SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

TECHNICAL WORKING GROUP (TWG)

Thursday, December 18, 2014: 10:00 a.m.

SCAG Offices
818 West 7th Street, 12th Floor
Board Room
Los Angeles, CA 90017
(213) 236-1800

Teleconferencing Information: Number: 1-800-832-0736 – Participant Code: 7334636

Please use for web connection: **http://scag.adobeconnect.com/twg91814/**

AGENDA

Introductions

Receive and File

1. Meeting Summary 11-20-14 (Attachment)
2. Agenda Outlook for the Development of the 2016 RTP/SCS (Attachment)

Information Items

3. SCAG Clean Cities Coalition/Alternative Fuel Vehicle Program/Alternative Mobility Map Research (Marco Anderson) (Attachment)
4. 2016 RTP/SCS Schedule (Courtney Aguirre) (Attachment)
5. Research and Analysis for RTP/SCS Strategies (Frank Wen/Guoxiong Huang/Peter Brandenburg) (Attachment)
6. SB 743 Guidelines Development (Ping Chang) (Attachment)

TECHNICAL WORKING GROUP (TWG)

November 20, 2014

Meeting Summary

The following is a summary of discussions of the Technical Working Group meeting of November 20, 2014.

Receive and File

1. **Meeting Summary 10-16-14**
2. **2016 RTP/SCS Agenda Outlook**

Information Items

3. **Existing and Proposed Performance Measures**
   Tarek Hatata, Principal, System Metrics Group, provided an overview of the various types of existing and proposed performance measures, and presented the framework for performance measurement for the 2016 RTP/SCS update process. Mr. Hatata stated that location efficiency was a new addition in the 2012 RTP/SCS, which is a reflection of the importance of land use, the Sustainable Communities Strategy, and SB 375. Mr. Hatata also provided a refresher on MAP-21 performance measurement requirements, and a report on safety performance.

   Ping Chang, Program Manager of Land Use and Environmental Planning, noted that in terms of monitoring performance indicators, the two most important categories are location efficiency and cost efficiency.

4. **Public Health Work Program**
   Sarah Jepson, Active Transportation Manager, provided an overview of the proposed draft Public Health Program, noting that the policy direction supported by the 2012 RTP/SCS and the Regional Council, is for SCAG to take a more proactive role in public health. Ms. Jepson stated that a Public Health working group has been formed and will hold its first meeting in December. Ms. Jepson encouraged TWG members to submit their names for participation in the working group.

   Concerns were expressed regarding the availability of funds to support the activities and expertise needed to move forward with the Public Health Program. Ms. Jepson stated that public health was included as part of the FY 14-15 Active Transportation budget.

5. **Scenario Planning – 2016 RTP/SCS – Overview and Emerging Themes**
   Peter Brandenburg, Acting Manager of Sustainability, provided an overview of the 2016 RTP/SCS scenario planning, which will include local input and an update of the 2012

Plan. Mr. Brandenburg stated that stakeholder workshops will be held in the Spring of 2015, and a revised draft of the 2016 Plan scenario will be presented in the Summer of 2015. Mr. Brandenburg provided an overview of the 2016 RTP/SCS emerging themes, which will include a progress report on the implementation and refinement of 2012 RTP/SCS strategies, integration of innovative transportation technologies, research of changing demographics, and setting the stage for the 2020 RTP/SCS.

6. **SCAG Clean Cities Coalition/Alternative Fuel Vehicle Program/Alternative Mobility Map Research**

   In the interest of time, this item was postponed and will be heard at the next meeting of the Technical Working Group, to be held on November 20, 2014.

Agenda Outlook for the Development of the 2016 RTP/SCS

(Note: Revised to put the outlook in chronological order as suggested at the Sept. 2014 TWG)
(Updated 12/16/14)

June 2013

- Potential approach/process, coordination between various technical working groups and policy committees, and updated overall schedule for the development of the 2016 RTP/SCS

January 2014

- System Preservation and system operation focus in the 2012 RTP/SCS and our current efforts on Pavement and Bridge condition database/management

February 2014

- System Performance Measures and MAP-21 requirements under Performance Based Planning and implications of MAP-21
- Local Input Process for Growth Forecast/Land Use (Scenario Planning) for 2016 RTP/SCS, including growth forecast and technology

March 2014

- Performance Based Planning and implications of MAP-21: Safety Performance Measures
- Overview of baseline and innovative funding sources adopted in the 2012 RTP/SCS including underlying technical assumptions/methodology/analysis under Transportation Finance
- Overview of cost assumptions/cost modal for the 2012 RTP/SCS under Transportation Finance
- Model and Tools and Datasets to be used in the 2016 RTP/SCS
- Overview of Aviation program in the 2012 RTP/SCS with a focus on ground transportation improvements

May 2014

- OCTA Draft Long Range Plan Update
- System Preservation Update
- Draft Paper on TOD benefits, challenges and best practices
- Active Transportation Program Update
- Local Input Survey Update
- MAP-21 Safety NPRM Update
- CalEnviro Screen Tool

June 2014

- SCAG Active Transportation Results from the 2011 Household Travel Survey
- 2016 RTP/SCS Modeling variables matrix
- Statewide and MPO Planning Rules NPRM Update
- California Active Transportation Program Update

July 2014

- 2016 RTP/SCS Modeling Variables Matrix

September 2014

- 2016 RTP/SCS Development Agenda Outlook
- Status of Local Input for the 2016 RTP/SCS; Growth Forecast Update
- Modeling Update
- CAL LOTS Update

October 2014

- Overview of SCS in the 2012 RTP/SCS
- Current status of SCS implementation (Local Implementation survey)
- Environmental Justice (First EJ Workshop will be held on 10/23)
- Map Collaborator Database (A web based tool to collect data and develop open space plan.)

November 2014

- Discussion on existing and proposed Performance Measures
- Role of Technology in the 2016 RTP/SCS
- Development of alternative scenarios (Scenario Planning) for 2016 RTP/SCS, including growth forecast, technology
- Emerging issues/themes that could influence 2016 SCS
- ~~Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)~~
- ~~Emerging New Technology Applications~~

December 2014

- Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS
- Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis
- Updated forecast/land use distribution for 2016 RTP/SCS
- Updated SCS for 2016 RTP/SCS
- ~~Overview of Active Transportation Strategy in the 2012 RTP/SCS~~
- ~~Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS~~
- **Zero/Near Zero/Clean Technology Applications, including Slow Speed/ Electric Vehicle programs (Nov. 2014)**
- **Update on 2016 RTP/SCS Schedule**
- **Update on research and analysis for RTP/SCS strategies**

January 2015

- ~~Asset Management and Infrastructure Performance Measures~~
- ~~Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis~~
- ~~Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS~~
- **Technical assumptions/methodology/data/analysis in the 2012 RTP/SCS**
- **Potential changes in the 2016 RTP/SCS to technical assumptions/methodology/data/analysis**
- **Updated forecast/land use distribution for 2016 RTP/SCS**

- **Updated SCS for 2016 RTP/SCS**
- **Overview of Active Transportation Strategy in the 2012 RTP/SCS**
- **Progress update on Active Transportation Strategy and emerging issues and their implications to the 2016 RTP/SCS**
-

February 2015

- Program EIR
- Public Participation Plan
- Overview of Transit Strategy in the 2012 RTP/SCS
- Progress update on the Transit Strategy and emerging issues/challenges that could influence the 2016 RTP/SCS

March 2015

- Overview of Highway/HOV/HOT/Toll Roads/Express Lanes proposed in the 2012 RTP/SCS with a focus on technical assumptions/analysis
- Progress update and emerging issues related to highways/HOV/HOT/Toll Roads/Express Lanes
- **Asset Management and Infrastructure Performance Measures**
- **Overview of Goods Movement (GM) Strategy in the 2012 RTP/SCS with a focus on technical assumptions (including technology assumptions)/data/analysis**
- **Progress update on the GM Strategy with focus on emerging issues and implications on the 2016 RTP/SCS**

May 2015

- Progress update on the current status of the Aviation component of the 2012 RTP/SCS and emerging issues that may influence the 2016 RTP/SCS
- Overview of TDM/TSM in the 2012 RTP/SCS, including underlying assumptions
- Progress status of TDM/TSM and emerging issues

June 2015

- Progress update on 2012 RTP/SCS revenue/cost
- Potential changes/focus areas and emerging issues in the 2016 RTP/SCS

July 2015

- Transportation Conformity

August 2015

- Finance Plan for 2016 RTP/SCS
- Updated GM Strategy for the 2016 RTP/SCS
- Updated Transit Strategy for the 2016 RTP/SCS
- Updated Active Transportation Strategy for the 2016 RTP/SCS
- Highways Improvement Element in the 2016 RTP/SCS

- Updated Aviation Element of the 2016 RTP/SCS
- Updated TDM/TSM Element for the 2016 RTP/SCS

Note: The Agenda Outlook is intended as a reference for TWG and is subject to change as needed and appropriate as things progress.

