruption imposed on drivers. Bringing this concept to the implementation of the pilot program has involved wrestling with complex policy and implementation issues, such as technology, collection methods, privacy concerns, systems integration and the details of transitioning from the gas tax to a road user fee system.

In addition, James has headed Oregon's public-private partnership program, which engages the private sector in financing highway projects. James also brings a private sector perspective to his role in transportation policy. His prior experience includes 10 years working with transportation finance public policy for Associated Oregon Industries and the Portland Chamber of Commerce and six years in private law practice.

Oregon's VMT Fee Concept: An Alternative Platform for Road Charges

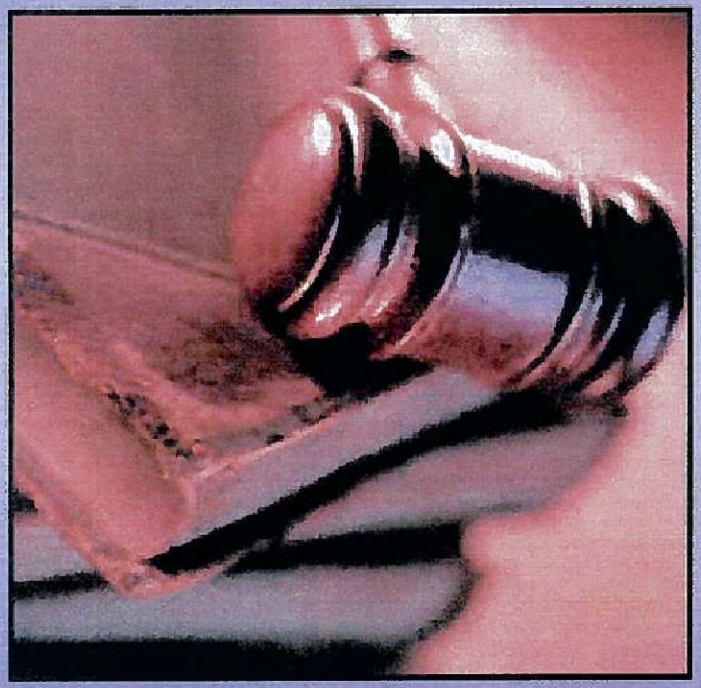
Presented to

House Transportation Committee of the Pennsylvania Legislature

Philadelphia, Pennsylvania
September 8, 2008

James Whitty, Manager
Office of Innovative Partnerships
and Alternative Funding

Oregon Overview



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."

Oregon Overview

Oregon's Solution
An electronically collected charge on vehicle miles traveled within state

The Challenge
Create a system to emulate best attributes of the gas tax

Oregon Overview

The Gas Tax – *Nearly* Perfect

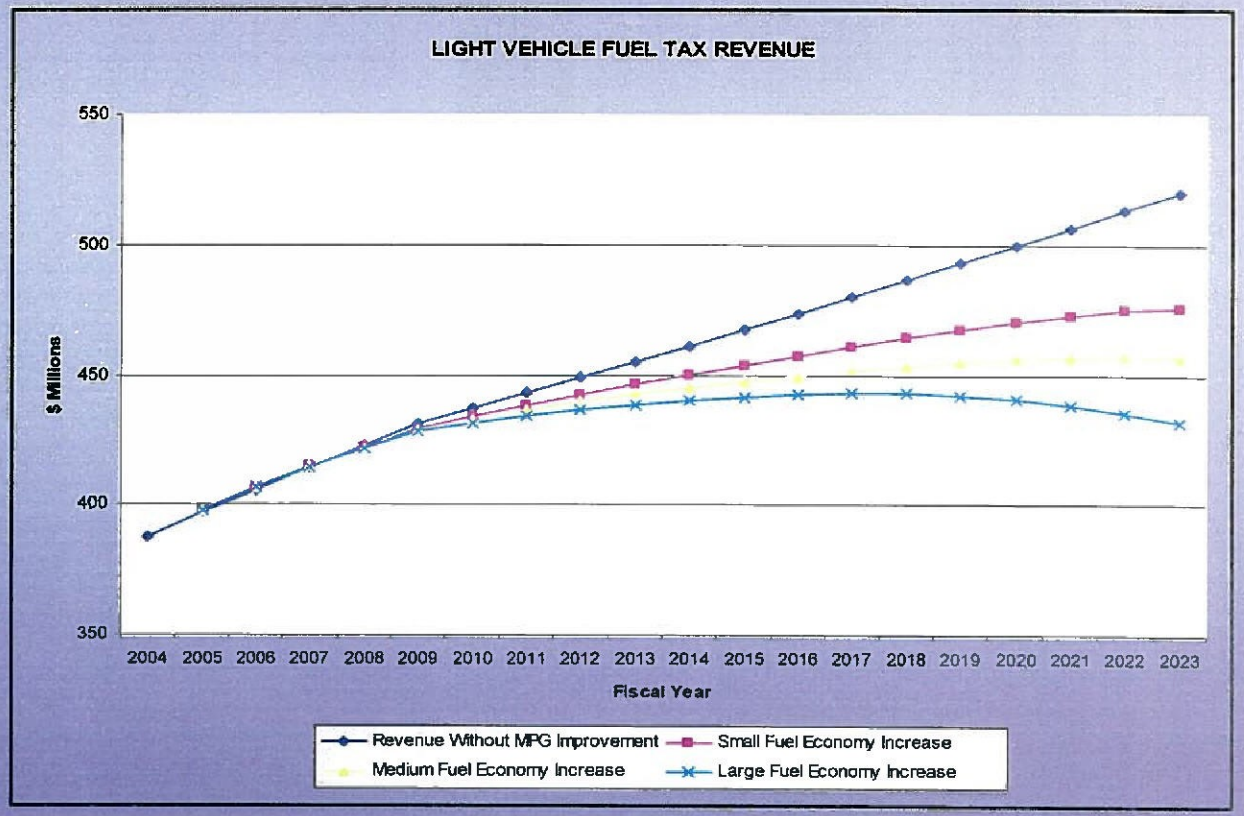
- Broadly applied
- Raises substantial revenue
- Easy to pay
- Easy to collect
- Easy to administer
- Minimal evasion or avoidance
- Minimal burden on business

