



Mileage-Based Road User Charge

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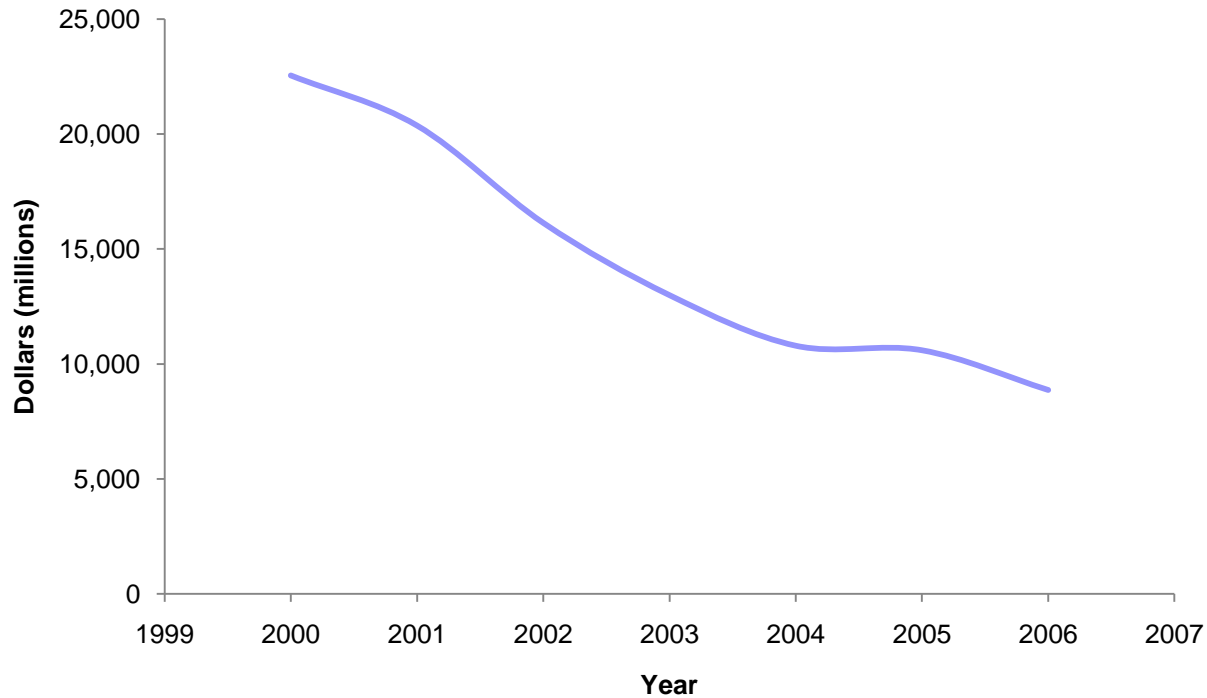
Public Policy Center

University of Iowa



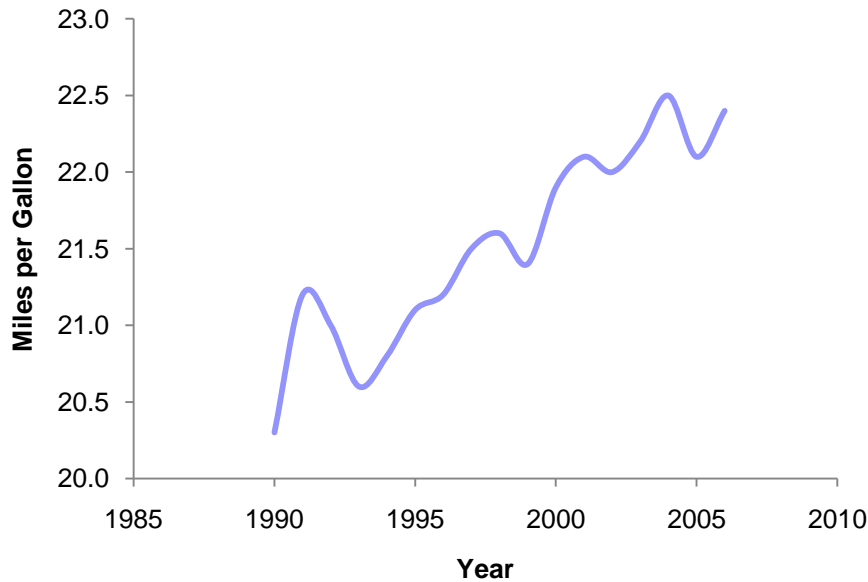
National Trend

Highway Trust Fund
(highway account)