Legend:

Light Grey Font: Items already presented

Regular Grey Font: Future Agenda Items

Bold Face Fonts: New or revised Agenda Items

SOUTHERN CALIFORNIA
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Item 3 Attachment:

SCAG Clean Cities Coalition/Alternative Fuel Vehicle Program/
Alternative Mobility Map Research

SCAG Clean Cities Coalition, Alternative Fuel Vehicle Program, and Alternative Mobility Map research

Technical Working Group

Thursday, November 20, 2014

Marco Anderson, SCAG

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

SCAG Clean Cities Coalition

The SCAG (Southern California) Clean Cities Coalition includes parts of Los Angeles County, Orange, San Bernardino, Ventura and Imperial

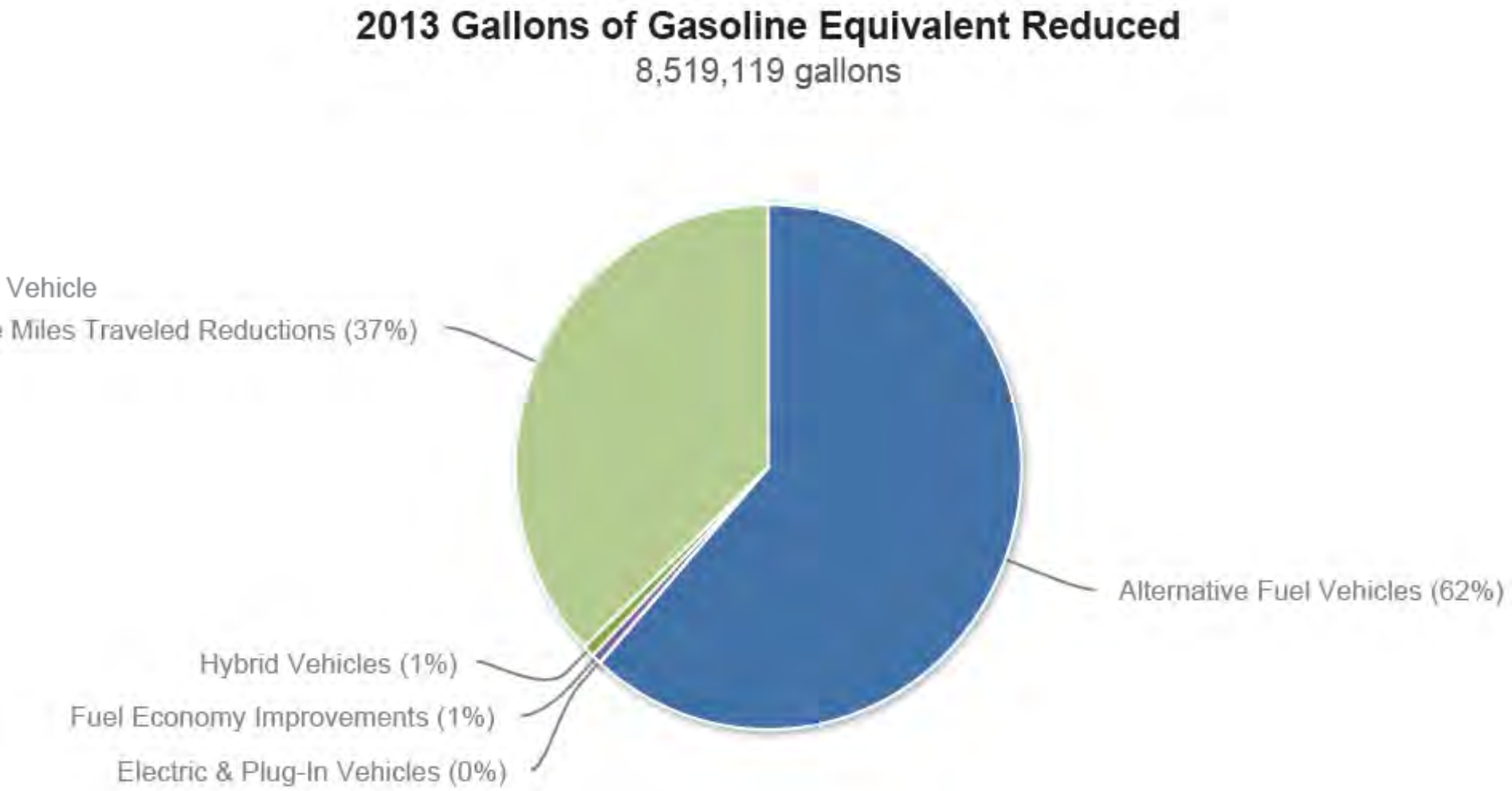
The Coalition was originally formed (designated) in 1996

Coalition Structure:

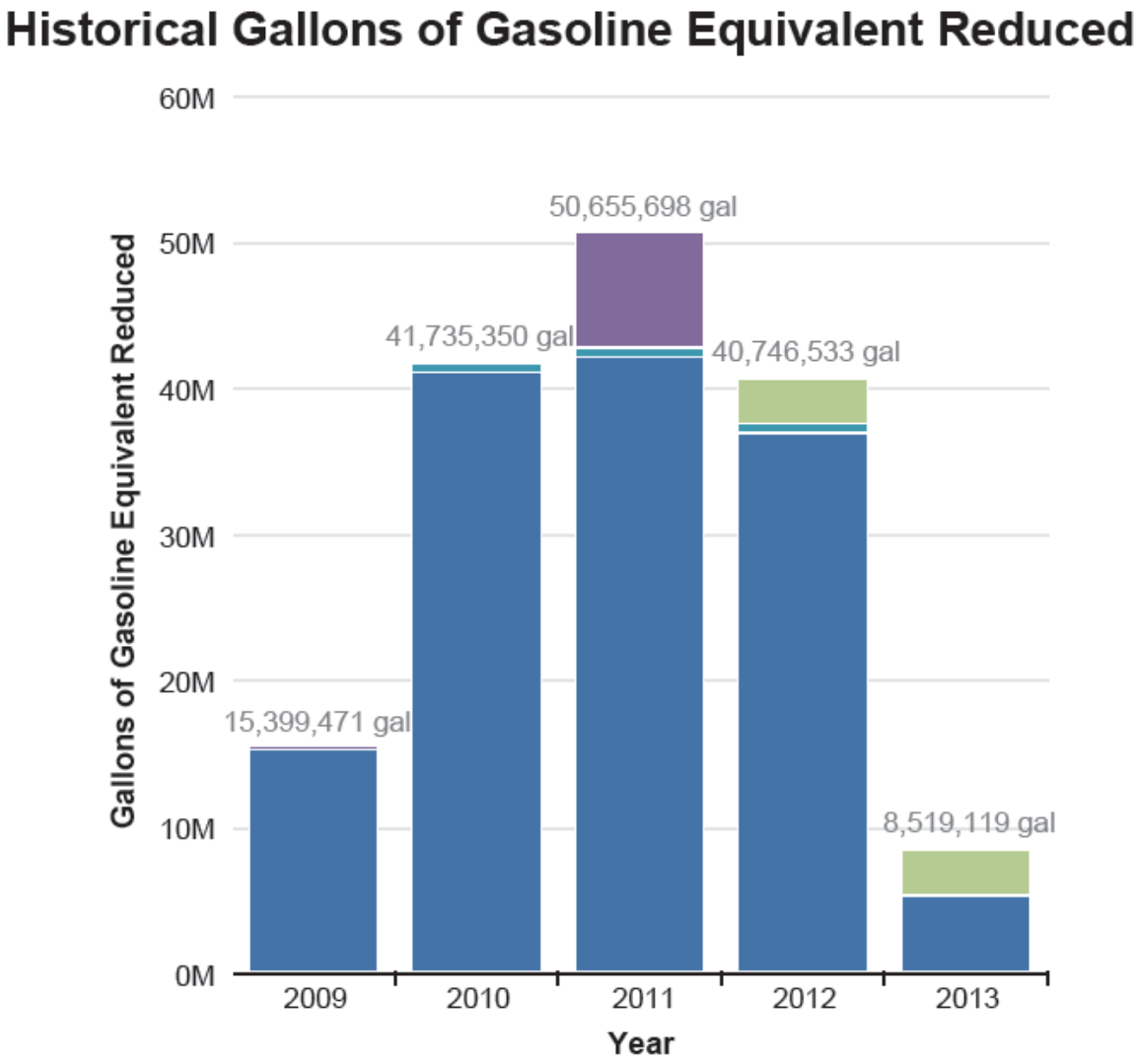
- Clean Cities is SCAG program component (since 2010)
- The Coalition reports to SCAG's Energy & Environment Policy Committee & RTTAC
- 200 + stakeholders/ members

