

SOUTHERN CALIFORNIA



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GOVERNMENTS**

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MEETING OF THE

ENERGY AND ENVIRONMENT COMMITTEE

PLEASE NOTE TIME

***Thursday, November 1, 2012
10:00 a.m. – 12:00 p.m.***

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

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Deby Salcido at (213) 236-1993 or via email salcido@scag.ca.gov

Agendas & Minutes for the Energy and Environment Committee are also available at: www.scag.ca.gov/committees/eec.htm

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Energy and Environment Committee
November 2012

Members

Representing

Chair*	1. Hon. Cheryl Viegas-Walker	El Centro	District 1
Vice-Chair*	2. Hon. James Johnson	Long Beach	District 30
	* 3. Hon. Sylvia Ballin	San Fernando	District 67
	* 4. Hon. Lisa Bartlett	Dana Point	TCA
	5. Hon. Denis Bertone	San Dimas	SGVCOG
	6. Hon. Brian Brennan	Ventura	VCOG
	* 7. Hon. Margaret Clark	Rosemead	District 32
	8. Hon. Jeff Duclos	Hermosa Beach	SBCCOG
	9. Hon. Jordan Ehrenkranz	Canyon Lake	WRCOG
	* 10. Hon. Mitchell Englander	Los Angeles	District 59
	11. Hon. Larry Forester	Signal Hill	Gateway Cities
	* 12. Hon. David Gafin	Downey	District 25
	* 13. Hon. Ed Graham	Chino Hills	District 10
	* 14. Hon. Keith Hanks	Azusa	District 33
	15. Hon. Phil Luebben	Cypress	OCCOG
	16. Hon. Rafi Manoukian	Glendale	SFVCOG
	17. Hon. Thomas Martin	Maywood	Gateway Cities
	* 18. Hon. Judy Mitchell	Rolling Hills Estates	District 40
	19. Hon. Sam Pedroza	Claremont	SGVCOG
	20. Hon. Jeffrey Prang	West Hollywood	WSCCOG
	* 21. Hon. Lupe Ramos Watson	Indio	District 66
	22. Hon. Edward Scott	Rialto	SANBAG
	* 23. Hon. Jack Terrazas		Imperial County
	24. Hon. Mark Waldman	La Palma	OCCOG
	25. Hon. Diane Williams	Rancho Cucamonga	SANBAG
	26. Hon. Edward Wilson	Signal Hill	Gateway Cities
	* 27. Hon. Dennis Zine	Los Angeles	District 50

* Regional Council Member

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ENERGY & ENVIRONMENT COMMITTEE

AGENDA

NOVEMBER 1, 2012

The Energy & Environment Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as Information or Action Items.

CALL TO ORDER & PLEDGE OF ALLEGIANCE

(Hon. Cheryl Viegas-Walker, Chair)

PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Committee, must fill out and present a speaker’s card to the Assistant prior to speaking. Comments will be limited to three (3) minutes. The Chair may limit the total time for all comments to twenty (20) minutes.

REVIEW AND PRIORITIZE AGENDA ITEMS

CONSENT CALENDAR

Time Page

Approval Items

- | | | |
|--|-------------------|----------|
| 1. <u>Minutes of the October 4, 2012 Meeting</u> | Attachment | 1 |
|--|-------------------|----------|

ACTION ITEMS

- | | | | |
|--|-------------------|-----------------|----------|
| 2. <u>2012 South Coast Air Quality Management Plan (AQMP) Appendix IV-C: Regional Transportation Strategy and Control Measures</u>
<i>(Huasha Liu, Director of Land Use and Environmental Planning)</i> | Attachment | 10 mins. | 8 |
|--|-------------------|-----------------|----------|

Recommended Action: Recommend that the RC adopt Resolution No. 12-544-1 approving Appendix IV-C for inclusion in the 2012 South Coast AQMP subject to the conclusion of the final comment period.

- | | | | |
|---|-------------------|----------------|-----------|
| 3. <u>Senate Bill 535 (de León) – California Global Warming Solutions Act of 2006; Greenhouse Gas Reduction (GHGR) Fund</u>
<i>(Huasha Liu, Director of Land Use and Environmental Planning)</i> | Attachment | 5 mins. | 73 |
|---|-------------------|----------------|-----------|

Recommended Action: Approve the Legislative/Communications and Membership Committee (LCMC) recommendation to authorize SCAG to work with stakeholders to help identify disadvantaged communities for the purposes of SB 535, and to support the inclusion of statewide transportation coalition principles, which include adopted regional sustainable communities strategies, into the project selection criteria and process for allocating cap and trade revenues.

ENERGY & ENVIRONMENT COMMITTEE

AGENDA

NOVEMBER 1, 2012

	<u>Time</u>	<u>Page</u>
<u>SUBCOMMITTEE REPORT</u>		
Public Health (PH) Subcommittee Update		
<u>INFORMATION ITEMS</u>		
4. <u>Oil Supply and Energy Myths</u> <i>(Dr. David Goodstein, Professor of Physics and Applied Physics, California Institute of Technology - Caltech)</i>	Attachment 30 mins.	78
5. <u>Climate Change Adaptation Study for Los Angeles County Update</u> <i>(Mr. Jonathan Parfrey, Executive Director, Climate Resolve)</i>	Attachment 15 mins.	85
6. <u>Proposal for Additional Funding Under Contract with the California Energy Commission to Support National Public Campaign Regarding Plug-In Electric Vehicles (PEVs)</u> <i>(Huasha Liu, Director of Land Use and Environmental Planning)</i>	Attachment 10 mins.	99

CHAIR'S REPORT

(Hon. Cheryl Viegas-Walker, Chair)

STAFF REPORT

(Jonathan Nadler, SCAG Staff)

FUTURE AGENDA ITEMS

Any Committee member or staff desiring to place items on a future agenda may make such a request.

ANNOUNCEMENTS

ADJOURNMENT

The Energy and Environment Committee (EEC) meeting for December is cancelled.

The Third Annual Economic Summit is scheduled for Thursday, December 6, 2012, 9:00 a.m. – 2:00 p.m., at the Westin Bonaventure Hotel, 404 South Figueroa Street, Los Angeles, CA 90071.

The next EEC meeting is scheduled for Thursday, January 3, 2013 at the SCAG Los Angeles Office.

Energy and Environment Committee
of the
Southern California Association of Governments
October 4, 2012

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE ENERGY AND ENVIRONMENT COMMITTEE. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG’S OFFICE.

The Energy and Environment Committee held its meeting at the SCAG Los Angeles Office. The meeting was called to order by the Hon. Cheryl Viegas-Walker, Chair. There was a quorum.

Members Present

Hon. Sylvia Ballin, San Fernando	District 67
Hon. Lisa Bartlett, Dana Point	TCA
Hon. Margaret Clark, Rosemead	District 32
Hon. Jordan Ehrenkranz, Canyon Lake	WRCOG
Hon. David Gafin, Downey	District 25
Hon. Ed Graham, Chino Hills	District 10
Hon. Keith Hanks, Azusa	District 33
Hon. James Johnson, Long Beach	District 30
Hon. Phil Luebben, Cypress	OCCOG
Hon. Judy Mitchell, Rolling Hills Estates	District 40
Hon. Sam Pedroza, Claremont	SGVCOG
Hon. Cheryl Viegas-Walker, El Centro	District 1
Hon. Diane Williams, Rancho Cucamonga	SANBAG
Hon. Edward Wilson, Signal Hill	Gateway Cities
Hon. Dennis Zine, City of Los Angeles	District 50

Members Not Present

Hon. Denis Bertone, San Dimas	SGVCOG
Hon. Brian Brennan, San Buenaventura	VCOG
Hon. Larry Forester, Signal Hill	GCCOG
Hon. Rafi Manoukian, Glendale	SFVCOG
Hon. Thomas Martin, Maywood	GCCOG
Hon. Jeffery Prang, West Hollywood	WSCCOG
Hon. Lupe Ramos Watson, Indio	District 66
Hon. Ed Scott, Rialto	SANBAG
Hon. Jack Terrazas	Imperial County
Hon. Sam Toles, Cathedral City	CVAG
Hon. Mark Waldman, La Palma	OCCOG

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Hon. Cheryl Viegas-Walker, Chair, called the meeting to order at 10:00 a.m.

PUBLIC COMMENT PERIOD

None

REVIEW AND PRIORITIZE AGENDA ITEMS

CONSENT CALENDAR

Approval Items

1. Minutes of July 5, 2012 Meeting
2. Minutes of September 6, 2012 Meeting

A motion was made (Johnson) to approve the Consent Calendar with an amendment to the EEC Attendance Sheet reflecting that the Hon. Mark Waldman of La Palma represents Orange rather than Los Angeles County. The motion was seconded (Gafin) and unanimously approved.

ACTION ITEMS

3. Support of the SCAG/Metro Joint Work Program Resolution and the Metro Countywide Sustainability Planning Policy

Grieg Asher, SCAG Staff, stated that Item #3 was brought to the EEC in September 2012, for consideration but due to the lack of a quorum an action could not be taken.

Diego Cardoso, Executive Officer, Metro Countywide Planning and Development, discussed the robust program for implementing transit and transportation projects in the County of Los Angeles. Metro is working on the issues of sustainability by connecting Metro's investments with the investments and programs of local cities. Mr. Cardoso stated that the leadership SCAG has demonstrated with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is now recognized beyond the counties within the SCAG region, and Metro is looking to further collaborate on sustainability programs between the agencies.

Hon. James Johnson, Long Beach, asked how the status of products would be provided to the EEC or the Regional Council (RC), and in what timeline? Mr. Cardoso responded that Metro staff would return to the EEC as well as to Metro's Board to inform each body on how Metro is progressing with the specific projects. Grieg Asher, SCAG staff, stated that a quarterly update would be provided to the EEC for the next two to three years on the eleven action items included in the Joint Work Program Resolution.

A motion was made (Johnson) to recommend that the Regional Council support Metro's Resolution authorizing collaboration between Metro and SCAG to implement the 2012-2035 RTP/SCS (SCAG/Metro Joint Work Program Resolution) and support the Metro Countywide Sustainability Planning Policy. The motion was seconded (Pedroza) and unanimously approved.

INFORMATION ITEMS

4. Update on Los Angeles County Metropolitan Transportation Authority (Metro) ExpressLanes Demonstration Program

Stephanie Wiggins, Executive Officer, Congestion Reduction Initiative, Metro, presented an update on the Metro ExpressLanes Demonstration Project. Ms. Wiggins noted that the concept of congestion pricing is addressed not only in SCAG's RTP/SCS but also in the SCAG/Metro Sustainability Plan. Metro has partnered with Caltrans and a number of municipal transit operators, including Foothill Transit, Los Angeles Department of Transportation (LADOT), Gardena Transit, and Torrance Transit to improve traffic flow and travel choices for those who have to use the I-110 and I-10 freeway corridors in Los Angeles County. The one-year demonstration program is comprised of an east/west corridor and a north/south corridor. The 11-mile north/south corridor utilizes the I-110 Harbor Transitway between Adams Boulevard (near downtown Los Angeles) and SR-91. The 14-mile east/west corridor utilizes the El Monte Busway between Alameda Street (at Los Angeles Union Station) and I-605 (El Monte).

The pilot project involves the conversion of existing carpool High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes, commonly known as express lanes. Working with Caltrans and the California Highway Patrol, Metro has been able to restripe the existing I-10 roadway between I-605 and I-710 for approximately nine (9) miles in each direction which will open up to a second ExpressLane, without eliminating any general purpose lanes. In addition to lane conversions, the \$210 million Congestion Reduction Demonstration Grant from the U.S. Department of Transportation funds sixty new clean-fuel buses and provides an operations subsidy for better quality transit service on the corridors. Additionally, Metro is making significant investments in security and lighting improvements along the I-110 Harbor Transitway and expansion of the El Monte Station.

Express lanes have worked in fourteen other cities across the nation (including Orange County, San Diego County, and the Bay Area) but are new for Los Angeles County. Metro will monitor, evaluate, report on the performance of the program to the general public, agencies such as SCAG, as well as the legislature by December 2014. The net toll revenues will be reinvested in transit and carpool lane improvements in the corridor where they are generated.

The key performance measures that are being tracked for the demonstration program include:

1. Changes in traffic flow, speed, and delay in the overall corridor and between the ExpressLanes and general purpose lanes
2. Reliability of adequate travel flow in the ExpressLanes
3. Sustainability measures
4. Transit ridership increases
5. Access for everyone regardless of income
6. Traffic flow on non-freeway, parallel arterials
7. Emissions reductions

All vehicles that use the ExpressLanes need a FasTrak[®] transponder. The transponder is portable but ExpressLanes users that intend to use the transponder in multiple vehicles should list all vehicles plates on their account to avoid receiving a toll violation notice. The toll system is an automated system, without any toll booths. The FasTrak[®] transponders are available on-line, by phone, or by mail. Metro also has a relationship with the Automobile Club of Southern California,

which is offering a 20% discount when members open a FasTrak[®] account. In the near future, the transponders will also be available at Costco stores.

The presentation generated numerous questions from EEC members with responses by Ms. Wiggins. Hon. Cheryl Viegas-Walker requested that Ms. Wiggins provide a copy of the ExpressLane rules to the EEC members.

5. I-710 (South) Corridor Project Update

Frank Quon, Executive Officer, Highway Program, Metro, stated that the project was initiated mainly to address the goals of reducing congestion on the I-710 and adjacent arterial system and improve the air quality associated with the corridor. A partnership was formed among Metro, Caltrans, Gateway Cities Council of Governments, I-5 Joint Project Agency, Port of Long Beach, Port of Los Angeles, and SCAG. In early 2001 a corridor study identified project alternatives.

Metro has developed a community participation framework to work on the technical aspects of the project with community members and local agencies. The project's review is by subject working groups and advisory committees, and eventually by the I-710 Project Committee and Executive Committee.

Metro is currently going through the draft Environmental Impact Report (EIR) for CEQA and Environmental Impact Statement for the NEPA process. The public comment period closed on September 28, 2012. The next step will be to identify a preferred alternative. Metro will continue to seek community participation including workshops to help community members understand the program and process. Metro anticipates having a final environmental document in 2013.

Hon. Cheryl Viegas-Walker opened the floor for discussion.

Hon. James Johnson, Long Beach, stated that the importance of Metro's environmental document is clearly so that the innovative clean freight movement concepts will be a pilot demonstration for the nation. Councilmember Johnson asked how SCAG might advocate for federal funding and demonstrate that such funding will benefit not just Southern California but the nationwide goods movement system. Jonathan Nadler, SCAG staff, responded that the new MAP-21 reauthorization law contains a freight component that may provide an opportunity to get federal recognition and funds for I-710 project.

Hon. Keith Hanks, Azusa, asked if the project proponent considered how the I-710 clean freight component will interact with other goods movement corridors including those outside of the region, and whether the environmental document was going to drive whatever system was selected region wide. Mr. Quon responded that the region was pioneering something that had never been done before and will need to identify the best and most reliable system that can deliver zero-emissions. He noted that there are various technologies that are evolving. Annie Nam, SCAG staff, clarified that SCAG and Metro are working together so that any technology selected will be able to serve the larger regional system, including the East-West Freight Corridor.

Hon. Judy Mitchell, Rolling Hills Estates, informed the EEC that the South Coast Air Quality Management District (AQMD) and partners lost out on a grant funding opportunity from the U.S. Department of Energy (DOE) to demonstrate a heavy duty truck catenary system, but did receive

grant funding to study truck electrification. AQMD is still pursuing grant funding to do a pilot using a catenary system.

Hon. Margaret Clark, Rosemead, asked if the proposal includes a carpool lane. Mr. Quon responded that there was a plan for an additional general purpose lane, not a high-occupancy vehicle lane. Mr. Quon responded that he did not have the specific reason at this time, but would return with more information for the committee at a later date.

6. Solicit Input on the State Draft Zero-Emission Vehicles (ZEVs) Action Plan

Marco Anderson, SCAG Staff, stated that in March 2012, Governor Brown released Executive Order B-16 2012 and the goals were to achieve over 1.5 million zero-emission vehicles on California roads by 2025; provide Californians easy access to zero-emission vehicles infrastructure; and ensure that zero-emission vehicles will be a strong and sustainable part of California's economy. California's clean emission vehicles will displace at least 1.5 billion gallons of petroleum fuels. The Governor formed an Inter-Agency Working Group on zero-emission vehicles and recently released the 2012 ZEV Action Plan. The plan identifies strategies that cover Battery Electric Fuel Cell Vehicles and Plug-in Electric Vehicles. The plan was presented and discussed on November 28, 2012 at a summit in Sacramento. Members of the EEC can direct their staff to provide input by e-mailing zevfeedback@opr.ca.gov. The deadline for comments is November 1, 2012. SCAG staff will be preparing a comment letter in the near future to the Inter-Agency Working Group.

In summary the 2012 ZEV Action Plan identifies four strategy areas:

1. Complete needed infrastructure and planning;
2. Expand consumer awareness and demand;
3. Transform the fleets; and
4. Grow jobs and investments in the sector

The plan is comprehensive, and SCAG agrees with many of its goals. There are a few areas noted by SCAG that could improve the plan. There are some local concerns such as barriers to charging in multi-family dwellings, the upfront cost of vehicles and charging infrastructure for both the consumer and to lease holders, and energy cost recovery for land owners and employers who want to provide charging at work. SCAG is currently in the process of completing work that is funded by the U.S. DOE and California Energy Commission. As part of this project, SCAG will prepare a Draft Plug-in Electric Vehicle Readiness Plan that is scheduled to be completed in December 2012. By June 2013 the final plan is anticipated to be finished as well as detailed sub-regional maps for the South Bay Cities Council of Governments (SBCCOG) subregion and Western Riverside Council of Governments (WRCOG), as both COGs were applicants/sub-recipients on the two (2) grants awarded to SCAG.

Hon. Sam Pedroza, Claremont, stated that SCAG should be cognizant that since a portion of funding comes from gas tax, there will be decreased revenues as the vehicle fleet electrifies or otherwise becomes more fuel efficient. SCAG should consider that although there are many positives with zero-emission vehicles, there are also some financial negatives. Jonathan Nadler, SCAG staff, responded that SCAG considered this important issue in the 2012 RTP/SCS financial plan and will again take into consideration as part of the 2016 RTP/SCS financial plan.

CHAIR'S REPORT - None

STAFF REPORT - None

FUTURE AGENDA ITEMS - None

ANNOUNCEMENTS

Jonathan Nadler, SCAG staff, announced scheduled public hearings for the proposed 2012 Air Quality Management Plan for the South Coast Air Quality Management District (AQMD) on November 13, 2012 in Cerritos; November 14, 2012 in Buena Park; November 15, 2012 in San Bernardino; and November 15, 2012 in Riverside. SCAG staff has more information available.

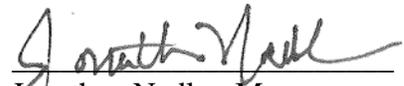
In addition, on October 12, 2012 at the Biltmore Hotel in Los Angeles, SCAQMD is hosting their 24th Annual Clean Air Awards. This event honors individuals, organizations, communities, and businesses that have made significant contributions to clean air. Elected Officials may register for free and Jonathan Nadler will facilitate registration for those interested in attending.

ADJOURNMENT

Hon. Cheryl Viegas-Walker adjourned the meeting at 11:41 a.m.

The next meeting of the Energy & Environment Committee will be held on Thursday, November 1, 2012 at the SCAG Los Angeles Office.

Action Minutes Approved by:



Jonathan Nadler, Manager
Compliance & Performance
Monitoring

Energy and Environment Committee Attendance Report

2012

Member (including Ex-Officio) LastName, FirstName	Date Appointed if after 1/1/12	Representing	X = County Represented					X = Attended				Black Shading = Dark				NM = New Member				Total Mtgs Attended		
			Imperial	Los Angeles	Orange	River side	San Bernardino	Ventura	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec	
Ballin, Sylvia*	9/6/2012	San Fernando		X														NM	X			2
Bartlett, Lisa*		OCCOG			X				X	X	X			X					X			5
Bertone, Denis		SGVCOG		X					X	X	X	G	X	X	X							6
Brennan, Brian		VCOG						X	X	X	E											2
Clark, Margaret*		Rosemead		X					X	X	X	N	X	X	X			X	X			8
Duclos, Jeff	5/14/2012	SBCCOG		X								E	NM									
Ehrenkranz, Jordan		WRCOG				X			X		X	R			X				X			4
Englander, Mitchell*		Los Angeles		X								A										
Forester, Larry		Gateway Cities		X					X	X	X	L	X	X				X				6
Gafin, David*		Downey		X					X	X			X	X	X				X			6
Graham, Ed	5/3/2012	Chino Hills					X						NM	X	X			X	X			5
Hanks, Keith		Azusa		X						X	X	A	X	X	X			X	X			7
Johnson James		Long Beach		X					X	X	X	S		X	X				X			6
Luebben, Phil		Cypress			X				X	X		S	X	X	X				X			6
Manoukian, Rafi	5/3/2012	SFVCOG		X							NM	E		X								1
Martin, Thomas		GCCOG		X					X	X	X	M		X				X				5
Mitchell, Judy*		SBCCOG		X					X	X	X	B	X		X				X			6
Pedroza, Sam		SGVCOG		X					X	X	X	L	X	X	X				X			7
Prang, Jeffery	3/1/2012	West Hollywood		X							NM	Y		X								1
Ramos Watson, Lupe		CVAG				X				X	X		X	X	X							5
Scott, Edward		SANBAG					X															
Terrazas, Jack		Imperial County	X						X		X		X	X	X							5
Viegas Walker, Cheryl*		El Centro	X						X	X	X		X	X	X				X			7
Waldman, Mark		La Palma			X				X	X	X											3
Williams, Diane	9/6/2012	SANBAG					X											NM	X			2
Wilson, Edward		Signal Hill		X					X				X	X				X	X			5
Zine, Dennis*		Los Angeles		X					X	X	X			X	X				X			6
TOTALS			2	16	3	2	3	1														

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DATE: November 1, 2012

TO: Energy and Environment Committee (EEC)
Regional Council (RC)

FROM: Huasha Liu, Director of Land Use and Environmental Planning, (213) 236-1838, liu@scag.ca.gov

SUBJECT: 2012 South Coast Air Quality Management Plan (AQMP) Appendix IV-C:
Regional Transportation Strategy and Control Measures

EXECUTIVE DIRECTOR'S APPROVAL:



RECOMMENDED EEC ACTION:

Recommend that the RC adopt Resolution No. 12-544-1 approving Appendix IV-C for inclusion in the 2012 South Coast AQMP subject to the conclusion of the final comment period.

RECOMMENDED RC ACTION:

Adopt Resolution No. 12-544-1 approving Appendix IV-C for inclusion in the 2012 South Coast AQMP subject to the conclusion of the final comment period.

EXECUTIVE SUMMARY:

Pursuant to federal and state law, SCAG is responsible for developing Appendix IV-C: Regional Transportation Strategy and Control Measures of the 2012 AQMP. The Proposed Final Appendix IV-C has incorporated comments received from the first round of public review as part of the Draft 2012 AQMP. The Appendix IV-C is currently under a second round of public review as part of the release of the Revised Draft 2012 AQMP on September 7, 2012. This second public comment period concludes on November 12, 2012. Any additional comments received will be responded to and incorporated into the Final Appendix IV-C as appropriate. The AQMD Board is scheduled to consider adoption of the 2012 AQMP, which includes Appendix IV-C, in December 2012.

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; Objective a) Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

Pursuant to the Federal Clean Air Act (CAA), the 2012 AQMP is jointly prepared by the South Coast Air Quality Management District (AQMD), the California Air Resources Board (ARB), and SCAG to address federal air quality standards for 24-hour PM_{2.5} and 1-hour ozone and vehicle miles traveled (VMT) emissions offset demonstrations for the South Coast Air Basin. The 2012 AQMP also updates provisions relevant to the federal 8-hour ozone standard and 24-hour PM_{2.5} transportation emission budgets based on the latest motor vehicle emissions model and planning assumptions. The 2012 AQMP incorporates significant new scientific data, emissions inventories, ambient measurements, and air quality models. In addition, the 2012 AQMP includes an update on the air quality status of the Salton Sea Air Basin in the Coachella Valley; a discussion of the emerging issues of ultrafine particle and near-roadway exposures; and an analysis of the energy supply and demand issues that face the Basin and their relationship to air quality. The 2012 AQMP includes an important component relative to regional transportation planning and federal transportation conformity requirements, the motor vehicle emissions budgets, which set an upper limit for

REPORT

emissions from on-road transportation activities. The emission budgets established as part of the 2012 AQMP process and adopted in the final State Implementation Plan (SIP) will become the functioning emission budgets for transportation conformity for future Regional Transportation Plan (RTP)/Federal Improvement Program (FTIP) and RTP/FTIP amendments post the effectiveness date of the new emission budgets.

