Hey California
help us research a potential alternative to the gas tax

www.CaliforniaRoadChargePilot.com
• Background on the necessity for road charging
• Overview of the pilot development process
• Description of the pilot and related activities
• Calendar and Next Steps
• Description of the organizational and potential functionality of a permanent road charging program
Fuel Economy (MPG) by Model Year

New Vehicle Average Combined MPG by Model Year

- Cars
- Pickups, Vans, SUVs
- All Passenger Vehicles

Mileage Year 2008:
• 10 car models with >30 MPG
• 9 SUVs >25 MPG.

Mileage Year 2013:
• 53 car models >30 MPG and 13 car models >50 MPG
• 20 SUV models with >25 MPG
Today the California fleet averages 19.8 MPG. At 30 cents per gallon, this equates to 1.52 cents per mile.

At 30 MPG and 30 cents per gallon, a motorist pays 1 cent per mile, a 34.2% decline.
Highway needs: **4.1 cents** per mile traveled*
*does not include mass transit or any other mode

<table>
<thead>
<tr>
<th>Direct Highway User Fees</th>
<th>Revenue per crossing</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Gas Tax</td>
<td>2.3 cents</td>
</tr>
<tr>
<td>Federal Gas Tax</td>
<td>0.8 cents</td>
</tr>
<tr>
<td>Registration</td>
<td>0.4 cents</td>
</tr>
<tr>
<td>Tolls</td>
<td>0.2 cents</td>
</tr>
<tr>
<td>Total</td>
<td><strong>3.8 cents</strong></td>
</tr>
</tbody>
</table>

**0.3 cents** deficit currently and the State Gas Tax is **61%** of the total amount collected.
Senate Bill 1077 (Chapter 825, 2014)

- Directs the California Transportation Commission to create a Road Usage Charge Technical Advisory Committee in consultation with the California Department of Transportation (CalSTA). The committee is made up of 15 members from government, business groups, and public interest stakeholders.

- The Technical Advisory Committee was directed to study road charge alternatives to the gas tax and make recommendations to CalSTA on the design of a pilot program and the criteria used to evaluate the pilot program.

- CalSTA was directed to implement the pilot by January 1, 2017. A report to the Legislature’s fiscal and policy committees is due no later than June 30, 2018.

- The committee spent much of 2015 meeting on issues involving the pilot program at various locations to carry out this charge in public settings.

- Ultimately, the committee made 12 recommendations on key components of an RUC pilot.
Advisory Committee Recommendations

1. Feature specific governance, accountability, and legal protection approaches for protecting privacy
2. Test ten data security features
3. Offer drivers a choice of account managers
4. Offer drivers a choice in mileage recording methods
5. Out-of-state vehicles should be included in the pilot and simulate payment for driving on California roads
6. Test an open system design
7. Test the interoperability of California’s system with that of other states
8. Include individuals, households, businesses, and at least one government agency
9. Include a cross-section of at least 5,000 vehicles that are reflective of the fleet currently using California’s road network
10. Offer methods to exempt miles driven on private road or out of state
11. The pilot should be evaluated according to criteria recommended by the TAC
12. Data anomalies should be detected, investigated and remedied during the pilot.
Road Charge Pilot Overview

• Runs July 2016 through March 2017

• 5,000 volunteers selected from applicants responding to outreach. A diverse mix of road users representing the complex California driving population.

• Mix of approaches to identify the most promising forms of implementation

• Limitations: No enforcement; no real financial activity.
Five Operational Concepts

- Time Permit
- Mileage Permit
- Odometer Charge
- Automated Distance Charge (no location data)
- Automated Distance Charge (general location data)
Four Specific Technologies

1. OBDII mileage meters (with and without GPS)
2. Smartphones
3. In-vehicle Telematics
4. Commercial Vehicle Mileage Meters
Four Participating Pilot Vendors

**CAM**
- Azuga
  1. Azuga OBDII MM (no loc)
  2. Azuga OBDII MM (location)
  3. Vehcon Smartphone MM
  4. Driveway Smartphone MM
  5. Smartcar Vehicle Telematics

