

Road Charge Pilot Design Recommendations

California Road Charge Technical Advisory
Committee

Version 0.8

Road Charge Pilot Design Recommendations
California Road Charge Technical Advisory Committee**FORWARD**, by Jim Madaffer, Chair, California Road Charge Technical Advisory Committee

Possible items to mention:

- ▶ Brief rationale for the Pilot Project and purpose of TAC (cross-reference Intro section)
- ▶ Acknowledge the complexity and challenges associated with changing the fundamental method of paying for CA roadways; recognize the common questions, concerns and fears expressed by many people; and point out that as a “test”, no decisions have been made whether, when or how a road charge will be implemented. Point out this is likely a mid- to longer term exploration of road charging.
- ▶ Explaining the TAC’s process;
- ▶ Describing the extensive outreach, including meetings held around the state;
- ▶ Establishment of the Working Group;
- ▶ Public comments received in writing, at the meetings and via web;
- ▶ Characterizing the nature of the deliberations among TAC members and stakeholder groups;
- ▶ Adding his own observations and reflections about the TAC recommendations; and
- ▶ Thanking the TAC members for their commitment to serve.

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ACKNOWLEDGEMENTS, by Jim Madaffer, Chair, California Road Charge Technical Advisory Committee

Acknowledge contributions and support from:

- ▶ CTC staff
- ▶ Caltrans staff
- ▶ Consulting staff/firms
- ▶ Others identified by Chair

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INSERT:

- ▶ Roster of TAC Members and their affiliations, including:
- ▶ CTC and Caltrans executives that provided key contributions during the TAC deliberations

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DOCUMENT CONTROL RECORD

VERSION	MAIN CHANGES	CONTRIBUTIONS FROM	DATE
0.1	Initial draft	Jeff Doyle	07/10/2015
0.2	Added Recommendations summary	Jeff Doyle	07/14/2015
0.3	Added Policy section outline	Jeff Doyle	07/15/2015
0.4	Added Technical,Org Design, Privacy sections	Jeff Doyle, Travis Dunn	7/16/2015
0.5	Removed logos, CTC Chair placeholder letter	Jeff Doyle, Laura Pennebaker	7/20/2015
0.6	Added new recommendations, main points in sections	Jeff Doyle	8/12/2015
0.7	Placeholder for decision on Enforcement testing in pilot	Jeff Doyle	8/29/2015

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0.8	Added recognition of complex issues to Forward section; updated table of definitions; added clarifications to Intro section; removed reference to distribution of revenues from Intro section reversed order of Policy Issues/Privacy, and of Public Input/Pilot Evaluation; added Commercial vehicles subsection; reordered recommendation material in each section	TAC subcommittee, Jeff Doyle	9/5/2015
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Road Charge Pilot Design Recommendations
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This is a two-to-four page Executive Summary written so that it can be easily extracted or adapted as a stand-alone document or handout. The handout should be able to be used by TAC members, CTC, Caltrans and others in their meetings and discussions with legislators, other public officials, stakeholder groups and media outlets as the circumstances require.

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Definitions & Abbreviations

TERM/ABBREVIATION	DEFINITION/DESCRIPTION	REMARKS
AAA	American Automobile Association	Refers collectively to both Automobile Club of Southern California, and Automobile Club of North California, Nevada and Utah
CalSTA	California State Transportation Agency	
Caltrans	California Department of Transportation	
CAM	Commercial Account Manager	
ConOps	Concept of Operations	
CTC	California Transportation Commission	
DMV	Department of Motor Vehicles under the CalSTA	
EPA	Environmental Protection Agency	
GPS	Global Positioning System	
GVWR	Gross Vehicle Weight Rating	
MM	Mileage Metering device	
MPG or MPGe	Miles per gallon or miles per gallon equivalent	MPGe is used in lieu of MPG for vehicles that derive some or all motive power from a fuel source other than gasoline or diesel, such as electricity.
MRD	Mileage reporting device	
OC	Operational Concept	
RUC	Road use charge or road usage charging	
SB	Senate Bill	
TAC	California Road Charge Technical Advisory Committee	
VIN	Vehicle Identification Number	