Oregon Overview

The Gas Tax – A *Not-So-Perfect* Tax

Revenue erosion

Disconnected from highway system



Oregon Overview

Steps Required for Electronic Collection of VMT Charges

1 Data generation

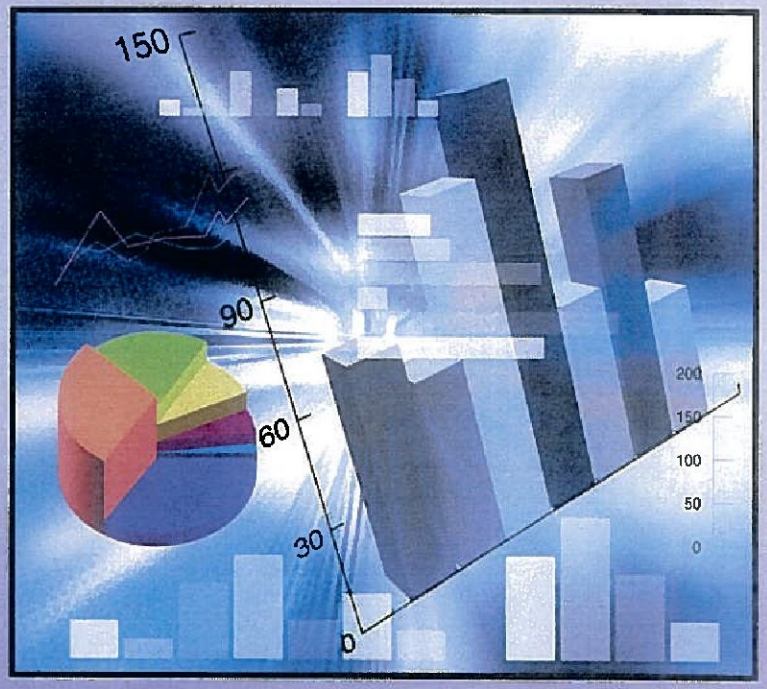
2 Data upload

3 Data management

4 Payment

The VMT Fee Collection Puzzle

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



Oregon Overview

Collection of VMT Data and Fee Payment

Collection at fuel pump

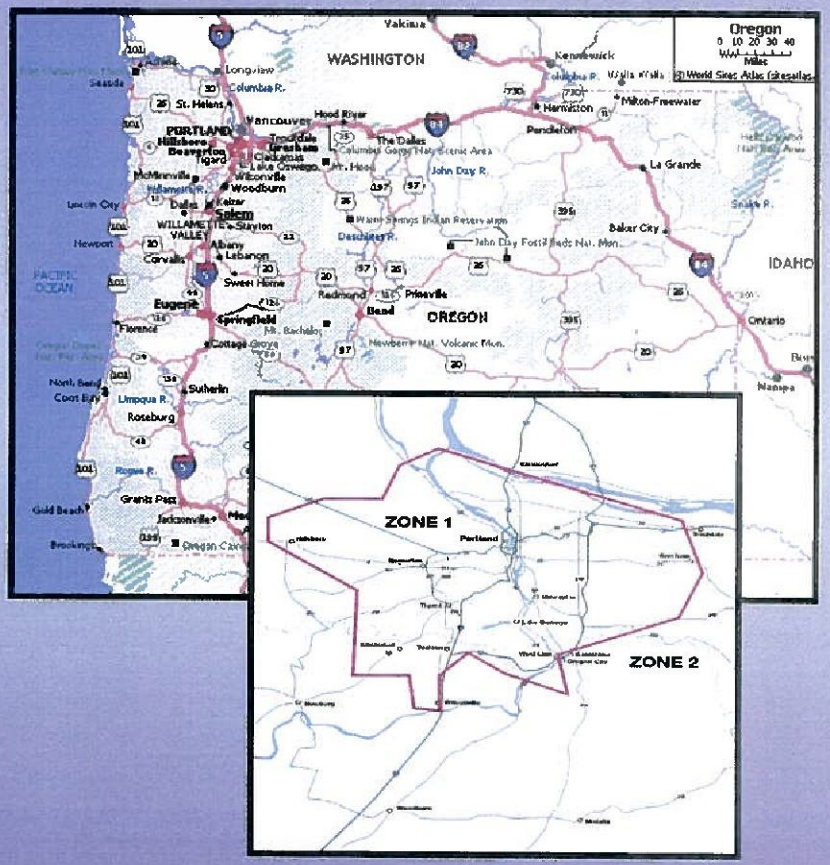
+ Operations affordable
+ Integrates with fuel tax
+ Enforcement simple
+ Motorist friendly
+ Solves most structural issues
- Electric Vehicles Not Covered

The Oregon Approach

Creation of Zones

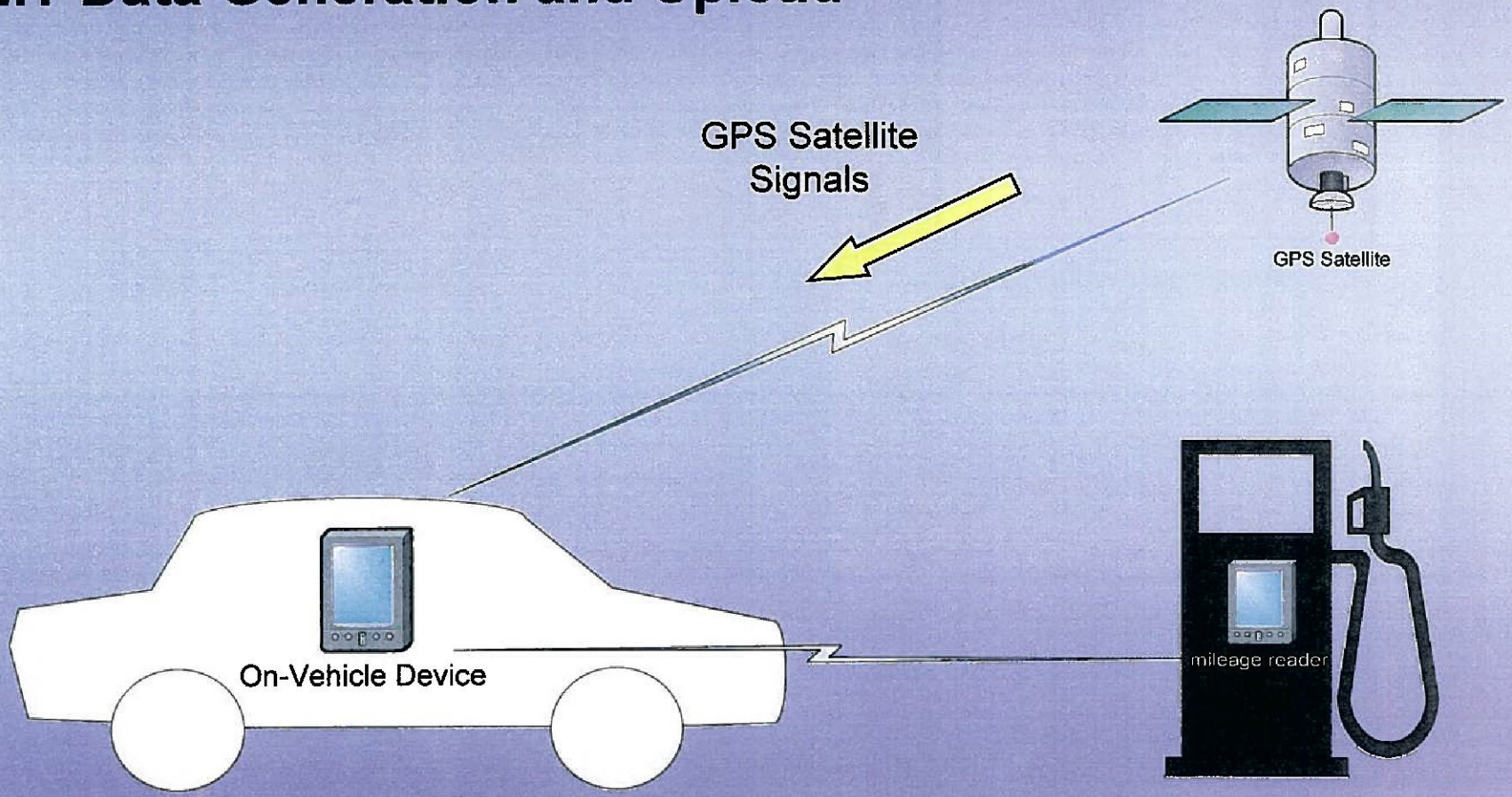
Charge on miles driven within Oregon by zone

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



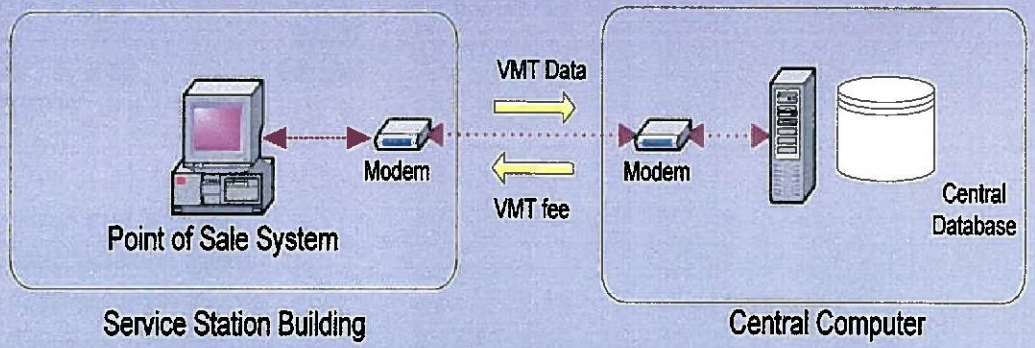
The Oregon Approach

VMT Data Generation and Upload



The Oregon Approach

VMT Data Processing and Fee Charging



Data Transferred:

1. Vehicle Device Identification
2. Mileage Totals for Each Zone
3. Fuel Purchase Amount

The Oregon Approach

csr
R# 1 S# 1 T# 882316 10:55 AM
06/09/06

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 !

