SPECIAL JOINT MEETING OF THE
REGIONAL COUNCIL;
COMMUNITY, ECONOMIC AND HUMAN DEVELOPMENT;
ENERGY AND ENVIRONMENT; AND
TRANSPORTATION COMMITTEES

Please Note Date and Time
Thursday, August 20, 2015
10:00 a.m. – 1:00 p.m.

SCAG Main Office
818 W. 7th Street, 12th Floor
Board Room
Los Angeles, CA 90017
(213) 236-1800

See Videoconference Locations on next page

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Donesia Gause at (213) 236-1858 or via email at gause@scag.ca.gov. In addition, the Joint Meetings may be viewed live or on-demand at http://www.scag.ca.gov/NewsAndMedia/Pages/SCAGTV.aspx

Agendas & Minutes for the Joint Meetings are also available at: http://www.scag.ca.gov/committees/Pages/default.aspx

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency’s essential public information and services. You can request such assistance by calling (213) 236-1908. We request at least 72 hours (three days) notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.
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600 South Main Street, Suite 906  
Orange, CA 92868

**RIVERSIDE**
3403 10th Street, Suite 805  
Riverside, CA 92501

**SAN BERNARDINO**
1170 West 3rd Street, Suite 140  
San Bernardino, CA 92410

**VENTURA**
950 County Square Drive, Ste. 101  
Ventura, CA 93003

Also available via Videoconference at the following videoconferencing sites:

**CITY OF PALMDALE**
38250 Sierra Highway  
Palmdale, CA 93550

**Coachella Valley Association of Governments (CVAG)**
73-710 Fred Waring Dr., Suite 200  
Palm Desert, CA 92260

**South Bay Cities Council of Governments (SBCCOG)**
South Bay Environmental Services Center  
20285 S. Western Avenue, Suite 100  
Torrance, CA 90501
CALL TO ORDER & PLEDGE OF ALLEGIANCE
(Hon. Cheryl Viegas-Walker, President)

PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the Special Meeting Agenda, must fill out and present a Public Comment Card to the Assistant prior to speaking. Comments will be limited to three (3) minutes per speaker. The President has the discretion to reduce the time limit based upon the number of speakers. The President may limit the total time for all public comments to twenty (20) minutes.

PRESENTATION ITEMS

1.  2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) – Transportation Finance

   - Brief Overview of Core Revenue Forecast and System Needs for the 2016 RTP/SCS
     (Annie Nam, SCAG Staff)

   - Putting Transportation Finance in Context: How We Got Here & Where We are Headed
     (Dr. Brian Taylor, UCLA – Luskin School of Public Affairs)

   - California Road Charging
     (Will Kempton, Executive Director, California Transportation Commission)

   - California Transportation Funding Study
     (Jim Earp, Executive Consultant, California Alliance for Jobs; Will Kempton, Executive Director, California Transportation Commission)

   - Road Charging: A Path to Sustainable Revenues Worldwide
     (Jack Opiola, Managing Partner and President, D’Artagnan Consulting)
# Special Joint Meeting of the Regional Council and Policy Committees

(Community, Economic and Human Development Committee; Energy and Environment Committee; Transportation Committee)

## Agenda

**Thursday, August 20, 2015**

### Presentation Items - continued

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<th>Description</th>
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<tr>
<td><strong>10 mins.</strong></td>
<td>Brief Remarks on the Cost of Transportation (including the Economics of Freight Transportation) <em>(Dr. Genevieve Giuliano, USC)</em></td>
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<td><strong>15 mins.</strong></td>
<td>RECESS (Break for lunch)</td>
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<td><strong>60 mins.</strong></td>
<td>MODERATED DISCUSSION WITH GUEST SPEAKERS <em>(Hon. Alan Wapner, TC Chair and Moderator)</em></td>
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<tr>
<td><strong>15 mins.</strong></td>
<td>NEXT STEPS <em>(Hasan Ikhrata, Executive Director)</em></td>
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### Adjournment
DATE: August 20, 2015

TO: Regional Council (RC)
Transportation Committee (TC)
Community, Economic and Human Development (CEHD)
Energy and Environment Committee (EEC)

FROM: Annie Nam, Manager, Goods Movement & Transportation Finance; (213) 236-1827; nam@scag.ca.gov

SUBJECT: 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) – Transportation Finance

EXECUTIVE DIRECTOR’S APPROVAL:

RECOMMENDED ACTION:
For Information Only - No Action Required.