**CAM**
- IMS
  1. IMS OBDII MM (no loc)
  2. IMS OBDII MM (location)
  3. Smartcar Vehicle Telematics

**SAM**
- Arvato
  1. Time Permit
  2. Mileage Permit
  3. Odometer Charge
  Powered by Arvato w/ Vehcon Support

**HVAM**
- EROAD
  - EROAD Heavy Vehicle Mileage Meters
<table>
<thead>
<tr>
<th>#</th>
<th>Account Manager</th>
<th>Mileage Meter</th>
<th>Vehicle Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Azuga</td>
<td>Azuga OBDII mileage meter (no location)</td>
<td>OBDII port (most post 1996 vehicles)</td>
</tr>
<tr>
<td>2</td>
<td>Azuga</td>
<td>Azuga OBDII mileage meter (location)</td>
<td>OBDII port (most post 1996 vehicles)</td>
</tr>
<tr>
<td>3</td>
<td>Azuga</td>
<td>Vehcon Smartphone Mileage meter</td>
<td>Functional odometer, have smartphone</td>
</tr>
<tr>
<td>4</td>
<td>Azuga</td>
<td>Driveway Smartphone Mileage meter</td>
<td>Functional odometer, have smartphone</td>
</tr>
<tr>
<td>5</td>
<td>Azuga</td>
<td>Smartcar Vehicle Telematics</td>
<td>Functional, actively paid subscription to OEM telematics system (some post 2014 vehicles)</td>
</tr>
<tr>
<td>6</td>
<td>IMS</td>
<td>IMS OBDII mileage meter (no location)</td>
<td>OBDII port (most post 1996 vehicles)</td>
</tr>
<tr>
<td>7</td>
<td>IMS</td>
<td>IMS OBDII mileage meter (location)</td>
<td>OBDII port (most post 1996 vehicles)</td>
</tr>
<tr>
<td>8</td>
<td>IMS</td>
<td>Smartcar Vehicle Telematics</td>
<td>Functional, actively paid subscription to OEM telematics system (some post 2014 vehicles)</td>
</tr>
<tr>
<td>9</td>
<td>Arvato</td>
<td>Time Permit</td>
<td>None</td>
</tr>
<tr>
<td>10</td>
<td>Arvato</td>
<td>Mileage Permit</td>
<td>Functional odometer</td>
</tr>
<tr>
<td>11</td>
<td>Arvato</td>
<td>Odometer Charge</td>
<td>Functional odometer</td>
</tr>
<tr>
<td>12</td>
<td>EROAD</td>
<td>Heavy Commercial Vehicle Mileage Meter</td>
<td>Heavy Commercial Vehicle and Professional Installation</td>
</tr>
</tbody>
</table>
Calendar of Significant Events

- Deliverables to Caltrans (March 2016)
- End-to-end testing (May 15-23, 2016)

- Pilot (July 1, 2016 to March 31, 2017)

- Interagency Work Group Meeting #2 (September 2016) - Discussion of functional responsibilities and resource requirements if RUC Program were to be approved.

- Interagency Work Group Meeting #3 (Spring 2017) – Discussion of the results of the pilot and pending final report to the Legislature.
Potential Road Charge System Overview

- Automated concepts supported by commercial account managers
- Manual concepts supported by state account manager
1. Establish and manage Commercial Account Managers (CAMs) and State Account Managers (SAMs)

2. Publish and establish Road Charge (RC) accounts with Vehicle Owners or Lessees (VOLs)

3. Process RC input from VOLs, calculating the RC for each VOL, and charging them the Road Charge

4. Manage changes and exceptions

5. Audit and analyze Road Charge Program data

6. Enforce and adjudicate

7. Manage tax credits and refunds (from the ongoing “gas tax at the pump”)

8. Unit administration
Potential Road Charge Organization Design

State Agency

Road Charge Administration (RCA)

- Account Management Oversight
  - CHP/Local Law Enforcement
- Designated Judiciary Courts
- RC Audit and Economic Compliance
  - Various State Agencies and Outside Organizations
- State Tax Review Agencies
  - Various State Agencies with expertise: Legal, IT, PR, etc.
Potential Money Flow for Road Charge Program

Vehicle owner/lessee pays the Account Manager (CAM or SAM)

Each Account Manager applies tax credits, deducts keeps own charges, passes remainder to state RC landing Account, submits data to account management oversight

Account Management Oversight Performs accounting/reconciliation, Determines funds to deposit, and moves them to an escrow account overseen by the State Controller’s office

State Controller’s office performs a range of checks on the funds, performs any needed accounting and deposits the funds in the state treasury

Account managers could incorporate other features that add value to the vehicle owner/lessee related to Parking, tolling, insurance, and finance.
THANK YOU!

Andrew Conway, California DMV
Registration Policy and Automation

andrew.conway@dmv.ca.gov
916 657-6259

www.CaliforniaRoadChargePilot.com