Fee Payment and Receipt

Fuel tax deducted from fuel purchase price

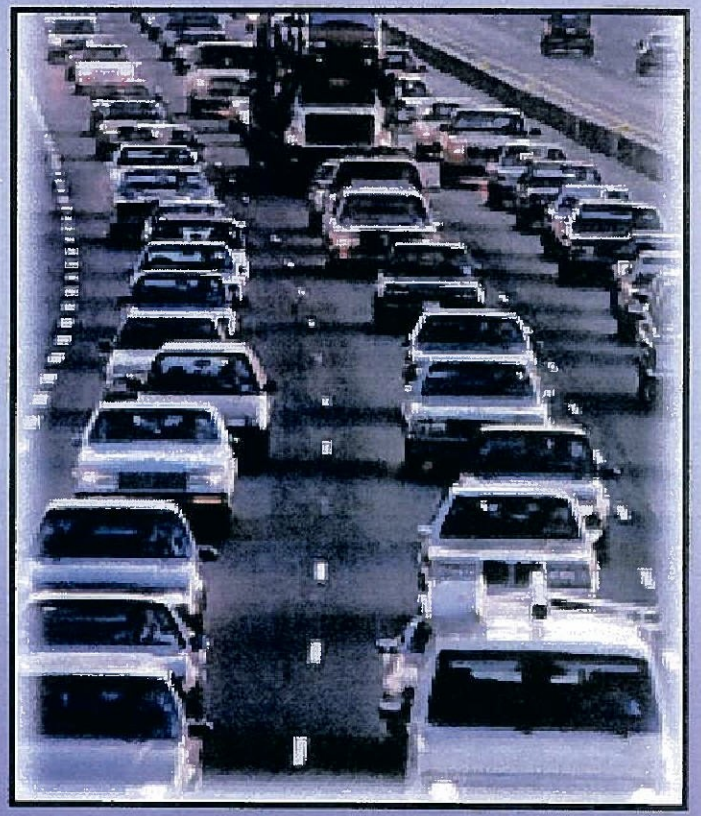
Mileage fee imposed as part of fuel purchase

The Oregon Approach

What About…

… Non-equipped cars?

… Heavy Trucks?



VMT Fee Integration with Fuel Tax

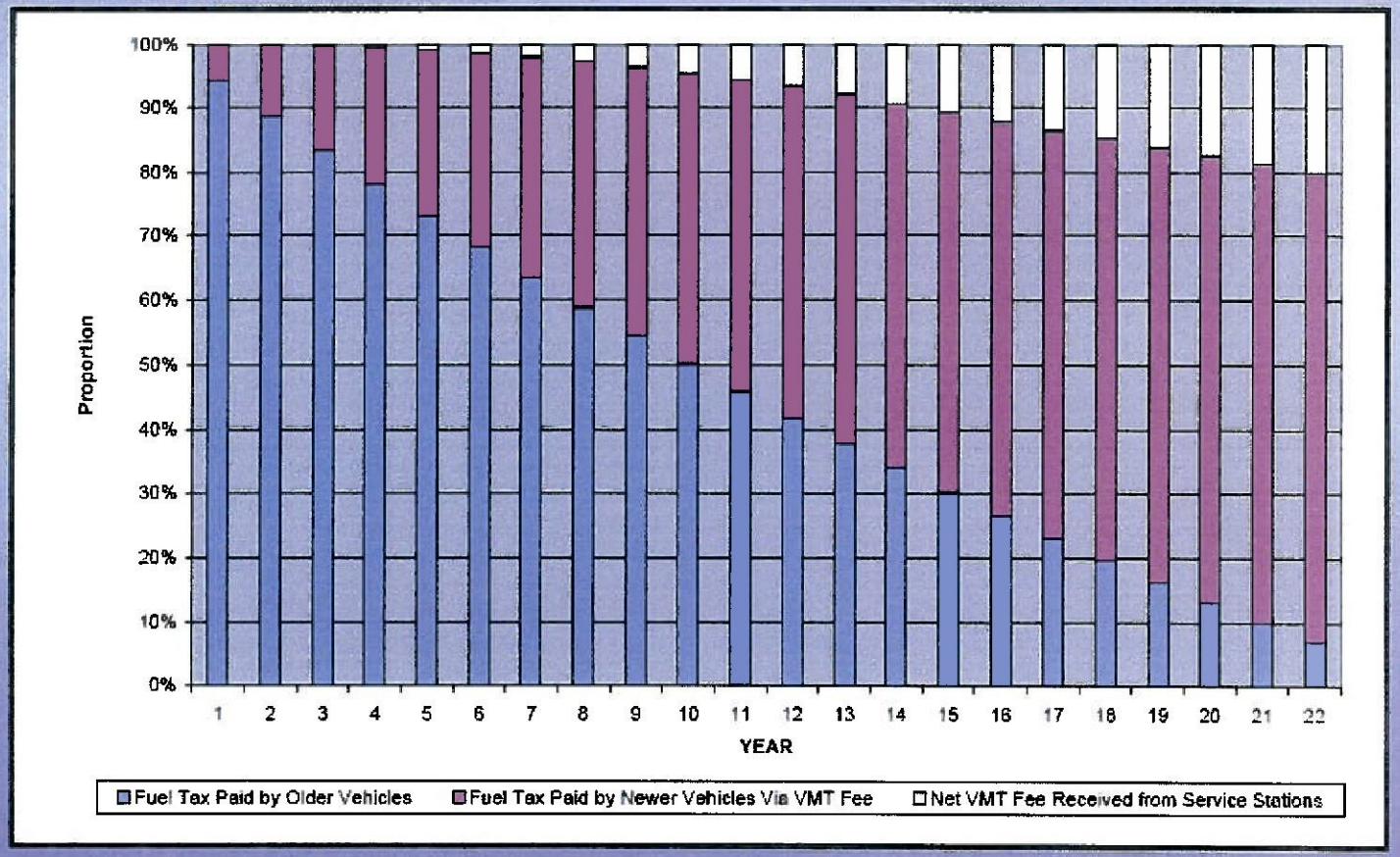
Bulk of mileage fees *pre-paid* by distributors

Mileage fee gradually becomes predominant

Fuel tax retained to guard against system failure and tampering

The Oregon Approach

Estimate of VMT Fee Revenue Shares over Time



Capital and Operating Costs for Full VMT Fee Implementation

Vehicles

No retrofitting

Components installed in new vehicles prior to sale

Service Stations

Capital costs: $35 m

Annual operating costs: $2 m

Oregon's VMT Fee System Adheres to Good Tax Policy

Broadly applied

Raises substantial revenue

Easy to collect

Easy to administer

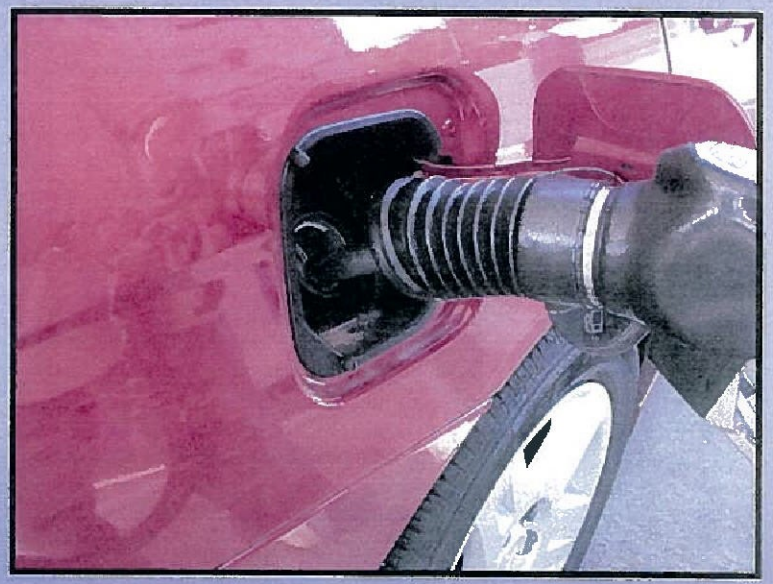
Easy to pay

Minimal evasion/avoidance potential

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

OSU Oregon State University

MEGA TECH OF OREGON

PORTLAND STATE UNIVERSITY

U.S. Department of Transportation
Federal Highway Administration

LEATHERS FUELS

CAR·TOYS
A better way to go.