SCAG's role in the 2012 AQMP process includes providing the socio-economic growth forecast and regional transportation demand model output data to the AQMD for use in estimating emission inventories and for airshed modeling and vehicle activity data to the ARB for use in developing on-road emission factors. In addition to above data, SCAG is also responsible for providing a section of the 2012 AQMP on the region's transportation strategy and control measures as they relate to air quality, commonly known as "Appendix IV-C." The write-up includes an overview of the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); a list of committed Transportation Control Measures (TCMs); and, pursuant to CAA requirements, an analysis of reasonably available (transportation) control measures (RACM Analysis).

As approved by the EEC on June 7, 2012, the Draft Appendix IV-C was transmitted to the AQMD for inclusion in the Draft 2012 AQMP. Subsequently, the Draft Appendix IV-C was released for public review as part of the Draft 2012 AQMP. Public review concluded August 31, 2012 and six (6) comments were received on the Draft Appendix IV-C regarding TCMs, active transportation, and transportation system management strategies. All the comments have been responded to and incorporated into the Proposed Final Appendix IV-C as appropriate. AQMD released for public review a revised Draft 2012 AQMP on September 7, 2012. Appendix IV-C is currently under this second round of public review which is scheduled to end November 12, 2012. Any additional comments received will be responded to and will be incorporated into the Final Appendix IV-C as appropriate.

The Final Appendix IV-C must be transmitted to the AQMD prior to the AQMD Governing Board's adoption in December 2012. Since SCAG's Economic Summit replaces the regular December meetings of the RC and EEC, the Proposed Final Appendix IV-C is being presented to the EEC and the RC today for recommended approval subject to the conclusion of the final comment period regarding the 2012 AQMP.

Upon adoption by the RC, the Final 2012 AQMP Appendix IV-C will be forwarded to the AQMD for inclusion in the Final 2012 AQMP. The AQMD Governing Board is scheduled to hold the final public hearing on the adoption of the 2012 AQMP on December 7, 2012. Upon adoption by the AQMD Governing Board, the Final 2012 AQMP will be submitted to the ARB which will submit it to the U.S. Environmental Protection Agency for inclusion into the SIP.

FISCAL IMPACT:

Work associated with this item is included in the current FY12-13 Overall Work Program (13-025.SCG00164.01: Air Quality Planning and Conformity).

ATTACHMENTS:

1. Resolution No. 12-544-1 of SCAG Approving Appendix IV-C for Inclusion in the 2012 South Coast AQMP
2. Exhibit "A" Proposed Final 2012 South Coast AQMP, Appendix IV-C: Regional Transportation Strategy and Control Measures
3. Responses to Comments regarding the Draft 2012 AQMP Appendix IV-C

SOUTHERN CALIFORNIA

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Transportation Commission

RESOLUTION NO. 12-544-1

**A RESOLUTION OF THE SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS (SCAG) APPROVING
APPENDIX IV-C FOR INCLUSION IN THE 2012 SOUTH COAST
AIR QUALITY MANAGEMENT PLAN**

WHEREAS, Section 110(a) of the Federal Clean Air Act (42 U.S.C. §7410(a)) and federal regulations at 40 C.F.R. §52.220 et seq. require each state to adopt a plan known as the State Implementation Plan (SIP) for implementation, maintenance and enforcement of primary and secondary national ambient air quality standards in each air quality control region of the state; and

WHEREAS, the South Coast Air Basin is designated as a non-attainment area for the 2006 national ambient air quality standards (NAAQS) for 24-hour fine particulate matter (PM_{2.5}). A PM_{2.5} SIP demonstrating attainment with these standards is due to the U.S. Environmental Protection Agency (EPA) by December 2012; and

WHEREAS, EPA recently published a proposed “SIP call” on September 19, 2012, finding the existing approved South Coast 1-hour ozone SIP substantially inadequate to provide for attainment of the revoked 1-hour ozone standard by the applicable attainment date of November 15, 2010, in response to the decision of the Ninth Circuit Court of Appeals in *Association of Irrigated Residents (“AIR”), et al. v. United States Environmental Protection Agency, et al.*, 686 F. 2d 668 (amended January 12, 2012). A 1-hour Ozone SIP demonstrating attainment with the revoked 1-hour ozone standard is due to the U.S. EPA within 12 months after the effective date of the final SIP call; and

WHEREAS, EPA also published a proposed action on September 19, 2012, withdrawing its approval of, and then disapproving, the vehicle miles travelled (VMT) emissions offset demonstrations in the 2003 1-hour ozone SIP and the 2007 8-hour ozone SIP, also in response to the same *AIR v. EPA* decision. Revised VMT emissions offset demonstrations for the 1-hour and 8-hour ozone standards are required to be submitted to EPA; and

WHEREAS, the 2012 South Coast Air Quality Management Plan (2012 AQMP) is being prepared to comply with these above-referenced requirements, by the South Coast Air Quality Management District (SCAQMD), in conjunction with the California Air Resources Board (CARB), and the Southern California Association of Governments (SCAG), and the U.S.EPA; and

WHEREAS, SCAG is responsible, pursuant to Section 40460(b) of the California Health and Safety Code, for preparing and approving, those portions of the 2012 AQMP for the South Coast Air Basin, which relate to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies; and

WHEREAS, SCAG is also required, pursuant to Section 40460(b) of the California Health and Safety Code, to analyze and provide emissions data related to its planning responsibilities; and

WHEREAS, pursuant to this authority, SCAG prepared a “Regional Transportation Strategy and Control Measures” as it relates to air quality, to be included as Appendix IV-C to the 2012 AQMP, and attached herein as Exhibit “A” (hereinafter referred to as “Appendix IV-C”). Specifically, Appendix IV-C provides an overview of the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); a list of committed Transportation Control Measures (TCMs); and, pursuant to Clean Air Act requirements, an analysis of reasonably available (transportation) control measures (RACM Analysis); and

WHEREAS, Appendix IV-C was developed in consultation with Federal, State and local transportation and air quality planning agencies and other stakeholders, including the four county transportation commissions in the South Coast Air Basin, namely, Los Angeles County Metropolitan Transportation Authority, the Riverside County Transportation Commission, the Orange County Transportation Authority and the San Bernardino Associated Governments; and

WHEREAS, in accordance with the approval of SCAG’s Energy and Environment Committee on June 7, 2012, a draft of Appendix IV-C was distributed to SCAQMD and released for public review and comment as part of the release of the Draft 2012 AQMP. The public comment period concluded on August 31, 2012, and public comments relating to Appendix IV-C have been responded to and incorporated into SCAQMD’s response to comment document, and did not result in any substantive changes to the 2012 AQMP; and

WHEREAS, SCAQMD released for public review a revised Draft 2012 AQMP on September 7, 2012. While there are no changes to Appendix IV-C as part of the revised Draft 2012 AQMP, Appendix IV-C is currently under this second round of public review which is scheduled to end on November 12, 2012. Any additional comments received will be responded to and will be incorporated into the Final Appendix IV-C as appropriate as part of the Final 2012 AQMP.

NOW, THEREFORE, BE IT RESOLVED, by the Regional Council of the Southern California Association of Governments as follows:

1. Subject to the conclusion of the public comment period for the revised Draft 2012 AQMP, the Regional Council hereby approves and transmits to SCAQMD Appendix IV-C, attached hereto as Exhibit A, including related staff findings and incorporating all of the foregoing recitals as SCAG's portion of the 2012 AQMP, which includes the 24-hour PM2.5 SIP, the 1-hour ozone SIP, and the VMT offset demonstration.
2. The Regional Council hereby directs that if additional comments regarding Appendix IV-C are received before the conclusion of the public comment period, that staff appropriately respond and include as part of the Final Appendix IV-C to be transmitted to SCAQMD.

PASSED, APPROVED AND ADOPTED by the Regional Council of the Southern California Association of Governments at a regular meeting this 1st day of November, 2012.

Hon. Glen Becerra
President, SCAG
Councilmember, City of Simi Valley

Attested by:

Hasan Ikhrata
Executive Director

Approved as to Form:

Joann Africa
Chief Counsel

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**PROPOSED FINAL 2012 SOUTH COAST
AIR QUALITY MANAGEMENT PLAN
APPENDIX IV-C**

**Regional Transportation Strategy and
Control Measures**

November 2012

Mission Statement

Under the guidance of the Regional Council and in collaboration with our partners, our mission is to facilitate a forum to develop and foster the realization of regional plans that improve the quality of life for Southern Californians.

SCAG Regional Council

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First Vice President: Greg Pettis, Cathedral City
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Ventura County: Linda Parks, Ventura County | Glen Becerra, Simi Valley | Bryan A. MacDonald, Oxnard | Carl Morehouse, San Buenaventura

Tribal Government Representative: Mark Calac, Pechanga Band of Luiseño Indians

Orange County Transportation Authority: Jerry Amante, Huntington Beach

Riverside County Transportation Commission: Mary Craton, Canyon Lake

San Bernardino Associated Governments: Alan Wapner, Ontario

Ventura County Transportation Commission: Keith Millhouse, Moorpark

Transportation Corridors Agency: Lisa Bartlett, Dana Point

Executive Summary

This Appendix describes the Southern California Association of Government's (SCAG) transportation strategy and transportation control measures (TCMs) to be included as part of the 2012 Air Quality Management Plan (AQMP) / PM2.5 State Implementation Plan (SIP) for the South Coast Air Basin. The transportation strategy and TCMs are based on SCAG's adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2011 Federal Transportation Improvement Program (FTIP) as amended which were developed in consultation with federal, state and local transportation and air quality planning agencies and other stakeholders. The four County Transportation Commissions (CTCs) in the South Coast Air Basin, namely Los Angeles County Metropolitan Transportation Authority, Riverside County Transportation Commission, Orange County Transportation Authority and the San Bernardino Associated Governments, were actively involved in the development of the regional transportation measures of this Appendix.

The Regional Transportation Strategy and Transportation Control Measures portion of the 2012 AQMP/SIP consists of the following three related Sections.

Section I. Linking Regional Transportation Planning to Air Quality Planning

As required by federal and state laws, SCAG is responsible for ensuring that the regional transportation plan, program, and projects are supportive of the goals and objectives of AQMPs/SIPs. SCAG is also required to develop demographic projections and regional transportation strategy and control measures for the AQMPs/SIPs.

As the Metropolitan Planning Organization (MPO), SCAG develops the RTP/SCS every four years. The RTP/SCS is a long-range regional transportation plan that provides a vision for transportation investments throughout the SCAG region. The 2012-2035 RTP/SCS also integrates land use and transportation planning to achieve regional greenhouse gas (GHG) reduction targets set by the California Air Resources Board (ARB) pursuant to SB375.

SCAG also develops the biennial FTIP. The FTIP is a multimodal list of capital improvement projects to be implemented over a six year period. The FTIP implements the programs and projects in the RTP/SCS.

Section II. Regional Transportation Strategy and TCMs

The SCAG region faces daunting mobility, air quality, and transportation funding challenges. Under the guidance of the goals and objectives adopted by SCAG's Regional Council, the 2012-2035 RTP/SCS was developed to provide a blueprint to integrate land use and transportation strategies to help achieve a coordinated and balanced regional transportation system. The 2012-2035 RTP/SCS represents the culmination of more than two years of work involving dozens of public agencies, 191 cities, hundreds of local, county, regional and state officials, the business community, environmental groups, as well as various nonprofit organizations. The 2012-2035 RTP/SCS was formally adopted by the SCAG Regional Council on April 4, 2012.

The 2012-2035 RTP/SCS contains a host of improvements to every component of the regional multimodal transportation system including:

- Active transportation
- Transportation demand management (TDM)
- Transportation system management (TSM)
- Transit
- Passenger and high-speed rail
- Goods movement
- Aviation and airport ground access
- Highways
- Arterials
- Operations and maintenance

Included within these transportation system improvements are projects that reduce vehicle use or changing traffic flow or congestion conditions (“TCMs”). TCMs include the following three main categories of transportation improvement projects and programs:

- High occupancy vehicle (HOV) measures,
- Transit and systems management measures, and
- Information-based transportation strategies.

New to this cycle of the RTP is the inclusion of the SCS as required by SB 375. The primary goal of the SCS is to provide a vision for future growth in Southern California that will decrease per capita GHG emissions from passenger vehicles. However, the strategies contained in the 2012-2035 RTP/SCS will produce benefits for the region far beyond simply reducing GHG emissions. The SCS strives to integrate the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The regional vision of the SCS maximizes current voluntary local efforts that support the goals of SB 375. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas on existing main streets, in downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. In addition, SCAG is a strategic partner in a regional effort to accelerate fleet conversion to near-zero and zero-emission transportation technologies. A significant expansion of alternative-fuel infrastructure is needed throughout the region to accommodate the anticipated increase in alternative fueled vehicles.

Section III. Reasonably Available Control Measure Analysis

As required by the Federal Clean Air Act (CAA), a reasonably available control measure (RACM) analysis must be included as part of the overall control strategy in the AQMP/SIP to ensure that all potential control measures are evaluated for implementation and that justification is provided for those measures that are not implemented. Appendix IV-C contains the TCM RACM component for the South Coast PM_{2.5} control strategy. In accordance with EPA procedures, this analysis considers TCMs in the 2012-2035 RTP/SCS, measures identified by the CAA, and relevant measures adopted in other non-attainment areas of the country.

Based on this comprehensive review, it is determined that the TCMs being implemented in the South Coast Air Basin are inclusive of all TCM RACM. None of the candidate measures reviewed and determined to be infeasible meets the criteria for RACM implementation.

Section I. Linking Regional Transportation Planning to Air Quality Planning

Federal and State Requirements

The air quality conformity requirements of the Federal CAA establish a need to integrate air quality planning and regional transportation planning. This integration presents the challenge of balancing the real need for improved mobility with the equally important goal of cleaner air. As the federally-designated MPO for the six-county Southern California region, SCAG is required by law to ensure that transportation activities “conform” to, and are supportive of, the goals of regional and state air quality plans to attain the National Ambient Air Quality Standards (NAAQS). In addition, SCAG is a co-producer, with the South Coast Air Quality Management District (AQMD), of the AQMP for the South Coast Air Basin. SCAG has the responsibility for the demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies, as well as analyzing and providing emissions data related to its planning responsibilities (California Health and Safety Code §40460).

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Federal Transportation Improvement Program (FTIP)

The SCAG Region is the largest metropolitan planning area in the United States, encompassing 38,000 square miles. The region is divided into 14 subregions and is one of the largest concentrations of population, employment, income, business, industry and finance in the world. The six-county SCAG Region is home to more than 18 million people, nearly half of the population of the state of California.

Federal and state regulations require SCAG, as the Regional Transportation Planning Agency and MPO, to develop an RTP every four years in order for our region's transportation projects to qualify for federal and state funding. The RTP is updated to reflect changes in trends, progress made on projects, and to adjust the growth forecast for population changes. The long-range transportation plan provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs.

The SCS is a newly required element of the RTP. The SCS integrates land use and transportation strategies that will achieve ARB greenhouse gas emissions reduction targets. According to SB 375, “The Sustainable Communities Strategy shall:

1. identify the general location of uses, residential densities, and building intensities within the region;
2. identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth;

3. identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region;
4. identify a transportation network to service the transportation needs of the region;
5. gather and consider the best practically available scientific information regarding resource areas and farmland in the region;
6. consider the state housing goals specified in Sections 65580 and 65581;
7. set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state board;
8. allow the regional transportation plan to comply with the federal Clean Air Act."

The RTP/SCS was developed through a collaborative process, guided by the SCAG Regional Council and its Policy Committees and Sub-committees, the Plans & Programs Technical Advisory Committee, numerous task forces, CTCs, subregions, local governments, state and federal agencies, environmental and business communities, tribal governments, non-profit groups, as well as the general public. The RTP/SCS constitutes the Regional Transportation Strategy and Control Measures for the AQMP.

SCAG is also responsible for developing a biennial short-term (six year planning horizon) FTIP. SCAG develops the FTIP in partnership with the CTCs of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura, and Caltrans Districts 7, 8, 11, and 12. The FTIP is a multimodal list of capital improvement projects to be implemented over a six-year period. The FTIP identifies specific funding sources and fund amounts for each project. It is prioritized to implement the region's overall strategy for providing mobility and improving both the efficiency and safety of the transportation system, while supporting efforts to attain federal and state air quality standards for the region by reducing transportation related air pollution. The FTIP must include all federally funded transportation projects in the region, as well as all regionally significant transportation projects for which approval from federal funding agencies is required, regardless of funding source. The FTIP is developed to incrementally implement the programs and projects in the RTP. TCMs that are committed to in the applicable SIP are derived from the first two years of the prevailing FTIP.

Section II. Regional Transportation Strategy and TCMs

Introduction

The 2012-2035 RTP/SCS is a long-range regional transportation plan that provides a blueprint to integrate land use and transportation strategies to help achieve a coordinated and balanced regional transportation system. Transportation projects in the SCAG region must be included in the RTP/SCS in order to receive federal funding. The 2012-2035 RTP/SCS is comprised of the following elements: (1) a policy element that presents an overview of the challenges facing the region; the RTP/SCS goals, policies and performance outcomes; (2) the SCS, which includes land use policies and forecasted future growth and land use for the region; (3) an action element that describes the transportation investments and programs necessary to implement the Plan and

performance measures to determine how the Plan performs; and (4) the financial element that summarizes the cost of Plan implementation constrained by a realistic projection of available revenues and provides recommendations for the allocation of funds.

The 2012-2035 RTP/SCS represents the culmination of more than two years of work involving dozens of public agencies, 191 cities, hundreds of local, county, regional and state officials, the business community, environmental groups, as well as various nonprofit organizations, and was founded on a broad-based public outreach effort. The implementation of one of the most comprehensive and coordinated public participation plans ever undertaken by SCAG is documented in the 2012-2035 RTP/SCS, Public Participation and Consultation Appendix¹.

The 2012-2035 RTP/SCS was formally adopted by the SCAG Regional Council on April 4, 2012 and submitted for approval to the federal agencies. The 2012-2035 RTP/SCS constitutes the transportation control strategy portion of the 2012 AQMP. A full, illustrative list of the 2012-2035 RTP/SCS projects can be found in the Project List Appendix of the 2012-2035 RTP/SCS. (See <http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx>)

Key Planning Challenges

The challenges facing the region's future are daunting:

Mobility Challenges: The region's roadways are the most congested in the nation, resulting in over three million hours wasted each year sitting in traffic. Traffic relief is critical, even more so in the region's current economic situation. By failing to adequately address congestion in the Region, we have foregone jobs - every 10 percent decrease in congestion can bring an employment increase of about 132,000 jobs.

Air Quality Challenges: While Southern California is a leader in reducing emissions and ambient levels of air pollutants are improving, the SCAG region continues to have the worst air quality in the nation, and air pollution causes thousands of premature deaths every year, as well as other serious adverse health effects. The South Coast Air Basin has the worst air quality of the four air basins contained in the SCAG region.

Funding Need: Of all the challenges facing the transportation system today, there is perhaps none more critical than funding. With the projected growth in population, employment, and demand for travel, the costs of our multimodal transportation needs surpass projected revenues available from our historic transportation funding source - the gas tax. State and federal gas taxes have not changed in nearly 20 years. Yet, highway construction costs have grown by over 80 percent. The region must consider ways to stabilize existing revenue sources and supplement them with reasonably available new sources.

Regional Goals and Policies: To Realize a Sustainable Future

¹ http://rtpscs.scag.ca.gov/Documents/2012/final/SR/2012fRTP_PublicParticipation.pdf

To guide development of the projects, programs, and strategies, SCAG's Regional Council adopted goals and objectives that help carry out the 2012-2035 RTP/SCS vision which encompasses three principles: mobility, economy, and sustainability. The regional goals reflect the wide-ranging challenges facing transportation planners and decision-makers in achieving the RTP/SCS vision. The goals demonstrate the need to balance many priorities in the most cost-effective manner. SCAG's Regional Council adopted the following goals as part of the 2012-2035 RTP/SCS.

- Align the plan investments and policies with improving regional economic development and competitiveness
- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
- Actively encourage and create incentives for energy efficiency, where possible
- Encourage land use and growth patterns that facilitate transit and non-motorized transportation
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

The six 2012-2035 RTP/SCS guiding policies below help focus future investments on the best-performing projects and strategies that seek to preserve, maintain, and optimize the performance of the existing system.

- 1) Transportation investments shall be based on SCAG's adopted regional Performance Indicators
- 2) Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region
- 3) RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives
- 4) Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1
- 5) HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1
- 6) Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan

Transportation Investments

The RTP/SCS contains a host of improvements to the regional multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to certain

parts of the region, as well as the strategic expansion of our transportation system where there is room to grow in order to provide the region with the mobility it needs.

Active Transportation Component: \$6.7 billion will be invested in various active transportation strategies to increase bikeways in the SCAG region from 4,315 miles to 10,122 miles, bring significant amount of sidewalks into compliance with the Americans with Disabilities Act (ADA), safety improvements, and various other strategies.

Transportation Demand Management (TDM) Component: \$4.5 billion will be invested in various TDM strategies to incentivize drivers to reduce solo driving: (1) Increase carpooling and vanpooling; (2) Increase the use of transit, bicycling, and walking; (3) Redistribute vehicle trips from peak periods to non-peak periods by shifting work times/days/locations; (4) Encourage greater use of telecommuting; and (5) Other “first mile/last mile” strategies to allow travelers to easily connect to and from transit service at their origin and destination. These strategies include the development of mobility hubs around major transit stations, the integration of bicycling and transit through folding-bikes-on-buses programs, triple bike racks on buses, and dedicated racks on light and heavy rail vehicles.

Transportation System Management (TSM) Component: \$7.6 billion will be invested in various TSM strategies to enhanced incident management, advanced ramp metering, traffic signal synchronization, advanced traveler information, improved data collection, universal transit fare cards (Smart Cards), and Transit Automatic Vehicle Location (AVL) to increase traffic flow and reduce congestion.

Transit Component: A total of \$55.0 billion will be invested in (1) bus rapid transit (BRT) - new BRT routes, extensions, and/or service enhancements in Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties; (2) light rail transit - new light rail and commuter rail routes/extensions in Los Angeles and San Bernardino Counties; (3) heavy rail transit – heavy rail extension in Los Angeles County; and (4) bus - new and expanded bus service in Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties.

Passenger and High-Speed Rail Component: A total of \$51.8 billion will be invested in (1) commuter rail - Metrolink extensions in Riverside County and Metrolink system-wide improvements to provide higher speeds; and (2) high speed rail - improvements to the Los Angeles to San Diego (LOSSAN) Rail Corridor with an ultimate goal of providing San Diego-Los Angeles express service in under two hours, and Phase I of the California High-Speed Train (HST) project that would provide high-speed service from the Kern County line to Anaheim via L.A. Union Station with stops in Palmdale, San Fernando Valley, L.A. Union Station, Norwalk and Anaheim.

Goods Movement (includes Grade Separations) Component: \$48.4 billion will be invested in various goods movement strategies including Port access improvements, freight rail enhancements, grade separations, truck mobility improvements including an East-West Freight Corridor, intermodal facilities, and support of emission-reduction strategies such as the deployment of commercially available lower-emission trucks and locomotives in the near term while taking critical steps (including technology demonstration projects) toward the phased implementation of a zero- and near-zero emission freight system.

Aviation and Airport Ground Access Component: As included in their respective modal investments, substantial investment will be made in various airport ground access improvements including rail extensions and improvements to provide easier access to airports, and new express bus service from remote terminals to airports.

Highways Component: \$64.2 billion will be invested in (1) toll facilities - closure of critical gaps in the highway network to provide access to all parts of the region (\$27.3 billion); (2) High-Occupancy Vehicle (HOV)/High-Occupancy Toll (HOT) - closure of gaps in the HOV lane network and the addition of freeway-to-freeway direct HOV connectors to complete Southern California's HOV network and a connected network of Express/HOT lanes (\$20.9 billion); and (3) mixed flow – interchange improvements to and closures of critical gaps in the highway network to provide access to all parts of the region (\$16.0 billion).