EXECUTIVE SUMMARY:
Today’s meeting is the 4th in a series of Special Joint Regional Council and Policy Meetings focused on key elements of the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (2016 RTP/SCS). The purpose of this Joint Meeting is to discuss the financial component of the Plan, including a brief overview of the SCAG region’s anticipated revenue shortfall and key considerations for sustainable transportation funding options. Dialogue will include perspectives from experts in academia and practitioners leading initiatives in the U.S. and abroad. Staff will present a more detailed update of the financial plan and seek guidance on the Draft 2016 RTP/SCS financial strategies at the September 3, 2015 TC meeting.

STRATEGIC PLAN:
This item supports SCAG’s Strategic Plan Goal 1, Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies, a) create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:
In preparation of the development of the 2016 RTP/SCS, today’s workshop will focus on transportation funding. SCAG’s latest research indicates that over the next 25 years, the region will need to invest as much as $60 billion to bring our local streets and roads to a state of good repair. Additionally, over the same time frame, system preservation needs for the region’s highways will cost at least $65 billion. Insufficient investment in the region’s transportation infrastructure has resulted in one of the highest vehicle operating cost in the country. According to the national research group TRIP’s latest report released in July, the Los Angeles-Orange metropolitan area ranks 2nd in the nation with 73 percent of its roadways in poor condition and motorist paying on average over $1,000 annually in additional vehicle maintenance costs due to poor road conditions. The Riverside-San Bernardino metropolitan area ranks 14th with 46 percent of its roads in poor condition and drivers paying a little over $800, annually.
Additionally, investments are needed to expand the region’s transportation system and accommodate future population growth. Traditional sources of funding, like the current per-gallon gas tax, inadequately meet existing needs—in large part due to the fixed base rate that has not been adjusted for inflation in two decades. Costs to fix our roadways will continue to escalate and fuel efficiency gains are expected to further erode the purchasing power of the gas tax over the next 25 years.

In accordance with federal fiscal constraint requirements, SCAG must develop a financial plan as part of the 2016 RTP/SCS. The financial plan must identify how much money is reasonably expected to be available to build, operate, and maintain the region’s surface transportation system over the next 25 years. Consistent with prior SCAG planning efforts, the financially constrained 2016 RTP/SCS will include both a “traditional” core revenue forecast comprising existing local, state, and federal sources and more innovative but reasonably available new revenues.

Staff’s latest forecast of existing core transportation revenues totals $356 billion through 2040 while the region’s transportation system expenditure needs are projected to total $554 billion. Total costs include capital costs for transit, state highways, and arterials, as well as operations and maintenance costs and debt service payments.

The difference between the expenditure forecast total ($554 billion) and the core revenue forecast total ($356 billion) is $198 billion. This funding gap is similar to the amount identified in the 2012 RTP/SCS. As part of the 2012 RTP/SCS, new revenue sources including short-term adjustments to state and federal gas excise tax rates and long-term replacement of gas taxes with mileage-based user-fees were included to fill the gap and establish a more sustainable funding future.

Staff anticipates further discussion of these and other funding options for consideration in the 2016 RTP/SCS. As such, today’s meeting will include a brief overview of the SCAG region’s core revenue forecast and transportation system investment needs, highlighting the importance of finding new ways of paying for transportation. Presentations will be provided by a panel of experts in academia and practitioners leading initiatives in the U.S. and abroad. The purpose of the Joint Meeting is to provide context for subsequent discussions and actions pertaining to the Draft 2016 RTP/SCS financial strategies.

Dr. Brian Taylor, UCLA Professor of Urban Planning and Director of the Lewis Center for Regional Policy Studies, will present on the economics of transportation funding. Will Kempton, Executive Director, California Transportation Commission will present on California’s Road Charge Pilot Program established under SB 1077. Jim Earp, Executive Consultant, California Alliance for Jobs, will discuss focus group research on transportation funding. Jack Opiola, Managing Partner and President of D’Artagnan Consulting, will present on international and domestic case studies related to road charges and transportation funding. Lastly, Dr. Genevieve Giuliano, Professor, USC School of Public Policy and Director, METRANS, will provide a brief commentary on the true costs and impacts of transportation.
FISCAL IMPACT:
No fiscal impact. Staff work required for the 2016 RTP/SCS development is already included in this year’s budget.

ATTACHMENTS:
PowerPoint Presentations:
1) Annie Nam – “Brief Overview of Core Revenue Forecast and System Needs for the 2016 RTP/SCS”
2) Brian Taylor – “Putting Transportation Finance in Context: How We Got Here & Where We are Headed” [will be distributed under separate cover]
3) Will Kempton – “California Road Charging”
4) Jim Earp – “California Transportation Funding Study”
5) Jack Opiola – “Road Charging: A Path to Sustainable Revenues Worldwide”
ISSUES IMPACTING RTP/SCS FINANCIAL PLAN

With 7 transportation sales tax measures in SCAG region, changes in consumer behavior significantly impact available revenue for transportation investments.