HDR

Oregon Pilot Program Field Test

285 participant passenger vehicles
Compensation $300 per vehicle
Control phase & experiment phase

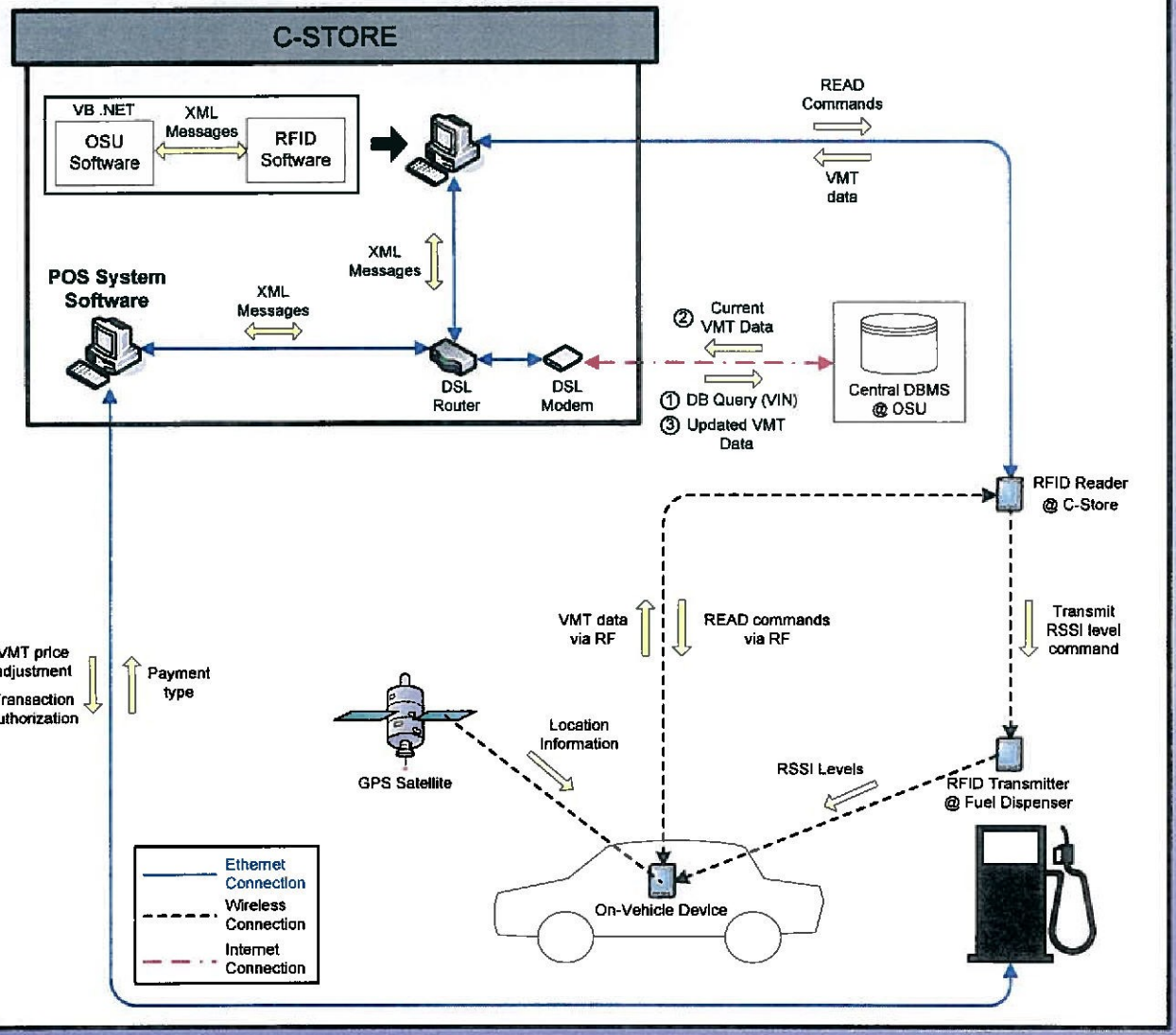
Three zones:

- ***In Oregon***
- ***Not in Oregon***
- ***Rush Hour***

Three test groups

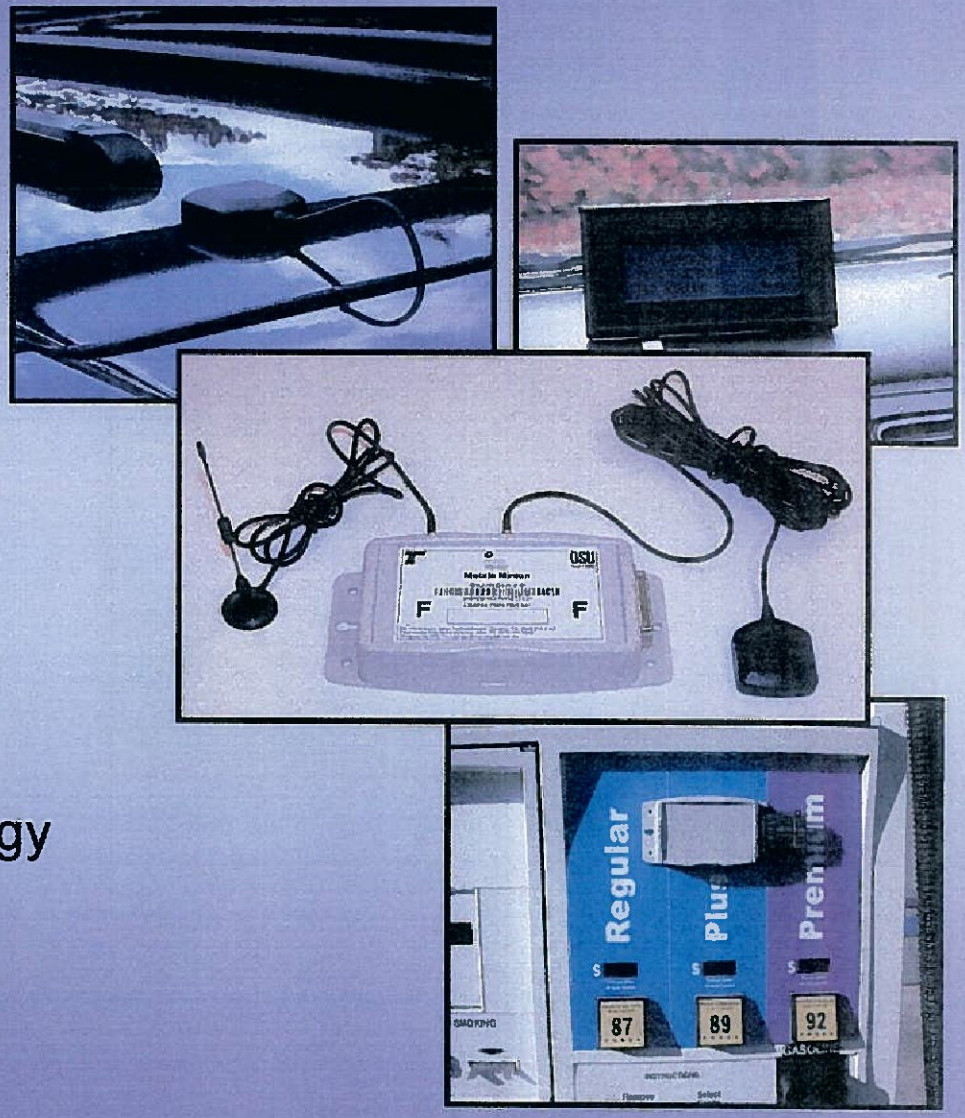
- ***Control group*** paid state gas tax
- ***VMT group*** paid 1.2 cents per mile but no state gas tax
- ***Rush hour group*** paid 10 cents per mile in congestion zone and .43 cents per mile for regular travel but no state gas tax