Arterials Component: \$22.1 billion will be invested in various arterial improvements including spot widening, signal prioritization, driveway consolidations and relocations, grade separations at high-volume intersections, new bicycle lanes, and other design features such as lighting, landscaping, and modified roadway, parking, and sidewalk widths.

Operations and Maintenance Component: \$216.9 billion will be invested in the operations and maintenance of transit (\$139.3 billion), highways (\$56.7 billion), and arterials (\$20.9 billion) to preserve our multimodal system in a good state of repair.

Financial Plan

The 2012–2035 RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing local, state, and federal sources along with funding sources that are reasonably available over the time horizon of the RTP/SCS. These new sources include adjustments to state and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission) created by Congress, further leveraging of existing local sales tax measures, value capture strategies, potential national freight program/freight fees, as well as passenger and commercial vehicle tolls for specific facilities. Reasonably available revenues also include innovative financing strategies, such as private equity participation. In accordance with federal guidelines, the plan includes strategies for ensuring the availability of these sources.

Sustainable Communities Strategy

Under SB 375, the primary goal of the SCS is to provide a vision for future growth in Southern California that will decrease per capita greenhouse gas emissions from automobiles and light trucks. This leads to strategies that can help reduce per capita vehicle miles traveled over the next 25 years. The strategies contained in the 2012–2035 RTP/SCS will produce benefits for the region far beyond simply reducing GHG emissions. Because it is the latest refinement of an evolving regional blueprint that SCAG began in 2000, the 2012–2035 RTP/SCS will help the region contend with many ongoing issues across a wide range of concerns, including better

placemaking, lower cost to taxpayers and families, benefits to public health and environment, greater responsiveness to changing demographics and housing markets, and improved access and mobility.

The 2012–2035 RTP/SCS was built primarily from local General Plans and input from local governments using the Local Sustainability Planning Tool, from the subregional COGs and from the County Transportation Commissions. A review of local plans and subregional strategies points to the common ground that is inherent in SCAG’s 2008 Advisory Land Use Policies. The advisory land use policies are a foundation for the overall regional land use development pattern:

- Identify regional strategic areas for infill and investment – Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth.
- Structure the plan on a three-tiered system of centers development – Identify strategic centers based on a three-tiered system of existing, planned, and potential, relative to transportation infrastructure.
- Develop “complete communities” – Create mixed-use districts, or “complete communities,” in strategic growth areas through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other.
- Develop nodes on a corridor – Intensify nodes along corridors with people-scaled, mixed-use developments.
- Plan for additional housing and jobs near transit – Support and improve transit use and ridership by creating pedestrian-friendly environments and more compact development patterns in close proximity to transit.
- Plan for a changing demand in types of housing – Address shifts in the labor force that will likely induce a demand shift in the housing market for additional development types such as multifamily and infill housing in central locations, which will appeal to the needs and lifestyles of these large populations.
- Continue to protect stable, existing single-family areas – Continue to protect stable, existing single-family neighborhoods as future growth and a more diverse housing stock are in infill locations near transit stations.
- Ensure adequate access to open space and preservation of habitat – Ensure access to open space and habitat preservation despite competing quality-of-life demands driven by growth, housing and employment needs, and traditional development patterns.
- Incorporate local input and feedback on future growth – Continue public outreach efforts and incorporate local input through public workshops, scenario planning, and stakeholder outreach.

These policies have evolved over time and serve as the basis for SCAG’s Compass Blueprint, a regional voluntary program that offers innovative planning tools, creative strategies, and collaborative partnerships to all local governments within the region. Since its inception, Compass Blueprint has supported local demonstration projects that seek to improve mobility for all residents, foster livability in all communities, enable prosperity for all people, and promote sustainability for future generations.

The SCS strives to integrate the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The regional vision of the SCS maximizes current voluntary local efforts that support the goals of SB 375, as evidenced by several Compass Blueprint demonstration projects and various county transportation improvements. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures. The RTP/SCS fully integrates the two subregional SCSs prepared by the Gateway Cities and Orange County Council of Governments.

In addition to Compass Blueprint, cities and counties within the SCAG region continue to implement their own local land use and transportation projects that support the goals of the 2012–2035 RTP/SCS.

To achieve the goals of the 2012–2035 RTP/SCS, public agencies at all levels of government may implement a wide range of strategies that focus on four key areas:

- A Land Use growth pattern that accommodates the region’s future employment and housing needs and protects sensitive habitat and natural resource areas;
- A Transportation Network that consists of public transit, highways, local streets, bikeways, and walkways;
- Transportation Demand Management (TDM) measures that reduce peak-period demand on the transportation network; and
- Transportation System Management (TSM) measures that maximize the efficiency of the transportation network.

In addition, SCAG is a strategic partner in a regional effort to accelerate fleet conversion to zero- and near-zero emission transportation technologies. SCAG’s policy with regard to alternative fuels is technology neutral and does not favor any one technology over any other. To accommodate the anticipated increase in alternative fueled vehicles, a significant expansion of infrastructure is needed throughout the region, among other preparedness steps.

SB 375 provides incentives in the form of CEQA streamlining to encourage community design that supports reduction in per capita GHG emissions. Generally, two types of projects are eligible for streamlined CEQA review once a compliant RTP/SCS has been adopted: (1) residential/mixed-use projects (consistent with the SCS) or (2) a Transit Priority Project (TPP).

Regional Transportation Emissions

Based on the data generated from SCAG’s Regional Travel Demand Model (e.g., traffic volumes, vehicle speeds, transit ridership, etc.), an estimate of emissions associated with on-road mobile sources can be generated using CARB’s emission factor model (EMFAC). Through this process, future emissions from on-road mobile sources can be compared for the regional

transportation system assuming implementation of the RTP/SCS versus a baseline case without RTP/SCS implementation. It is generally understood that potential future improvements in air quality deriving from the RTP/SCS will likely be much smaller, since motor vehicle emissions have and will continue to be substantially reduced through technology (i.e., emission standards for new engines and in-use standards for existing fleets). Table 1 below compares VOC (ROG), NO_x, and PM_{2.5} emissions between implementation of the 2012-2035 RTP/SCS and the baseline without the regional transportation strategy for 2014 and 2035.

Table 1 Regional Transportation Emissions (annual average) (tons per day) *

	VOC (ROG)		NO _x		PM _{2.5} **	
	2014	2035	2014	2035	2014	2035
2012 RTP/SCS	137.5	70.9	285.9	119.6	15.2	14.2
2012 RTP Baseline	137.6	72.8	285.5	124.8	15.2	15.6
RTP/SCS Reduction	-0.1	-1.9	-0.4	-5.2	0.0	-1.4

Note: * Calculated with EMFAC2007; ** Does not include fugitive dust calculations

Transportation Control Measures

TCMs are measures that are specifically identified and committed to in the applicable implementation plan that are either one of the types listed in CAA section 108, or any other measures for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs. TCMs in this plan include the following three main categories of transportation improvement projects and programs:

- High occupancy vehicle (HOV) measures,
- Transit and systems management measures, and
- Information-based transportation strategies.

The 2012-2035 RTP/SCS includes TCM type projects throughout the entire Plan horizon (i.e., 2035) and are all part of the regional transportation strategy for the 2012 South Coast PM_{2.5} AQMP. Those TCM type projects which have funding programmed for right of way or construction in the first two years of the prevailing FTIP are considered committed for air quality planning purposes in the applicable SIP. Attachment A of this Appendix illustrates the currently committed TCMs that are derived from the TCM projects of the 2011 FTIP, as amended.

TCM Emissions Reduction Benefits To estimate the emission benefits of TCMs, the socio-economic data variables of the 2012-2035 RTP/SCS were held constant while the transportation

network was modified to account for the TCMs in the Plan (both TCM-type projects and committed TCMs). In other words, the TCM emissions reduction benefits are the difference between the 2012-2035 RTP/SCS which includes TCMs and the AQMP baseline which is defined as RTP minus TCMs. It should be noted that this analysis is done for illustrative purposes as the regional transportation strategy is appropriately viewed on a systems-level basis, and not by its components since each of the individual transportation improvements and strategies affect each other and the system.

Compared to previous AQMPs/SIPs, potential future improvements in air quality deriving from TCMs is consistently diminishing for two reasons. On one hand, motor vehicle emissions have and will continue to be substantially reduced through technology. On the other hand, most of the TCM projects in the South Coast Air Basin were adopted into the SIP to meet the one-hour ozone standard by 2010 and have already been implemented. Thus, the emission reductions associated with these projects are now included in the baseline emissions and no longer show up in the TCM benefit values. Table 2 shows the results of the TCM modeling analysis for years 2014, 2019, and 2023.

Table 2 TCM Emissions (annual average) (tons per day) *

	VOC (ROG)			NOx			PM _{2.5} **		
	2014	2019	2023	2014	2019	2023	2014	2019	2023
2012 RTP/SCS	137.5	110.7	93.7	285.9	194.1	157.7	15.2	14.8	13.5
RTP/SCS without TCM	137.8	111.1	94.4	286.6	195.5	159.2	15.3	15.1	13.9
TCM Reduction	-0.3	-0.4	-0.7	-0.7	-1.4	-1.5	-0.1	-0.3	-0.4

Note: * Calculated with EMFAC2007; ** Does not include fugitive dust calculations

Section III. Reasonably Available Control Measure Analysis

Introduction

Clean Air Act Section 172(c)(1) requires SIPs to provide for the implementation of all reasonably available control measures (RACM) as expeditiously as practicable. Guidance on interpreting RACM requirements in the context of the 1990 Amendments was set forth in the General Preamble (57 FR 13498, 13560) in 1992. In the General Preamble, U.S. Environmental Protection Agency (EPA) interpreted section 172(c)(1) as imposing a duty on States to consider all available control measures and to adopt and implement measures that are reasonably available for implementation in a specific nonattainment area. It also retained an earlier interpretation of RACM that it would not be reasonable to require the implementation of measures that do not advance the date for attainment.

With regard to TCMs, EPA revised earlier guidance by indicating that it is inappropriate to presume that all Section 108(f)(1)(A) measures of the CAA are available in all nonattainment areas. Instead, States should consider Section 108(f)(1)(A) measures as potential options that are not exhaustive, but indicative of the types of measures that should be considered. In addition, any measure identified as reasonably available during the public comment period should also be considered for implementation. EPA indicated that States could reject measures as not reasonably available for reasons related to local conditions. States are required to justify why available measures were not considered RACM and not adopted in the SIP.

To meet the RACM requirements articulated in the EPA guidance described above, this RACM analysis was performed using several steps. First is a description of the process by which SCAG and related transportation agencies in the South Coast Air Basin identify, review, and make enforceable commitments to implement TCMs. Second is the assembly and review of a list of control measures recently implemented in other ozone nonattainment areas. This effort involved a review of measures implemented in California nonattainment areas as well as those located in Arizona, Colorado, Georgia, New York, Texas, and Washington D.C., and the organization of those measures in the 16 categories specified in CAA Section 108(f). The third step is to determine RACM measures by contrasting the list of candidate measures with measures implemented to date in the South Coast Air Basin, as well as any new commitments in the current AQMP. The fourth step is to provide a reasoned justification for any of the available measures that have yet to be implemented. These justifications must address criteria described in the above-cited guidance.

SCAG RACM/TCM Development Process

While the SCAG Region has an extensive, systematic TCM development program continually updated through the FTIP process, areas are obligated during SIP preparation to evaluate TCMs and determine whether they qualify as RACM.

The RACM process relies predominantly on the continuous updating and addition process for TCMs in the South Coast Air Basin. The TCM process was established for the South Coast Air Basin by replacing a process that developed TCMs each time a SIP was produced with a continuous ongoing TCM process. This process continues to govern the selection and implementation of TCMs today. TCMs are continuously identified and reviewed throughout the transportation planning process. SCAG's ongoing public outreach effort, including an involved interagency input process via the TCWG, helps ensure that the process to identify and review TCMs is robust, inclusive, and comprehensive. Development of TCMs arises from multiple processes and multiple sources, which include CTCs, subregional agencies, task forces, committees, and the public. These funding and scheduling incentives ensure that TCMs are developed, sponsored, and clearly identified throughout the process.

Assembly and Review of Candidate RACM

EPA and related court decisions have maintained that TCMs considered RACM must be measures that 1) advance the attainment date, typically by at least one year and 2) are technologically and economically feasible. Measures must pass both the advance attainment and technical/economic feasibility tests to be deemed RACM.

U.S. EPA guidance documents provide help in identifying the type of measures to be considered. CAA Section 108(f)(1)(A) provides a list of sixteen categories of TCMs that are potential options that should be considered indicative types of control measures:

- i. Programs for improved use of public transit;*
- ii. Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;*
- iii. Employer-based transportation management plans, including incentives;*
- iv. Trip-reduction ordinances;*
- v. Traffic flow improvement programs that achieve emission reductions;*
- vi. Fringe and transportation corridor parking facilities, serving multiple occupancy vehicle programs or transit service;*
- vii. Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration, particularly during periods of peak use;*
- viii. Programs for the provision of all forms of high-occupancy, shared-ride services, such as the pooled use of vans;*
- ix. Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;*
- x. Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;*
- xi. Programs to control extended idling of vehicles;*
- xii. Programs to reduce motor vehicle emissions, consistent with Title II of the Clean Air Act, which are caused by extreme cold start conditions;*
- xiii. Employer-sponsored programs to permit flexible work schedules;*
- xiv. Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;*
- xv. Programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation, when economically feasible and in the public interest; and*
- xvi. Programs to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.*

EPA guidance has emphasized that these sixteen measures are an illustrative, but not exhaustive list. Instead, TCMs need to be evaluated on an area-by-area basis to determine which are reasonably available. In addition to the measures listed above, the 1992 General Preamble of the CAA cite other sources to include TCMs that were a) suggested during public comments (e.g. at workshops, public hearings, in written comments, etc.); b) adopted in other nonattainment areas

of the country; and c) specifically identified by the EPA (i.e. EPA TCM database, support documents for rulemaking, etc.).²

To develop a list of candidate RACM, SCAG performed a comprehensive review of available TCMs in California, as well as in other states. SCAG reexamined the candidate RACM identified during the comprehensive RACM analysis performed for the 2007 AQMP. Additionally, SCAG coordinated with other MPOs and air quality districts to identify measures that are being implemented in the following other nonattainment areas:

- **Maricopa County, Arizona:** Maricopa Association of Governments. Eight-Hour Ozone Resignation Request and Maintenance Plan for the Maricopa Nonattainment Area, February, 2009.
- **Bay Area, California:** Bay Area Air Quality Management District. Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard, October 24, 2001.
- **Sacramento, California:** Sacramento Metropolitan Air Quality Management District. Sacramento Regional 8-Hour Ozone Attainment and RFP Plan, December 19, 2008. EPA approval pending.
- **San Joaquin Valley, California:** San Joaquin Valley Air Pollution Control District. 2007 Ozone Plan, April 30, 2007.
- **Denver Metropolitan Area, Colorado:** North Front Range Metropolitan Organization. Denver Metro Area and North Front Range Ozone Action Plan, December 12, 2008.
- **Atlanta Metropolitan Area, Georgia:** Georgia Department of Natural Resources, Environmental Protection Division. Proposed Georgia's State Implementation Plan for the Atlanta 8-Hour Ozone Nonattainment Area, March 26, 2009. EPA approval pending.
- **New York Metropolitan Area, New York:** New York State Department of Environmental Conservation Ozone (8-Hour NAAQS) Attainment Demonstration for NY Metro Area, August 9, 2007.
- **Dallas-Fort Worth Area, Texas:** Texas Commission on Environmental Quality. Revisions to the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution, Dallas-Forth Worth 8-Hour Ozone Nonattainment Area, December 7, 2011. EPA approval pending.
- **Houston-Galveston Area, Texas:** Texas Commission on Environmental Quality. Revisions to the State of Texas Air Quality Implementation Plan for the Control of Ozone Air Pollution, Houston-Galveston-Brazoria 1997 8-Hour Ozone Nonattainment Area, March 10, 2010. EPA approval pending.
- **Washington D.C.:** Metropolitan Washington Council of Governments (MWCOG). Plan to Improve Air Quality in the Metropolitan Washington, DC-MD-VA Region: State Implementation Plan (SIP) for 8-Hour Ozone Standard, May 23, 2007.

Additionally, TCMs were discussed and reviewed at numerous TCWG meetings as part of the 2011 FTIP, 2012-2035 RTP/SCS, and 2012 AQMP. Further, SCAG has an extensive and robust public participation process for the development of the RTP/FTIP through ongoing public

² Seitz, John S. (December 2, 1999). Memo from John Seitz: Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas. Available at: <http://www.epa.gov/ttn/oarpg/t1/memoranda/revracm.pdf>.

meetings, and technical, advisory, and policy committees. These groups generally meet on a monthly basis and provide explicit opportunities for the public to participate and contribute.

In summary, SCAG performed the RACM analysis based on information reviewed from the following sources:

- CAA Section 108(f)(1)(A)
- 2007 South Coast AQMP RACM Analysis
- Other nonattainment areas in California
- Other nonattainment areas outside California
- RTP/FTIP Updates
- Interagency Consultation (TCWG)

The candidate measures were reviewed to determine which can be considered RACM. As discussed above, the RACM TCM requirement consists of two core criteria that must be satisfied: 1) TCMs must advance attainment of the air quality standards; and 2) TCMs must be both technically and economically feasible. EPA has not provided specific definitions on these core criteria, but has preferred to allow flexibility in each region's determination.

In practice, agencies have based their determination of the first criteria on whether a measure or group of measures would help an area achieve attainment one year earlier than in the absence of the measure or group of measures. In other words, TCM implementation must significantly reduce emissions to facilitate attainment of the NAAQS one year earlier than without the TCMs. Considering the magnitude of the emissions reductions necessary to demonstrate attainment in the South Coast Air Basin, the implementation of TCMs is not expected to meet this criterion. Technical feasibility has been determined in terms of local factors, such as environmental impacts, availability of control measures, and ability to achieve the emission reductions. Project cost-effectiveness has been considered a determining factor to determine economic feasibility.

Determining RACM Measures

For this step of the RACM analysis, SCAG compared the list measures implemented within the South Coast Air Basin with those implemented in other areas. SCAG then organized measures, including candidate measures and those measures currently implemented in the region, according to the sixteen categories specified in Section 108(f)(1)(A) of the CAA. No formal requirement exists on how to organize TCMs. However, SCAG utilized this organization scheme as a way to highlight those measures that fall within the sixteen CAA categories, which are formally recognized as "TCMs" and subject to CAA and federal conformity requirements. SCAG found a small number of candidate measures that were not currently implemented in the region and not included in the 2007 AQMP RACM analysis. In addition, a new category titled "Other Measures and Programs" was added to the list of measures. This category includes TCMs that do not fall in any of the sixteen Section 108(f) categories. New measures that were in addition to those reviewed as part of the 2007 RACM analysis were highlighted in bold font as shown in Attachment B.

For this RACM analysis, SCAG also reviewed statewide and South Coast AQMD measures that have been adopted since the last RACM analysis. Although these measures are out of the realm of SCAG's funding authority, they are discussed below for completeness. Statewide mobile source measures are also covered in California RACM analysis completed for the latest ozone SIP revision for the South Coast Air Basin. Table 3 shows on-road TCMs and mobile source measures that were adopted by the ARB and are currently being implemented in the SCAG region.

Table 3 Adopted California Transportation Control Measures

RACM	Implementing Nonattainment Area	Implemented in SCAG?
California Diesel Fuel Regulation	ARB	Yes
On-Road Heavy-Duty Diesel Vehicles Regulation	ARB	Yes
California Reformulated Gasoline	ARB	Yes
Low Emission Vehicle Standards (LEV II)	ARB	Yes
Transportation Refrigeration Unit ATCM	ARB	Yes
School Bus Idling ATCM	ARB	Yes
Fleet Rule for Transit Agencies	ARB	Yes
Drayage Truck Regulation	ARB	Yes
Hybrid Truck and Bus Voucher Incentive Program	ARB	Yes
Clean Vehicle Rebate Project	ARB	Yes
Solid Waste Collection Vehicle Rule	ARB	Yes
Heavy-Duty Vehicle Inspection Program	ARB/BAR	Yes
Periodic Smoke Inspection Program	ARB/BAR	Yes
School Bus Retrofit Program	ARB/SCAQMD	Yes
Goods Movement Program/Proposition 1B	ARB/CTC/SCAQMD	Yes

Reasoned Justification

The fourth step is to provide a reasoned justification for any of the available measures that have yet to be implemented or will not be implemented. In 1999, EPA issued a memorandum entitled “Guidance on the Reasonably Available Control Measures Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas.”³ In this memorandum, EPA states that in order to determine whether a state has adopted all RACM necessary for attainment and as expeditiously as practicable, the state must explain why the selected implementation schedule is the earliest schedule based on the circumstances of the area. This indicated that States could reject measures as not reasonably available for reasons related to local conditions. In such cases, States are obligated to provide justification as to why potentially reasonable measures have not been adopted. Valid reasons for rejecting a measure include that it would not advance the attainment date, it is economically infeasible, or it is technologically infeasible.

The complete listing of all candidate measures evaluated for RACM determination is included in Attachment B. A “Measure Number” is assigned for each strategy for ease of discussion (not rank in priority). The “Description” column provides a brief description of the relevant measure in discussion. “Has It Been Implemented?” confirms whether the measure is currently implemented in the SCAG region. The final column “Reasoned Justification for Not Implementing” provides a reasoned justification for those measures that were not considered RACM. SCAG appropriately considered a number of factors that included technical and economic feasibility, enforceability, geographic applicability, and ability to provide emission reductions. Of the TCMs that were deemed candidate measures, none were found to meet the criteria for RACM implementation.

Conclusion

CAA Section 172(c)(1) requires SIPs to provide for the implementation of all RACM as “expeditiously as practicable.” EPA and related court decisions have maintained that TCMs considered RACM must be measures that 1) advance the attainment date, typically by at least one year and 2) are technologically and economically feasible. Measures must pass both the advance attainment and technical/economic feasibility tests to be deemed RACM.

Based on a comprehensive review of TCM projects in other nonattainment areas or otherwise identified, it is determined that the TCMs being implemented in the South Coast Air Basin are inclusive of all RACM. None of the candidate measures reviewed herein and determined to be infeasible meets the criteria for RACM implementation.

SCAG and the local transportation agencies have in place a comprehensive, formal process for identifying, evaluating, and selecting TCMs. The regular RTP, FTIP, and AQMP/SIP public update processes ensure that TCM identification and implementation is a routine consideration that helps SCAG and the AQMD demonstrate attainment of applicable NAAQS.