- Coalition funded through DOE program contract and available CEC Grant Funding

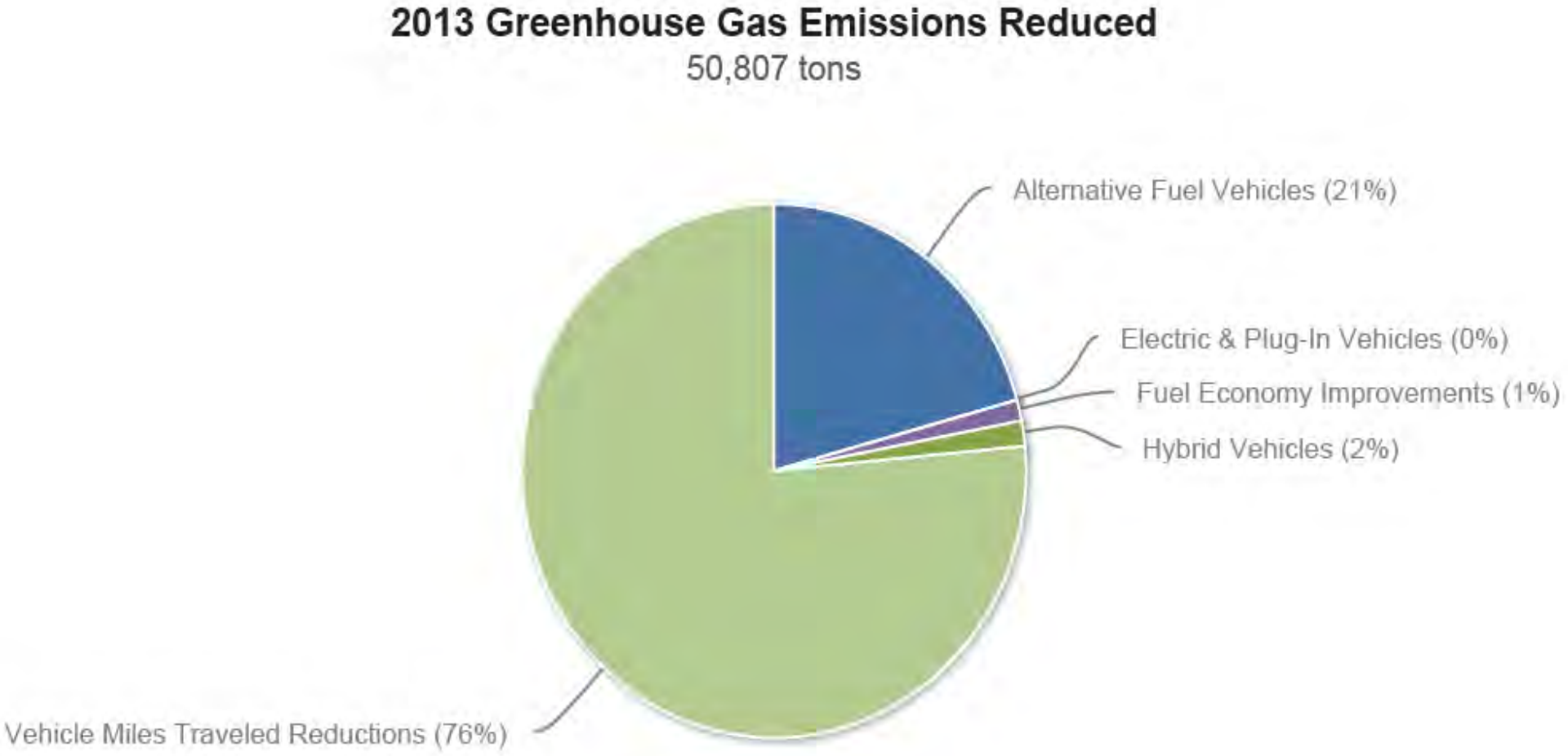
2013 Gallons of Gasoline Equivalent (GGe) Reductions



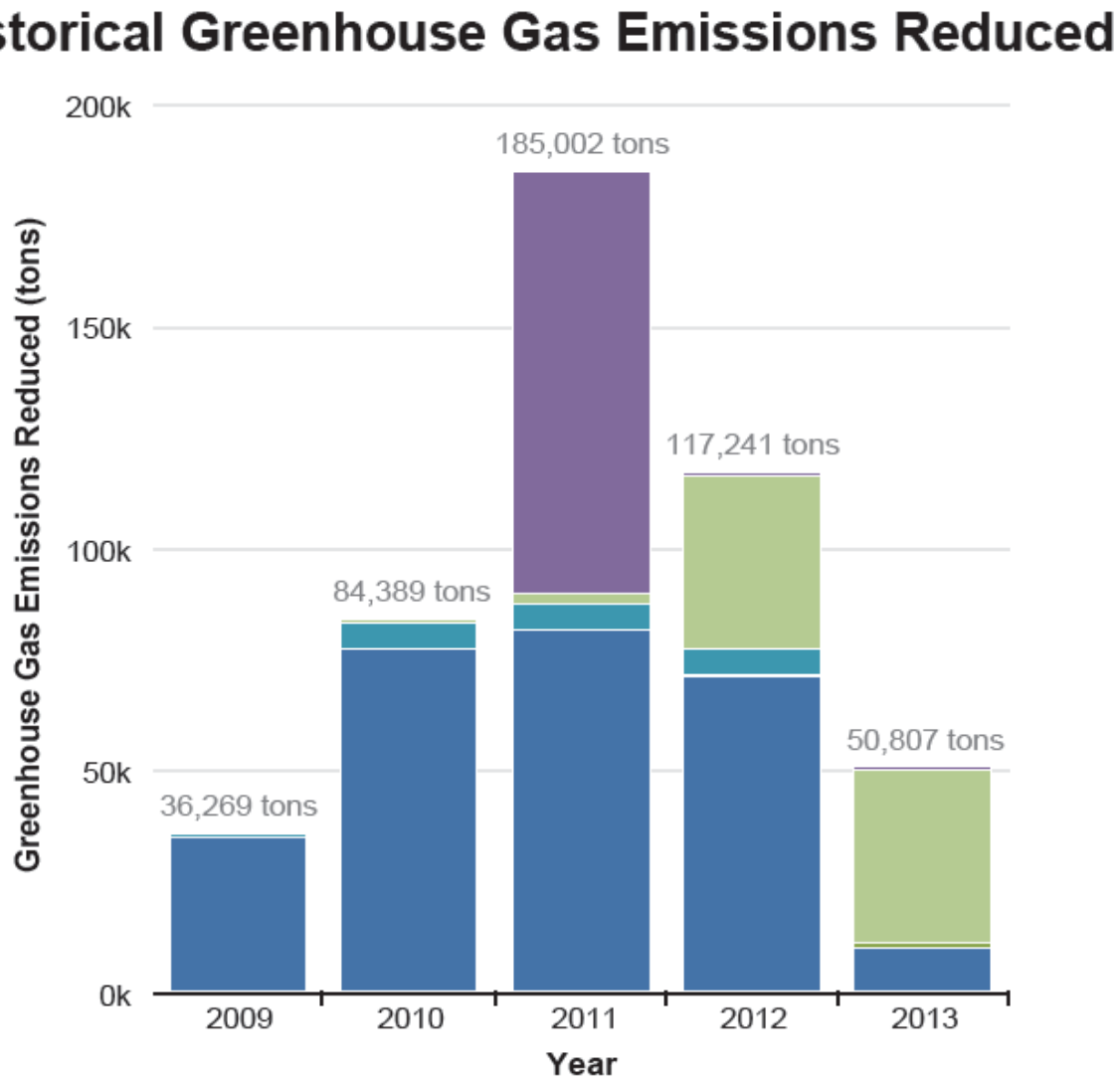
Gallons of Gasoline Equivalent (GGe) Reductions



2013 Greenhouse Gas Emissions (GHG) Reductions



Greenhouse Gas Emissions (GHG) Reductions



Next Steps

- 2014 Survey – Solicitation begins January 2015 Survey Complete March 2015
- Upcoming Coalition Activities
  - Managing Mixed Fuel Fleets Webinar
  - Renewable Natural Gas Briefings
- One-on-One Stakeholder Interviews
  - Funding opportunities
  - Information distribution
  - Additional input?
  - Questions?

