Running on Empty: Alternatives to the Gas Tax

The Per Mile Road Usage Charge

• James Whitty, Partner
• NCSL’s 2019 Capitol Forum
• December 10, 2019
• Phoenix, Arizona
“The future is already here. It’s just not very evenly distributed.”

William Gibson
Author
Emergence of a RUC System in the United States
Light vehicle per-mile charging in the United States

- **Pilot Program Complete/Underway**
  - California 2017
  - Minnesota 2012
  - Pennsylvania 2018
  - New Jersey 2018
  - Delaware 2018
  - Vermont 2019

- **Planning Pilot Program**
  - Hawaii 2019

- **Small Demo Test**
  - North Carolina 2017
  - Arizona 2017
  - Oklahoma 2019

- **Operational Program**
  - Oregon 2015
  - Washington 2019
  - Nevada 2019
  - Colorado 2017
  - Utah 2020

- **Major Pilot Program**
  - California 2017

- **Planning Pilot Program**
  - Hawaii 2019

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Oregon enacts and implements nation’s 1\textsuperscript{st} operational Per-mile Road Usage Charge program

- Motorist chooses government or private sector data collector and account manager
- Motorist chooses mileage reporting method
- Oversight and enforcement by government agency
- Open system with published standards and business rules
- Certification of technologies and billing systems
- Personal data protected by statute
What is an *Open System*?

“An integrated system based on common standards accessible to the marketplace whereby components performing the same function can be readily substituted or provided by multiple providers”

In other words, there are multiple ways to do it.
Open system design

- Prepare an open, competitive market for RUC service providers
- Tap into commercial market for data collection and account management
- Allow individual choices reporting method and technology, invoicing and payment
- No government selected reporting technology
- No government possession of location data
- Common standards and performance criteria allow for technological evolution
How RUC payments work:

Driver selects account manager, activates method for reporting mileage and fuel usage

Account manager calculates per mile charge, credits fuel tax paid and sends bill to driver

Driver pays bill; account manager pays state; revenue transferred to state highway fund
Oregon RUC program’s particulars

- Operational program with real-money (2015)
- Open system account structure
- Voluntary opt-in for light vehicles
- Participating motorists pay RUC and receive credit for gas tax paid
- No fuel tax refunds after 2019
- RUC alternative to flat fee for alt-fuel vehicles and vehicles rated at 40 MPG or greater in 2019
- RUC rate = 1.5 cents per mile in 2015; aligned with gas tax rate and raised to 1.8 cents for 2020
- Two private sector account managers
- Two mileage reporting choices
Oregon: 2 mileage reporting choices

Automatic Reporting

OBDII Plug-in Device (location aware)

OBDII plug-in device (non-location-aware)
California experiments with more reporting methods

• Pilot program with mock-invoices for RUC and credit of gas tax paid (2016-17)
• Open system account structure per OR
• RUC rate = 1.8 cents per mile
• Two private sector account managers
• Included heavy vehicle demonstration
• Seven mileage reporting choices
California: 7 mileage reporting choices

**Automatic Reporting**
- OBDII Plug-in Device (location aware)
- OBDII plug-in device (non-location-aware)
- Smartphone App
- Automaker-installed Telematics

**Manual Reporting**
- Odometer Read
- Time Permit
- Mileage Permit

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Washington adds system improvements

- Pilot program with mock-invoices for RUC with credit of gas tax paid (2018-19)
- Open system account structure per OR, CA
- RUC rate = 2.4 cents per mile
- Two private sector account managers
- System improvements
  - Single sign-on
  - Central HUB for multi-state transactions
- Financial interoperability with Oregon
- Five mileage reporting choices

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Washington: 5 mileage reporting choices

**Automatic Reporting**
- OBDII Plug-in Device (location aware)
- OBDII plug-in device (non-location-aware)
- Smartphone App

**Manual Reporting**
- Odometer Read

Mileage Permit:
- 1,000
- 5,000
- 10,000
Hawaii investigates manual reporting at safety check

- Pilot program with driving-statements showing comparison of RUC with gas tax (2019-20)
- Open system account structure per OR, CA, WA
- RUC rate = 0.8 cents per mile
- Two-stage pilot
  - Stage 1: odometer check at government facility
  - Stage 2: automatic reporting via private service provider
- Three mileage reporting choices
Hawaii: 3 mileage reporting choices