³ Seitz, John S. (December 2, 1999). *Memo from John Seitz: Guidance on the Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas*. Available at: <http://www.epa.gov/ttn/oarpg/t1/memoranda/revracm.pdf>

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
BALDWIN PARK	LAFA141	BALDWIN PARK METROLINK TRANSPORTATION CENTER. FUNDED THRU STIP AUGMENTATION CONSTRUCTION A TRANSPORTATION CENTER AND PARKING STRUCTURE AT THE BALDWIN PARK METROLINK STATION.	11/1/2014
FOOTHILL TRANSIT ZONE	LA0B311	PARK AND RIDE FACILITY TRANSIT ORIENTED NEIGHBORHOOD PROGRAM SAFETEA-LU # 341 (E-2006-BUSP-092) (E-2006-BUSP-173)	12/31/2013
GLENDALE	LA0G406	FAIRMONT AVE. PARK-N-RIDE FACILITY (83 PARKING SPACES) TO SERVE COMMUTERS USING SR-134, I-5. THE LOCATION OF THE PARK-N-RIDE IS FAIRMONT AVENUE AND SAN FERNANDO RD.	12/30/2013
LOS ANGELES COUNTY	LAF1514	EMERALD NECKLACE BIKE TRAIL PROJECT. DESIGN AND CONSTRUCT 1.1 MILES OF CLASS I BIKE PATH TO CONNECT DUARTE ROAD TO THE SAN GABRIEL RIVER BICYCLE TRAIL.	6/30/2013
LOS ANGELES COUNTY MTA	LA0G270	EXPANSION AND IMPROVEMENT TO EXISTING TRANSIT CENTER IN THE CITY OF PALMDALE. E2009-BUSP-137.	9/30/2013
LOS ANGELES COUNTY MTA	LA0F021	EXPOSITION LIGHT RAIL TRANSIT SYSTEM PHASE II – FROM CULVER CITY TO SANTA MONICA	12/31/2017
LOS ANGELES COUNTY MTA	LA29202W	MID -CITY TRANSIT CORRIDOR: WILSHIRE BLVD. FROM VERMONT TO SANTA MONICA DOWNTOWN- MID-CITY WILSHIRE BRT INCL. DIV. EXPANSION AND BUS ONLY LANE	12/31/2014
LOS ANGELES COUNTY MTA	LA0G194	ACQUIRE FOUR (4) ALTERNATE FUEL BUSES FOR THE CITY OF ARTESIA TO BE USED FOR NEW FIXED ROUTE SERVICE EARMARK ID #E2008-BUSP-0694	10/31/2012
LOS ANGELES COUNTY MTA	LA0C10	MID-CITY/EXPOSITION CORRIDOR LIGHT RAIL TRANSIT PROJECT PHASE I TO VENICE-ROBERTSON STATION	12/31/2012
LOS ANGELES COUNTY MTA	LA0G431	MULTI-MODAL TRANSIT CENTER AT CSUN TO INCLUDE PASSENGER LOADING AREAS AND BUS SHELTERS	10/1/2012
LOS ANGELES COUNTY MTA	LA974165	MACARTHUR PARK STATION IMPROVEMENTS INCLUDE DESIGN AND CONSTRUCTION OF A PLAZA TO ACCOMMODATE PUBLIC ACCESS (PEDESTRIAN ENTRANCES, WALKWAYS, BICYCLE FACILITIES) PPNO# 3417	12/30/2011
LOS ANGELES, CITY OF	LA0G155	LACRD – TRANSIT SIGNAL PRIORITY IN THE CITY OF LOS ANGELES.	02/28/2012

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
PASADENA	LAE3790	THE PASADENA ITS INTEGRATES 3 COMPONENTS; TRAFFIC SIGNAL COMMUNICATION AND CONTRL, TRANSIT VEHICLE ARRIVAL INFO AND PUBLIC PARKING AVAILABILITY INFO. SAFETEA-LU PRJ #3790 AND #399	6/30/2013
PICO RIVERA (PREVIOUSLY LEAD AGENCY WAS SGVCOG)	LA0C57	ACE/GATEWAY CITIES-CONSTRUCT GRADE SEP. AT PASSONS BLVD IN PICO RIVERA (& MODIFY PROFILE OF SERAPIS AV.)(PART OF ALAMEDA CORR EAST PROJ.)SAFETEA-LU HPP # 1666 (TCRP #54.3)	12/31/2012
ROLLING HILLS ESTATE	LAF1529	PALOS VERDES DRIVE NORTH BIKE LANES. CONSTRUCTION OF CLASS II BIKE LANE AND RELATED IMPROVEMENTS ON PALOS VERDES DRIVE NORTH	12/31/2013
SANTA CLARITA	LAF1424	MCBEAN REGIONAL TRANSIT CENTER PARK AND RIDE. PURCHASE LAND, DESIGN, AND CONSTRUCT A REGIONAL PARK-AND-RIDE LOT ADJACENT TO THE MCBEAN REGIONAL TRANSIT CENTER IN THE CITY OF SANTA CLARITA.	10/1/2013
WHITTIER	LA0G257	WHITTIER GREENWAY TRAILHEAD PARK. EXTENSION OF WHITTIER GREENWAY TRAIL FROM MILLS AVENUE TO 300 FEET EAST OF MILLS AVENUE ON CITY OWNED RIGHT-OF-WAY IN CONJUNCTION WITH THE CONSTRUCTION OF NEW TRAILHEAD PARK WITH A PARK AND RIDE PARKING LOT FOR NEARBY PUBLIC TRANSIT STOP. NEW 20 SPACE PARKING LOT WOULD BE CONSTRUCTED OF "GREEN" PERMEABLE PAVEMENT IN COMPLIANCE WITH NPDES REQUIREMENTS. INCLUDES THE INSTALLATION OF PARK AMENITIES, DRINKING FOUNTAIN FOR THE CONVENIENCE OF PEDESTRIAN AND BICYCLE PATRONS OF THE WHITTIER GREENWAY TRAIL. CONSTRUCTION OF NEW SIDEWALKS ALONG MILLS AVENUE TO PROVIDE WHITTIER GREENWAY TRAIL CROSSING CONNECTION AT THE SIGNALIZED INTERSECTION OF MILLS AVENUE AT LAMBERT ROAD.	9/30/2014
ARTESIA	LAF1607	SOUTH STREET PEDESTRIAN, BIKEWAY AND TRANSIT IMPROVEMENT. IMPROVE PEDESTRIAN ENVIRONMENT AND TRANSIT STOP LOCATIONS WITH LANDSCAPED MEDIANS, TRANSIT SHELTERS, BENCHES, SIDEWALK ENHANCEMENTS AND LIGHTING. CLOSE EXISTING BIKE LANE GAP.	10/1/2014
AVALON	LAF1501	COUNTY CLUB DRIVE BIKEWAY IMPROVEMENT PROJECT. CONSTRUCTION OF A 4-FOOT WIDE CLASS II BIKE LANE IN BOTH DIRECTIONS ALONG A ONE MILE SECTION OF COUNTRY CLUB DRIVE.	10/1/2013
AZUSA	LAF3434	AZUSA INTERMODAL TRANSIT CENTER. CONSTRUCT REGIONAL AZUSA INTERMODAL TRANSIT CENTER TO ACCOMMODATE EXISTING AND FUTURE PARKING DEMAND AND SUPPORT EFFECTIVE TRANSIT USE.	6/30/2015

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
BALDWIN PARK	LAE0076	CONSTRUCT ADD'L VEHICLE PARKING (200 TO 400 SPACES), BICYCLE PARKING LOT AND PEDESTRIAN REST AREA AT THE TRANSIT CENTER	12/31/2014
BALDWIN PARK	LAF1654	BALDWIN PARK METROLINK PEDESTRIAN OVERCROSSING. CONSTRUCT A PEDESTRIAN OVERCROSSING OVER BOGART AVE AND THE METROLINK LINE TO LINK THE STATION WITH VITAL BUS TRANSFER POINTS AND TO PROVIDE ACCESS TO PARKING OVERFLOW AREAS.	10/1/2015
BURBANK	LAF1502	SAN FERNANDO BIKEWAY. IMPLEMENT A CLASS I BIKEWAY ALONG SAN FERNANDO BLVD, VICTORY PLACE AND BURBANK WESTERN CHANNEL TO COMPLETE THE BURBANK LEG OF A 12 MILE BIKEWAY.	6/30/2014
CALTRANS	LA000358	ROUTE 5: – FROM ROUTE 134 TO ROUTE 170 HOV LANES (8 TO 10 LANES) (CFP 346)(2001 CFP 8355). (EA# 12180, 12181,12182,12183,12184, 13350 PPNO 0142F,151E,3985,3986,3987) SAFETEA LU # 570. CONSTRUCT MODIFIED IC @ I-5 EMPIRE AVE, AUX LNS NB & SB BETWEEN BURB	12/31/2014
CALTRANS	LA000548	ROUTE 10: FROM PUENTE TO CITRUS HOV LANES FROM 8 TO 10 LANES (C-ISTEA 77720) (EA# 117080, PPNO# 0309N)	2/12/2016
CALTRANS	LA0B875	ROUTE 10: HOV LANES FROM CITRUS TO ROUTE 57/210 – (EA# 11934, PPNO# 0310B)	3/15/2016
CALTRANS	LA0D73	ROUTE 5: LA MIRADA, NORWALK & SANTA FE SPRINGS-ORANGE CO LINE TO RTE 605 JUNCTION. WIDEN FOR HOV & MIXED FLOW LNS, RECONSTRUCT VALLEY VIEW (EA 2159A0, PPNO 2808). TCRP#42.2&42.1	12/1/2016
CALTRANS	LA000357	ROUTE 5: FROM ROUTE 170 TO ROUTE 118 ONE HOV LANE IN EACH DIRECTION (10 TO 12 LANES) INCLUDING THE RECONSTRUCTION OF THE I-5/SR-170 MIXED FLOW CONNECTOR AND THE CONSTRUCTION OF THE I-5/SR-170 HOV TO HOV CONNECTOR (CFP 345) (2001 CFP 8339; CFP2197).	12/31/2013
CALTRANS	LA01342	ROUTE 10: RT 10 FROM RT 605 TO PUENTE AVE HOV LANES (8+0 TO 8+2) (EA# 117070, PPNO 0306H) PPNO 3333 3382 AB 3090 REP (TCRP #40)	10/28/2013
CALTRANS	LA996134	ROUTE 5: RTE. 5/14 INTERCHANGE & HOV LNS ON RTE 14 – CONSTRUCT 2 ELEVATED LANES – HOV CONNECTOR (DIRECT CONNECTORS) (EA# 16800)(2001 CFP 8343) (PPNO 0168M)	5/24/2013
CLAREMONT	LAF1510	CLAREMONT PORTION OF THE CITRUS REGIONAL BIKEWAY. THIS PROJECT PROPOSES THE IMPLEMENTATION OF THE CLAREMONT PORTION OF THE CITRUS REGIONAL BIKEWAY UTILIZING BONITA AVENUE AND FIRST STREET AS PRIMARY CLASS II BIKE ROUTES.	10/1/2012

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
EL MONTE	LAF1504	EL MONTE: TRANSIT CYCLE FRIENDLY. EL MONTE PROPOSES TO IMPLEMENT THE 1ST PHASE OF THE EL MONTE BIKE-TRANSIT HUB COMPONENT (METRO BICYCLE TRANSPORTATION STRATEGIC PLAN) A COUNTYWIDE EFFORT TO IMPROVE BIKE FACILITIES	10/1/2013
LONG BEACH	LAE1296	LONG BEACH INTELLIGENT TRANSPORTATION SYSTEM	9/30/2012
LONG BEACH	LAF1530	BICYCLE SYSTEM GAP CLOSURES & IMPROVED LA RIVER BIKE PATH. PROJECT WILL CONSTRUCT PRIORITY CLASS I & III BICYCLE SYSTEM GAP CLOSURES IN LONG BEACH AND IMPROVE CONNECTION TO LA RIVER.	10/1/2014
LOS ANGELES COUNTY MTA	LA0D198	CRENSHAW TRANSIT CORRIDOR	12/31/2018
LOS ANGELES COUNTY MTA	LA0G010	REGIONAL CONNECTOR – LIGHT RAIL IN TUNNEL ALLOWING THROUGH MOVEMENTS OF TRAINS, BLUE, GOLD, EXPO LINES. FROM ALAMEDA / 1ST STREET TO 7TH STREET/METRO CENTER	12/31/2019
LOS ANGELES COUNTY MTA	LA0G154	LACRD – EL MONTE TRANSIT CENTER IMPROVEMENTS AND EL MONTE BUSWAY IMPROVEMENTS, INCLUDING BIKE LOCKERS, TICKET VENDING MACHINES AT EL MONTE BUSWAY STATIONS AND UP TO 10 BUS BAYS.	12/31/2012
LOS ANGELES COUNTY MTA	LA0G447	METRO PURPLE LINE WESTSIDE SUBWAY EXTENSION SEGMENT 1 – WILSHIRE/WESTERN TO FAIRFAX	12/31/2019
LOS ANGELES COUNTY MTA	LA0C8114	LA CITY RIDESHARE SERVICES; PROVIDE COMMUTE INFO, EMPLOYER ASSISTANCE AND INCENTIVE PROGRAMS THROUGH CORE & EMPLOYER RIDESHARE SERVICES & MTA INCENTIVE PROGRAMS. PPNO 9003	12/30/2016
LOS ANGELES COUNTY MTA	LA963542	ACQUISITION REVENUE VEHICLES – 2,513 CLEAN FUEL BUSES: LEASED VEH, FY02 (370) FY03 (30 HC) + FY04 (70 HC) + (200 ARTICS); FY05-FY10 TOTAL OF 1000 BUSES.	6/30/2014
LOS ANGELES COUNTY MTA	LAE0036	WILSHIRE/ VERMONT PEDESTRIAN PLAZA IMPROVEMENTS AND INTERMODAL PEDESTRIAN LINKAGES	2012
LOS ANGELES COUNTY MTA	LAE0195	DESIGN AND CONSTRUCT IMPROVED PEDESTRIAN LINKAGES BETWEEN LOS ANGELES PIERCE COLLEGE AND MTA’S RAPID BUS TRANSIT STOPS TO INCLUDE PASSENGER AMENITIES, 2007 CFP # F1658	10/1/2014

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
LOS ANGELES, CITY OF	LA0C8164	EXPOSITION BLVD RIGHT-OF-WAY BIKE PATH-WESTSIDE EXTENSION. DESIGN AND CONSTRUCTION OF 2.5 MILES OF CLASS 1 BIKEWAY, LIGHTING, LANDSCAPING & INTERSECTION IMPROVEMENTS. (PPNO# 3184)	2/2/2012
LOS ANGELES, CITY OF	LAF1704	DOWNTOWN L.A. ALTERNATIVE GREEN TRANSIT MODES TRIAL PROGRAM. OFFER SHARED RIDE-BICYCLE AND NEIGHBORHOOD ELECTRIC VEHICLE TRANSIT SERVICES TO LA CITY HALL AS AN ALTERNATIVE TO OVERCROWDED DASH SERVICE	6/27/2014
LOS ANGELES, CITY OF	LA002738	BIKEWAY/PEDESTRIAN BRIDGE OVER LA RIVER AT TAYLOR YARD CLASS I (CFP 738, 2077) (PPNO# 3156)	7/31/2015
LOS ANGELES, CITY OF	LA0B7330	SAN FERNANDO RD ROW BIKE PATH PHSE II – CONSTRUCT 2.75 MILES CLAS I FRM FIRST ST TO BRANFORD ST,ON MTA-OWND ROW PARLEL TO SAN FERNANDO RD. LINK CYCLSTS TO NUMEROUS BUS LNE. PPNO 2868.	1/30/2014
LOS ANGELES, CITY OF	LAF1450	ENCINO PARK-AND-RIDE FACILITY RENOVATION. RENOVATION OF THE ENCINO PARK-AND-RIDE FACILITY IN ORDER TO ADDRESS PHYSICAL AND STRUCTURAL DEFICIENCIES AND ADD CAPACITY TO THIS HEAVILY UTILIZED FACILITY. INCLUDES 50 NEW PARKING SPACES AND BIKE LOCKERS.	10/1/2013
LOS ANGELES, CITY OF	LAF1520	IMPERIAL HIGHWAY BIKE LANES. THIS PROJECT INVOLVES THE MODIFICATION OF THE MEDIAN ISLAND AND THE WIDENING OF IMPERIAL HIGHWAY ALONG 1000 FT EAST OF PERSHING DRIVE TO ACCOMMODATE BIKE LANES.	6/1/2014
LOS ANGELES, CITY OF	LAF1524	SAN FERNANDO RD. BIKE PATH PH. IIIA/IIIB – CONSTRUCTION. RECOMMEND PHASE IIIA- CONSTRUCTION OF A CLASS I BIKE PATH WITHIN METRO OWNED RAIL RIGHT-OF-WAY ALONG SAN FERNANDO RD. BETWEEN BRANFORD ST. AND TUXFORD ST INCL BRIDGE.	10/1/2015
LOS ANGELES, CITY OF	LAF1615	EASTSIDE LIGHT RAIL PEDESTRIAN LINKAGE. IMPROVE LINKAGES WITHIN 1/4 MILE OF METRO’S GOLD LINE LRT.	6/29/2012
LOS ANGELES, CITY OF	LAF1657	LOS ANGELES VALLEY COLLEGE (LAVC) BUS STATION EXTENSION. PROJECT WILL EXTEND THE ORANGE LINE STATION AT THE LA VALLEY COLLEGE BY PROVIDING A DIRECT PEDESTRIAN CONNECTION FROM THE STATION TO A NEW PEDESTRIAN ENTRANCE TO LAVC.	10/1/2013
LOS ANGELES, CITY OF	LAF1708	HOLLYWOOD INTEGRATED MODAL INFORMATION SYSTEM. INSTALLATION OF ELECTRONIC, DIRECTION AND PARKING AVAILABILITY SIGNS WITH INTERNET CONNECTIVITY TO PROVIDE ADVANCE AND REAL-TIME INFORMATION INTENDED TO INCREASE TRANSIT RIDERSHIP	9/21/2015

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
LOS ANGELES, CITY OF	LAF3419	SUNSET JUNCTION PHASE 2. CREATE A MULTI-MODAL TRANSIT PLAZA TO INTEGRATE PUBLIC TRANSPORTATION, PEDESTRIAN & BICYCLE IMPROVEMENTS THAT WOULD RESULT IN REGIONAL & LOCAL BENEFITS (CFP3844). TRIANGLE PROPERTY ON SUNSET BLVD BWT MANZANITA AND SANTA MONICA.	6/30/2017
MONROVIA	LAE0039	TRANSIT VILLAGE – PROVIDE A TRANS. FACILITY FOR SATELLITE PARKING FOR SIERRA MADRE VILLA GOLD LINE STA, P-N-R FOR COMMUTERS, A FOOTHILL TRANSIT STORE.	12/31/2012
PORT OF LOS ANGELES	LAF3170	PORT TRUCK TRAFFIC REDUCTION PROGRAM: WEST BASIN RAILYARD. INTERMODAL RAILYARD CONNECTING PORT OF LA WITH ALAMEDA CORRIDOR TO ACCOMMODATE INCREASED LOADING OF TRAINS AT THE PORT, THEREBY REDUCING TRUCK TRIPS TO OFF-DOCK RAILYARDS.	12/1/2014
RANCHO PALOS VERDES	LAF1506	BIKE COMPATIBLE RDWY SAFETY AND LINKAGE ON PALOS VERDES DR. THE PROJECT WILL HAVE A CLASS II BIKE LANE ON BOTH SIDES OF PALOS VERDES DRIVE SOUTH, WITH AN UNPAVED SHOULDER FOR EMERGENCY USE.	10/9/2014
RANCHO PALOS VERDES	LAF1605	PEDESTRIAN SAFE BUS STOP LINKAGE. LINKING 11 BUS STOPS CURRENTLY INACCESSIBLE BECAUSE OF LACK OF SIDEWALKS ON BOTH THE EAST AND WEST SIDE OF HAWTHORNE BLVD. FROM CREST RD. TO PALOS VERDES DR. SOUTH (ABOUT 13,000')	12/9/2013
SAN DIMAS	LAF1503	BIKEWAY IMPROVEMENTS ON FOOTHILL BLVD. AT SAN DIMAS WASH. THE BWY IMPROVEMENTS ON FOOTHILL BLVD. AT SAN DIMAS WASH; WILL CLOSE THE GAP ON A BRIDGE & CONNECT THE EXISTING CLASS II BIKE LANES TO THE EAST & WEST OF SAN DIMAS WASH CROSSING.	12/1/2013
SAN GABRIEL VALLEY COG	LA990359	GRADE SEP XINGS SAFETY IMPR; 35- MI FREIGHT RAIL CORR. THRGH SAN.GAB. VALLEY – EAST. L.A. TO POMONA ALONG UPRR ALHAMBRA & L.A. SUBDIV – ITS 2318 SAFETEA #2178;1436 #1934 PPNO 2318	6/30/2018
SANTA FE SPRINGS	LA0F096	NORWALK SANTA FE SPRINGS TRANSPORTATION CENTER PARKING EXPANSION AND BIKEWAY IMPROVEMENTS. PROVIDE ADDITIONAL 250 PARKING SPACES FOR TRANSIT CENTER PATRONS AND IMPROVE BICYCLES ACCESS TO THE TRANSIT CENTER	6/30/2012
SANTA MONICA	LAE0364	CONSTRUCT INTERMODAL PARK AND RIDE FACILITY AT SANTA MONICA COLLEGE CAMPUS ON SOUTH BUNDY DRIVE NEAR AIRPORT AVENUE	12/31/2013

Attachment A: Committed Transportation Control Measures (TCMs)

Los Angeles County			
Lead Agency	Project ID	Project Description	Completion Date
TORRANCE	LA0G358	SOUTH BAY REGIONAL INTERMODAL TRANSIT CENTER PROJECT. THE LAND IS IN THE PROCESS OF BEING PURCHASED AND ESCROW WILL CLOSE ON DECEMBER 17, 2009. PRESENTLY, THE LOT IS VACANT/OPEN LAND WITH NO EXISTING STRUCTURE UPON IT. THE ADDRESS IS 465 N. CRENSHAW BLVD., TORRANCE, CA 90503.	12/31/2015
WESTLAKE VILLAGE	LA960142	LINDERO CANYON ROAD FROM AGOURA TO JANLOR DR CONSTRUCT BIKE PATH, RESTRIPE STREET, INTERSECTION WIDENING, SIGNAL COORDINATION	1/30/2013

Orange County			
Lead Agency	Project ID	Project Description	Completion Date
ANAHEIM	ORA000100	GENE AUTRY WAY WEST @ I-5 (I-5 HOV TRANSITWAY TO HASTER) ADD OVERCROSSING ON I-5 (S)/MANCHESTER AND EXTEND GENE AUTRY WAY WEST FROM I-5 TO HASTER (3 LANES IN EA DIR.)	11/16/2012
CALTRANS	ORA000193	HOV CONNECTORS FROM SR-22 TO I-405, BETWEEN SEAL BEACH BLVD. (I-405 PM 022.558) AND VALLEY VIEW ST. (SR-22 PM R000.917), WITH A SECOND HOV LANE IN EACH DIRECTION ON I-405 BETWEEN THE TWO DIRECT CONNECTORS.	2/1/2015
CALTRANS	ORA000194	HOV CONNECTORS FROM I-405 TO I-605, BETWEEN KATELLA AVE. (I-605 PM R001.104) AND SEAL BEACH BLVD. (I-405 PM 022.643), WITH A SECOND HOV LANE IN EACH DIRECTION ON I-405 BETWEEN THE TWO DIRECT CONNECTIONS.	7/1/2015
FULLERTON	ORA020113	FULLERTON TRAIN STATION – PARKING STRUCTURE, PHASE I AND II. TOTAL OF 800 SPACES (PPNO 2026)	5/31/2012
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA041501	PURCHASE (71) STANDARD 30FT EXPANSION BUSES – ALTERNATIVE FUEL – (31) IN FY08-09, (9) IN FY09-10, (7) IN FY11-12, (6) IN FY12-13 AND (18) IN FY13-14	6/30/2016
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA110633	RIDESHARE VANPOOL PROGRAM – CAPITAL LEASE COSTS	9/30/2012

Attachment A: Committed Transportation Control Measures (TCMs)

Orange County			
Lead Agency	Project ID	Project Description	Completion Date
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA65002	RIDESHARE SERVICES RIDEGUIDE, DATABASE, CUSTOMER INFO, AND MARKETING (ORANGE COUNTY PORTION).	6/30/2016
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA0826016	PURCHASE (72) PARATRANSIT EXPANSION VANS – (21) IN FY09/10, (51) IN FY10/11.	6/30/2016
ORANGE COUNTY TRANS AUTHORITY (OCTA)	ORA082618	PURCHASE PARATRANSIT VEHICLES EXPANSION (MISSION VIEJO) (11) IN FY09/10. ON-GOING PROJECT.	6/30/2030
TCA	10254	SJHC, 15 MI TOLL RD BETWEEN I-5 IN SAN JUAN CAPISTRANO & RTE 73 IN IRVINE, EXISTING 3/M/F EA.DIR.1 ADD’L M/F EA DIR, PLUS CLIMBING & AUX LNS AS REQ, BY 2020 PER SCAG/TCA MOU 4/5/01	12/31/2020
TCA	ORA050	ETC (RTE 241/261/133) (RTE 91 TO I-5/JAMBOREE) EXISTING 2 M/F EA.DIR, 2 ADD’L M/F IN EA. DIR, PLUS CLIMB AND AUX LNS AS REQ, BY 2020 PER SCAG/TCA MOU 4/05/01.	12/31/2020
TCA	ORA051	(FTC-N) (OSO PKWY TO ETC) (13MI) EXISTING 2 MF IN EA. DIR, 2 ADDITIONAL M/F LANES, PLS CLMBNG & AUX LANS AS REQ BY 2020 PER SCAG/TCA MOU 4/05/01.	12/31/2020
TCA	ORA052	(FTC-S) (I-5 TO OSO PKWY) (15MI) 2 MF EA. DIR BY 2013; AND 1 ADDITIONAL M/F EA. DIR. PLS CLMBNG & AUX LANES AS REQ BY 2030 PER SCAG/TCA MOU 4/05/01. #1988	6/15/2030