Long-term inflation is projected to grow at 2.4 percent annually, while capital costs are projected to grow at 3.2 percent—contributing to declines in purchasing power of transportation revenue sources.

Since 2008, the Federal Highway Trust Fund has required over $65 billion in General Fund transfers to remain solvent.

The viability of the State Highway Account remains another critical issue—2015 State Highway Operation and Protection Plan funds less than 30 percent of state highway maintenance, safety, and rehab 10-year needs.
Insufficient Core Revenues to Meet System Needs

Total SCAG Region System Needs: $554.4 Billion (in Nominal Dollars)

- Capital Costs: $250.8
- Debt Service: $30.7
- Operations & Maintenance: $272.8
- Core Federal: $37.7
- Core State: $63.8
- Core Local: $254.7
- Funding Gap: $198.3

Total SCAG Region System Needs: $554.4 Billion (in Nominal Dollars)

Thank you!

Learn more by visiting www.scag.ca.gov. SCAG Staff Contact: Annie Nam (nam@scag.ca.gov)
Putting Transportation Finance in Context:
_Thoughts on benefits, costs, revenues, and options_

A Presentation to the
_Southern California Association of Governments_

**Brian D. Taylor, PhD, FAICP**
Professor of Urban Planning
Director, Institute of Transportation Studies
Director, Lewis Center for Regional Policy Studies
UCLA Luskin School of Public Affairs

August 2015

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**What’s unique about transportation?**

• A means to an end
  – Economic transactions and social interactions

• On continuum between private and public goods
  – Private markets alone are not enough, a public role is required

• Generate significant external costs and benefits
  – The costs and benefits of transportation are not confined to travelers
Policy implications of this uniqueness

• Economic transactions and social interactions
  – Central to economic development policy
• Private markets alone are not enough, a public role is required
  – Ambiguity over who is in charge and who should pay
• The costs and benefits of transportation are not confined to travelers
  – Internalizing these costs a central rationale for pricing of transportation

Premise:

Four fundamental questions about transportation finance underlie nearly all transportation policy debates
Four basic questions

- *Who* should pay for transportation?
- *How* should they pay?
- *Where* should funds be expended?
- *What* systems, modes, or projects should receive priority?

Fundamental Questions: *Who*?

- Should transportation system users pay fees to travel?
Fundamental Questions: *Who?*

- Should transportation system users pay fees to travel?

- Or should everyone pay for transportation systems through general instruments of taxation?

- Should people pay for transportation systems based on ability to pay? Benefits received? Costs imposed?
Fundamental Questions: *How?*

• If users are to pay...
  – Should we levy bridge tolls, transit fares, fuel taxes, or roadway user charges?
Fundamental Questions: *How?*

• If users are to pay...
  – Should we levy bridge tolls, transit fares, fuel taxes, or roadway user charges?
  – Should such fees be relatively static, or vary with respect to congestion, emissions, axle weights, etc.?

• If everyone is to pay...
Fundamental Questions: *How?*

• If users are to pay...
  – Should we levy bridge tolls, transit fares, fuel taxes, or roadway user charges?
  – Should such fees be relatively static, or vary with respect to congestion, emissions, axle weights, etc.?

• If everyone is to pay...
  – Should it be from income, sales, property, or other taxes?

  – Should we borrow the money now and put off decisions over how to retire the debt?
Fundamental Questions: *Where*?

- Should transportation taxes and fees collected in one jurisdiction be spent in other places?
  - If so, on what basis should the funds be geographically redistributed?
    - From have-nots to have?
Fundamental Questions: Where?

• Should transportation taxes and fees collected in one jurisdiction be spent in other places?
  – If so, on what basis should the funds be geographically redistributed?
    • From have-nots to haves?
  – If not, what is the rationale for a federal (or, for that matter, state) finance program?
    • Why not finance everything locally?

Fundamental Questions: What?

• Should streets and highways receive priority because they are so heavily used?
Fundamental Questions: What?

• Should streets and highways receive priority because they are so heavily used?

• Or should public transit and bicycling receive priority to create more environmentally-friendly travel alternatives?

• Should we focus on the movement of people and leave goods movement largely to the private sector?
Fundamental Questions: *What?*

- Should streets and highways receive priority because they are so heavily used?