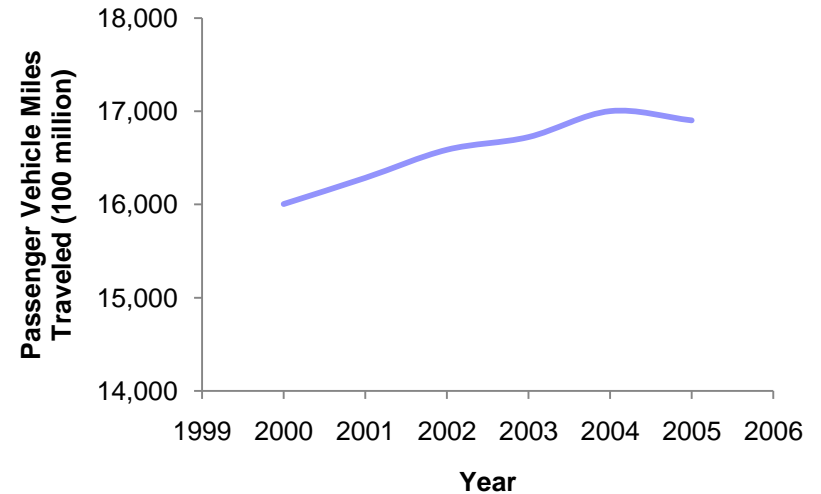


National Trends

Passenger Vehicle Fleet Average Fuel Efficiency



Passenger Vehicle Miles Traveled



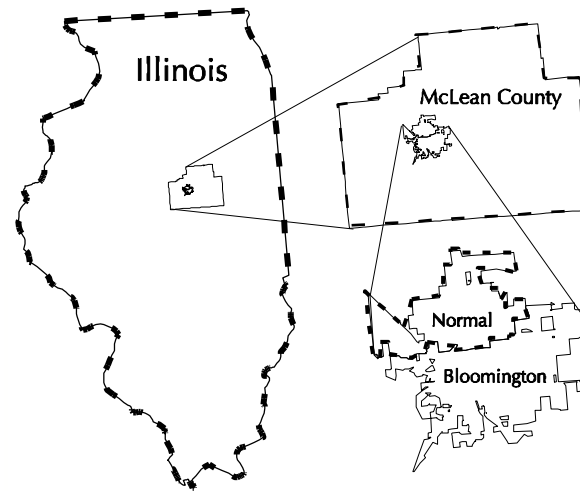
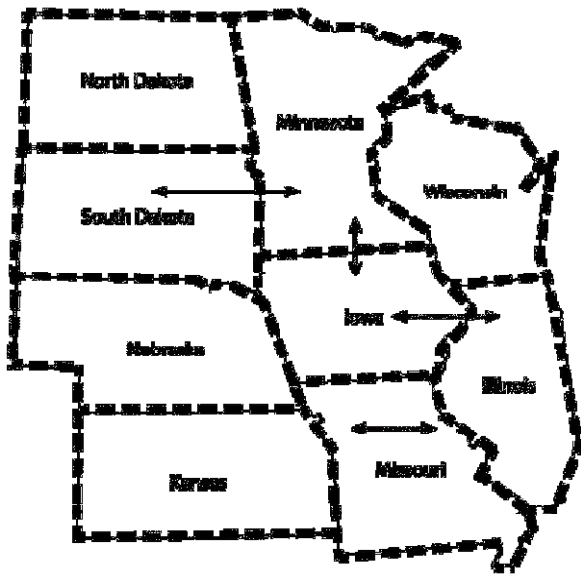