Riverside County			
Lead Agency	Project ID	Project Description	Completion Date

Attachment A: Committed Transportation Control Measures (TCMs)

Riverside County			
Lead Agency	Project ID	Project Description	Completion Date
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV010212	ON SR91 – ADAMS TO 60/215 IC: ADD ONE HOV LN IN EACH DIRECTION, RESTRIPE TO EXTEND 4TH WB MIXED FLOW LANE FROM 60/215 IC TO CENTRAL OFF-RAMP, RESTRIPE TO EXTEND 5TH WB MIXED FLOW LANE FROM 60/215 IC TO 14TH ST OFF-RAMP, AUX LNS (MADISON-CENTRAL), BRIDGE WIDENING & REPLACEMENTS, EB/WB BRAIDED RAMPS, IC MOD/RECONSTRUCT + SOUND/RETAINING WALLS	8/3/2015
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV050555	ON I-215 (N/O EUCALYPTUS AVE TO N/O BOX SPRINGS RD) & SR60 (E/O DAY ST TO SR60/I-215 JCT): RECONSTRUCT JCT TO PROVIDE 2 HOV DIRECT CONNECTOR LNS (SR60 PM: 12.21 TO 13.6) AND MINOR WIDENING TO BOX SPRINGS RD FROM 2 TO 4 THROUGH LANES BETWEEN MORTON RD AND BOX SPRINGS RD/FAIR ISLE DR IC (EA: 449311)	4/29/2013
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV051201	IN CORONA – CONTINUE THE IMPLEMENTATION OF A 60 SPACE PARK-AND-RIDE LOT (VIA ANNUAL LEASE AGREEMENT) AT LIVING TRUTH CHRISTIAN FELLOWSHIP AT 1114 W. ONTARIO AVE.	6/30/2013
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV070303	ON SR60 IN NW RIV CO: CONTINUE THE IMPLEMENTATION OF THE EXPANDED SR60 FREEWAY SERVICE PATROL (FSP) (BEAT #7 PATROL , 2 TRUCKS) BETWEEN MILIKEN AVE & MAIN ST (SR60 HOV LN CHANGE TCM SUBSTITUTION PROJECT)	ON GOING TCM PROGRAM IN RIVERSIDE COUNTY
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV070304	ON I-215 IN SW RIV CO: CONTINUE THE IMPLEMENTATION OF I-215 FREEWAY SERVICE PATROL (FSP) (BEAT #19, 2 TRUCKS) BETWEEN SR74/4TH ST AND ALESSANDRO BLVD (SR60 HOV LANE CHANGE TCM SUBSTITUTION PROJECT)	ON-GOING TCM PROGRAM IN RIVERSIDE COUNTY
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV070307	ON SR60 IN MORENO VALLEY: CONTINUE THE IMPLEMENTATION OF SR60 FREEWAY SERVICE PATROL (FSP) (BEAT #8, 2 TRUCKS) BETWEEN DAY ST AND REDLANDS BLVD (SR60 HOV LANE CHANGE TCM SUBSTITUTION PROJECT)	ON-GOING TCM PROGRAM IN RIVERSIDE COUNTY
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV520109	RECONSTRUCT & UPGRADE SAN JACINTO BRANCH LINE FOR RAIL PASSENGER SERVICE (RIVERSIDE TO PERRIS) (PERRIS VALLEY LINE) (FY 07 5307) (UZA: RIV-SAN)	2014
RIVERSIDE COUNTY TRANS COMMISSION (RCTC)	RIV520111	REGIONAL RIDESHARE – CONTINUING PROGRAM.	ON-GOING TCM PROGRAM IN RIVERSIDE COUNTY

Attachment A: Committed Transportation Control Measures (TCMs)

Riverside County			
Lead Agency	Project ID	Project Description	Completion Date
RIVERSIDE TRANSIT AGENCY	RIV041030	IN THE CITY OF HEMET – CONSTRUCT NEW HEMET TRANSIT CENTER (WITH APPROXIMATELY 4 BUS BAYS) AT 700 SCARAMELLA CR., HEMET, CA (5309C FY 04 + 05 EARMARKS).	6/30/2013
RIVERSIDE TRANSIT AGENCY	RIV050553	IN TEMECULA – CONSTRUCT NEW TEMECULA TRANSIT CENTER AT 27199 JEFFERSON AVE. (SW OF JEFFERSON AVE & SE OF CHERRY ST) (04, 05, 06, 07, E-2006-091, E-2007-0131, & 2008-BUSP-0131, SAFETEA-LU).	12/30/2014
RIVERSIDE TRANSIT AGENCY	RIV090609	IN WESTERN RIVERSIDE COUNTY FOR RTA: INSTALL ADVANCE TRAVELER INFORMATION SYSTEMS (ATIS) ON VARIOUS FIXED ROUTE VEHICLES AND INSTALLATION OF ELECTRONIC MESSAGE SIGNS AT APPROX. 60 BUS STOPS (FY ,S 05, 07, 08, 09, AND 10 – 5309).	12/30/2012
TEMECULA	RIV62029	AT HWY 79 SO AND LA PAZ ST: ACQUIRE LAND, DESIGN AND CONSTRUCT PARK-AND-RIDE LOT – 250 SPACES (FY 05 HR4818 EARMARK)	12/31/2015

San Bernardino County			
Lead Agency	Project ID	Project Description	Completion Date
OMNITRANS	981118	BUS SYSTEM – PASSENGER FACILITIES: DESIGN AND BUILDING OF ONTARIO TRANSCENTER	5/31/2012
RIALTO	200450	RIALTO METROLINK STATION – INCREASE PARKING SPACES FROM 225-775	12/1/2012
SANBAG	200074	LUMP SUM – TRANSPORTATION ENHANCEMENT ACTIVITIES PROJECTS FOR SAN BERNARDINO COUNTY-BIKE/PED PROJECTS (PROJECTS CONSISTENT W/40CFR PART 93.126,127,128, EXEMPT TABLE 2 & 3).	12/1/2015
SANBAG	20040827	RIDESHARE PROGRAM FOR SOUTHCOAST AIR DISTRICT	12/1/2015
VARIOUS AGENCIES	713	I-215 CORRIDOR NORTH – IN SAN BERNARDINO, ON I-215 FROM RTE 10 TO RTE 210 – ADD 2 HOV & 2 MIXED FLOW LNS (1 IN EA. DIR.) AND OPERATIONAL IMP INCLUDING AUX LANES AND BRAIDED RAMP	9/1/2013

Note: Projects may include TCM and non-TCM portions. Committed TCMs include only that portion of the projects that meets the definition of TCMs.

Attachment B: 2012 South Coast PM2.5 AQMP Reasonably Available Control Measure (RACM) Analysis - TCMs

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.1	Regional Express Bus Program	Purchase of buses to operate regional express bus services.	Yes		CTCs (MTA, OCTA), Transit Operators
1.2	Transit access to airports	Operation of transit to airport to serve air passengers.	Yes		Transit Operators, CTCs (MTA, SCRRRA)
1.3	Accelerate Bus Retrofit Program	Accelerate application of retrofit of diesel-powered buses to achieve earlier compliance with state regulations.	Yes		CTCs (MTA, OCTA), Transit Operators
1.4	Mass transit alternatives	Major change to the scope and service levels.	Yes		SCAG, CTCs
1.5	Expansion of public transportation systems	Expand and enhance existing public transit services.	Yes		CTCs
1.6	Transit service improvements in combination with park-and-ride lots and parking Management	Local jurisdictions and transit agency improve the public transit system and add new park-and-ride facilities and spaces on an as needed basis.	Yes		CTCs (MTA, SCRRRA)

Attachment B: 2012 South Coast PM2.5 AQMP Reasonably Available Control Measure (RACM) Analysis - TCMs

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.7	Free transit during special events	Require free transit during selected special events to reduce event-related congestion and associated emission increases.	No <i>(The Mobile Source Air Pollution Reduction Review Committee has been co-funding free event center shuttle service demonstration projects)</i>	The Legislature significantly reduced authority of AQMD to implement indirect source control measures through revisions to the Health & Safety Code (HSC 40717.8). Transit agencies should decide individually whether this measure is economically feasible for them.	
1.8	Require that government employees use transit for home to work trips, expand transit, and encourage large businesses to promote transit use	Require all government employees use transit a specified number of times per week, or expand transit, and encourage business to promote transit use.	Yes		CTCs
1.9	Increase parking at transit centers or stops	Encourage transit convenience by providing additional parking at transit centers.	Yes		CTCs
1.10	Expand regional transit connection ticket distribution	Provides interchangeability of transit ticket.	Yes		CTCs, Metrolink

Section 108 (f) 2. Restriction of Certain Roads or Lanes to, or Construction of Such Roads or Lanes for Use By, Passenger Buses or High Occupancy Vehicles

Attachment B: 2012 South Coast PM2.5 AQMP Reasonably Available Control Measure (RACM) Analysis - TCMs

Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
2.1	Update High Occupancy Vehicle (HOV) Lane Master Plan	Analysis of increased enforcement, increasing occupancy requirements, conversion of existing HOV lanes to bus only lanes and/or designation of any new carpool lanes as bus-only lanes; utilization of freeway shoulders for peak-period express bus use; commercial vehicle buy-in to HOV lanes; and appropriateness of HOV lanes for corridors that have considered congestion pricing or value pricing.	Yes		SCAG, Caltrans, CTCs
2.2	Fixed lanes for buses and carpools on arterials	Provide fixed lanes for buses and carpools on arterial streets where appropriate.	Yes		CTCs (MTA, OCTA), LA City
2.3	Expand number of freeway miles available, allow use by alternative fuel vehicles, changes to HOV lane requirements and hours	Various measures evaluated in many ozone nonattainment areas. Specifics vary according to freeway system, use patterns and local characteristics.	Yes		ARB, Caltrans

Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives

Attachment B: 2012 South Coast PM2.5 AQMP Reasonably Available Control Measure (RACM) Analysis - TCMs

Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.1*	Commute solutions	The federal law that complements parking cash-out is called the <i>Commuter Choice Program</i> . It provides for benefits that employers can offer to employees to commute to work by methods other than driving alone.	Yes		Employer, AQMD
3.2*	Parking cash-out	State law requires certain employers who provide subsidized parking for their employees to offer a cash allowance in lieu of a parking space.	Yes		Employer, AQMD
3.3*	Employer Rideshare Program Incentives	Employer rideshare incentives and introduction of strategies designed to reduce single occupant vehicle trips. Examples include: public awareness campaigns, Transportation Management Associations among employers, alternative work hours, and financial incentives.	Yes		Employer, AQMD
3.4*	Implement Parking Charge Incentive Program	Evaluate feasibility of an incentive program for cities and employers that convert free public parking spaces to paid spaces. Review existing parking policies as they relate to new development approvals.	Yes		Cities, Counties, Employer
3.5*	Preferential parking for carpools and vanpools	This measure encourages public and private employers to provide preferential parking spaces for carpools and vanpools to decrease the number of single occupant automobile work trips. The preferential treatment could include covered parking spaces or close-in spaces.	Yes		Employer, AQMD
3.6*	Employee parking fees	Encourage public and private employers to charge employees for parking.	Yes		Employer, AQMD

* This measure relates to AQMD Rule 2202, *On-Road Motor Vehicle Mitigation Options*. Administered by AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen.

Attachment B: 2012 South Coast PM2.5 AQMP Reasonably Available Control Measure (RACM) Analysis - TCMs

Section 108 (f) 3. Employer-Based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.7	Merchant transportation incentives	Implement “non-work” trip reduction ordinances requiring merchants to offer customers mode shift travel incentives such as free bus passes and requiring owners/managers/developers of large retail establishments to provide facilities for non-motorized modes.	No	Require state legislation.	
3.8*	Purchase vans for vanpools	Purchase a specified number of vans for use in employee commute travel.	Yes		Employer, AQMD
3.9*	Encourage merchants and employers to subsidize the cost of transit for employees	Provide outreach and possible financial incentives to encourage local employers to provide transit passes or subsidies to encourage less individual vehicle travel.	Yes		Employer, AQMD
3.10*	Compressed work weeks	Work 80 hours in 9 days, or 40 hours in 4 days, or 36 hours in 3 days in lieu of working 40 hours in 5 days.	Yes		Employer, AQMD
3.11*	Telecommuting	Goal of specified percentage of employees telecommuting at least once per week.	Yes		Employer, AQMD
3.12	Income Tax Credit to Telecommuters	Provide tax relief to employees telecommuting to work.	No	Requires state legislation.	

Section 108 (f) 4. Trip Reduction Ordinance

In December 1995, Congress changed the Clean Air Act Amendments to make the Employee Commute Option program voluntary (no longer mandatory). California State Law prohibits mandatory employer based trip reduction ordinance programs (SB437). (HSC 40717.9) To account for these restrictions, SCAQMD Rule 2202 provides employers with a menu of options to

* This measure relates to AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Administered by AQMD, Rule 2202 provides a menu of options for employers in choosing how they will comply. Individual employers implement the mitigation option(s) that they have chosen.

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Section 108 (f) 4. Trip Reduction Ordinance					
reduce mobile source emissions generated from employee commutes. Rule 2202 complies with federal and state Clean Air Act requirements, HSC 40458, and HSC 182(d)(1)(B) of the federal Clean Air Act. Nevertheless, some jurisdictions continue to implement Trip Reduction Ordinances. For example, the City of Santa Monica requires new and existing non-residential development projects to adopt Emission Reduction Plans and pay transportation impact fees to reduce traffic congestion and improve air quality in the city.					

Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.1	Develop Intelligent Transportation Systems	The term “Intelligent Transportation Systems” includes a variety of technological applications intended to produce more efficient use of existing transportation corridors.	Yes		CTCs, Caltrans
5.2	Coordinate traffic signal systems	This measure implements and enhances synchronized traffic signal systems to promote steady traffic flow at moderate speeds.	Yes		CTCs, Counties, and Cities
5.3	Reduce traffic congestion at major intersections	This measure implements a wide range of traffic control techniques designed to facilitate smooth, safe travel through intersections. These techniques include signalization, turn lanes or median dividers. The use of grade separations may also be appropriate for high volume or unusually configured intersections.	Yes		CTCs, Counties, and Cities
5.4	Site-specific transportation control measures	This measure could include geometric or traffic control improvements at specific congested intersections or at other substandard locations. Another example might be programming left turn signals at certain intersections to lag, rather than lead, the green time for through traffic.	Yes		CTCs, Counties, and Cities

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Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.5	Removal of on-street parking	Require all commercial/industrial development to design and implement off-street parking.	Yes		CTCs, Counties, and Cities
5.6	Reversible lanes	Implement reversible lanes on arterial streets to improve traffic flow where appropriate.	Yes		CTCs, Counties, and Cities
5.7	One-way streets	Redesignate streets (or portions of in downtown areas) as one-way to improve traffic flow.	Yes		CTCs, Counties, and Cities
5.8	On-Street parking restrictions	Restrict on-street parking where appropriate.	Yes		CTCs, Counties, and Cities
5.9	Bus pullouts in curbs for passenger loading	Provide bus pullouts in curbs, or queue jumper lanes for passenger loading and unloading.	Yes		CTCs, Counties, and Cities
5.10	Additional freeway service patrol	Operation of additional lane miles of new roving tow truck patrols to clear incidents and reduce delay on freeways during peak periods.	Yes		CTCs, CHP
5.11	Fewer stop signs, remove unwarranted and "political" stop signs and signals	Improve flow-through traffic by removing stop signs and signals. Potential downside in safety issues.	Yes		CTCs, Counties, and Cities
5.12	Ban left turns	Banning all left turns would stop the creation of bottlenecks although slightly increase travel distances.	No	No clear demonstration of air quality emissions benefits.	
5.13	Changeable lane assignments	Increase number of one-way lanes going in congested flow direction during peak traffic hours.	Yes		Caltrans, CTCs, Counties, and Cities
5.14	Adaptive traffic signals and signal timing	Self explanatory.	Yes		Counties, Counties, and Cites

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Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.15	Freeway bottleneck improvements (add lanes, construct shoulders, etc.)	Identify key freeway bottlenecks and take accelerated action to mitigate them.	Yes		Caltrans, SCAG
5.16	Minimize impact of construction on traveling public. Have contractors pay when lanes are closed as an incentive to keep lanes open.	Prohibit lane closures during peak hours, limit work to weekends and/or nights.	Yes		Caltrans
5.17	Internet provided road and route information	Reduce travel on highly congested roadways by providing accessible information on congestion and travel.	Yes		CTCs, Caltrans, Counties, Cities
5.18	Regional route marking systems to encourage underutilized capacity	Encourage travel on local roads and arterials by better route marking to show alternatives.	Yes		Caltrans, Counties, Cities
5.19	Congestion management field team to clear incidents	Self explanatory.	Yes		CTCs, CHP
5.20	Use dynamic message signs to direct/smooth speeds during incidents	Self explanatory.	Yes		Caltrans
5.21	Get real-time traffic information to trucking centers and rental car agencies	Reduce travel in congested areas by providing information directly to high volume travelers.	Yes		CTCs, Caltrans

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Section 108 (f) 5. Traffic Flow Improvement Programs That Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.22	55 mph speed limit during ozone season	Self explanatory	No	Reductions in freeway speeds are governed by California Vehicle Code 22354, which authorizes Caltrans to lower speeds after doing an engineering and traffic survey, which shows that the legislatively- set maximum speed of 65 mph, is more than is reasonable or safe. No consideration of emissions is contemplated under this statute. This measure is not feasible until the statute is changed.	
5.23	Require 40 mph speed limit on all facilities	Depends on area's emission factors.	No	The California Vehicle Code Sections 22357 and 22358 mandates a methodology for setting speed limits for local areas. This measure is not feasible until the statute is changed.	
5.24	Require lower speeds during peak periods	Self explanatory.	No	The California Vehicle Code Sections 22357 and 22358 mandates methodology for setting speed limits for local areas. This measure is not feasible until the statute is changed.	
5.25	On-street parking restrictions	Restrict on-street parking where appropriate.	Yes		State, Counties, and Cities

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Section 108 (f) 6. Fringe and Transportation Corridor Parking Facilities Serving Multiple Occupancy Vehicle Programs or Transit Service					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
6.1	Park-and-ride lots	Develop, design, and implement new park-and-ride facilities in locations where they are needed.	Yes		CTCs, Transit Operators, SCRRA
6.2	Park-and-ride lots serving perimeter counties	Specific to a locality.	Yes		CTCs, Transit Operators, SCRRA

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.1	Off-peak goods movement	Restrict truck deliveries by time or place in order to minimize traffic congestion during peak periods.	Yes		PierPass A non-profit organization of marine terminal operators at the Ports of Los Angeles and Long Beach.
7.2	Truck restrictions during peak periods	Restrict truck travel during peak periods in order to minimize traffic congestion.	Yes		See Measure 7.1

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Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.3	Involve school districts to encourage walking/bicycling to school	Decrease vehicle emissions due to school trips by reducing these trips through education and out-reach programs.	Yes		School Districts
7.4	Adjust school hours so they do not coincide with peak traffic periods and ozone seasons	Measure to reduce travel during peak periods and ozone-contributing periods in the early morning.	No	School hours are dictated by many variables, including overcrowding and year-round schooling. This measure is not feasible.	
7.5	Area-wide tax for parking	Reduce driving by limiting parking through pricing measures.	Yes		Counties, Cities
7.6	Increase parking fees	Reduce driving by limiting parking through pricing measures.	No	Attorney General ruled AQMD lacks authority to implement this measure.	
7.7	Graduated pricing starting with highest in Central Business District	Charge the most for parking in the central business or other high volume areas in a city to discourage vehicle travel in these areas.	Yes		Market Driven
7.8	Buy parking lots and convert to other land use	Limit parking by converting available parking to other land uses to discourage driving.	Yes		Counties and Cities

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Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.9	Limit the number of parking spaces at commercial airlines to support mass transit	Reduce airport travel by limits on parking at airports.	No	Regulatory agencies do not have the legal authority to make local land use decisions. It is at the discretion of the regional or local airport authority to make local land use decisions pertaining to airports. Additionally, It is necessary to have significant mass transit available at airports before this measure can be implemented.	
7.10	No Central Business District (CBD) vehicles unless LEV or alt fuel or electric	Define high-use area and ticket any vehicles present unless they are low emitting, alternative fueled or electric.	No	The Legislature significantly reduced authority to implement indirect source control measures through revisions to the Health & Safety Code (40717.6, 40717.8, and 40717.9).	
7.11	Auto restricted zones	No vehicles allowed in certain areas where high emissions, congestion or contribution to ozone problems.	Yes		Counties and Cities
7.12	Incentives to increase density around transit centers	Lower travel by increasing residential and commercial density in areas near transit.	Yes		Counties and Cities
7.13	Land use/air quality guidelines	Guidelines for development that contributes to air quality goals.	Yes		ARB, AQMD, SCAG
7.14	Cash incentives to foster jobs/housing balance	Specific to locality – encouraged by California Clean Air Plan.	No	No dedicated source of funding for this measure.	

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Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.15	Trip reduction oriented development	Land use decisions that encourage trip reductions.	Yes		Counties, Cities, CTCs
7.16	Transit oriented development	Land use decisions that encourage walkable communities and multi-modal transit systems.	Yes		Counties, Cities, CTCs
7.17	Sustainable development	Land use decisions that create equitable standards of living to satisfy the basic needs of all peoples, all while taking the steps to avoid further environmental degradation.	Yes		Counties, Cities, CTCs

Section 108 (f) 8. Programs For the Provision of All Forms of High-Occupancy, Shared-Ride Services					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
8.1*	Financial Incentives, Including Zero-Bus Fares	Provide financial incentives or other benefits, such as free or subsidized bus passes and cash payments for not driving, in lieu of parking spaces for employees who do not drive to the workplace.	Yes		AQMD, Employer

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Section 108 (f) 8. Programs For the Provision of All Forms of High-Occupancy, Shared-Ride Services					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
8.2	Internet ride matching services	Provide match-lists, route info, hours and contact information over the internet to assist individuals in joining or developing carpools.	Yes		CTCs, SCAG
8.3*	Preferential parking for carpoolers	Provide free, covered, near-building or similar incentives to carpoolers.	Yes		AQMD, Employer
8.4*	Credits and incentives for carpoolers	Self-explanatory – form depends on locality.	Yes		AQMD, Employer
8.5*	Employers provide vehicles to carpoolers for running errands or emergencies	Having vehicles available for workday errands makes it easier to go to work without one.	Yes		AQMD, Employer
8.6	Subscription services	Free van services to provide transportation for the elderly, handicapped or other individuals who have no access to transportation.	Yes		County, Employer
8.7	School car pools	Self explanatory and voluntary	No	Not economically feasible and insufficient resources available for implementation.	
8.8*	Guaranteed ride home	Self explanatory.	Yes		AQMD, Employer
8.9	Transit Voucher Program	Transit vouchers for elderly and low income commuters.	Yes		CTCs, SCAG

Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place

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Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.1	Establish Auto-Free Zones and pedestrian malls	Establish auto free zones and pedestrian malls where appropriate.	Yes		Counties and Cities
9.2	Encouragement of pedestrian travel	This measure involves encouraging the use of pedestrian travel as an alternative to automobile travel. Pedestrian travel is quite feasible for short shopping, business, or school trips.	Yes		CTCs, Counties, Cities, SCAG
9.3	Bicycle/Pedestrian Program	Fund high priority projects in countywide plans consistent with funding availability.	Yes		CTCs, Counties, and Cities
9.4	Close certain roads for use by non-motorized traffic	During special events, weekends, or certain times of the day, close some roads to all but non-motorized traffic.	Yes		Counties, and Cities
9.5	Encouragement of bicycle travel	Promotion of bicycle travel to reduce automobile use and improve air quality. Bikeway system planning, routes for inter-city bike trips to help bicyclists avoid other, less safe facilities. Another area for potential actions is the development and distribution of educational materials, regarding bicycle use and safety.	Yes		SCAG, CTCs, Counties, and Cities
9.6	Free bikes	Provide free bikes in the manner of Boulder, CO. Simple utilitarian bikes that can be used throughout the metro area and dropped off at destination for use by anyone desiring use.	No	Evidence suggests that bicycle theft is a problem in other programs and renders the measure technically and economically infeasible.	
9.7*	Cash rebates for bikes	Provide financial incentives to purchase bicycles and thereby encourage use.	Yes		Employer

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Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.8	Close streets for special events for use by bikes and pedestrians	Self Explanatory.	Yes		Counties and Cities
9.9	Use condemned dirt roads for bike trails	Self Explanatory.	No	Not applicable because there are no condemned dirt roads in the region.	

Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
10.1*	Bike racks at work sites	Self Explanatory.	Yes		AQMD, Employer
10.2	Bike racks on buses	Bike racks would be placed on a to-be-determined number of buses to increase bicycle travel.	Yes		CTCs, Transit Operators, SCRRA
10.3	Regional bike parking	Bike Transit Centers	Yes		CTCs
10.4	Development of bicycle travel facilities	Encourages a variety of capital improvements to increase bicycle use. Off-street bikeways where high-speed roadways preclude safe bicycling. Clearly mark travel facilities with signs and provide adequate maintenance.	Yes		CTCs, Transit Operators, SCRRA

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Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
10.5	Expedite bicycle projects from RTP	Create bicycle and pedestrian master plan and build out at an accelerated rate to achieve benefits in time for attainment deadline.	Yes		SCAG, CTCs, Counties, Cities
10.6	Provide bike/pedestrian facilities safety patrols	Self Explanatory.	Yes		Counties and Cities
10.7	Inclusion of bicycle lanes on thoroughfare projects	Self Explanatory.	Yes		State, Counties, and Cities
10.8	Bicycle lanes on arterial and frontage roads	Self Explanatory.	Yes		State, Counties, and Cities
10.9	Bicycle route lighting	Self Explanatory.	Yes		State, Counties, Cities

Section 108 (f) 11. Programs to Control Extended Idling of Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies

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Section 108 (f) 11. Programs to Control Extended Idling of Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
11.1	Limit excessive car dealership vehicle starts	Require car dealers to limit the starting of vehicles for sale on their lot(s) to once every two weeks. Presently, a number of new and used car dealers start their vehicles daily to avoid battery failure and assure smooth start-ups for customer test drives.	No	This measure was investigated by the AQMD and it was determined that in contrast to colder climates where vehicles are started on a daily basis, vehicles in the South Coast started much less frequently. For this reason it was determined not to be technically feasible.	
11.2	Encourage limitations on vehicle idling	Encourage limitations to limit extended idling operations.	Yes		ARB
11.3	Turn off engines while stalled in traffic	Public outreach or police-enforced program.	No	This measure raises safety and congestion concerns. No clear demonstration of air quality emissions benefits.	
11.4	Outlaw idling in parking lots	Self-explanatory and police enforced program.	No	Enforcement of idle restrictions is a low priority for police relative to their other missions. The cost effectiveness of this measure has not been demonstrated. It is not economically feasible.	
11.5	Reduce idling at drive-throughs; ban drive-throughs	Mandate no idling or do not allow drive-through windows during ozone season.	No	No clear demonstration of air quality emissions benefits. This measure is not economically feasible.	
11.6	Promote use of pony engines	Use special battery engines to keep air conditioning and other truck systems working while truck not in use.	Yes		ARB

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Section 108 (f) 11. Programs to Control Extended Idling of Vehicles					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
11.7	Idle restrictions at airport curbsides	Self-explanatory and police enforced.	Yes		Airport authority
11.8	Truck Stop Electrification	Provide electric charging stations for at truck stops to power heating/AC units and other on-board equipment.	Yes		ARB

Section 108 (f) 12. Program to Reduce Motor Vehicle Emissions Consistent with Title II, Which Are Caused by Extreme Cold Start Conditions	
Not applicable. The definition of an "extreme cold start" specifies temperatures below 20 degrees Fahrenheit.	Not applicable in the South Coast - No extreme cold start conditions

Section 108 (f) 13. Employer-sponsored programs to permit flexible work schedules

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Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
13.1*	Alternative work schedules	Enables workers to choose their own working hours within certain constraints. Flextime provides the opportunity for employees to use public transit, ridesharing, and other Nonmotorized transportation. A related strategy, staggered work hours, is designed to reduce congestion in the vicinity of the workplace. Alternative workweeks have been implemented extensively by large private and public employers.	Yes		AQMD, Employer
13.2*	Modifications of work schedules	Implement alternate work schedules that flex the scheduled shift time for employees. Encourage the use of flexible or staggered work hours to promote off-peak driving and accommodate the use of transit and carpooling.	Yes		AQMD, Employer
13.3*	Telecommunications-Telecommuting/Teleconferencing	Encourage the use of telecommuting-telecommuting/teleconferencing in place of motor vehicle use where appropriate.	Yes		AQMD, Employer

Section 108 (f) 14. Programs and Ordinances to facilitate Non-automotive travel, provision to and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts

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Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
14.1	Areawide public awareness programs	This measure focuses on conducting ongoing public awareness programs throughout the year to provide the public with information on air pollution and encourage changes in driving behavior and transportation mode use.	Yes		AQMD
14.2	Special event controls	This measure would require new and existing owners/operators of the special event centers to reduce mobile source emissions generated by their events. A list of optional strategies would be available that reduce mobile source emissions. The definition of “special event center” could be developed through the rule development process.	Yes		Counties, Cities, Special Event Operators
14.3	Land Use/development alternatives	This measure includes encouraging land use patterns, which support public transit and other alternative modes of transportation. In general, this measure would also encourage land use patterns designed to reduce travel distances between related land uses	Yes		ARB, SCAG, AQMD, Counties, Cities
14.4	Voluntary No-Drive Day programs	Conduct voluntary No-Drive Day programs during the ozone season through media and employer based public awareness activities.	Yes		CTCs
14.5**	New Development Air Quality Impact Evaluation	Evaluate air quality impacts of new development and recommend or require mitigation for significant adverse impacts.	Yes		AQMD, Counties, Cities, CEQA Lead Agencies
14.6	Transportation for Livable Communities (TLC)/Housing Incentive program	Program provides planning grants, technical assistance, and capital grants to help cities and Nonprofit agencies define and implement transportation projects that support community plans including increased housing near transit.	Yes		SCAG, State

** AQMD and SCAG recommend mitigation as commenting agencies on new development projects; cities and counties require mitigation under their discretionary authority as lead agency.

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Section 108 (f) 14. Programs and Ordinances to facilitate Non-automotive travel, provision to and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
14.7	Incentives to increase density around transit centers	Lower travel by increasing residential and commercial density in areas near transit.	Yes		Counties, Cities, CTCs
14.8	Incentives for cities with good development practices	Provide financial or other incentive to local cities that practice air quality-sensitive development.	Yes		Counties, Cities
14.9	Increase state gas tax	Self Explanatory.	No	Need state legislation.	
14.10	Pay-As-You-Drive Insurance	Self Explanatory.	No	Need state legislation. No clear demonstration of air quality emission benefits so does not advance attainment date..	

Section 108 (f) 15. Programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other Non-motorized means of transportation when commercially feasible and in the public interest					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or

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					Agencies
15.1*	Encouragement of pedestrian travel	Promote public awareness and use of walking as an alternative to the motor vehicle.	Yes		AQMD, SCAG, CTCs, Employer
15.2	Pedestrian and bicycle overpasses where safety dictates	Ongoing implementation as development occurs.	Yes		Counties, Cities

Section 108 (f) 16. Program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
16.1	Counties assess ten dollar license plate fee to fund repair/replacement program for high-emitters	Self explanatory.	Yes		ARB, BAR**
16.2	Buy vehicles older than 1975	Self explanatory.	Yes		ARB, AQMD***
16.3	Demolish impounded vehicles that are high emitters	Self explanatory.	No	Not economically feasible.	
16.4	Do whatever is necessary to allow cities to remove the engines of high emitting vehicles (pre-1980) that are abandoned and to be auctioned	Self explanatory.	No	Not economically feasible.	
16.5	Accelerated retirement program	Identify high emitting vehicle age groups and develop a program to remove them from use.	Yes		ARB, AQMD

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** Similar program administered with different funding source as part of smog check.

*** Voluntary car scrapping programs to generate credits.

Comments	Responses
<p><u>National Resources Defense Council (NRDC) Comment Letter dated September 5, 2012, page 5 of 6 (Comment KK-9):</u></p> <p>NRDC remains concerned that the 2012 AQMP does not effectively incorporate a range of Transportation Control Measures (“TCM”) commensurate with the air quality challenges this region faces. Accordingly, we suggest that the agencies cooperating on this air plan reevaluate the potential for additional TCMs that can enhance mobility while helping tackle[r][sic] the region’s persistent air quality challenges.</p> <p>A. Elements of SCAG’s RTP Should Be Included in the AQMP as TCMs.</p> <p>SCAG’s excellent work to adopt its RTP/SCS in April, 2012 resulted in a plan with many useful elements, some of which should be adopted into this plan as TCMs. We recommend:</p> <ol style="list-style-type: none"> 1. Active Transportation Component, \$6.7B (AQMP, at IV-C-7); 2. Transit Component (id.); and 3. Passenger and High Speed Rail Component. 	<p>The U.S. Environmental Protection Agency’s (EPA) Transportation Conformity Regulations define transportation control measures (TCMs) as those projects and programs that reduce emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Note, SCAG facilitates interagency consultation regarding TCM related issues through SCAG’s Transportation Conformity Working Group but SCAG does not have the discretion to expand this regulatory definition.</p> <p>The Clean Air Act requires TCMs to be included in SIPs only for “serious” and above ozone non-attainment areas. In the SCAG region, only the South Coast Air Basin and the Ventura County portion of the South Central Coast Air Basin are serious or above nonattainment areas and thus include TCMs in their ozone SIPs. To add new TCM categories that are not in the applicable ozone SIPs, an ozone revision would be required. Nevertheless, TCM type projects are planned for and implemented throughout the six-county SCAG region irrespective of whether or not they are included in an applicable SIP. Specifically, the 2012-2035 Regional Transportation Plan/ Sustainable Communities Strategy (2012-2035 RTP/SCS) constitutes the transportation strategy and control measures portion of the 2012 AQMP (Appendix IV-C), inclusive of all TCMs and TCM type projects therein.</p> <p>As discussed in the Appendix IV-C and also specified in the 2007 South Coast Ozone SIP, TCM type projects and programs in this plan include the following three main categories of transportation improvement projects and programs:</p> <ol style="list-style-type: none"> (1) High occupancy vehicle (HOV) measures, (2) Transit and systems management measures (including capacity-expanding active transportation projects such as new bike lane projects), and (3) Information-based transportation strategies. <p>While all TCM type projects in the 2012-2035 RTP/SCS are included in the transportation strategy and control measures portion of the AQMP, only those TCM type projects which have funding programmed for right-of-way or</p>

Comments	Responses
	<p>construction in the first two years of the prevailing Federal Transportation Improvement Program (FTIP) developed by SCAG are considered committed for air quality planning purposes in the applicable SIP. As TCM type projects become committed TCMs through the biennial FTIP process, they are automatically rolled into the SIP as committed TCMs (the “TCM Rollover Process” as described in SCAG’s FTIP Guidelines and 2007 Ozone SIP). To add any new TCM projects that are not in the adopted 2012-2035 RTP/SCS, an RTP/FTIP amendment/update would be required.</p>
<p><u>National Resources Defense Council (NRDC) Comment Letter dated September 5, 2012, pages 5 & 6 of 6 (Comment KK-10):</u></p> <p>[Footnote ¹] The current list of TCMs includes some bike projects, but it remains unclear what is the criteria for inclusion of these projects as TCMs. Overall, NRDC supports including a much more robust set of active transportation projects as TCMs</p> <p>B. Expanding parking should not be included as a TCM without evidence that it will lead to real, cost-effective reductions in emissions</p> <p>Several projects propose to add hundreds of new parking spaces, either at park and rides or at transit facilities. Expanding parking at transit stations, unless priced appropriately to offset the cost of the spaces, increases costs for all transit system users, including the many who do not drive, and takes valuable land in the vicinity of transit stations off the market for what could be viable commercial or residential development. Please provide background documentation to suggest that such parking expansions lead to real, cost-effective, equitable reductions in vehicle use and emissions.</p>	<p>Comments noted. SCAG’s FTIP Guidelines include a Transportation Control Measures chapter with detailed information on the TCM development process including definitions and project categories of TCMs, addition of new TCMs, and the TCM “Rollover” Process.</p> <p>In the SCAG region, new TCMs are identified by the FTIP process. Projects that meet the TCM criteria become committed TCMs and part of the applicable SIP after the following occurs: 1) funds are committed for right-of-way or construction in the first two years (the fiscally constrained portion) of the FTIP; 2) the FTIP is approved by the Regional Council; 3) state and federal approval of the FTIP; and 4) concurrence with regard to TCMs by US EPA and California Air Resources Board (ARB).</p> <p>Park-n-ride lot expansion projects are TCMs because park-n-ride lots are intermodal transfer facilities that can increase usage of public transit services.</p>

Comments	Responses
<p><u>National Resources Defense Council (NRDC) Comment Letter dated September 5, 2012, page 6 of 6 (Comment KK-11):</u></p> <p>C. Expansion of mixed-flow lanes should not be included as TCMs.</p> <p>Several projects propose to widen roads by adding mixed-flow lanes. Section 108(f)(1)(a) lists high occupancy vehicle (HOV) lanes as appropriate TCMs, but it is less clear that construction of new mixed-flow facilities will yield permanent reductions in vehicle use and emissions. More likely, such expansions – if intended to reduction bottlenecks – may have temporary emissions benefits, and in short order lead to new, induced trips, and potentially induced land development to take advantage of new capacity. The literature on induced demand is extensive and the Regional Transportation Plan guidelines adopted by the California Transportation Commission acknowledge this now broadly accepted planning phenomenon. We strongly recommend that SCAG, AQMD and its member CTCs reconsider whether capacity expansion projects belong on a list of Transportation Control Measures, or whether there are other projects that will more effectively achieve the worthy goals of reducing vehicle use and emissions.</p>	<p>As discussed in Appendix IV-C, TCMs are projects and programs that reduce emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. TCMs in this plan include the following three main categories of transportation improvement projects and programs:</p> <ul style="list-style-type: none"> • High occupancy vehicle (HOV) measures, • Transit and systems management measures, and • Information-based transportation strategies. <p>To facilitate TCM tracking, TCMs are listed by project ID and project description as specifically set forth in the FTIP since TCM project inclusion in the FTIP is the means to track timely implementation. To avoid confusion that may arise from the project descriptions listed in Appendix IV-C, Attachment A, a footnote will be included that clarifies that the TCM is only that portion of the project that meets the definition of the TCM. For example, for a project that adds both mixed flow lanes and HOV lanes, only the HOV portion of the project is considered a TCM.</p>
<p><u>National Resources Defense Council (NRDC) Comment Letter dated September 5, 2012, page 6 of 6 (Comment KK-12):</u></p> <p>D. NRDC also Recommends Additional Efforts.</p>	<p>SCAG’s 2012-2035 RTP/SCS identifies opportunities to increase funding for active transportation. SCAG will continue to work with the County Transportation Commissions in the region to develop new policy strategies that can generate funding for transportation projects that support the goals identified in the 2012-2035 RTP/SCS. Further, at its July 5, 2012, SCAG’s Regional</p>

Attachment 3. SCAG Responses to Comments on Draft 2012 AQMP Appendix IV-C

Comments	Responses
<p>Page IV-C-8 references the \$22.1 billion the RTP will invest in arterials. For such a significant investment of resources, we believe an additional goal of the program should be, to create a network of slow-speed streets that are safer for bicyclists and pedestrians. New bike lanes are critical, but even with lanes many riders, particularly women and children, will not ride when the bike lane is on a high-speed street. Low speed streets make these clean, healthy, non-polluting modes of transportation accessible to more SCAG residents and SCAG should work with its member cities and CTCs to identify the best streets for these networks.</p>	<p>Council approved the development of an Active Transportation subcommittee, among 5 other subcommittees responsible for developing policy recommendations to implement the 2012-2035 RTP/SCS. This subcommittee will specifically be responsible for recommending to the SCAG’s Transportation Committee (TC) policies which implement the 2012-2035 RTP/SCS as it relates to Active Transportation. Policy recommendations approved by the TC will be forwarded to SCAG’s Regional Council for final review and approval. These anticipated, new SCAG policies may assist local jurisdictions and the County Transportation Commissions in initiating additional efforts and funding in support of active transportation.</p>
<p><u>National Resources Defense Council (NRDC) Comment Letter dated September 5, 2012, page 6 of 6 (Comment KK-13):</u></p> <p>On page IV-C-7, we recommend that SCAG supplement its adopted list of TSM strategies with improved data sharing. A plethora of transit-user apps has sprung up since the 2007 AQMP. High quality, real-time, easily-accessible transit vehicle departure and arrival information can help to leverage significant new transit investments with higher ridership. Releasing data is a low-cost way to leverage outside talent to improve usability of transit, biking, and walking.</p>	<p>The 2012-2035 RTP/SCS was intended to reflect the most feasible, practical and effective TSM Strategies, including Transit Automatic Vehicle Location (AVL), universal transit fare media, next vehicle arrival display etc. SCAG will consider updating the TSM Strategies list in the future to reflect the most current technology applications to transit services in the future RTP/SCS updates as necessary and appropriate.</p>

Comments	Responses
<p><u>Southern California Edison (SCE) Comment Letter dated August 31, 2012, page 4 (Comment Y-7):</u></p> <p>With regard to Appendix IV-C, Regional Transportation Strategy and Transportation Control Measures (TCMs), many of the strategies and TCMs improve efficiency of the existing system and would have no impact on SCE operations. However, the measures in Appendix IV-C call for more than \$150 billion in capital improvements (funded and unfunded) to the local transit, commuter, and high-speed rail and goods-movement systems (pages 7-8), many of which include a “zero or near-zero” emissions component. As noted above, this expansion of electric transportation would have an impact on the electric system and the need for new transmission, distribution and generation, and is yet another example of the need to address New Source Review reform. Another issue that is not clear from TCM Emissions Table 1 & 2 is whether the District has accounted for emissions from the construction and operation of energy infrastructure to feed the increase in electric, natural gas, and other alternative fuels. While page 10 of the appendix recognizes the need for improved infrastructure planning and investment to support alternative-fueled vehicles, it does not discuss if any TCMs will be updated or amended to account for and support the development of the required infrastructure.</p> <p>SCAG is a strategic partner in a regional effort to accelerate fleet conversion to near-zero and zero-emission transportation technologies. A significant expansion of alternative-fuel infrastructure is also needed throughout the region to accommodate the anticipated increase in alternative-fueled vehicles. SCE is working with SCAG</p>	<p>Comment noted. By definition in the Clean Air Act, TCMs are projects and programs that reduce emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Per the U.S. EPA’s Transportation Conformity Regulations, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs.</p> <p>For the next South Coast Ozone SIP, SCAG will consider holding interagency consultation via SCAG’s Transportation Conformity Working Group to discuss whether monetary or non-monetary incentives to encourage infrastructure for zero and near-zero emission transportation could be considered as TCMs.</p>

Attachment 3. SCAG Responses to Comments on Draft 2012 AQMP Appendix IV-C

<p style="text-align: center;">Comments</p>	<p style="text-align: center;">Responses</p>
<p>and the District to develop a framework for the necessary infrastructure changes.</p> <p>SCE encourages the District to support development of infrastructure for alternative-fueled vehicles as part of future TCMs in the 2015 AQMP. Example locations include destination locations or locations such as park-and-ride lots where vehicles park for long period. Future TCMs could also include monetary or non-monetary incentives to encourage infrastructure for zero and near-zero emission transportation. Similarly SCE urges consideration of publicly car-share services to serve as a critical component to completing the “last mile” of trips taken by transit.</p>	

DATE: November 1, 2012

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

FROM: Hasan Ikhtrata, Executive Director,  ikhtrata@scag.ca.gov, (213) 236-1800

SUBJECT: Senate Bill 535 (de León) – California Global Warming Solutions Act of 2006;
Greenhouse Gas Reduction (GHGR) Fund

RECOMMENDED ACTION:

Approve the Legislative/Communications and Membership Committee (LCMC) recommendation to authorize SCAG to work with stakeholders to help identify disadvantaged communities for the purposes of SB 535, and to support the inclusion of statewide transportation coalition principles, which include adopted regional sustainable communities strategies, into the project selection criteria and process for allocating cap and trade revenues.

EXECUTIVE SUMMARY

SB 535 (de León), enacted on September 30, 2012, requires that the California Environmental Protection Agency (CalEPA) identify disadvantaged communities for investment opportunities, that the Department of Finance allocate 25% of the available moneys in the GHGR Fund to projects that provide benefits to disadvantaged communities, and to allocate a minimum of 10% of the available moneys in the GHGR Fund to projects located within disadvantaged communities. These provisions afford the first opportunity for input into the process that will eventually determine how certain cap and trade revenues are allocated for benefit of disadvantaged communities throughout the region. These communities shall be identified by CalEPA based on geographic, socioeconomic, public health, and environmental hazard criteria. Staff seeks direction to consider and forward factors for consideration by CalEPA to identify disadvantaged communities for investment opportunities, as well as authorization to work with stakeholders to promote the inclusion of statewide transportation coalition principles, which include adopted regional sustainable communities strategies, into the project selection criteria and process as part of the overall statewide investment plan that will allocate cap and trade revenues.

SENATE BILL 535

SB 535 (de León) requires that the investment plan developed and submitted to the Legislature pursuant to AB 1532 allocate a minimum of 25% of the available moneys in the fund to projects that provide benefits to identified disadvantaged communities; and a minimum of 10% of the available moneys in the fund to projects located within identified disadvantaged communities. The bill requires CalEPA to identify disadvantaged communities for investment opportunities. While the bill does not specifically define ‘disadvantaged communities,’ it requires disadvantaged communities to be identified based on geographic, socioeconomic, public health, and environmental hazard criteria, which may include either of the following:

1. Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public effects, exposure, or environmental degradation; and,
2. Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

Additionally, the bill requires the investment plan related to the GHGR Fund to include all of the following allocations:

1. A minimum of 25% of the available moneys in the fund to projects that provide benefits to identified disadvantaged communities; and,
2. A minimum of 10% of the available moneys in the fund to projects located within identified disadvantaged communities. This minimum 10% allocation may be for projects included, in whole or in part, in the set of projects supported by the minimum 25% allocation described above.

SB 535 was co-sponsored by the California Environmental Justice Alliance, Coalition for Clean Air, Ella Baker Center, Greenlining Institute, NAACP, and the National Resource Defense Council, and has been supported by numerous health and environmental organizations throughout the legislative process. Opposition to the bill was registered from numerous business community groups including the California Chamber of Commerce, California Building Industry Association, and others. The bill was amended numerous times late in session, and thus recorded support and opposition reflect the positions of organizations at different times through the legislative process. No state or local transportation stakeholders took a position on SB 535, including members of the statewide transportation coalition that promulgated cap and trade principles that SCAG supports, Council of Governments, or other city or local government organization. As reported last month to the Regional Council, San Diego Association of Government (SANDAG) and Metropolitan Transportation Commission (MTC) have approved principles with respect to use of cap and trade revenues generally consistent with the coalition principles supported by SCAG, but neither took a position on SB 535.

The South Coast Air Quality Management District (SCAQMD) supported the bill, citing bill provisions in alignment with SCAQMD priorities, which are consistent with longstanding SCAG air quality and environmental mitigation objectives, including:

- Providing support/funding to areas disproportionately affected by environmental pollution that can lead to negative public health effects and exposure.
- The elimination of adverse environmental and/or economic impacts on environmental justice communities.
- The promotion of co-benefits; i.e., the simultaneous reduction of multiple types of emissions, including those of GHG, criteria pollutants, and toxic air contaminants.

Efforts by many of our partner agencies concerning implementation of SB 535 and how it impacts the overall process of revenue allocation and project selection appear to be early in the formative stage because this bill has passed so recently at the end of session.

SCAG CAP & TRADE PRINCIPLES POLICY ACTION

At its October 4, 2012 meeting the Regional Council adopted the recommendation of the Legislative/Communications & Membership Committee to support the principles for Cap and Trade Auction Revenues promulgated by a statewide transportation Coalition consisting of the League of California Cities, the California State Association of Counties, California Alliance for Jobs, California Transit Association, and Transportation California.