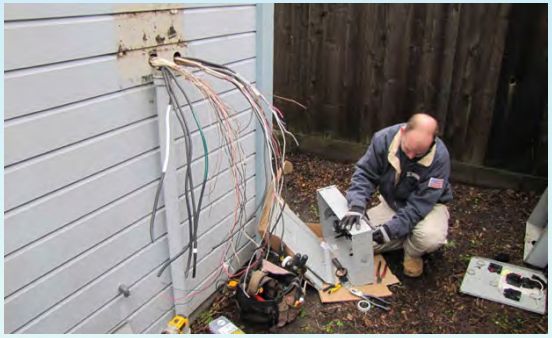
PEV Plan Recommendations

Local Agency Focus

- Workplace Charging
  - Employer Outreach
  - Pre-Connection Commitments
- Multi-Family Buildings
  - Demonstration Projects
- Retail Fast Charging
  - Parking Issues

Local Agency Recommendations

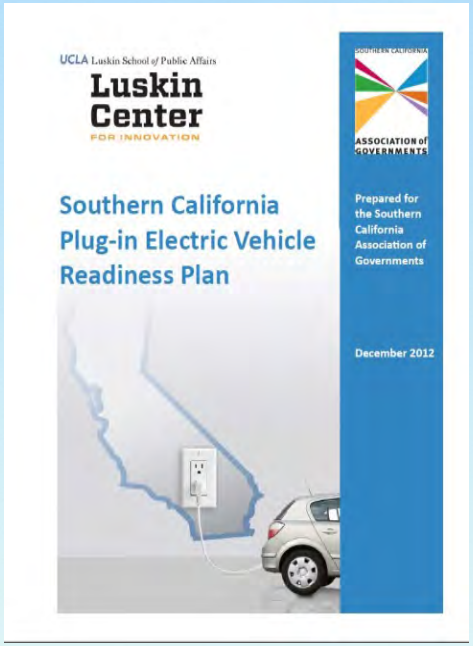
- General Outreach and Awareness
  - PEV Events, Ride-&-Drives,
- Consumer Friendly Installation Permits
  - Model Ordinances, Zoning Changes,
    Streamlined On-line Permits
- Targeted Outreach to Audiences
  - Employers, Building Owners, PEV Owners
- Direct Participation in Pilot Projects
  - Multi-Family Dwelling Unit Installation to understand policy issues



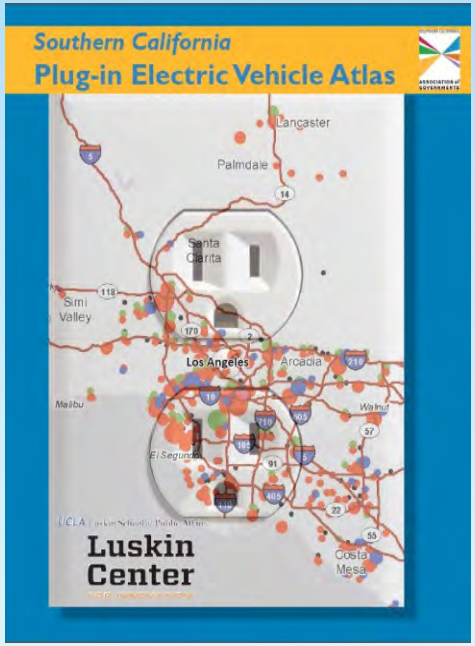
Regional PEV Resources

SCAG Funded Products and Resources available:

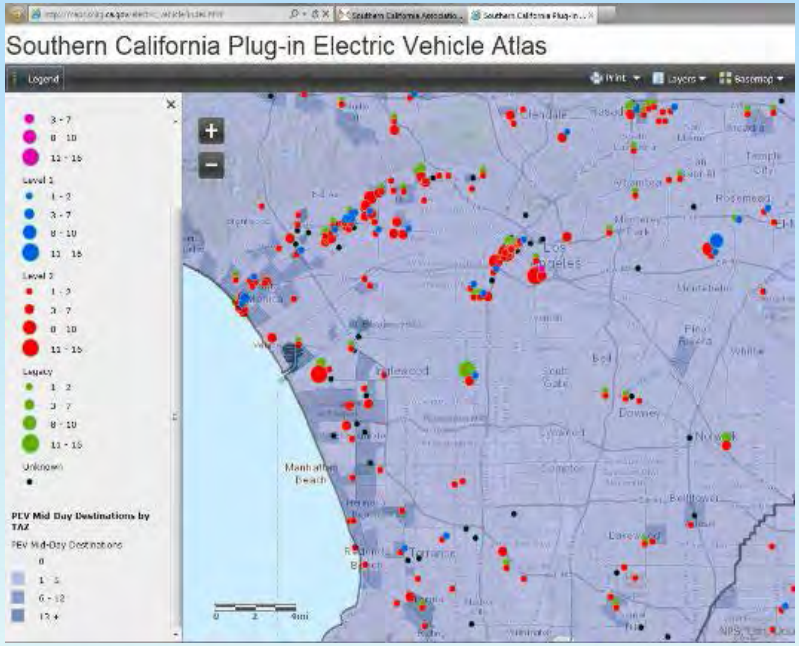
www.scag.ca.gov/programs/Pages/RegionalElectric.aspx



SCAG PEV Readiness Plan



SCAG PEV Readiness Atlas



SCAG Interactive PEV Readiness Atlas

Regional NEV/Alt Mobility Friendliness

- NEVs
- Urban Mobility Platforms
- eBikes
- Car Sharing
- Travel Planning Apps
- Fully Autonomous Vehicles