The Oregon Technology Configuration



Oregon Pilot Program Technology Configuration

- On-vehicle device technology
- Fueling station technology
- Data storage/retrieval technology



Oregon Field Test Final Results

Successes

- Zone differentiation
- Mileage counting
- Vehicle identification with fuel pump
- Transmission accuracy
- Transaction administration
- Reduced Peak Driving 22%
- Acceptance by Participants

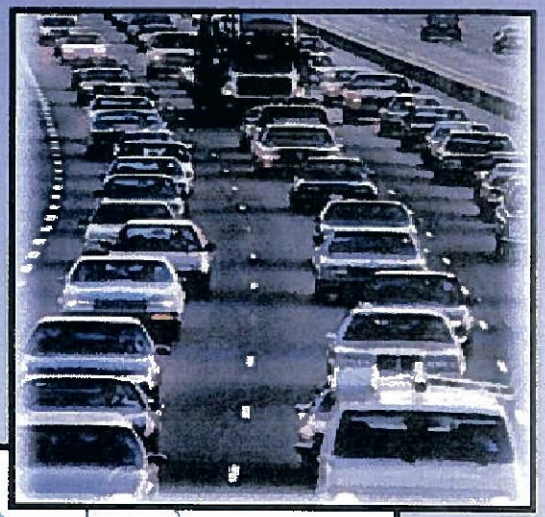
Needs More Work

- Perfect vehicle identification with pump
- Improve cash transaction time

Fundamental Lessons

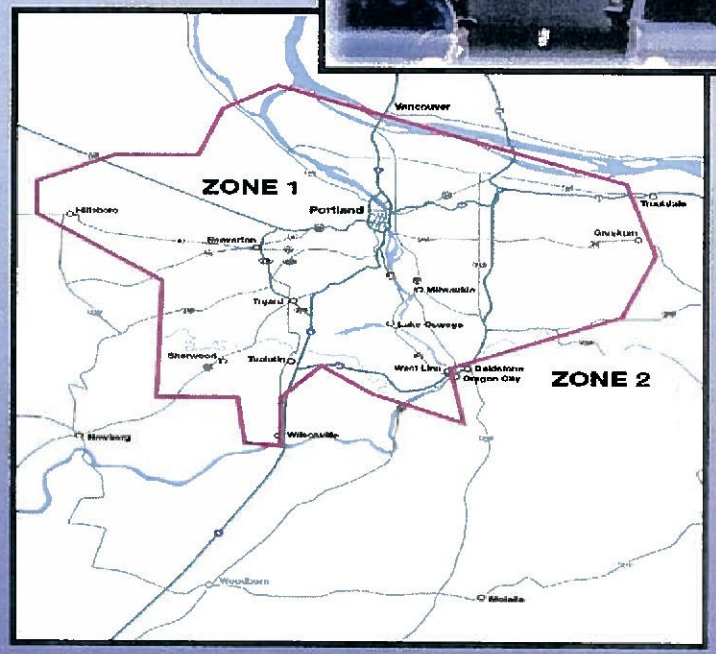
- Retrofitting extremely difficult

Adaptability of Oregon System to Congestion Pricing



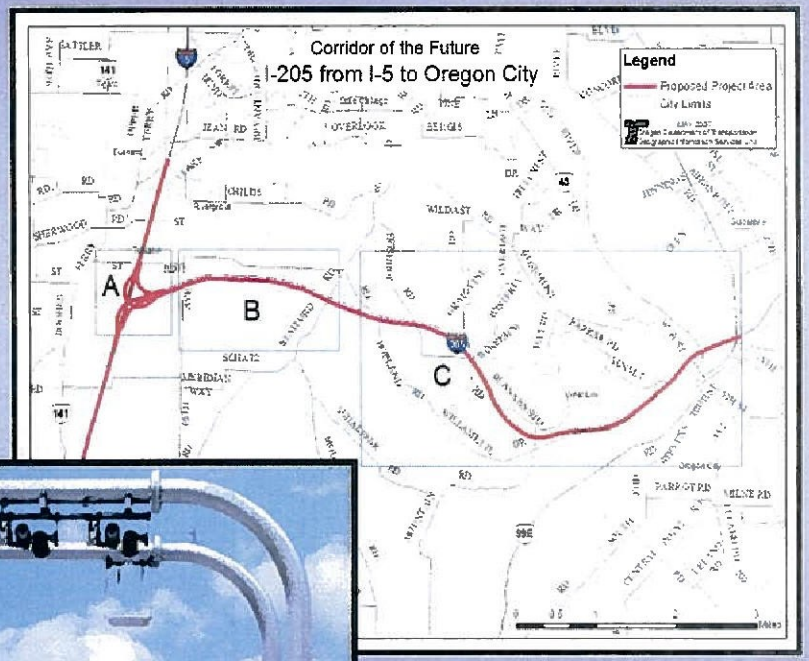
Area pricing

- Separate "rush hour" zone
- Higher mileage fee rates during peak periods



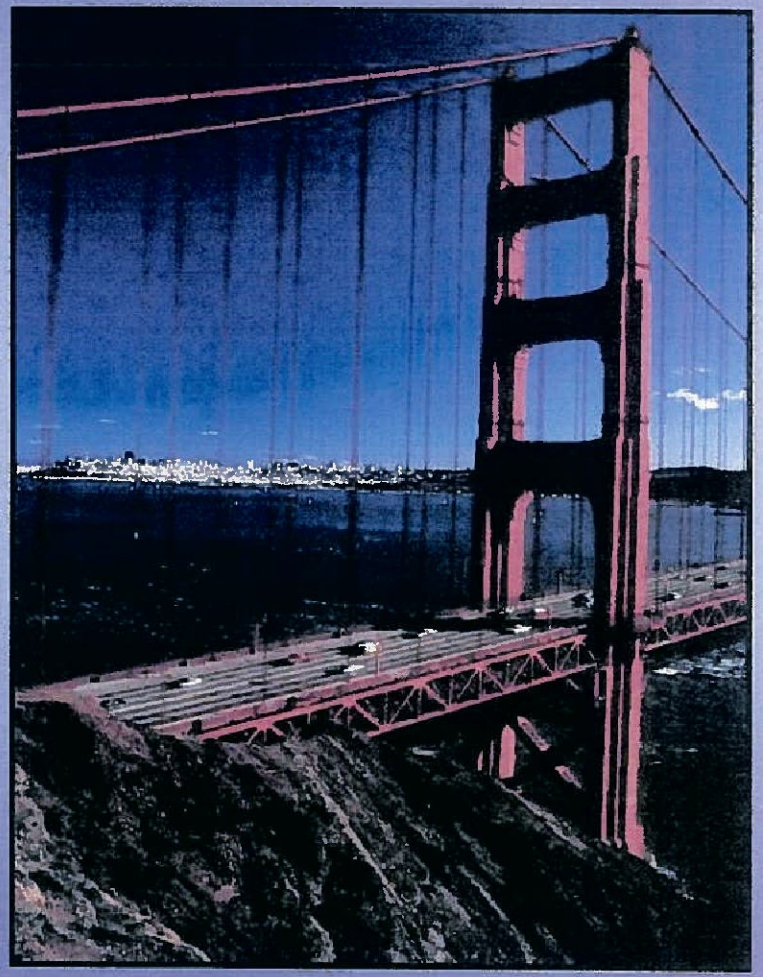
Congestion Pricing for On-Ramps

- Managing traffic flow on limited access highways with minimal physical infrastructure
- Point charge or distance charge