- Or should public transit and bicycling receive priority to create more environmentally-friendly travel alternatives?

- Should we focus on the movement of people and leave goods movement largely to the private sector?

- Or should we focus on the movement of goods to mitigate externalities and facilitate commerce?

**Fuel taxes, sales taxes, user fees...**
### User Fees and General Taxes in Transportation Finance

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**Revenues:**
- Transportation Sources
  - Motor fuel taxes for highways and transit
  - Transit fares
  - Bridge tolls to retire bonds
- Non-Transportation Sources
  - Fuel taxes for deficit reduction
  - Parking meter revenue to fund libraries

**Revenues:**
- General Taxes for Transportation
  - Sales taxes dedicated to transportation
  - General obligation bonds for transportation
- General Taxes for General Purposes
  - Income taxes for education, welfare, and national defense
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**Transportation Finance at a Crossroads:**
*Which Way Do We Go?*
Three Future Scenarios

1. Allow gas tax to wither, accelerate shift towards general tax revenues for transportation
   – Fees disconnected from use
   – Trend towards ad hoc, project-based transportation planning
   – Declining federal and state roles

• Yet many of the 8-decade-old arguments for avoiding general taxes and bond finance for transportation still hold today
Transportation sales taxes: The pros

- A politically popular way to raise money
- Enacted by voters, they are a form of direct democracy
- Tend to keep the revenue at home
- Often linked to projects, they tend to fund projects favored by voters
- Are relatively easy to administer
- Are dedicated to transportation
- Can raise a lot of revenue relatively quickly

Transportation sales taxes: The cons

- One-time actions/fixed-terms make them unreliable and inhibit long-range planning
- Links to specific projects makes it difficult to adapt to changing circumstances
- Geographic restrictions can keep money from going to most needed projects
- Most popular projects are often not the most effective projects
- Sales taxes are doubly regressive
- No link to system use: user fee principle is lost
Three Future Scenarios

2. Summon political will to increase fuel taxes
   – Perhaps sufficient for a couple of decades
   – Would need to be revisited with rise of alternative fuel vehicles
   – Regional taxes possible, but a very tough row to hoe politically

• Won’t help manage congestion and regular increases in levy to keep pace with inflation, travel is a tough political hurdle – no state has done it consistently
Fuel tax increase: The pros

• Fuel taxes are an established revenue-raising method
• Widespread support for new transportation investments may make this a good time to seek an increase
• Raising the levy is administratively simple
• Raising the fuel tax encourages increased fuel efficiency
• Indexing could eliminate the need for frequent increases
• Fuel taxes have long been viewed as fair

Fuel Tax Increase: The cons

• Voters generally prefer sales tax increases and borrowing
• Recent revenue shifts from the fuel tax swap may mean this is not a good time to seek an increase
• Revenues can slip as fuel efficiency increases
• Per gallon levy requires regular, unpopular increases to keep pace with costs and travel
• Fuel taxes disproportionately burden poor drivers
Three Future Scenarios

3. Shift to road user fees as inevitable successor to the fuels tax sooner rather than later
   – Viable over the long term, regardless of fuel type / economy
   – Reinvigorates user-pays principle, opens the door to many innovative pricing strategies
   – Inevitable clashes with various interest groups favored under current system

• There is an increasing number of successful experiments, but much political wariness remains
Road user fees: The pros

• Variable pricing can influence system performance more than system use
• Variable pricing can greatly increase system efficiency thereby reducing “needs”
• Linking prices paid by travelers to the costs they impose is inherently fair
• User charges generally, particularly variable charges, are more “progressive” than fuel or, especially, sales taxes
• Privacy concerns have been successfully addressed elsewhere
• Voter/motorist opposition tends to fade with exposure to these new charging systems
• New technologies make road user charges much easier to implement than in the past
• Can substantially reduce environmental impacts

Road User Fees: The cons

• Some forms of tolling raise privacy concerns
• Many direct user fees are unfamiliar, raising suspicions among voters and elected officials
• User charges/foes raise perceptions of equity concerns more often than other forms of finance
• Road user charges are politically difficult to enact
• Some see road user charges as double taxation
• Implementing road user charges is substantially more complex than most other forms of finance
• As they may not vary with costs imposed, there is no guarantee that road user charges will be set to improve system performance, equity, or environmental impacts
CALIFORNIA ROAD CHARGING

Presentation to:
Southern California Association of Governments

Will Kempton, Executive Director
California Transportation Commission

August 20, 2015

An efficient transportation system is critical to California’s economy and quality of life…
But our transportation system is in financial crisis