As a reminder, these Coalition principles consist of the following:

1. Dedicate the allocation of revenues related to fuels to transportation investments. This is consistent with the longstanding policy of the state to dedicate revenues related to motor vehicle fuels to transportation. It also assures a political and legal nexus between the costs and benefits of the program.
2. Invest a major portion of fuels related revenues to implement the AB 32 regulatory program by reducing GHG emissions from transportation.
3. Dedicate revenues directly into transit and road operations and maintenance, as well as transit and complete streets infrastructure within existing urban infill and rural communities. These funds must be invested in a way that implements AB 32 using, where applicable, the SB 375 (Steinberg) regional strategies. In regions not within an MPO where SB 375 does not apply, other measurable greenhouse gas reduction strategies can be developed within regional transportation plans.
4. Structure the investments to favor integrated transportation and land use strategies. Funds should be allocated regionally by population, recognizing that different strategies are needed to achieve GHG reductions in different areas of the state. To maximize cost effective GHG reduction, additional incentives for regions with Sustainable Community Strategies that exceed GHG reduction targets, or equivalent Blueprint Plans or other regional plans. Within each region, funding should be allocated primarily through a competitive grant program based on cost effectiveness of GHG emission reductions from combined land use and transportation infrastructure and operations investments.
5. Improve modeling and verification systems to evaluate GHG reduction potential. Funding should be allocated to the development of performance measurement tools for local and regional actions that will allow evaluation and prediction of the GHG reduction and cost effectiveness of investment and land-use strategies.
6. Allow flexibility at the regional and local level to develop the most cost effective ways to meet GHG reduction goals through transportation and land use investments. Provide the incentives and assistance that local governments need to make SB 375 work.
7. Project-funding determinations should be done at the regional level under established statewide criteria to encourage local innovation and flexibility.

The requirements of SB 535 to direct 25% of GHGR fund revenues to benefit disadvantaged communities as well as 10% to be spent within disadvantaged communities are not oppositional to the adopted coalition principles enumerated above. However, there is some question as to whether such determination—both from standpoint of project criteria and selection—will include transportation-specific projects within and beneficially impacting disadvantaged communities commensurate with the impact that the transportation sector has upon emitting GHGs.

LCMC APPROVES STAFF IMPLEMENTATION RECOMMENDATIONS

At its October 16 meeting, the Legislative/Membership and Communications Committee unanimously approved forwarding to the Regional Council for adoption recommendations to implement provisions of SB 535 and to work with stakeholders to secure the inclusion of statewide transportation coalition principles, including adopted regional sustainable communities strategies, into the project selection criteria and process for allocating cap and trade revenues.

The LCMC noted that the region faces unique air quality and carbon emissions challenges arising from its shared international border with Mexico in Imperial County. Environmental regulation and protection is not as rigorous in Mexico as in the United States. Due to the proximity of over 1 million residents in the Calexico metropolitan area immediately across the border and in the same air basin, the region faces disproportionate air quality impacts. Other related issues identified by the committee include the inland port at Calexico, a major intermodal freight shipping project that is responsible for large amounts of diesel emissions on a daily basis; and the border crossing delays in Imperial County which also add significantly to overall emissions from passenger and freight vehicles. The LCMC recommended that SCAG include these factors when identifying disadvantaged communities for consideration by the state agencies and decision-making entities that will determine how cap and trade revenues are allocated.

The most immediate step in the implementation of SB 535 is, pursuant to bill provisions, determination by the CalEPA of what constitutes a ‘disadvantaged community’ for purposes of the bill, which specifies certain factors CalEPA must consider, and others that it may consider as described in the above bill summary. It is presupposed that CalEPA likely will consider an analytical tool they are developing (the *California Communities Environmental Health Screening Tool [CalEnviroScreen]*) in making this determination. CalEPA has been conducting statewide workshops on this tool through September and will issue its final report later this year, though the date has not yet been determined.

Staff has reviewed the factors CalEPA is evaluating to determine communities that are facing disproportionately high cumulative impacts of pollutants on communities, including factors related to exposure to pollutants (PM 2.5, ozone, traffic density, etc.), public health effects (asthma ER rates, cancer/heart disease mortality rates, etc.), environmental effects (brown fields, impaired water bodies, solid/hazardous waste facilities, etc.); as well as population characteristics including sensitive populations and socio-economic factors. Staff notes that on the areas disproportionately affected by environmental pollution or hazards, pursuant to SB 535, these could be identified through several different ways. The LCMC approved staff recommendation that SCAG work with the CalEPA and other stakeholders to ensure the following considerations are included within the process of final determination of what disadvantaged communities consist of:

- First, that disadvantaged communities should include “areas with high levels of criteria pollutant concentration (e.g., ozone, PM2.5)” due to the associated health impacts. In fact, these areas are generally correlated to the “areas with high risks of cancer or respiratory hazard.”

- Second, communities adjacent to transportation facilities could be disproportionately affected due to air pollution and noise impacts. This is particularly the case for “areas within 500 feet of high-volume freeways or other roadways” based on the results of many research over the past decade. In addition, since goods movement and logistic facilities are major generators of pollution and source of health hazards, “areas surrounding major goods movement facilities and along the freight corridors, including all modes” should be included as part of the disadvantaged communities.
- Third, areas with high noise levels due to roadways or airports should also be considered.

The public comment period for CalEPA to receive comments was extended until October 16, 2012. There is no fixed date yet for issuance of its final report. CalEPA staff has informed that it will have a statewide meeting in December to discuss revisions in response to the comments it receives. Staff recommends authorization for SCAG to forward these considerations to CalEPA and follow up at the December revisions meeting to provide any assistance to assure full consideration by CalEPA of these factors for determination of disadvantaged communities. Staff believes that consideration of the above factors in CalEnviroScreen will support both the communities in most need, which suffer from the highest concentrations and levels of exposure to criteria pollutants as well as highest traffic densities, as well as most deserving projects throughout the region.

Additionally, the bill is legislatively tied to enactment of AB 1532 (Nunez), also chaptered on September 30, 2012, which establishes a three-year investment plan to set procedures for the investment of revenues derived from cap and trade (including investment within and for benefit of disadvantaged communities pursuant to SB 535, as well as for transportation and other purposes.) AB 1532 requires the Department of Finance (DOF), in consultation with ARB (and any other relevant state entity), to develop and submit a three-year investment plan to the Legislature for the May Revision (May 1, 2013). Beginning in the FY 2016-17 budget and every three years thereafter, DOF is required to include updates to the investment plan. All money must be appropriated through the annual Budget Act consistent with the investment plan. ARB is required under the bill to conduct two public workshops in different regions of the state and one public hearing on the proposed investment plan prior to the submission of the plan by DOF, but does not specify dates and ARB has not yet established the date and location of these workshops.

The LCMC approved staff recommendation to authorize SCAG to work with ARB, DOF, as well as transportation, local government, environmental, and other stakeholders to include the objectives of the statewide transportation coalition principles, which include adopted regional sustainable communities strategies, into the project selection criteria for projects funded by cap and trade revenues, to be incorporated into the investment plan submitted by DOF to the Legislature for funding through the budget process. Transportation comprises approximately 40% of the state’s share of GHG emissions in total; thus, recognizing that cap and trade represents the only new significant funding source to reduce GHG emissions, the transportation sector and low-carbon transportation improvements should receive a substantial share of proceeds from the cap and trade program.

ATTACHMENT: None

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DATE: November 1, 2012

TO: Energy and Environment Committee (EEC)

FROM: Christine Fernandez, Regional Planner, (213) 236-1923, fernande@scag.ca.gov

SUBJECT: Oil Supply and Energy Myths

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

For Information Only - No Action Required.

EXECUTIVE SUMMARY:

At the request of EEC Members, staff is inviting a series of speakers to discuss energy supply topics including new fossil fuel technologies, alternative fuel issues, and related challenges as they apply to the SCAG region, the state and the nation. Guest speakers on topics such as peak oil have been invited to share facts and information and present the current challenges regarding energy supply. Dr. David Goodstein, Professor of Physics, California Institute of Technology (Caltech), will discuss energy myths that impede the transition away from an oil-based economy.

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; Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

Dr. David Goodstein, Professor of Physics and Applied Physics at Caltech and Vice Provost from 1988-2007, will give a presentation on oil supply and the energy myths that impede the transition from an oil-based economy. The presentation continues the discussion on energy supply topics including new fossil fuel technologies, alternative fuel issues, and related challenges as they apply to the SCAG region, the state and the nation.

Dr. Goodstein will discuss the following "energy myths" and explain his views on why these statements are wrong or poorly express an idea that is right: 1) \$4 a gallon is too much to pay for gasoline; 2) oil companies produce oil; 3) we must conserve energy; 4) when we run out of oil, a substitute will appear; 5) there is enough fossil fuel in the ground to last for hundreds of years; 6) nuclear energy is dangerous; and 7) the greenhouse effect and global warming are bad. The presentation will also briefly touch on the safety and efficacy issue of the practice of hydraulic fracturing (fracking), which is the process of injecting water, sand, and a chemical mixture deep underground to create fissures (cracks) in rocks to allow for additional gas extraction. This follows the June 7, 2012 presentation by Dr. Omar Ergashi, who discussed the viability of increasing California's natural gas production to replace oil.

FISCAL IMPACT:

No fiscal impact

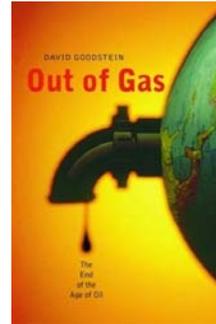
ATTACHMENT:

PowerPoint Presentation: "Out of Gas"

Out of Gas

The end of the age of oil

David Goodstein

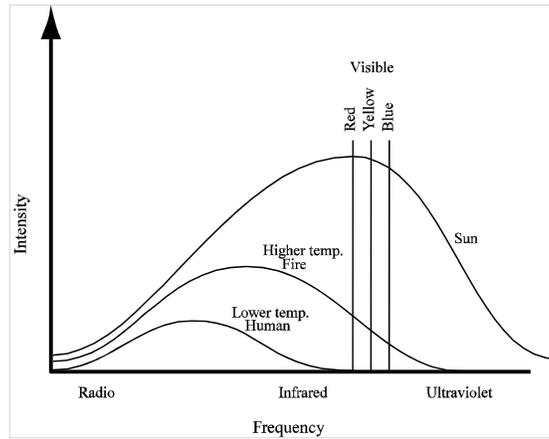


SCAG, November 1, 2012

Energy Myths

- **\$4.00 a gallon is too much to pay**
- **Oil companies produce oil.**
- **We must conserve energy.**
- **When we run out of oil, a substitute will appear**
- **There's enough fossil fuel in the ground to last for hundreds of years.**
- **Nuclear energy is dangerous.**
- **The greenhouse effect and global warming are bad.**

Thermal Radiation



The Sun-Earth System



30% reflected
70% absorbed

$$T = 255 \text{ K} = -18 \text{ }^\circ\text{C} = 0 \text{ }^\circ\text{F}$$

The Greenhouse Effect

(Preindustrial)

From the Sun: 343 W/m^2

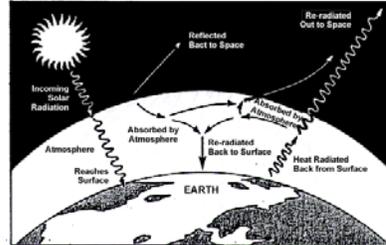
Water vapor, methane,
Carbon dioxide, etc.

88% Greenhouse

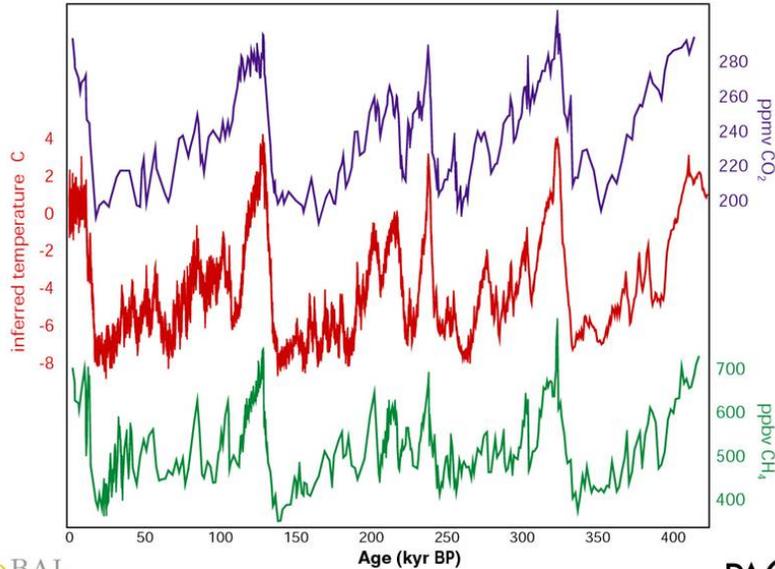
$T = 287\text{K} = 14^\circ\text{C} = 57^\circ\text{F}$

Feedback effects

Limiting cases



4 glacial cycles recorded in the Vostok ice core

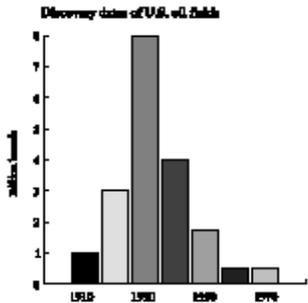


GLOBAL
I G B P
CHANGE

J.R. Petit et al., *Nature*, 399, 429–36, 1999.

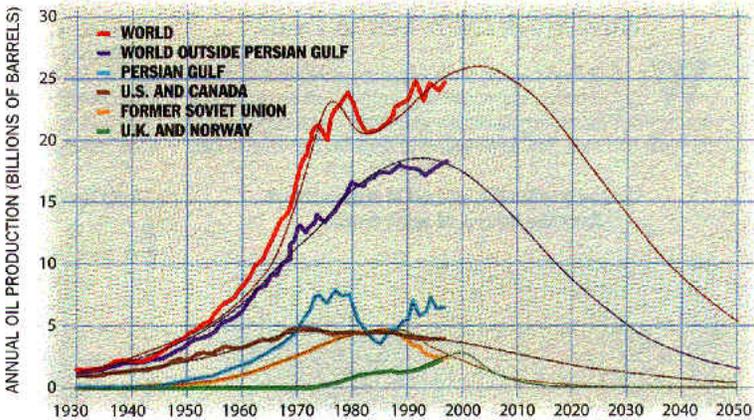
PAGES
PAST GLOBAL CHANGES

M. King Hubbert



Model Calculation

Colin J. Campbell and Jean H. Laherrère Sci. Amer., 1998

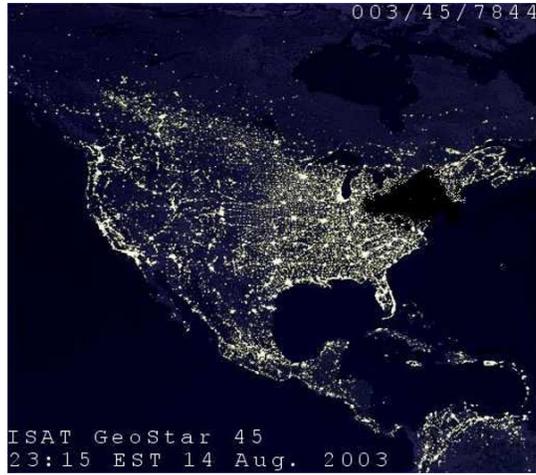


Signs of Desperation

- Deep water wells (the Gulf of Mexico spill)
- Fracking
- Natural Gas

What does the future hold?

- Oil crisis very soon
- Fossil fuel will run out
- Unknown consequences for the climate
- Solar and nuclear
- Dilemma
 - Social, political



Prediction

Civilization as we know it will come to an end sometime in this century, when the fuel runs out.

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DATE: November 1, 2012
TO: Energy and Environment Committee (EEC)
FROM: Grieg Asher, Senior Regional Planner, (213-236-1869), asher@scag.ca.gov
SUBJECT: Climate Change Adaptation Study for Los Angeles County Update

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:
For Information Only - No Action Required.

EXECUTIVE SUMMARY:

Staff regularly invites speakers to EEC to discuss issues and developments related to overall sustainability that may be of regional interest, such as greenhouse gas mitigation policies, climate action plans, and climate change adaptation strategies. Guest speakers on topics such as climate action plans have been invited to share facts and information, and present the current challenges regarding climate change. Jonathan Parfrey, Executive Director of Climate Resolve, and Dr. Alex Hall, Professor, University of California, Los Angeles (UCLA), will continue the discussion by updating the Committee on a major climate change adaptation study prepared by UCLA.

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; Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:

Jonathan Parfrey, founder of Climate Resolve, served as Director of the GREEN LA Coalition from 2007-2011. In 2008, Mr. Parfrey was appointed by Mayor Villaraigosa to the Los Angeles Board of Water and Power Commissioners where he is serving a five-year term. He is currently President of the Los Angeles League of Conservation Voters. Mr. Parfrey will be joined by Dr. Alex Hall, Professor at UCLA's Department of Atmospheric and Oceanic Sciences.

Dr. Hall will discuss the recent UCLA study "Mid-Century Warming in the Los Angeles Region." It is the first study to provide specific climate-change predictions for the greater Los Angeles area, with unique predictions down to the neighborhood level. The study provides a range of climate impacts covering the best and worst case emissions scenarios for the Los Angeles region by the mid-century period of 2041-2060, just 30 years from now.

SCAG's planning work could benefit by understanding and incorporating climate scenarios, and in particular the consideration of adaptation strategies. Adaptation planning is a process by which federal, state and local governments can address the impacts of climate change on the local environment.

FISCAL IMPACT:

No fiscal impact.

ATTACHMENT:

PowerPoint Presentation: "Mid-Century Warming in the Los Angeles Region and its Uncertainty"

Mid-Century Warming in the Los Angeles Region and its Uncertainty

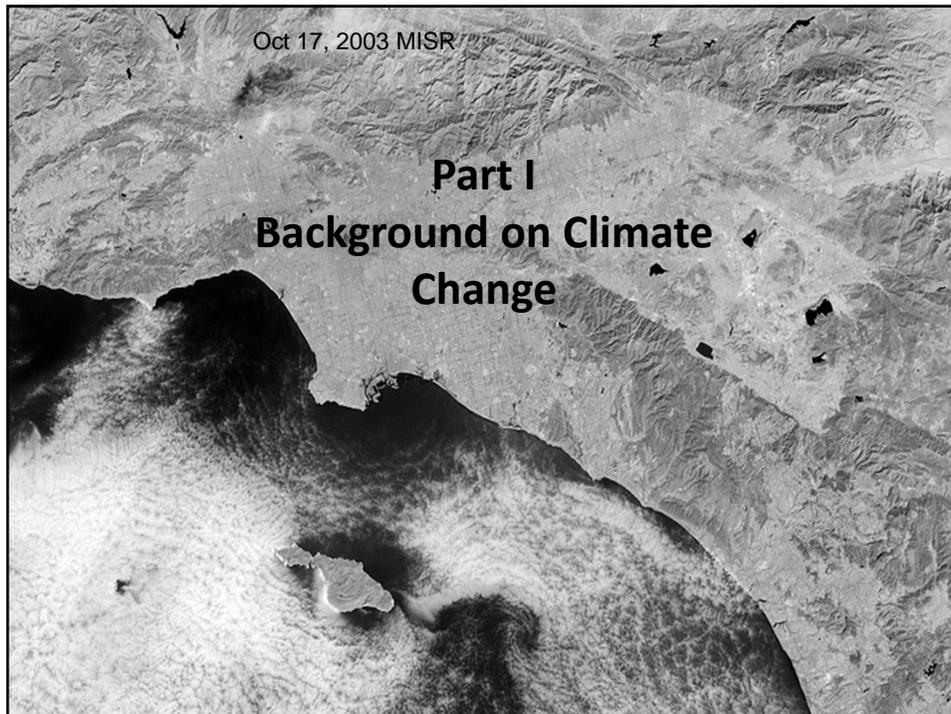
Part I of the “Climate Change in the Los Angeles Region” Project

Alex Hall

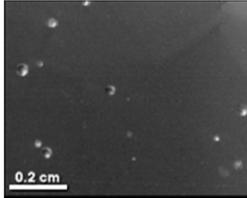
Fengpeng Sun, Xin Qu, Scott Capps, Hsin-yuan Huang, Daniel Walton, Neil Berg, Marla Schwartz, Alexandre Jousse, Ruth Cerezo-Mota, Mark Nakamura

UCLA

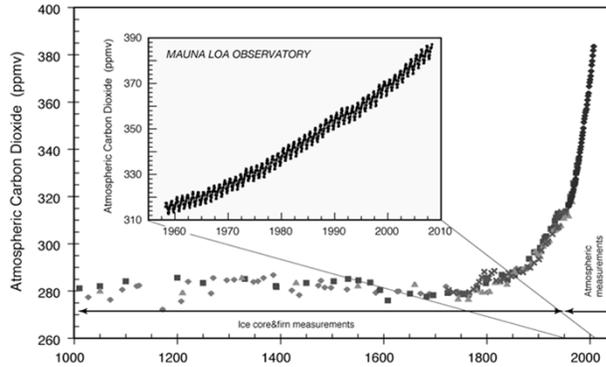
LARC
Los Angeles Regional Collaborative
for Climate Action and Sustainability



The carbon dioxide record in the Greenland Ice Core



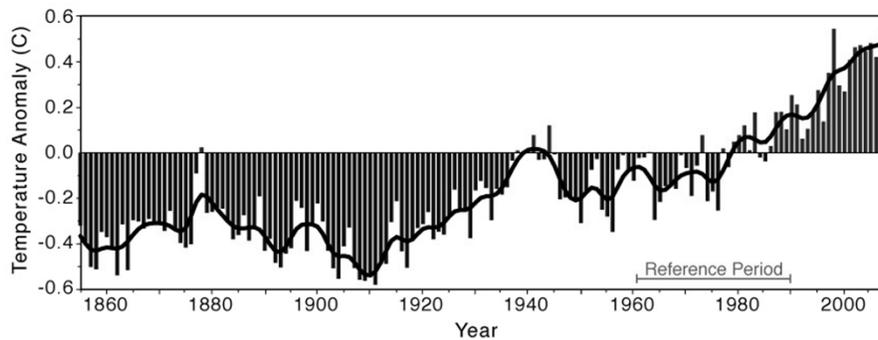
Air bubbles trapped in ice (photograph courtesy of the National Ice Core Lab)



The current increase in CO₂ amounts to about 4.1 gigatons of carbon being put into the atmosphere every year.