Polaris GEMs

Renault Twizy

Madsen Cargo eBike

Car 2 Go Car Share Network

Google Self Driving Prius

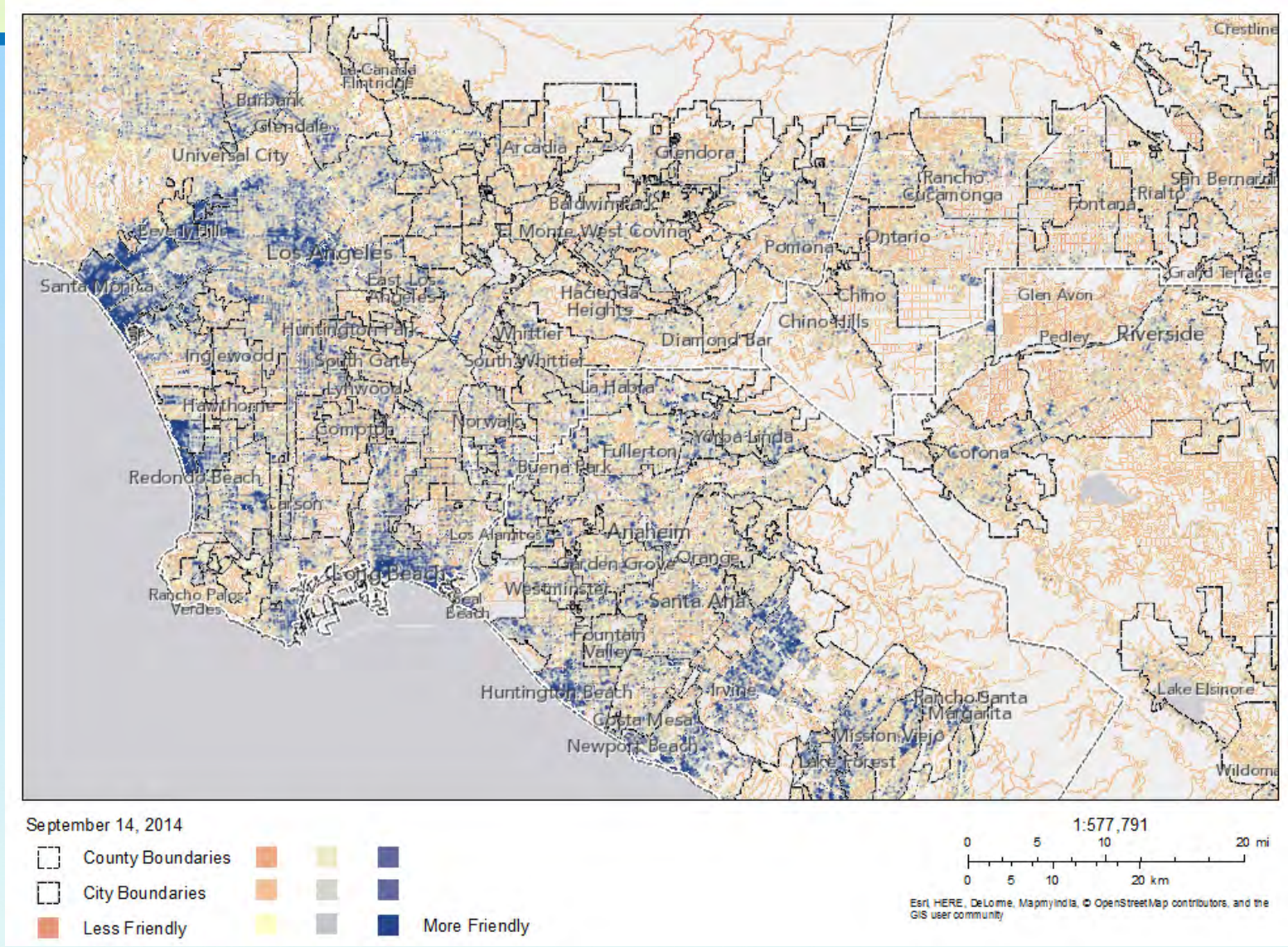
Google Self-driving Prototype

Regional NEV/Alt Mobility Friendliness

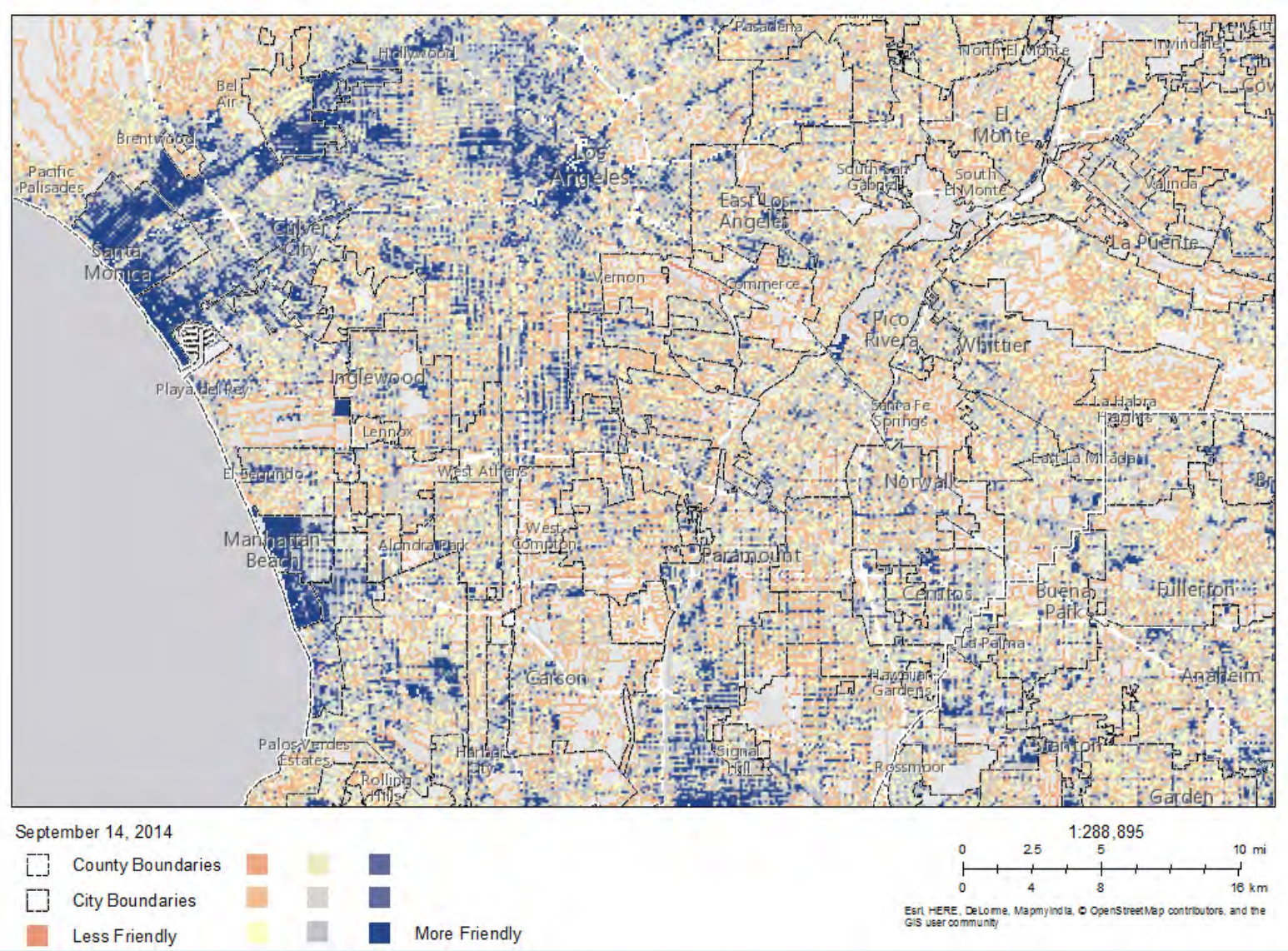
Index comprised of eight different factors

1. Roadway Speed (actual NOT posted)
2. Average Roadway Class
3. Intersection Density
4. Household Density
5. Employment Density
6. Population Density
7. Retail Employment Density
8. Density of EV Registrations

Regional NEV/Alt Mobility Friendliness



Regional NEV/Alt Mobility Friendliness



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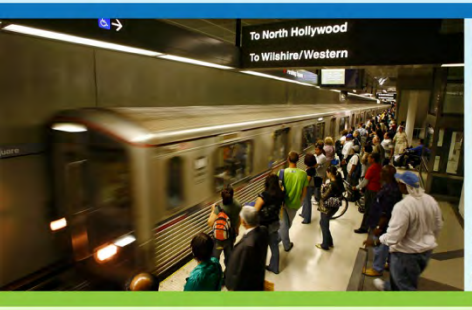



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Item 4 Attachment:

2016 RTP/SCS Schedule

DRAFT Critical Technical, Joint Policy Committees, Policy Committees, and Regional Council Meetings for the Development of the 2016 RTP/SCS
Updated 12.04.14

January- March 2015	**Technical Working Group** Review 2012 RTP/SCS Implementation Progress Report. Provide input on draft Baseline Scenarios, approaches to draft Program Environmental Impact Report , emerging themes, and performance measures.
February/ March 2015	**Joint Policy Committee Meeting - INFORMATION** Review 2012 RTP/SCS Implementation Progress Report. Discuss Framework for the development of the draft 2016 RTP/SCS and approaches to draft Program Environmental Impact Report.
March 2015	**Stakeholder Briefings** Share and solicit feedback on draft Scenarios and other relevant topic areas.
March/ April 2015	**Individual Policy Committees -INFORMATION** Review and provide feedback on relevant topic areas.
April 2015	**Technical Working Group** Review Scenarios and Framework for SB 375 Workshops.
May 2015	**General Assembly** Kick off workshop to review and comment on proposed draft 2016 RTP/SCS Scenarios to be used for the SB 375 Workshops.
May/June 2015	**Technical Working Group** Review 2016 RTP/SCS Alternative Scenarios feedback from General Assembly Workshop and public outreach.
May - July 2015	Public Outreach/Workshops (required by SB 375)
June/July 2015	**Joint Policy Committee Meeting - INFORMATION** Review input/feedback received through the public workshops and seek policy guidance for incorporating/integrating input/feedback into draft 2016 RTP/SCS.
August 2015	**Technical Working Group** Review and comment on draft 2016 RTP/SCS and draft Program Environmental Impact Report.
September 2015	**Joint Policy Committee Meeting - INFORMATION** Review and comment on draft 2016 RTP/SCS and draft Program Environmental Impact Report.
October 2015	**Regional Council Meeting- ACTION** Approve release of draft 2016 RTP/SCS and draft Program Environmental Impact Report.
October 2015 - February 2016	Public Outreach and Comment Period (Oct. - Dec.) Responses to public comments prepared (Jan. - Feb.)
February 2016	**Technical Working Group** Review 2016 RTP/SCS and Proposed Final Program Environmental Impact Report.
March 2016	**Individual Policy Committees -ACTION** Review Proposed Final Program Environmental Impact Report. Recommend adoption of 2016 RTP/SCS.
March 2016	**Joint Policy Committee Meeting - ACTION** Review Proposed Final Program Environmental Impact Report. Recommend adoption of 2016 RTP/SCS.
April 2016	**Regional Council - ACTION** Certification of Proposed Final Program Environmental Impact Report. Adoption of 2016 RTP/SCS.
June 2016	**FHWA/FTA certifies conformity on 2016 RTP/SCS.**
	CARB evaluates and approves SCAG's proposed GHG targets.

Notes:

* Schedule subject to change as needed and appropriate.
* Acronyms include (in order of appearance): Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), California Air Resources Board (CARB), Southern California Association of Governments (SCAG), and Greenhouse Gases (GHG).

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Item 5 Attachment:

Research and Analysis for RTP/SCS Strategies

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Network	**Y**	**L-M**	**Y**					
Highway/Mixed Flow - Gap closure - Hotspots/Bottleneck relief	Y	L-M	Y	TM			Network Specification	
HOV	Y	L-M	Y	TM			Network Specification	
Hot Lanes	Y	L-M	Y	TM			Network & Pricing Specification	
Toll Roads	Y	L-M	Y	TM			Network & Pricing Specification	
Truck lanes	Y	L-M	Y	TM			Network Specification	
Transit - Bus - Rail (Urban Rail, Commuter Rail)	Y	L-M	Y	TM			Network & Operation Specification	
Transit Flexible Service	N	tbd	tbd		tbd			
Park & Ride	Y	L-M	Y	TM			P&R Location & Capacity	
Intercity passenger rail - High Speed Rail - Amtrak/Pacific Surfliner	Y	L-M	Y	TM			Network & Operation Specification	
Others: Regionwide system integration/connectivity	Y	L-M	Y	TM			Network Specification	
TSM								
Route optimization for passenger and goods movement	N	tbd	N		OM		Research from UPS, FedEx for goods movement and delivery. Can apply similar impacts to passenger travel from traffic information adjustment to route optimization	Potential 1% a year improvement in fuel efficiency due to idling reduction and route optimization for service/delivery fleet (UPS)
ITS (Roadway)	Y	L-M	tbd		OM		Assumptions/research	5% capacity expansion at selected