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1. Introduction

Briefly highlights the background leading to the passage of SB 1077 and the creation of the California Road Charge Technical Advisory Committee. First lists factors cited in SB 1077’s legislative intent section:

- First: a road charge is clearly intended to be a replacement mechanism for the gas tax (in other words, we are replacing the method of taxation). Drivers would not pay both a gas tax and a road charge.
- Fiscal impact of improving vehicle fleet fuel economy on state of California’s motor fuel tax revenue stream
 - Insert: Figure X from Caltrans depicting erosion of motor fuel tax revenues over time [reference: page 9 of Attachment 5, TAC #1 (Caltrans’ presentation charts)]. Be sure to distinguish the erosion in purchasing power (due to inflation and lack of adjustments to the underlying tax rate), from erosion due to shifts in fuel sources (alternative fueled vehicles) and advanced technologies that provide greater vehicle fuel economy.

Second, add other observations made by the TAC on reasons to explore the feasibility of a per-mile road charge system:

- Concerns about equity impacts on a per-mile basis between drivers of high-mpg vehicles vs. average or below average mpg vehicles
 - Particular concerns about how this might impact lower-income communities,

Explain the required process (per SB 1077) for developing TAC recommendations.

Delineate each requirement contained in SB 1077, and signals to the reader that the recommendations grouped and presented in the following sections link back to SB 1077 requirements.

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2. Recommendations

This section is intended to be concise and direct, without long explanations or reasoning. The more detailed explanation for each of the recommendations appears in the sections that follow. Below are recommendations made to date (8/10/2015) by the TAC.

The California Road Charge Technical Advisory Committee makes the following recommendations to CalSTA:

2.1. The pilot will offer drivers a choice in account managers.

More than one non-state account manager will be available for pilot participants to choose from. A simulated state account manager will also be offered.

2.2. The pilot will offer drivers a choice in mileage recording methods.

Methods under consideration for the pilot include time permits, mileage permits, odometer charges (prepay and postpay), automated distance charging without location information, and automated distance charging with location information.

2.3. Out-of-state vehicles will be included in the pilot and simulate payment for driving on California roads.

Drivers from neighboring states who drive regularly in California will be recruited to participate in the pilot.

2.4. The pilot will test an open system design.

Security standards and privacy protections will be required, and data content messaging formats between service providers and the state may be defined. However, the system will otherwise be designed in a way that is technology neutral and allows entry of multiple operational concepts, technologies, and service providers.

2.5. The pilot will test the interoperability of California's system with that of other states.

In the event another state does not have a pilot operational concurrent with California's, interoperability will be simulated using account managers.

2.6. The pilot will include individuals, households, businesses, and at least one government agency.

This represents the diversity of the vehicle ownership types most common in California.

2.7. The pilot will include a cross-section of 5,000 vehicles that are reflective of the fleet currently using California's road network.

The pilot will recruit a variety of vehicles with the goal of forming a vehicle pool that reflects the diversity of the fleet currently using California roads, according to the matrix of vehicles and participant demographics developed and recommended by the TAC. Include direct reference (Section and page #) where the matrix can be found.

2.8. The pilot will offer methods to exempt miles driven on private road or out of state.

Both manual and automated options for claiming mileage exemptions will be tested.

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2.9. The pilot will feature three approaches for protecting privacy: governance, accountability, and legal protection

The TAC recommended 12 privacy principles (governance), four privacy evaluation criteria (accountability), and model privacy protection provisions (legal protection). Provide a brief explanation of what these provisions accomplish, and direct Section/Page # where the exact wording can be found.

2.10. The pilot will be evaluated according to criteria recommended by the TAC.

The 50 evaluation criteria adopted by the TAC span 8 categories. Provide a brief explanation of what these provisions accomplish, and direct Section/Page # where the exact wording can be found.

2.11. The pilot will test ten data security features.

The TAC adopted security features for authentication, authorization, data modification notification, data masking, encryption, data storage, data transmittal, data destruction, general IT network security, and third party data security system verification.