Pricing Specific Facilities

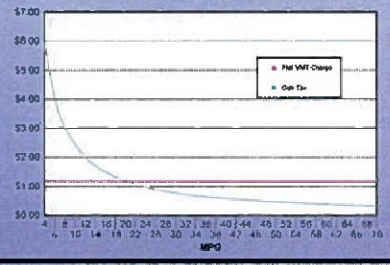
Tolling new bridges or roads, point or distance



The Critical Pathway for Distance Charging : Obtaining Public Acceptance

The Two *Big* Issues:

- Privacy
- Rate Structure



The Oregon Approach

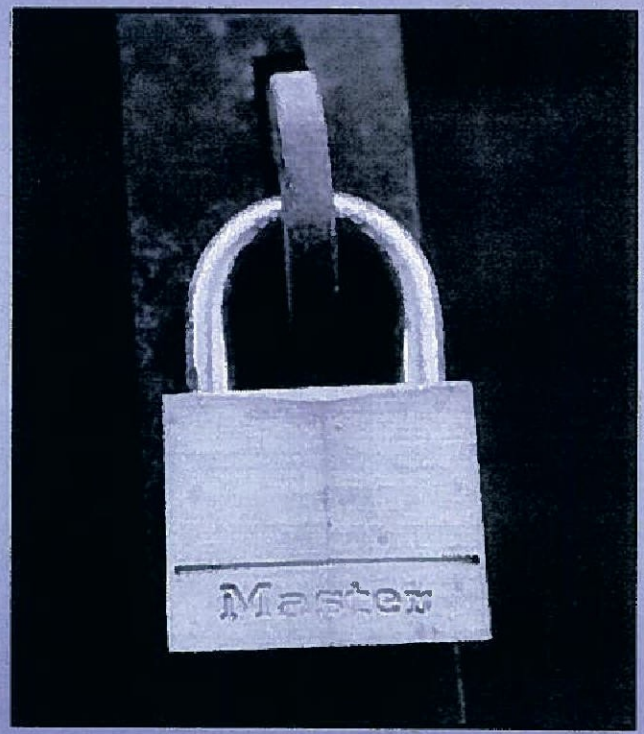
Big Issue #1

Privacy

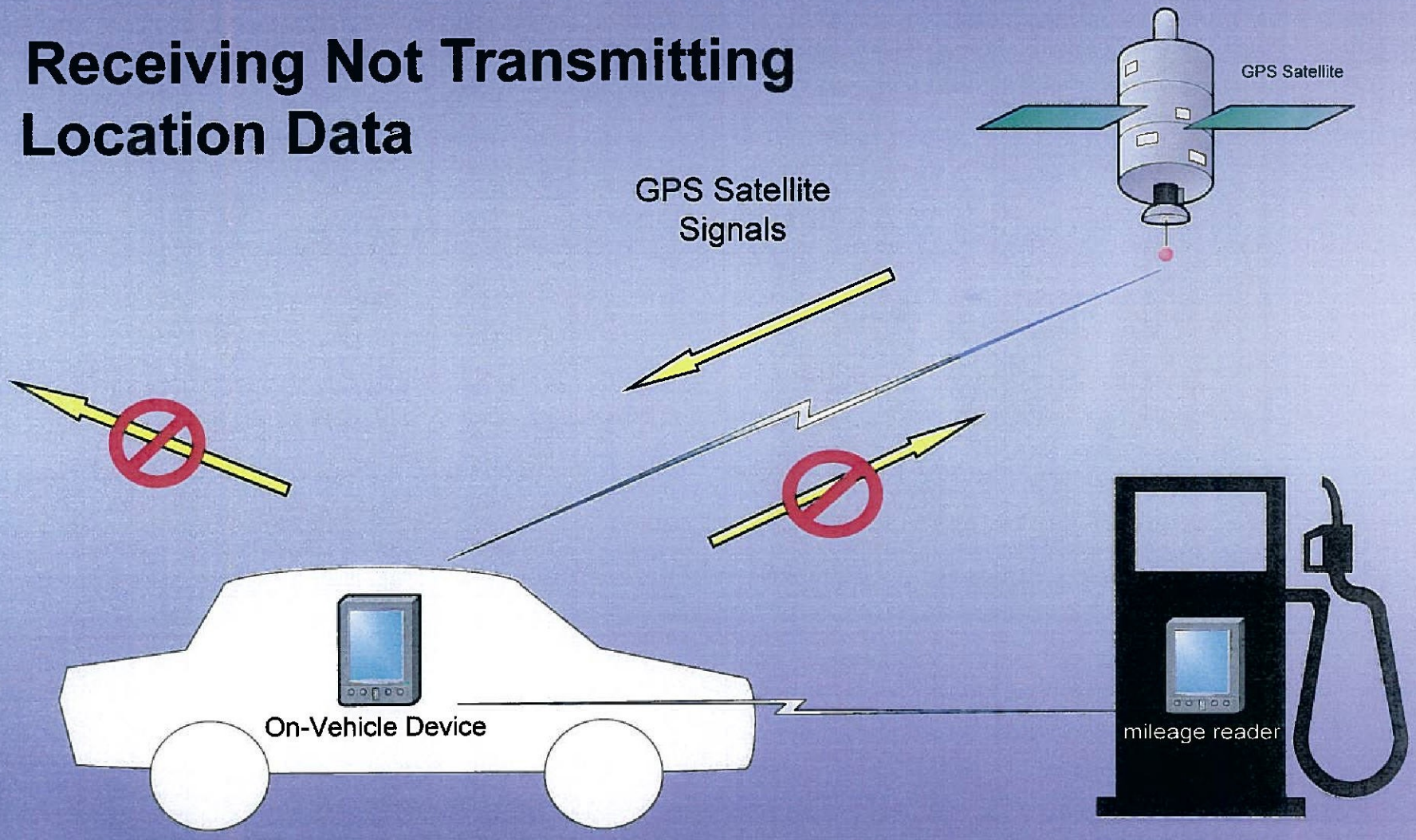
No data transferred except mileage totals within zones

Data transferred only at time of fueling via short range radio frequency

No vehicle location data stored in vehicle

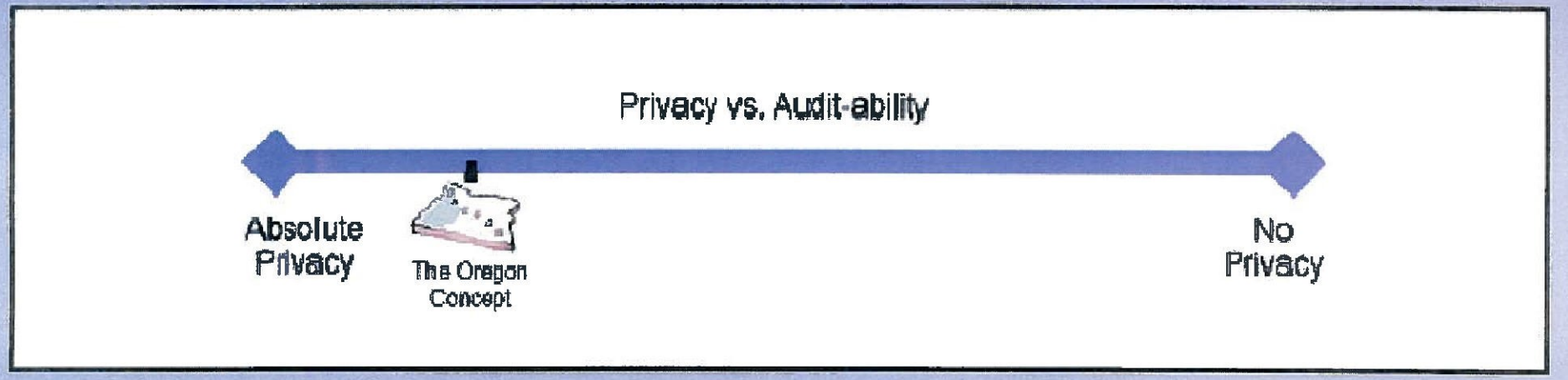


Receiving Not Transmitting Location Data



The Oregon Approach

The Privacy Continuum



Absolute Privacy

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

No Privacy

- Detailed trip data maintained
- Full ability to audit
- Full ability for customer validation