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Traffic signal synchronization	Y	L-M	tbd	TM			Intersection Location & Type of Control	selected locations/corridors. (ARB Research suggest a 10% increase in capacity will result in only 0.41% reduction in VMT, and most likely will increase VMT due to mobility enhancement)
Aux lanes/Left turn lanes/signals	Y	L-M	tbd	TM			Network & Operation Specification	
Ramp metering	Y	L-M	tbd	TM			Meter Location & Timing Schedule	
Traffic incident management	Y	L-M	tbd		OM		Research citation/assumptions	Will result in 3-5% net reduction in delay due to system operation treatments related to accidents management (TAMU Urban Mobility Study)
Traffic information/GPS Transit/Open Transit Data - Intelligent parking	N	L-M	tbd		OM			Parking price: 10% increase result in 0.07% reduction in VMT; Traffic information/GPS and route optimization will increase fuel efficiency by 1%-3%;
TDM								
Work at home	Y	M-H	tbd			COMBO	1. % Increase from Base Year/Baseline 2. RTP Policy/Program/ Funding Assessment as related to % Increase	

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Telecommuting	Y	M-H	tbd			COMBO	1. % Increase from Base Year/Baseline 2. RTP Policy/Program/ Funding Assessment as related to % Increase	Census data showed 1997: 6.96% 2010: 9.44%
Flexible/alternative work schedule	Y	M-H	tbd			COMBO	1. Level of Flexibility and Effectiveness by Job Industry 2. RTP Policy/Program/ Funding Assessment as related to % Increase	
Bus pool/ Van pool/Car pool	Y	L-M	tbd			COMBO	1. Service, Trip Reductions, Occupancy 2. RTP Policy/Program/ Funding Assessment as related to trip reduction, 3. Not sensitive to program and marketing	Van pool: Use historical growth rate (1990-2010), extrapolate to 2020, 2035 and 2040; Car pool: Assume 2% annual growth rate; Bus pool: School bus? Plan targets: % goal of all school trips; Need program funding assumptions (examples are provided from SANDAG)
Special centers - Theme park - Ball park - Shopping/Outlet Centers - Convention center - Airport	Y	L-M	tbd			COMBO	Special center trip matrices by vehicle type and occupancy	Effectiveness of Indirect Sources Rules

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
- Zip cars, Jitneys, Car-share -	N	L-M	N		OM		9-13 vehicles are taken off of the road for each car sharing vehicle (SCAG White Paper)	5% regional participation will result in 1.5% reduction in VMT (ARB Research Team)--Need to establish SCAG region participation rates, and projections into future
Non-Motorized								
Bike-share	N	L-M	N		OM		Conduct new survey from companies providing and establishing the bike-share facility and locations	Integrate with overall bike strategies
First mile/last mile strategies Pedestrian/bike network -	Y	L-M	tbd			COMBO	Survey data, inventory, sidewalk network- both existing and future, Could increase ridership by 1-4% in transit areas	A 1% increase in commute bicycle trip mode share with additional 1 mile of bicycle facilities/sm (Dill and Carr 2003).
Complete street	Y	L-M	tbd		OM		Survey data, inventory, sidewalk network- both existing and future, Could increase ridership by 1-4% in transit areas	1% increase in network will result in 0% to 0.19% increase in the walk trip

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Safe Route to School	Y	L-M	tbd		OM		Survey data, inventory, sidewalk network- both existing and future, Could increase ridership by 1-4% in transit areas	(% goal of safe route to school --walk trip) Can assume a 10 percent increase in walk/bike trips by 2020, a 20 percent increase by 2035, and a 25 percent increase by 2040
Facilities enabling the mode: Shower/change facilities, bike parking	Y	L-M	tbd		OM			Integrate with overall bike strategies
Pricing/Incentives								
Fuel price, auto operating costs	Y	M-H	Y	TM			MPO consensus based on fuel price survey, DOF/EIA Projections & assumptions on maintenance costs	10% increase result in -1.65% reduction in VMT
VMT fee	Y	M-H	N	TM			VMT Fee per Mile	Similar to Gas Tax: 10% increase result in 1.5-2% reduction in VMT
Congestion pricing, HOT Lane, Express Lane	Y	M-H	tbd	TM			Daily pricing schedule and location	Similar to Gas Tax: 10% increase result in 1.5-2% reduction in VMT
Cordon pricing	N	tbd	N			COMBO	1. Daily pricing schedule and location 2. Trip adjustment matrices	tbd (Consultant study project)
Parking pricing	N	L-M	N	TM			Daily pricing schedule and location	Parking price: 10% increase result in 0.07% reduction in VMT;
Freight Fee/Charges	N	tbd	N			COMBO	1. Pricing schedule 2. Mode shift	Previous Container fee study

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Subsidy on transit - Adjust transit fare - Low income/Minority - Student	N	tbd	N			COMBO	1. Subsidy by fare type, by transit operator 2. Transit fare reimbursement by county by job type	30% transit fare subsidy will result in 1.65% reduction in VMT (Need translate into boarding increase and vehicle trip reductions)
VMT Based Insurance	N	tbd	N		OM		Pilot study in N Central Texas showed ~2.5%-5% VMT reductions from program participants. Brookings Institute study on CA showed 8% reduction in VMT, MIT study show MA could VMT reduction between 3-14%	~2.5%-5% VMT reductions from program participants, Minnesota study showed between 0.75%-0.9% VMT reductions from program participants, Brookings Institute study showed 8% VMT reductions, MIT study show VMT reduction between 3-14%
Goods movement/Freight								
Freight corridor - Locomotive	Y	L-M	tbd		OM		1) Train operation data, 2) Locolmotive emission data, 3) vehicle number and idling time with grade crossing frequency and locations	
Freight corridor - Truck lane	Y	L-M	N	TM			Network Specification	
Goods Movement Technology, Freight corridor - Clean technology	Y	L-M	N		OM		Train operation and localmotives emission factors	
Air (Airport)--Special center	Y	M-H	N			COMBO	Airport model and trip matrices by vehicle type and occupancy	

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List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Vessel (Port)--Special center	Y	M-H	N			COMBO	Port model and trip table by vehicle type	
Regional Aviation System								
Ground access	Y	M-H	N			COMBO	Airport model and trip table by occupancy	
Land Use/SED								
HQTA	Y	L-M	Y	TM/GFM/ SPM or SM		COMBO	1. Land Use Density/Intensity 2. SCS & Transit	SCAGupdated Sustainability Model (previously the NHTS Model), Combined with All strategies, including transit, active transportation, 1st/last mile, complete street will result in 2-3% reduction of VMT. Tools include: SPM, Sustainability Model, GFM,
Focused/Preferred/Priority Development Area (FDA/PDA) - Rail station buffers, 1/4, ½ mile - Bus station Buffers, 1/4, ½ mile	Y	L-M	Y	TM/GFM/ SPM or SM		COMBO	1. Land Use Density/Intensity 2. SCS & Transit	
Complete Community Development	N	tbd	N	GFM/SPM or SM		COMBO	1. Land Use Density/Intensity 2. SCS	
J/H, J/W balance and match - Job center approach - Residential community/center approach - Clustering of uses/destinations	N	tbd	Y	TM/GFM/ SPM or SM		COMBO	1. Land Use Density/Intensity 2. SCS	
Warehousing location/Optimization of delivery	Y	tbd	tbd	TM		COMBO	Warehouse Location, Size, Operation	Potential 1% a year improvement in fuel efficiency due to idling reduction and route optimization for service/delivery fleet (UPS)
Parking management	N	tbd	N		OM			Parking price: 10% increase result in 0.07% reduction in VMT;

List of Potential RTP/SCS Strategies

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	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Land/Zoning to facilitate - Complete Street - 1st/last mile - Safe route to school - Regional EV plug in/Charges	Y	L-M	Y		OM			Integrate as part of the suite of HQTA Stratagy (Enabling)
Regulation/Financial Related: - GP Update - Permit assistance and streamlining - Lot assembly - Financial assistance - Differential Development Impact Fees - CEQA incentives	Y	L-M	Y/tbd		OM			
Technology & Innovation								
Local/Community/Neighborhood Electric Vehicle (LEV/CEV/NEV)	Y	tbd	N			COMBO	1. Program effectiveness 2. Mode shift matrices	Work with 1) SBCOG to develop the projection, 2) Uber, 3) Mobility designer Dan Sturgues (abovecar@gmail.com)
- Electric Bike	N	tbd	N		OM	COMBO	market study	Treat as part of bike mode?
Transportation Network Companies (TNCs)	N	N/A	N	N/A	N/A	N/A	Types and inventory of TNCs: 1). Real time carpool matching, 2) Car sharing--Zip car/Car2go, bike share, 3) ATP--Rideshare Amigo; 4) Neighborhood/ community electric vehicles	Transportation net work companies are facilitators/enablers to establish platforms to match online transportation services users and peer suppliers. Treats as part of "infrastructures" for car sharing, bike sharing, and Uber/Lyft types of services