**Automatic Reporting**
- OBDII Plug-in Device (location aware)
- OBDII plug-in device (non-location-aware)

**Manual Reporting**
- Odometer Read
Utah prepares nation’s 2nd operational RUC program

- Operational program with real-money (2020)
- Open system account structure per OR, CA, WA, HI
- RUC as alternative to added flat fee for alternate-fuel light vehicles
- Participating motorists pay RUC and receive credit for gas tax paid
- RUC rate = 1.5 cents per mile plus inflation factor
- User pays on all miles driven
- One private sector account manager
- Three mileage reporting choices
Utah: 3 mileage reporting choices

**Automatic Reporting**

- OBDII Plug-in Device (location aware)
- OBDII plug-in device (non-location-aware)
- Odometer Read
- Automaker-installed Telematics

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Utah’s RUC alternative to alt–fuel vehicle flat fee

**Annual Flat Fee**
- EV: $120
- PHEV: $52
- Gas Hybrid: $20

**Usage-based Fee**
- Utah: 1.5¢ / Mile*

*Usage-based fees will not exceed annual flat fee
Oregon’s RUC alternative to added vehicle reg fee

Annualized Flat Fee

EV: $110
40+ mpg: $33

Usage-based Fee

Oregon: 1.8¢ / Mile
How an open market should affect RUC operations

- Minimizes government footprint
- Competition improves operational efficiency
- Competition fosters evolution of technologies and lower administrative cost
- Value-added services draw administrative costs downward
- Payers control system engagement according to individual preferences
What have we learned about an open market for per-mile charging?

✔ Privacy protection
✔ Complexity of implementation
✔ Difficulty of operations
✔ Simplicity of compliance
✔ Scalability of systems
✔ Flexibility for policy adaptations
✔ Evolution of technologies and business systems
❖ Data security
➢ Interoperability among states
➢ Non-resident driving
❑ Equity by income, geography and vehicle type
❑ Enforcement
❑ Cost of administration
❑ Transition

✔ Essentially resolved
❖ Continually managed
➢ On pathway to resolution
❑ To be determined by state legislatures
Current certified RUC service providers

azüga

emovis

DRIVESYNC

AUTOMATIC

In-Drive

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PRIVACY
Model RUC Privacy Policy for States

Derived from comprehensive review of the following contemporary privacy protection laws:

• European Union General Data Protection Regulations (2018)
• California Consumer Privacy Act of 2018
• Oregon Road Usage Charge Program Privacy Provisions (2013)
Model RUC Privacy Policy for States

- Principles to protect personal data
- Responsible agency
- Express approval for sharing data
- Rights of RUC payers
  - Right to information
  - Right to access
  - Right to rectification
  - Right to erasure
  - Right to portability
- Security requirements
- Certification for compliance
- Remedies
What happens next in the USA?
A RUC Mandate!
Electric vehicle fleet will grow to significant market share
Automaker-installed Telematics will make RUC easier
Building blocks for a “full RUC” program

**POLICY**
- Administrative rules
- Privacy protection
- Oversight/accountability
- Multi-state coordination
- Cost analysis and reduction
- Public communication
  - System requirements
  - Public relations
- Evaluation
- Reporting
- State automotive regulations
- Federal automotive regulations
- Rate setting
- Revenue analysis

**SYSTEM**
- Design
  - System
  - Security
  - User experience
  - Business model
    - Procurement
    - Certification
  - Software
    - DMV interface
    - Treasury interface
    - Central RUC accounting
    - RUC CRM
- Operations
  - Maintenance of system design
  - Customer service
  - System data analysis
  - Exemptions/refunds processing
  - Accounting and funds handling
- Integrity
  - Audit (end users)
  - Audit (account managers)
  - Detect noncompliance
  - Adjudicate noncompliance
  - Enforcement compliance
  - Interface to law enforcement

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System evolution is a very good thing
Thank You

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RESERVED SLIDES
Multi-state organizations researching per mile charge

- **RUC West**
- **I-95 Corridor Coalition**
Per-mile charge level of state involvement

RUC West Tiers
- Active promotion
- Conducting research
- Monitoring trends

I-95 MBUF Involvement
- Participation
- Monitoring