Policy issues being addressed

- Revenue neutral fuel tax replacement
- Fair and stable revenue source

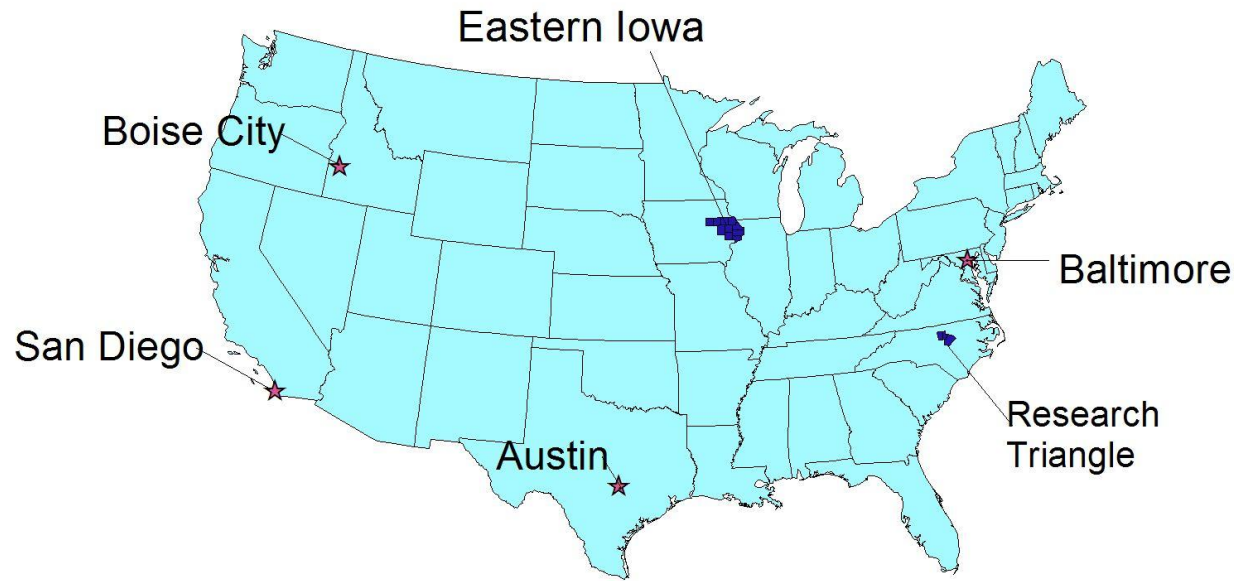
Basic Approach

- Area-wide pricing based on miles traveled within jurisdictions



Participants

- Six Locations



- Two panel field test with 200 participants
1st panel 250 in 2nd panel per site
- Total 2,700 participants

Participant Profile

■ Demographics

- Age**
- Gender**
- Education Level**

■ Driving Behavior

- Annual miles driven
- Commute length
- Vehicle Type**

■ Attitudes

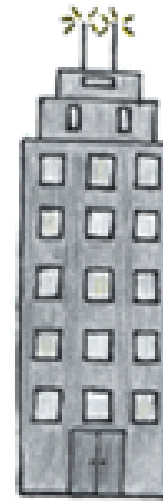
- Confidence in government
- Importance of personal privacy
- Level of road finance



Network
Operation
Center



Vehicle w/ OBC



Billing &
Dispersal Center





Questions being addressed

- Appropriateness of the technology
 - Cost-effective, reliable, user friendly, flexible, and secure
- User Acceptability
 - Maximize convenience and user benefits



Study Parameters

- Mileage rates

- Revenue neutral with current fuel tax
 - Varying based on fuel efficiency



Study Parameters

- Data upload
 - Wireless transfer
 - No user involvement



Study Parameters

- Data transfer frequency
 - Frequency of wireless transfer
 - Vehicle initiated (data push)
 - NOC initiated (data pull)



Study Parameters

- System updates

- Penetration time for rate table and jurisdiction boundary updates

- Time versus degree of penetration

Study Parameters

- Level of in-vehicle information
 - In-vehicle LCD display
 - Amount and duration of information presented to driver





Study Parameters

- Level of detail on invoice
 - Maximum personal privacy
 - Only total charge and total mileage
 - Minimum audit-ability

 - Maximum audit-ability
 - Charge and mileage by trip (engine start/stop)
 - Minimum personal privacy



Where are we now?

- On-board computer
 - ☑ Design of OBC
 - ☑ Beta-testing in 6 sites
 - ☑ Pilot test in Johnson County, IA
- Network Operations Center
 - ☑ Installation of servers
 - ☑ Customize software

Where are we now?

■ Billing & Dispersal Center

- ☑ Designed and tested invoicing system
- ☑ Created a national call center

■ Participants

- ☑ Created ad campaigns (TV, Radio, Papers, BB)
- ☑ Created training video
- ☑ Refined training manuals
- ☑ Held focus groups

Where are we now?

■ Review & Approvals

- ☑ Institutional Review Board, University of Iowa
 - ☑ Human subjects review
- ☑ National Institute of Health
 - ☑ Certificate of Confidentiality
- ☑ Bureau of Transportation Statistics
 - ☑ Participant selection process
 - ☑ Participant questionnaires



Where are we now?

■ Review & Approval

- ☑ Federal Highway Administration

 - ☑ Study plan & design

- ☑ Office of Information Technology, USDOT

 - ☑ IT Security Plan (submitted April, 2007)

 - ☑ Approved October 1, 2008

- ☑ Office of Budget and Management

Recruitment October 6, 2008



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