List of Potential RTP/SCS Strategies

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	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Regional PEV Alternative fuel vehicles -	N	M-H	Y/tbd			COMBO	1. US Projected Growth Curve from PEV plan (45.1% of CA) 2. Regional PEV Growth Curve 3. State-Wide Aspirational Assumptions 4. EMFAC Assumptions	Three scenarios: 2012-2025, use 25%, 40%, and Governor's initiative of 750,000 as cap, 2025-2040, use 15% annual compound growth rates. Land use: # of charge stations by 2025 (10x current level), by 2040 (20x current level)
Connected / Automated Vehicles - Passenger Vehicle Automation - Good Movement Vehicle Automation - Driverless car	N	tbd	N		OM		1. Auto manufacturers release dates 2. Market Penetration Projections	No capacity impacts with certainty have been reached yet. Suggest to simulate for 5%, 10%, 15% and 25% additional network capacity expansion and assess the impacts
Finance/Revenue/Costs								
Taxable sales - Internet taxation - Voter approval threshold - Expand tax base to cover services transactions	Y	M-H	Y/tbd		OM		Data from Census, BEA, state BOE,	As of 2012, the potential loss of taxable sales dedicated to transportation investment (1% at SCAG Region) from E-Commerce is estimated at $115 million/year
Gasoline tax - Index to inflation or construction costs	Y	M-H	Y/tbd		OM		Rules and Regulations	
PPP - Private/Foreign direct investment	N	tbd	N		OM		Rules and Regulations	
Regulatory reform/modernization - Speed up project delivery	Y	tbd	N		OM		CEQA Modernization	
Alternative fuel taxes - Natural gas, electricity to charge car, biofuels, etc.	Y	tbd	N		OM			

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Transportation impact fees	N	tbd	N		OM		Check with TLMA Riverside County	
Transportation/improvement assessment districts/ Enhanced Infrastructure Financial Districts (EIFD)	N	tbd	N		OM		Previous RDA Funding level could be used as reference case	SB628 "Enhanced Infrastructure Financing District"--requires only 55% vote
Others								
Open space/conservation plan: - Focused or priority conservation areas	Y	tbd	Y		OM		SCAG Open Space databse	
Climate action plans	N	tbd	Y/tbd		OM		Local jurisdiction implementation survey	
Commuter Benefits Ordiance	N	tbd	N/tbd		OM		Base year program participants and projections of program participants in the future	MTC used off model to assess the benefits in their RTP/SCS. MTC estimates the ordinance would achieve GHG emissions reductions of 0.1 percent per capita in 2020, and 0.3 percent per capita in 2035, compared to a 2005 baseline.
Accelerated fleet turnover/Clean vehicle fee bate	N	L-M	N		OM		Data from AQMD, ARB, etc.	MTC used off model to assess the benefits in their RTP/SCS.

List of Potential RTP/SCS Strategies

List of RTP/SCS Strategies	2012 RTP/SCS			Modeling			Analysis Methods	
	Policy Y/N	Quantified Low / Med / High / tbd	Performance Monitoring (Y /N / tbd)	Model	Off-Model	Combo	Data Needs	Sketch Methodology
Smart Driving or Eco-Driving	N	tbd	N		OM			1) Earlier driver assist models are currently being introduced, so a basic old model analysis, could combine model introduction rates, with market penetration accounting for increasing longevity of vehicles. 2) National Sustainable Transportation Center, 3) Potential 10% savings on fuel consumption given the same VMT, 4) Need to assess the abase year participation rate and assess projections in the future

Off Model Assumptions/Programs/Funding--Strategies Used by Major MPOs in the First Round of RTP/SCS

MTC	
Car sharing	MTC estimates its car sharing program will achieve a 2.6 percent per capita reduction in GHG emissions by 2020 and a 2.6 percent per capita reduction by 2035.
Vehicle buyback & PHEV	MTC estimates the program will reduce regional GHG emissions by 0.5 percent per capita from the 2005 baseline level by 2035. 1) program implementation beginning in 2020; 2) an additional 47,000 PEVs on Bay Area roads attributable to the program, split 50/50 between PHEVs and BEVs; 3) buyback vehicles are more than ten years old; and 4) incentive levels of $1,000 per PHEV and $2,000 per PEV.
Fleet turnover acceleration/clean vehicle fee bate	MTC estimates a program like this can provide regional GHG emission reduction benefits of 0.7 percent per capita from its 2005 baseline by 2035. 1) the feebate program is introduced at the regional-level in 2020; 2) there are no increases in fuel economy standards at the state- or national-level after 2025; 3) the Bay Area represents about 20 percent of California's new car market; 4) a $20 per CO2 grams/mile feebate rate; 5) as a result of the program, average CO2 emissions for new vehicles sold in the region is reduced 10 grams/mile in 2020 and 2.5 grams/mile in 2035; and 6) the program is revenue neutral with administrative costs covered by MTC.
Commuter benefit ordiance	MTC estimates the ordinance would achieve GHG emissions reductions of 0.1 percent per capita in 2020, and 0.3 percent per capita in 2035, compared to a 2005 baseline.
Carpool/Van Pool	MTC estimated that the vanpooling program will reduce regional GHG emissions by 0.3 percent per capita from the 2005 baseline by 2020, and 0.4 percent per capita by 2035.
Eco driving	MTC estimates its smart driving program will achieve a 1.8 percent per capita GHG emissions reduction from the 2005 baseline in 2020 and a 1.5 percent per capita reduction in 2035.
SACOG	
TDM **Work at Home** **TSM/ITS**	**Claiming a mid-range reduction of 1.42 percent for 2020, and a mid-range reduction of 2.62 percent for 2035.**
SANDAG	
Car/bus/vwn pool **ATP** **Safe route to school**	**Together, the estimated GHG emission reductions using the off-model tool accounted for approximately 0.8lbs per capita in 2020 and 1.3lbs per capita in 2035 of the targets. These reductions account for approximately 20 percent of the SCS GHG reductions in 2020 and 40 percent in 2035.**
SCAG	
Land use/4D Model **Work at home/Telecommuting**	**Developed the NHTS Model to estimated VMT impact from land use at sub-TAZ level** **Based on Census statistics, develop the estimate of work trip reductions**

EXAMPLES OF HOW TO SUPPORT MODELING WITH PROGRAM/FUNDING

Table 11-1 includes the proposed level of investment for each TSM program by phasing period for the Revenue Constrained Scenarios.

TSM Core Program Costs (2015-2050)	Scenarios 1 and 2 and Blended Scenario			
	2015-2020	2021-2035	2036-2050	TOTAL
Multi-Modal Integration and Performance-Based Management	$32	$16	$26	$74
Traveler Information	$11	$17	$17	$45
Arterial Management	$20	$202	$45	$267
Freeway Management	$15	$42	$19	$76
Transit Management - Bus	$26	$26	$0	$52
Transit Management - Rail	$16	$16	$10	$42
Electronic Payment Systems	$56	$16	$56	$128
Subtotal	$176	$335	$173	**$684**
New TSM Element Costs (2015-2050)	**Blended Scenario**			
	2015-2020	2021-2035	2036-2050	TOTAL
Vehicle Automation	$5	$20	$0	$25
Advanced Transit Technology	$20	$15	$15	$50
Universal Transportation Account	$0	$10	$0	$10
Transit Infrastructure Electrification	$0	$15	$10	$25
Subtotal	$25	$60	$25	**$110**
Total Cost	$201	$395	$198	**$794**

Figure 13-1 Mobility Hub Concept

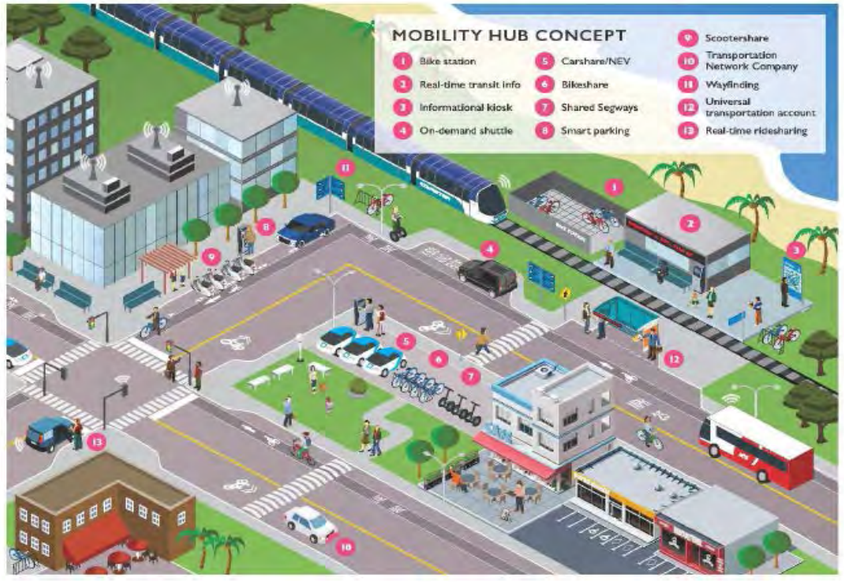


Table 12-1
TDM Program: Proposed Level of Investment for the Blended Scenario
(in millions, 2014 dollars)