- **Vehicle Miles Traveled**
- **Gas Consumption with Increased Efficiency**
- **Revenue Loss Due to Increased Fuel Economy**

**California Infrastructure Report Card**

- **$57 Billion** - Deferred Transportation Maintenance
  *Source: Governor Brown’s 2015 Five-Year Infrastructure Plan*

- **45th** - State Ranking for Overall Highway Performance
  *Source: Reason Foundation’s 21st Annual Report on the Performance of State Highway Systems*

- **$296 Billion** - Ten-Year Project Funding Shortfall
  *Source: California Transportation Commission’s 2011 Statewide Transportation Needs Assessment*
California Infrastructure Report Card

Pavement

- **58%** of California Roadways Require Rehabilitation or Pavement Maintenance
- **87%** of California’s Counties have an Average Pavement Rating of “At Risk” or “Poor”
- **25%** of Local Streets and Roads will be in “Failed” Condition by 2022 under our Current Funding Levels
- **6** of the Nation’s 10 Worst Urban Area Pavement Conditions

Revenue Solutions

- **Near-Term Solutions**
  - Truck Weight Fees
  - Excise Tax
  - VLF/VRF
  - Early Loan Repayments
  - Cap & Trade
- **Long-Term Sustainable Solutions**
  - Congestion Pricing/Tolling
  - Public Private Partnerships (P3’s)
  - Road Charge Program (SB 1077)
In 2014, Senate Bill 1077 was signed into law

- Directs the California Transportation Commission (CTC) to establish a Technical Advisory Committee
- TAC to report recommendations to the California State Transportation Agency (CalSTA)
- Requires CalSTA to implement a pilot program by January 2017
- Requires a report of findings and recommendations by June 2018

Road Charging is …

- A policy whereby motorists pay for use based on the distance they travel on the roadway network.
- A “User Pays” principle – the more you drive, the more you pay.
- Similar to other utilities such as electricity, water, telephone.
States Exploring a Road Charge

Road Charge Technical Advisory Committee Composition

- 15 members:
  - Telecommunications Industry
  - Data Security & Privacy Industry
  - Privacy Rights Advocacy Organizations
  - Regional Transportation Agencies
  - Members of the Legislature
  - Highway User Groups
  - National Research & Policymaking Bodies
  - Other Relevant Stakeholders
The Technical Advisory Committee is examining all dimensions of a Road Charge

- Revenue sustainability
- Privacy protection
- Equity implications
- Technology alternatives
- Environmental sustainability
- Out-of-state travelers
- Communications & public outreach
- Organizational framework

As we design the pilot test, we want the public to participate

We Are Here

Phase 1
- Establish a pilot program design
- Evaluation criteria

Phase 2
- Pre-pilot planning
- Develop pilot program test plan
- Procure independent evaluator

Phase 3
- Conduct live pilot
- Concurrent independent evaluation

Phase 4
- Report findings and evaluation results
- Next steps
Work Group Members

- Riverside County Transportation Commission
- Alliance of Automobile Manufacturers
- San Joaquin County Farm Bureau
- Lyft
- California Department of Motor Vehicles
- California State Council of Laborers
- Electric Drive Transportation Association
- Downs Energy
- California Building Industry Association
- Plug In America
- Native American Advisory Council
- Inland Empire Economic Partnership
- UPS – Central California
- California Tax Foundation (Cal Tax)
- Sonoma County
- California Business Roundtable
- Southern California Assoc. of Governments
- Western States Petroleum Association
- Rural Counties Task Force
- Transform
- Self Help Counties Coalition
- Port of Long Beach

Input from California residents and businesses is integral to our effort

- Focus Groups
- Telephone surveys
- Website
- Online Questionnaire
- Twitter
- Facebook
- Public Meetings
TAC monthly meetings around the state

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<td>September 25</td>
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<td>October 23</td>
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<td>November 20</td>
<td>Los Angeles</td>
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<td>December 11</td>
<td>Riverside</td>
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Road Charge Pilot Program Timeline

The TAC work now underway is only to support a pilot project. No decision to move forward with a full-scale permanent road charge program has been made, or will be made, without public participation, input from stakeholders and approval from the Legislature. The timing of the process is expected to be:

- **December 2015:** The TAC will finalize the parameters of the road charge pilot program.
- **Summer 2016:** Road charge pilot program will begin.
- **Summer 2017:** The pilot project will be complete and its results will be reported back to the TAC, the California Transportation Commission (CTC) and the Legislature.
- **December 2017:** The CTC will provide commentary and recommendations to the Legislature.
Thank You