Big Issue #2

Rate Structuring

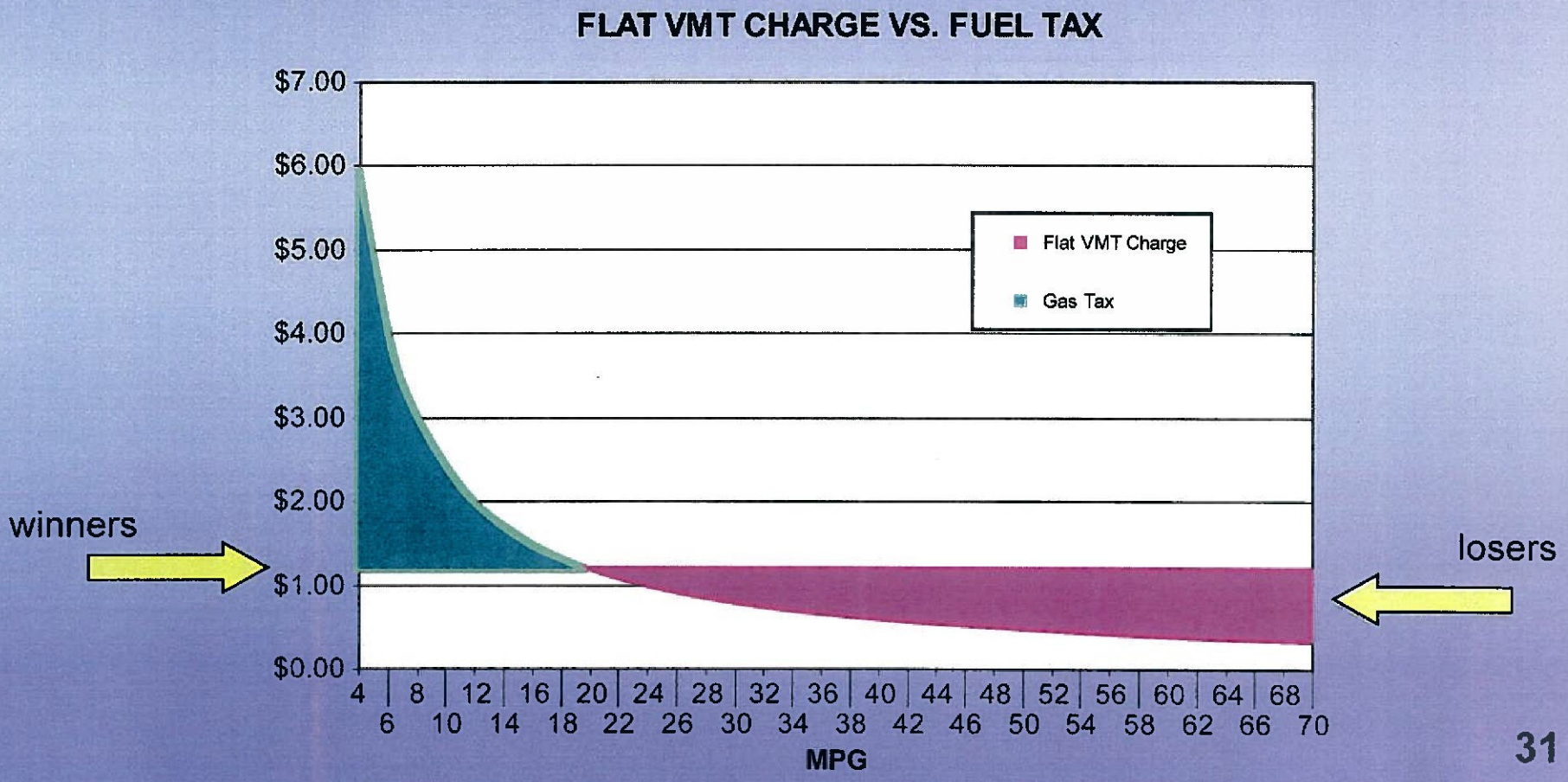
Flat Rate for Revenue Stability

Variable Rates for Other Policies

- Fuel efficiency
- Weight
- Emissions
- Congestion charging

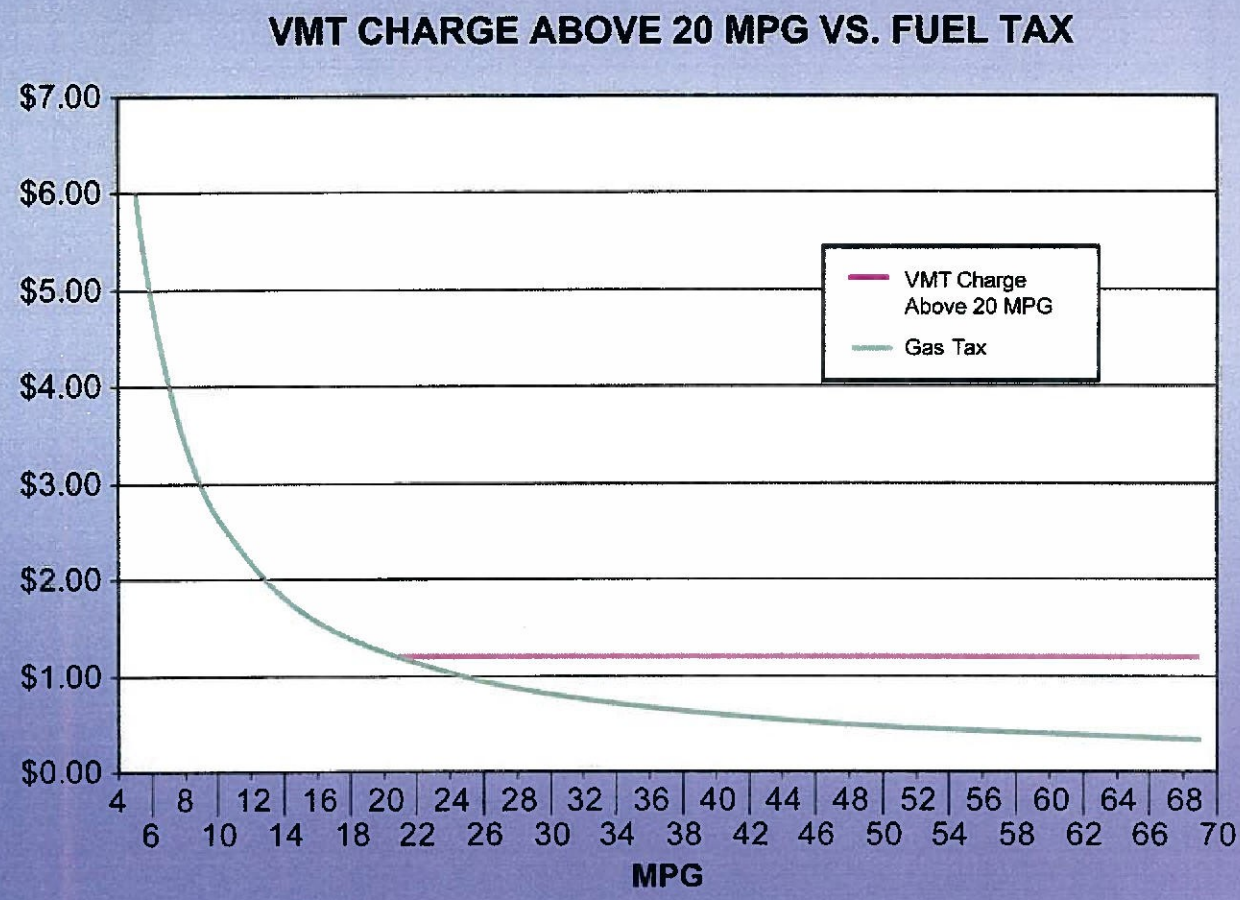
Flat Rate Structure

Possibility # 1: Flat VMT fee for every vehicle



Split Rate Structure

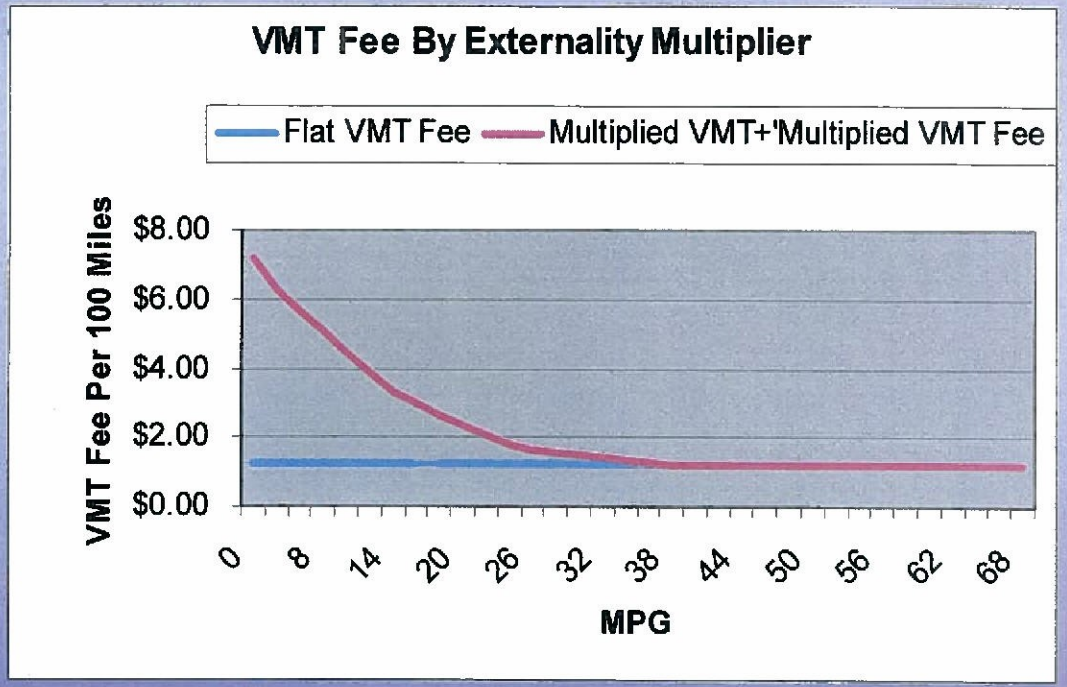
Possibility # 2: Fuel efficient vehicles pay VMT fee &
Low fuel efficiency vehicles pay gas tax



Multiplier Rate Structure

Possibility # 3: VMT fee adjusted by multiplier to account for externalities

MPG	Multiplier
42+	1.0
34	1.2
26	1.5
22	2.0
18	2.5
15	3.0
10	4.0
6	6.0



Key Steps to Implementation of Oregon Road User Fee System

- Refine technologies to commercial viability
- Define manufacturing standards
- Address concerns of fuel distribution industry
- Integrate collection system for all-electric vehicles

VMT Fee Collection Possibilities for All-Electric Vehicles

Pre-Critical Mass

- Collection at re-registration

Post-Critical Mass

- Centralized collections
- Utility meter collection
- Combining systems

Potential Legislative Authorizations

All-electric Vehicles

Authorize mileage fee collection at re-registration

Technology Development

Fund VMT technology development to level of commercial viability

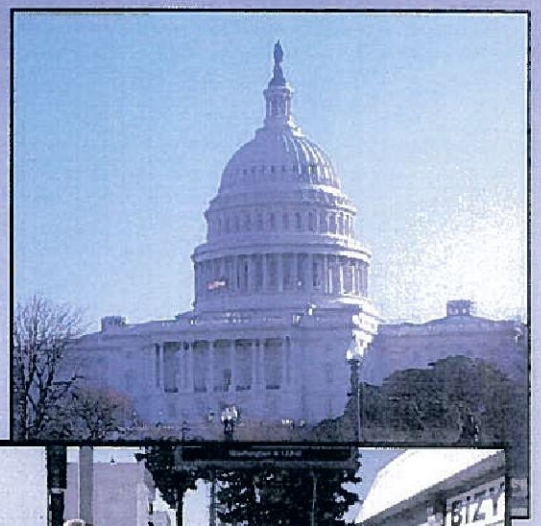
Demonstrate Additional VMT Applications