TDM Core Program (2015-2050)	Scenario 1				Scenario 2				Blended Scenario			
	2020	2035	2050	TOTAL	2020	2035	2050	TOTAL	2020	2035	2050	TOTAL
Regional Vanpool Program	$32	$100	$150	$282	$32	$100	$150	$282	$32	$100	$150	$282
Employer Services and Outreach	$22	$52	$52	$126	$22	$52	$52	$126	$22	$52	$52	$126
Commuter Services and Bike Program	$6	$10	$9	$25	$6	$10	$9	$25	$6	$10	$9	$25
Program Administration	$9	$20	$19	$48	$9	$20	$19	$48	$9	$20	$19	$48
Subtotal	$69	$182	$230	**$481**	$69	$182	$230	**$481**	$69	$182	$230	**$481**
New TDM Elements (2015-2050)	**Scenario 1**				**Scenario 2**				**Blended Scenario**			
	2020	2035	2050	TOTAL	2020	2035	2050	TOTAL	2020	2035	2050	TOTAL
Mobility Hubs	$41	$133	$0	$174	$32	$175	$54	$261	$52	$206	$0	$258
Active Traffic & Demand Management	$31	$111	$20	$162	$31	$121	$20	$172	$30	$129	$16	$175
Shared-Use Mobility	$6	$12	$0	$18	$12	$25	$0	$37	$12	$25	$0	$37
Subtotal	$78	$256	$20	**$354**	$75	$321	$74	**$470**	$94	$360	$16	**$470**
Total Cost	$147	$438	$250	**$835**	$144	$503	$304	**$951**	$163	$542	$246	**$951**

Active Transportation Program

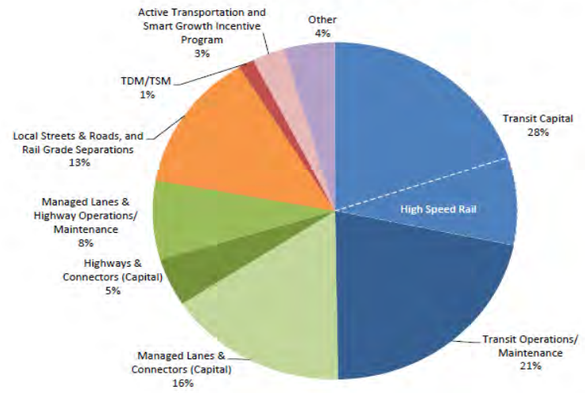
Regional Bike Plan Network Projects (includes $200M Early Action Program)	$809
Safe Routes To Transit at new transit station areas	$1,025
Local bike projects	$728
Local pedestrian/safety/traffic calming projects	$180
Regional bicycle and pedestrian programs	$30
Regional Safe Routes To School implementation	$77
Total (in millions, 2014 dollars)	$2,849

Table 1 – San Diego Forward: The Regional Plan
Revenue Constrained Scenarios
Estimated SB 375 Greenhouse Gas Emissions Reductions for Cars and Light Trucks

	2020			2035		
	Scenario 1	Scenario 2	Blended Scenario	Scenario 1	Scenario 2	Blended Scenario
Per capita CO_2 reductions from 2005	19 percent	19 percent	19 percent	22 percent	22 percent	22 percent
SB 375 Targets	7 percent			13 percent		

Source: SANDAG and CARB

Figure 3 – Blended Scenario: Proposed Investments ($204 Billion in Year of Expenditure)



Source: SANDAG Board of Directors Agenda, Various Dates.

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Item 6 Attachment:

SB 743 Guidelines Development

SOUTHERN CALIFORNIA
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November 21, 2014

Mr. Christopher Calfee, Senior Counsel
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

RE: Comments on the "Preliminary Discussion Draft for the SB 743 CEQA Guidelines Update"

Dear Mr. Calfee:

The Southern California Association of Governments (SCAG) would like to express our appreciation for the efforts put forth by the Office of Planning and Research (OPR) staff in developing the draft California Environmental Quality Act (CEQA) Guidelines Update, pursuant to SB 743 and thank you for the opportunity to provide comments.

As the Metropolitan Planning Organization, representing six counties and 191 cities, SCAG is responsible for implementing SB 375 in our region. In April 2012, SCAG's Regional Council adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, a transformational plan for Southern California. Since that time the Regional Council has made expediting the implementation of this plan a top priory and modernizing CEQA is one of many tools needed to achieve this goal. However, as reflected in comments from our many members, partners and stakeholders in our region, the proposal in the current Preliminary Discussion Draft, may have unintended consequences, increasing burdens to our member jurisdictions and delaying project implementation.

SCAG recognizes the importance that SB 743 could provide for effective implementation of SB 375. The new exemption created by SB 743 for certain projects that are consistent with an adopted Specific Plan, and the elimination of the need to evaluate aesthetic and parking impacts of a project, in some circumstances, will further the objectives of SB 375. Similarly, the development of a new metric, if providing flexibility and accounts for the diversity of our region, could also facilitate SCS implementation to promote the reduction of greenhouse gases and the development of multi-modal networks.

OPR's extensive outreach efforts, which most recently included a well-attended stakeholder meeting at the SCAG offices on October 28, 2014, provided our stakeholders the opportunity to gain a better understanding of the Preliminary Discussion Draft and to offer timely and meaningful input. We appreciate the responsiveness of OPR staff to hear and engage our stakeholders in meaningful discussions. However, there have been many concerns raised by our member jurisdictions that the Guidelines update could have unintended consequences.

Below is a summary of major concerns raised by our stakeholders:

- Timing of Implementation
  - Need for pilot/case studies prior to full implementation
  - Different timeframes for implementation should be considered for TPAs (Transit Priority Areas) and non-TPA areas
  - Provide further guidance including flexibility on new metric(s) other than vehicle miles traveled (VMT) for areas outside the TPAs

- Thresholds
  - Should be at discretion of the lead agency
  - Regional average may not be the most suitable baseline in all cases/areas

- Added Burden/Litigation Risk
  - Presumptive mitigation

Based on SCAG staff's review of OPR's "Preliminary Discussion Draft for the SB 743 CEQA Guidelines Update", as well as the comments from of our stakeholders, we recommend the following:

Timing of Implementation

1. **Pursue a case study approach within selected TPAs to better inform the Guidelines development.**

   Currently, there is a lack of experience in applying VMT-based metrics for transportation impact analysis at the project level. The case study approach will establish a solid base of empirical knowledge and best practices prior to the implementation of the Guidelines within TPAs. The results of these case studies will be an excellent learning opportunity to further inform the draft Guidelines prior to full implementation. We appreciate OPR staff's acknowledgment of the likely benefits of such an approach. In addition, we would also suggest that results of implementing VMT-based metrics within TPAs should be evaluated after the first two to three years of implementation.

2. **Provide further guidance including flexibility for new metric(s) other than VMT for areas outside the TPAs in a deliberative way.**

   While TPAs generally share some common characteristics, areas outside the TPAs have much wider diversity and complexity. Those non-TPA areas range from urban, suburban or rural areas. Accordingly, a single metric such as VMT-based may not be appropriate for all areas outside TPAs. We recommend OPR to provide guidance including flexibility on the new metric(s) for areas outside the TPAs in a deliberate way. Also additional case studies should be conducted for projects outside of TPAs, considering different development context, composition and scale, to inform the Guidelines development for projects outside the TPAs.

Thresholds

1. **Clarify that the specific threshold of significance shall be established at the discretion of the lead agencies.**

   The Preliminary Discussion Draft recommends using a regional average as the threshold of significance. While SB 743 requires OPR staff to provide guidance on setting the threshold, the CEQA Guidelines update should make it explicitly clear that the specific threshold of significance shall be established at the discretion of the lead agencies. We appreciate the fact that OPR staff acknowledged such during our stakeholders meetings and look forward to this clarification in the next version of the Draft Guidelines.

Added Burden/Litigation Risk

1. **Provide guidance on mitigation measures in a different format.**

   SCAG staff recommends removing from the proposed Guideline Update the list of potential mitigation measures and project alternatives. Further, the VMT-based approach may significantly broaden the scope of potential mitigation measures from those used under the LOS (Level of Service) -based approach which tends to focus narrowly on roadway widening improvements. Many potential mitigation measures under the VMT-based approach are not well understood as to their effectiveness. OPR should support additional studies to provide further guidance on the effectiveness of mitigation measures. Better understanding and documentation of the effectiveness of mitigation measures will also help to further reduce litigation risks for lead agencies and facilitate SB 743 implementation.

2. **Provide additional language to minimize unintended litigation risks for local governments.**

   For example, with the new VMT-based metrics, local governments may face litigation risks if they continue to assess traffic impact fees based on the LOS approach. OPR should provide additional language in the CEQA Guidelines Update to minimize those unintended litigation risks.

   SCAG looks forward to continuing to assist OPR in the development of the CEQA Guidelines Update pursuant to SB 743 to ensure that the update does not create undue burdens to our member jurisdictions or delays in project implementation. Please keep us apprised of the status of this initiative, and let us know of any means by which we may be able to further assist OPR staff, including providing assistance in conducting case studies within the SCAG region.

If you have any questions, please contact Ms. Huasha Liu, Director, Land Use and Environmental Planning, at (213) 236-1838.

Regards,

Hasan Ikhrata
Executive Director