For more information: www.CaliforniaRoadChargePilot.com
Purpose & Goals

• Conduct conversation with voters, walking them through problem solving exercises, rather than polling them cold on transportation funding.
• Ascertain whether voters place a high priority on addressing transportation deficiencies.
• Identify which transportation programs are highest priority to voters for any new transportation funding.
• Test voter receptivity to several potential statewide funding sources for transportation; and their preference for single source or combination of sources.
Overview of Research project

• Six two-hour focus group sessions.
• Total of 75 participants selected through careful screening process using predetermined for voters residing in each geographic area.
  – Sacramento, Tuesday 6 January – 12 participants
  – Los Angeles, Thursday 8 January – 11 participants
  – San Diego, Tuesday 10 February – 14 participants
  – Contra Costa, Thursday 12 February – 12 participants
  – South Bay, Thursday 19 March – 13 participants
  – Merced County, Saturday 21 March – 13 participants

• Focus group sessions followed by statewide poll in April 2015 of likely voters.
Focus Groups: Key Findings

#1: Voters highly aware of deficiencies in transportation infrastructure.

- Without prompting, deteriorating streets & roads brought up as a major problem in all focus groups.
Voters’ transportation priorities.

• Maintaining & repairing streets & roads listed as most important transportation priority:
  – 41% maintain & repair existing streets, roads
  – 31% provide more rail, bus options
  – 20% replace unsafe infrastructure
  – 8% widen roads
#2: Voters accept assertion that existing transportation revenues insufficient.

- When asked initially if transportation is underfunded, near majority said “yes.”
  - 48% Yes 35% No 17% Don’t Know
- After reviewing fact sheet on funding, more voters believe transportation is underfunded.
  - 68% Yes 24% No 8% Don’t Know
- Voters question whether existing funding being spent wisely.
Finding #2 cont.

- Most compelling points in making case for lack of adequate funding:
  - Failure to keep up with transportation needs has led to large backlog of deferred maintenance, deteriorating system.
  - Transportation funding has not grown with cost of road maintenance, therefore problem will continue to grow worse without immediate attention.
#3: Voters receptive to increased funding for transportation.

- Solid support for some form or combination of fees to raise an additional $3 billion to keep up reasonable pace with maintaining & rehabilitating existing transportation system.
  - 63% Yes
  - 37% No
#4: Voters support modest increases in variety of sources, rather than large increase from single source to address problems.

- Basic information presented on how $3 billion increase could be achieved annually from a number of individual sources.
  - Gas Tax: 20 cents per gallon increase
  - VRF: $90 increase annually per vehicle.
  - VLF: 1% increase per vehicle value (current rate set at .65%)
Finding #4 cont.

• Well over three-fourths of the participants preferred a combination of fees & taxes rather than a single source:
  – 75% combination of sources
  – 16% single source
  – 8% either way is fine

• Many participants unfamiliar with the VLF and VRF, asking what they are and how they are collected.

• Little familiarity with truck weight fees.
Finding #4 cont.

• Walked participants through an exercise to build their own transportation funding package, either from a single source or a combination of sources.

• When amounts of the agreed-upon taxes and fees were tallied up after the exercise, every groups’ transportation funding package exceeded $3 billion.

• Highest amount “raised” in a group was just under $6 billion (Merced).
Solid support for “pre-packaged” multi-source funding package.

- Concluded discussion with up-or-down vote on a sample funding package:
  - 8-cent gas tax increase
  - $25 vehicle registration fee increase
  - VLF increase of .25% on value of vehicle
  - All increases phased in over 4 years
- Proposal received strong support:
  - 79% Support
  - 21% Oppose

Reasons for support of “pre-packaged” multi-source funding package.

- Supporters said proposal was “affordable, not too painful and fair to those least able to afford fee and tax increases.
- Element of individual choice in how much you will pay, based on how much gas you use, value of vehicle you own.
- Element of “phasing in” was widely supported when presented, but not a condition of supporting funding increases.
1. Voters lukewarm about any single source of revenue to fix the problem...

State and local transportation planners believe a plan needs to be put in place to rehabilitate state bridges, highways and local streets and roads to prevent further deterioration. The funding for this plan would likely come from a phased increase in the state gas tax, and vehicle license and registration fees.

The revenues would be placed in a Road Rehabilitation Fund to be shared 50-50 between local cities and counties and the state highway system for road rehabilitation and highest priority road safety projects.

I'll ask your opinion of the different parts of this plan.
1. Voters lukewarm about any single source of revenue to fix the problem...