2.12. [Placeholder for TAC decisions regarding Enforcement].

[Description of methods of compliance and enforcement that will be tested in the pilot – if any]

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3. Policy Issues

3.1. Scope of this section

This section groups together the recommendations that were labeled “policy” in the TAC Decision schedule. In addition, this section also includes policy decisions that were informed by the Business Case Analysis; and policy issues that were of particular interest and concern to the TAC in their deliberations.

3.2. Types of participants to be included in Road Charge pilot project

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

3.2.1. Heavy commercial vehicles as volunteer participants

- ▶ Note that heavy commercial vehicles (i.e., commercial trucks) were not intended for inclusion in the pilot under a strict interpretation of SB 1077.
- ▶ However: California Trucking Association has volunteered to participate in the pilot test
- ▶ Briefly describe CTA’s reasoning for participating (i.e., not an endorsement of road charge policy; decided to gather additional information and direct experience with a potential system)
- ▶ Target numbers and types of commercial trucks to be included

3.3. Mileage exemptions from road charging

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
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3.4. Should the pilot assess charges on out-of-state vehicle owners driving on California roads?

Follow the same format for each subject:

- ▶ Recommendation(s)

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- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

3.5. Policy issues of special concern to the TAC

This section is reserved for policy issues that arose during the TAC’s deliberations that, while not specifically called out in SB 1077, were still of special interest and concern to the TAC. Specifically mention presentations and TAC consideration of other policy issues, and how those were addressed if not resulting in a specific pilot design recommendation.

3.5.1. Potential income equity implications of a road charge

Body text

3.5.2. Potential differential impacts on urban vs. rural residents

Body text

3.5.3. Others to be added here

Body text

TABLE 1: POLICY RECOMMENDATIONS SUMMARY TABLE
 [insert table here]

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4. Privacy and Data Security

This section highlights the personal privacy and data security issues, and how the TAC has addressed them.

4.1. Specific privacy protections to be used in the pilot project and program

Follow the same format for each subject:

- ▶ Recommendation(s) (Highlight the recommendations first.)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

4.2. What system data security requirements should be used for the pilot?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
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5. Technical and Organizational Design Issues

5.1. Scope of this section

This section groups together issues and recommendations that were labeled “technical” or “organizational” in the TAC Decision schedule. This section may include items discussed under Business Case Analysis.

5.2. Should both manual and automated recording and reporting be offered in the pilot?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

5.3. Should a GPS-based option for recording mileage be offered in the pilot?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

5.4. Should road charging use open or closed systems?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
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5.5. What mileage measurement and reporting methods are most promising?

Follow the same format for each subject:

- ▶ Recommendation(s)

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- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
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5.6. What technologies should be further studied to pursue those measurement and reporting methods?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
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5.7. Should the pilot test interoperability with other states considering road charges, and interoperability with toll systems?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
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5.8. Should the pilot test multiple account managers?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
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5.9. How many participants should be involved in the pilot?

Follow the same format for each subject:

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- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
- ▶ Differences of opinion held among TAC members
- ▶ Issues to monitor throughout course of pilot project

5.10. How should participants be distributed throughout the state?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
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5.11. What type of enforcement and compliance activities should be demonstrated?

Follow the same format for each subject:

- ▶ Recommendation(s)
- ▶ Requirements under SB 1077
- ▶ Summary of material reviewed by TAC
- ▶ Comments received and other external source material
- ▶ Synopsis of reasoning for recommendation
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- ▶ Issues to monitor throughout course of pilot project

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This section is intended to be a full description of the various ways in which the TAC invited and received public input into their deliberations. This section will also serve to demonstrate due diligence by the TAC in meeting the public involvement directives in SB 1077.

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7. Pilot Evaluation

7.1. Purpose of Evaluation

This section would introduce the evaluation topic including relevant SB 1077 language related to evaluation

7.2. Evaluation Criteria Recommended by the TAC

This section would summarize the criteria recommended by the TAC

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8. Conclusions and Next Steps

8.1. Summary of Where things Stand

This would highlight some of the issues the TAC intends to monitor and report on in the coming months.

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9. Appendix