Direct ODOT to demonstrate various mileage fee applications

- Multi-state simulation
- Develop all-electric vehicle system

VMT Fee Recommendation for Reauthorization

Establish Six Year Timeline to Complete Preparation



Mandate USDOT Actions

- Establish interdisciplinary project teams for passenger vehicle system and motor carrier system
- Consult with automobile manufacturers, energy distribution industries and trucking industry
- Immediately commence technology work
- Establish Oversight Advisory Committee

Advisory Committee Reports to USDOT and Congress

Phase One Report (12 mo)

- Outlines preferred system architecture

Phase Two Report (18 mo)

- Final recommendation on system architecture

Recommendation on Implementation (30 mo.)

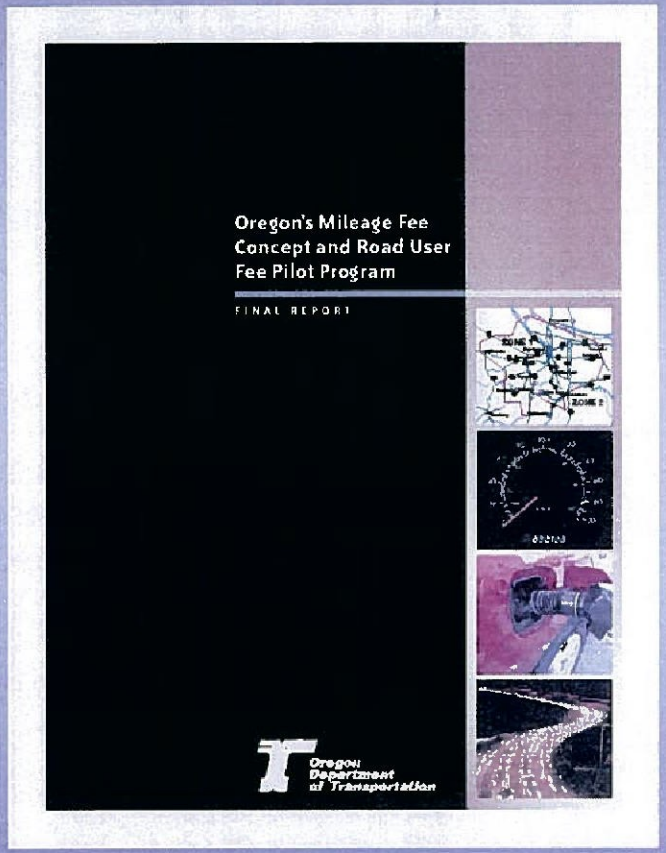
Additional Pilot Projects

- State pilot projects for directed R&D
- Broad-scale pilot test to prove concept

USDOT Authorities Upon Recommendation to Implement

- Set specifications for in-vehicle counting devices and mileage data communications technology
- Mandate deployment of VMT fee equipment in new vehicles and collection sites within two years

Oregon's Final Report



www.oregon.gov/ODOT/HWY/RUFPP/docs/RUFPP_finalreport.pdf

Collection Possibilities for VMT Data and Fee Payment

Centralized Collection

- Operations costly
- Collection enforcement problematic
- Not motorist friendly
- No system redundancy
+ Accommodates all vehicles