<table>
<thead>
<tr>
<th>Source</th>
<th>Supp Strong</th>
<th>Supp Some</th>
<th>Oppos</th>
<th>No Opin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicating current truck weight fees paid by large trucks, to be used for road repair purposes.</td>
<td>39 (69)</td>
<td>30</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Increasing vehicle license fees by a total of one half of one percent of a vehicle's value, phased in over a 5 year period.</td>
<td>23 (49)</td>
<td>26</td>
<td>48</td>
<td>3</td>
</tr>
<tr>
<td>Increasing vehicle registration fees by a total of $35, phased in by $7 a year over 5 years.</td>
<td>21 (45)</td>
<td>24</td>
<td>52</td>
<td>3</td>
</tr>
<tr>
<td>Increasing the state gas tax by 2 cents a gallon each year for 5 years, totaling 10 cents a gallon after 5 years.</td>
<td>23 (43)</td>
<td>20</td>
<td>56</td>
<td>1</td>
</tr>
</tbody>
</table>

2. ... but when presented with a blended package containing those same elements, support increases.

Those are the possible sources for funding a 10-year plan to rehabilitate and and repair state bridges, highways, and local streets and roads.

Would you like support or oppose this funding proposal?

SUPPORT 55

OPPOSE 38

NO OPINION 7
3. Adding accountability provisions increases support and helps reassure voters.

<table>
<thead>
<tr>
<th>Would you support or oppose adding a provision to ___:</th>
<th>Supp Strong</th>
<th>Supp Some</th>
<th>Oppos</th>
<th>No Opin</th>
</tr>
</thead>
<tbody>
<tr>
<td>place all revenues in a Road Rehabilitation Fund and require 95% be spent on road projects and Caltrans administrative expenses limited to 5%.</td>
<td>(72) 42</td>
<td>30</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>require that future Caltrans administrative budgets be reduced by 30% with all savings spent on road projects.</td>
<td>(68) 35</td>
<td>33</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>allow local governments to use a portion of funds to finance bonds to quickly make safety improvements.</td>
<td>(68) 35</td>
<td>33</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>limit this plan to 10 years and require voter approval for an additional 10 year extension.</td>
<td>(66) 37</td>
<td>29</td>
<td>29</td>
<td>5</td>
</tr>
</tbody>
</table>

3. Adding accountability provisions increases support and helps reassure voters.

If those provisions were added, would you likely support or oppose a 10-year funding plan to rehabilitate and repair state bridges, highways and local streets and roads?

- SUPPORT 68
- OPPOSE 25
- NO OPINION 7
Road Charging
A path to sustainable revenues
Worldwide

Presented by:
Jack Opiola
Managing Partner / President
jack.opiola@dartagnan.net
Tel (703) 915 - 1844

Agenda

- The problem in context
- Road Charging in the EU
- Road Charging in New Zealand
- Road Charging in Australia
- Lessons Learned
Problem: our transportation system is in financial crisis because the vehicle fleet is transitioning away from fossil fuels.

Source: Motorists’ Views of Fuel Economy and Advanced Vehicle Technologies, University of Michigan, Transportation Research Institute, June 2015

Changing nature of USA Vehicle Fleet – New and Total Fleet Stock

Source: IDDRI, Pathways to deep de-carbonation in the USA, USA 2050 REPORT, California ARB Presentation, MAY 2015
Is the fuel tax unsustainable? The EU discussion.

- Fuel tax revenue has dropped due to increased vehicle fuel efficiency.
- Increasingly politically difficult to raise this blunt tax on all road users.
- Distance charging raises more revenue, more ‘user pays’ oriented and better vehicle to allocate costs.
- Fuel taxes have kept up with inflation better than in the US, but have still lost ground
  - Despite nominal increases, on EU-wide average, fuel tax now €0.10 per liter lower, in real terms, than in 1999.

Current Status of Road Charging in Europe

- Vignettes introduced to charge transit traffic for road use
- Distance charging raises more revenue, more user pays oriented
- Italy, France, Spain and Portugal have many toll roads and distance charging
- Germany first country for Heavy Vehicle Road Charging with GNSS device
- Austria followed with HVC & Vignettes
- Hungary now most advanced electronic Vignette using video image capture and has 22 Commercial Service Providers.
Example: Ireland’s revenue challenge

- Improving fuel efficiency.
- Drop in vehicle sales.
- Fewer vehicles driving more.
- Similar to the picture across the EU

Options discussed in EU for fair and sustainable revenues

<table>
<thead>
<tr>
<th>Options</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor and vehicle registration tax increase</td>
<td>- Dependent on ownership and purchase decisions, not usage.</td>
</tr>
<tr>
<td></td>
<td>- Imposes deadweight costs on economy.</td>
</tr>
<tr>
<td></td>
<td>- Successful in encouraging more fuel efficient vehicles, which</td>
</tr>
<tr>
<td></td>
<td>reduces fuel tax revenues.</td>
</tr>
<tr>
<td>Fuel tax increase</td>
<td>- Chasing declining source of energy due to efficiency and</td>
</tr>
<tr>
<td></td>
<td>alternative fuels.</td>
</tr>
<tr>
<td></td>
<td>- Those least able to afford pay the most.</td>
</tr>
<tr>
<td></td>
<td>- Poor reflection of wear and tear imposed by heavy vehicles.</td>
</tr>
<tr>
<td>Wider use of tolls</td>
<td>- Risk of diversion onto alternative routes.</td>
</tr>
<tr>
<td></td>
<td>- Inefficient to toll beyond major highways.</td>
</tr>
<tr>
<td>Transition to user pays</td>
<td>- Short term costs for long term financial and economic gain.</td>
</tr>
<tr>
<td></td>
<td>- Need a long transition time.</td>
</tr>
</tbody>
</table>
Transition Paths being addressed in EU

**Heavy vehicles first**
- Electronic vignette for all HGVs 3.5 tonnes, plus, reducing vehicle registration tax.
- Voluntary weight/distance charge with offsetting partial fuel tax refund (and vignette replacement).

**But light vehicles may follow soon**
- Transition to all new vehicles going onto a form of distance charging, fully replacing purchase and ownership taxes, partially replacing fuel tax.

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New Zealand Road User Charging

- **Overview of New Zealand**
  - The Original Problem: growing heavy vehicle VMT
  - RUC since 1978
  - Electronic since 2009
  - Open System with two service providers & third in progress

- **RUC’s role and approach**
  - Applies to all diesel vehicles
  - Weight/Mass & distance
  - National Systems Strategy
  - Independent distance measurement device –
    - Hubodometer or approved “e-hubodometer” (includes GPS & sensors)
  - Marginal Social Cost analysis – Cost Allocation for all modes
  - Some challenges – Farming, Dairy Industry, Logging Industry
New Zealand transition from paper to electronic charges

System choices based on long term goals:

- Best-fit technology with standards
- Open System Architecture
- Interoperability to allow free roaming
- Most efficient/least cost back office management system
- Advanced payment systems
- Apportion Risks where they best fit
- Competitive Rights of the Market

Australia has unique vehicles
### Australia has unique vehicles

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Length</th>
<th>Load Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-Double</td>
<td>25 m</td>
<td>62.5 tonnes</td>
</tr>
<tr>
<td>Double Road Train</td>
<td>36.5 m</td>
<td>79 tonnes</td>
</tr>
<tr>
<td>Triple Road Train</td>
<td>53.5 m</td>
<td>115 tonnes</td>
</tr>
<tr>
<td>AAB Quad</td>
<td>53.5 m</td>
<td>146.7 tonnes</td>
</tr>
<tr>
<td>ICON (Double B-Triple)</td>
<td>53.5 m</td>
<td>166 tonnes</td>
</tr>
</tbody>
</table>

### Western Australia exploring Road Charging in Perth

[Map of Perth Freight Link]
Light vehicle road charges are also under discussion in New Zealand and Australia

- New Zealand discussing extending RUC to gas powered light vehicles
- Australia discussing heavy vehicles first approach—but also discussion extending RUC to light vehicles
  - The effort is sponsored by states because all motoring charges (vehicle and fuel taxes) go to the Commonwealth Treasury
  - There are a plethora of motoring charges at the state level
  - Reforming road charging would have three goals:
    - Simplify charges to motorist
    - Make most or all charges proportional to the usage of the road network.
    - Directly and properly allocate cost of road usage

Lesson Learned: Advantages of road charging

- Network-wide
- Resilience to fuel type & increasing fuel economy
- Charges all engine types on same basis
- Equitable across income groups
- Able to allocate costs to motorists based on usage
Additional lessons learned

- Public acceptability is the MOST important factor in acceptance of Road Charging. Public acceptability improved by:
  - Making charging a replacement instead of additional tax,
  - Dedicate revenues to transport, and
  - Having a voluntary transition.
- It is best when charges are objectively set according to costs.
  - So fairness and economics drive charges, not politicians.
- New Zealand shows how electronic distance-based charging can be rolled out at low cost with competitive service delivery.

Current status of road charging interest by state

![Map of the United States with color-coded areas indicating road charge activity.](image)
Thank You!

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