(Ice core data from Barnola, 1999; Mauna Loa from D. Keeling & T. Whorf, 2000)

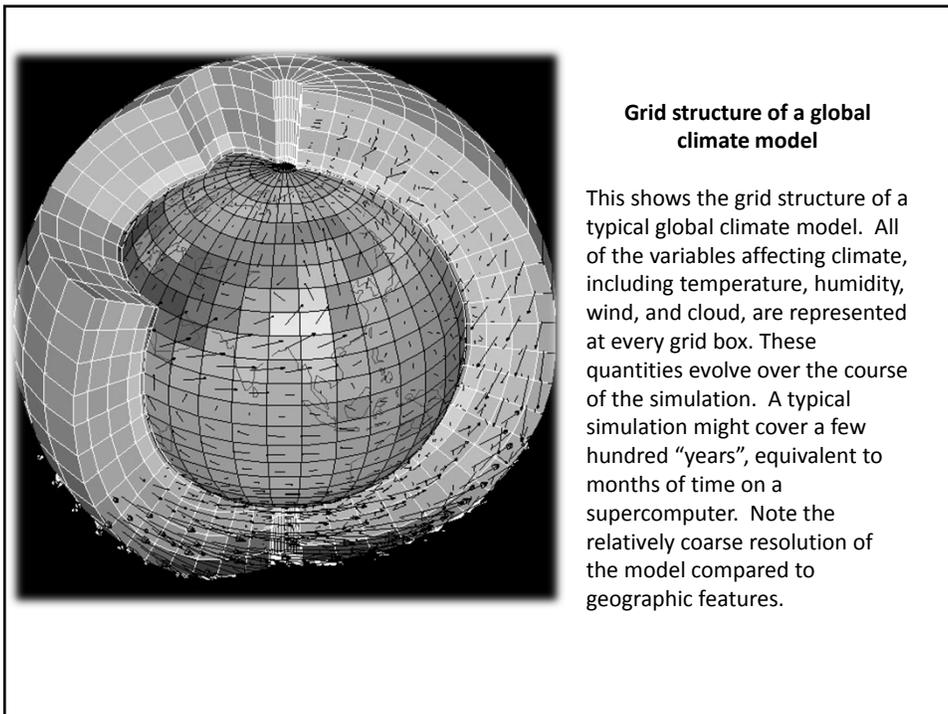
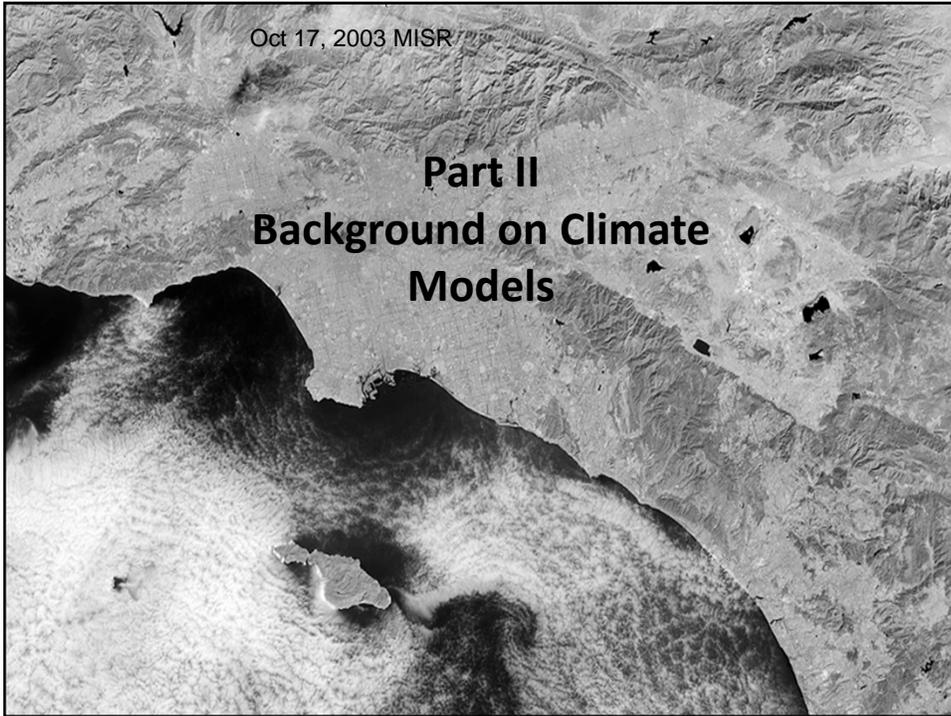
Global mean surface temperatures estimated during industrial era



- Anomalies relative to reference period, i.e. subtracting 1961-1990 mean
- Annual average values of combined near-surface air temperature over continents and sea surface temperature over ocean.
- Curve: smoothing similar to a decadal running average.
- natural variability on yearly and decade timescales, and warming trend

Oct 17, 2003 MISR

Part II Background on Climate Models



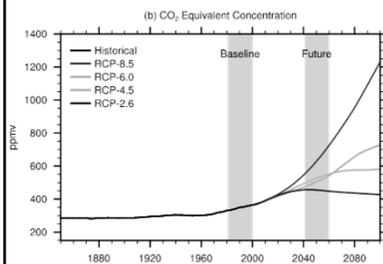
Today, there are a number of centers around the world that have developed global climate models, and have supercomputing capabilities to run them.

Here is a list of some of the main modeling centers. Each model is a different from the others because of the way it handles processes smaller in scale than the grid spacing of the model. Processes associated with clouds are examples of such sub-grid-scale phenomena.

MODEL	COUNTRY	INSTITUTE	RESOLUTION	RCP2.6	RCP8.5
CCSM4	USA	National Center for Atmospheric Research	1.25° x 0.9°	✓	✓
Can-ESM2	Canada	Canadian Centre for Climate Modelling and Analysis	2.8° x 2.8°	✓	✓
CNRM-CM5	France	Centre National de Recherches Meteorologiques	1.4° x 1.4°		✓
CSIRO-Mk3.6	Australia	Commonwealth Scientific and Industrial Research Organization	1.9° x 1.9°	✓	✓
GFDL-CM3	USA	NOAA Geophysical Fluid Dynamics Laboratory	2.5° x 2.0°	✓	✓
GFDL-ESM2M	USA	NOAA Geophysical Fluid Dynamics Laboratory	2.5° x 2.0°	✓	✓
GFDL-ESM2G	USA	NOAA Geophysical Fluid Dynamics Laboratory	2.5° x 2.0°	✓	✓
GISS-E2-R	USA	NASA Goddard Institute for Space Studies	2.5° x 2.0°	✓	✓
HadGEM2-CC	UK	Met Office Hadley Centre	1.9° x 1.25°	✓	✓
HadGEM2-ES	UK	Met Office Hadley Centre	1.9° x 1.25°	✓	✓
INMCM4	Russia	Institute for Numerical Mathematics	2.0° x 1.5°	✓	✓
IPSL-CM5A-LR	France	Institut Pierre Simon Laplace	3.75° x 1.9°	✓	✓
IPSL-CM5A-MR	France	Institut Pierre Simon Laplace	2.5° x 1.25°	✓	✓
MIROC-5	Japan	AORI (U. Tokyo), NIES, JAMSTEC	1.4° x 1.4°	✓	✓
MIROC-ESM-CHEM	Japan	AORI (U. Tokyo), NIES, JAMSTEC	2.8° x 2.8°	✓	✓
MIROC-ESM	Japan	AORI (U. Tokyo), NIES, JAMSTEC	2.8° x 2.8°	✓	✓
MPI-ESM-LR	Germany	Max Planck Institute for Meteorology	1.9° x 1.9°	✓	✓
MRI-CGCM3	Japan	Meteorological Research Institute	1.1° x 1.1°	✓	✓
NorESM1-M	Norway	Norwegian Climate Center	2.5° x 1.9°	✓	✓

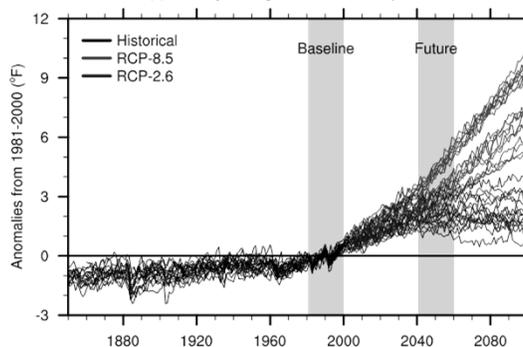
The Challenge of Multiple Projections

First, a word about emissions scenarios...



These are emissions scenarios associated with the next IPCC 5th Assessment Report, shown here with historical emissions. There are four scenarios. We will focus here on the red curve (RCP8.5 “business as usual”) and the blue curve (RCP2.6 “mitigation”).

(c) Globally averaged surface air temperature



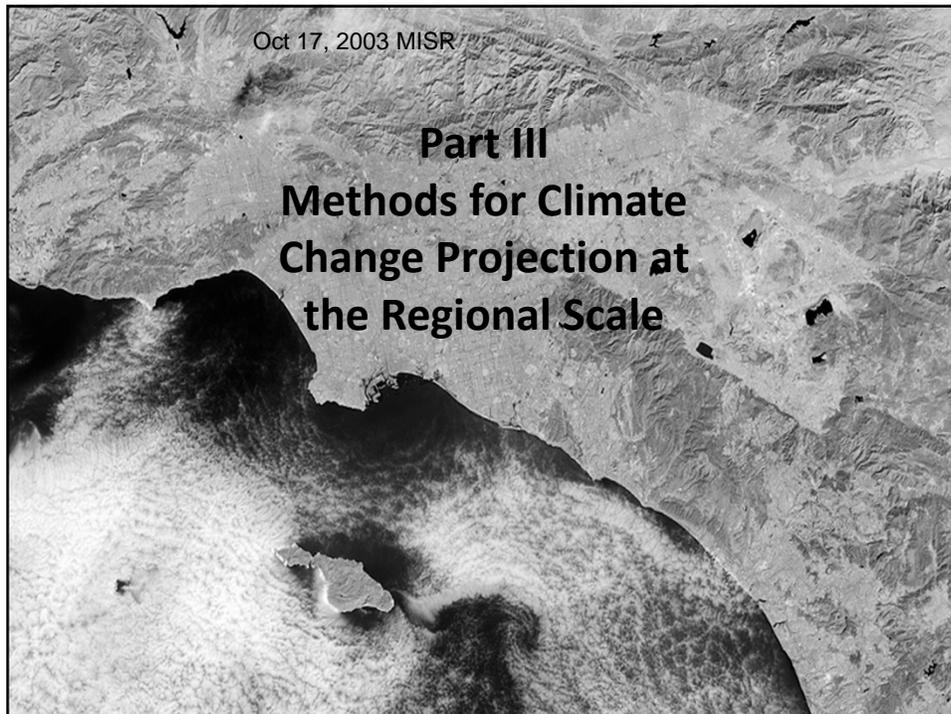
A single emissions scenario results in different global climate model responses. Here are the responses for RCP8.5 “business as usual” and RCP2.6 “mitigation” scenarios.

Los Angeles Regional Climate Change Study overview

The aim of this project is to provide credible and relevant information about climate change in the Los Angeles region in the middle of 21st century.

The project surmounts two obstacles associated with climate change simulations.

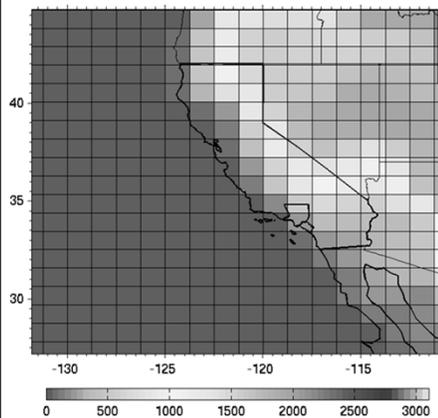
- (1) The resolution of global climate models is much too coarse to be believable at the regional scale, especially in this region of complex topography and coastlines, and such obvious variations in climate across the landscape.
- (1) The simulations provide very different views of future climate change, so that no single simulation can be thought of as giving the "right" answer.



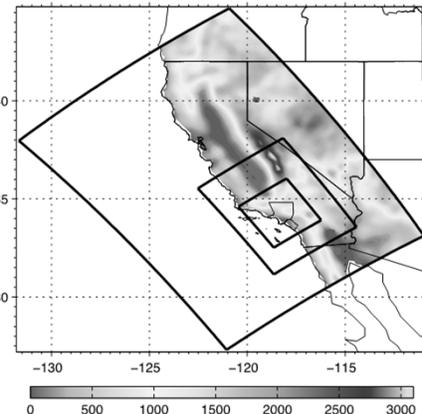
Downscaling

- To bridge the scales between those of the global model, and those of the Los Angeles region, we rely on a high-resolution regional climate model
- Two simulation periods
 - Baseline climate simulation (1981-2000)
 - Future climate change simulation (2041-2060)
- The differences between the two simulations allow us to quantify climate change in the region.
- RCP 8.5 “business-as-usual” emissions scenario

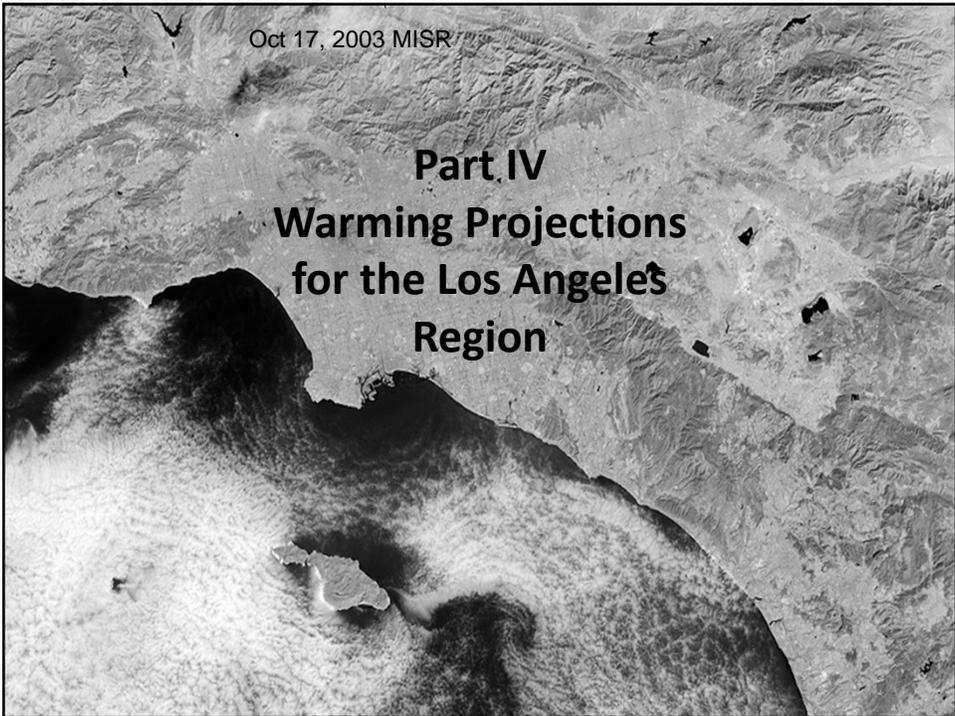
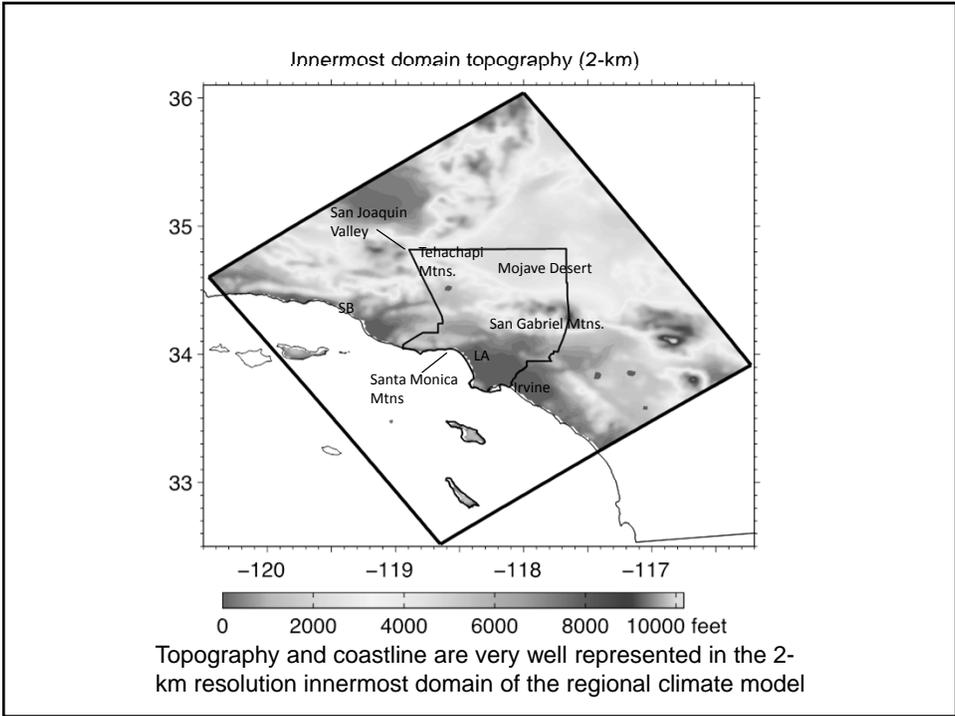
On the right is the geographic domain for the regional climate model. The regional model is fed information about baseline and future climate conditions at its lateral boundaries. It then simulates the environmental conditions consistent with the boundary information, and local topography and coastlines.



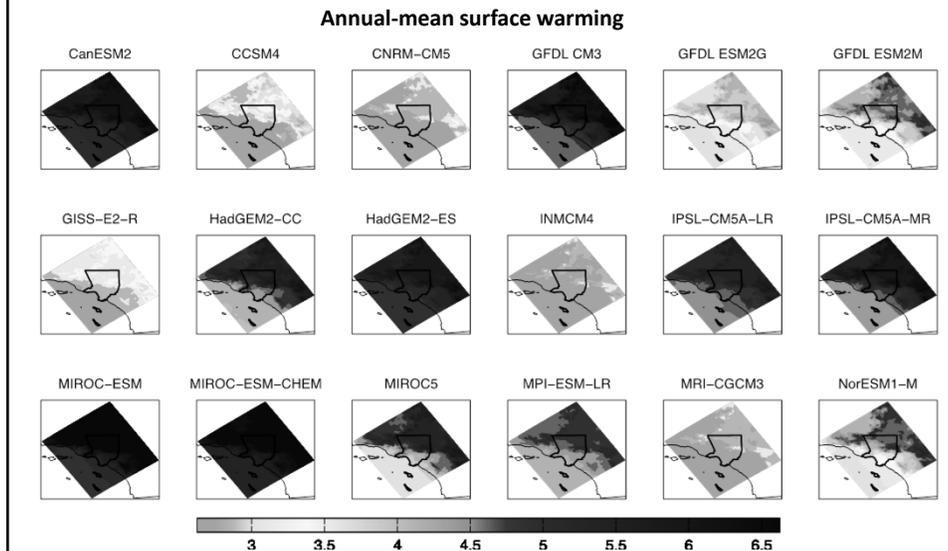
GCM (CCSM4) resolution ~100 km



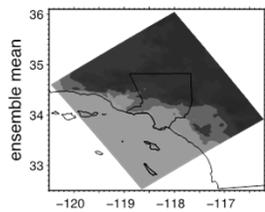
Regional climate model resolutions (18km, 6km, 2km) for three nested domains



When all the global models' RCP8.5 climate change signals are regionalized, a striking variety of warming patterns is seen...

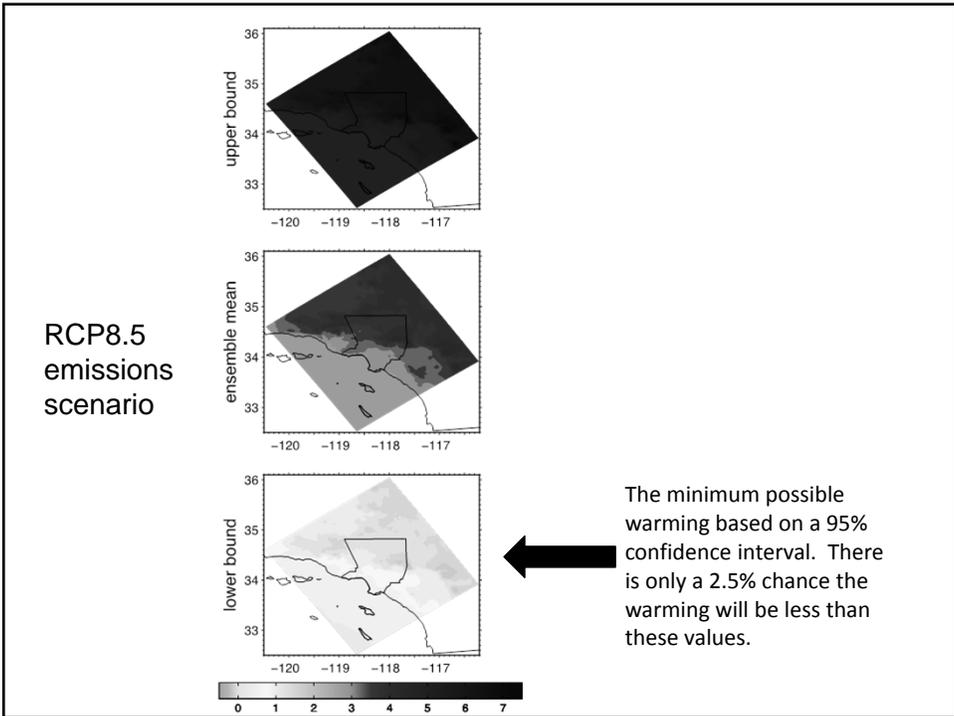
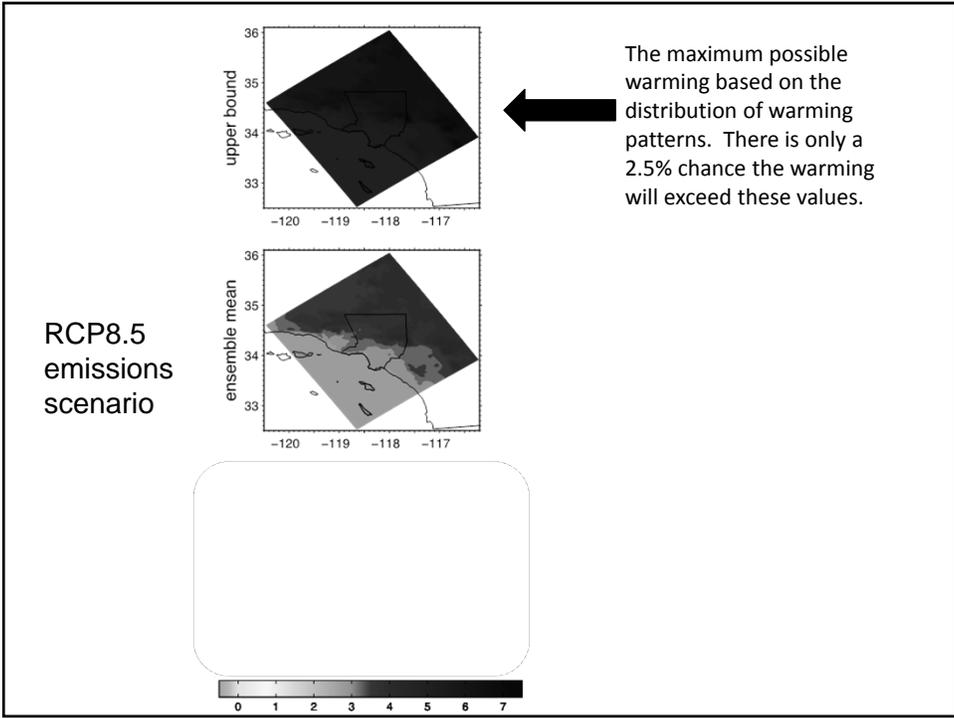


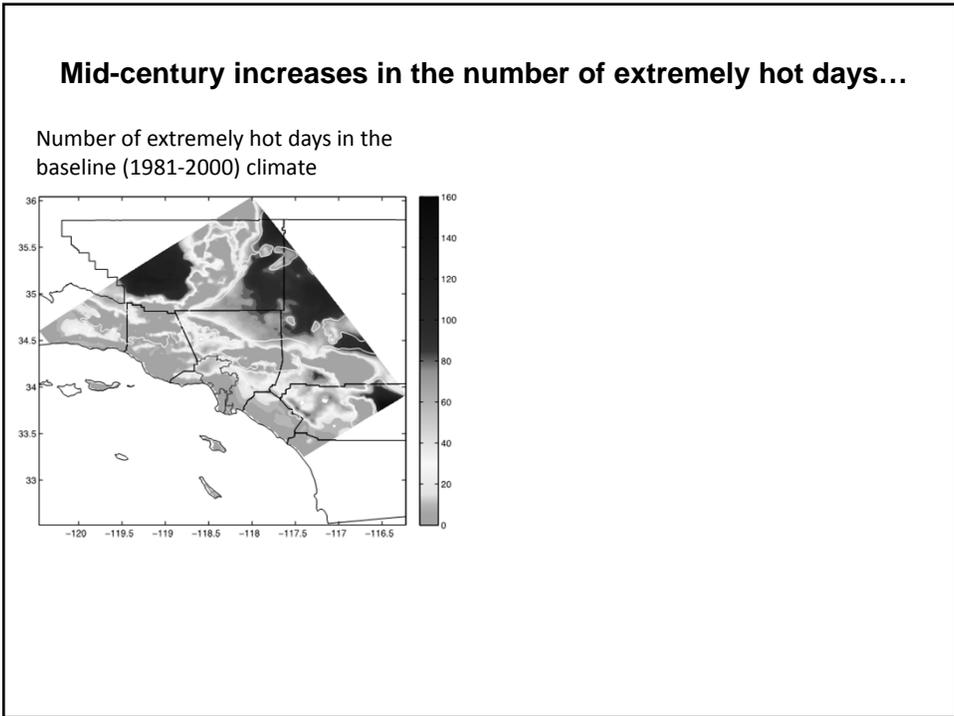
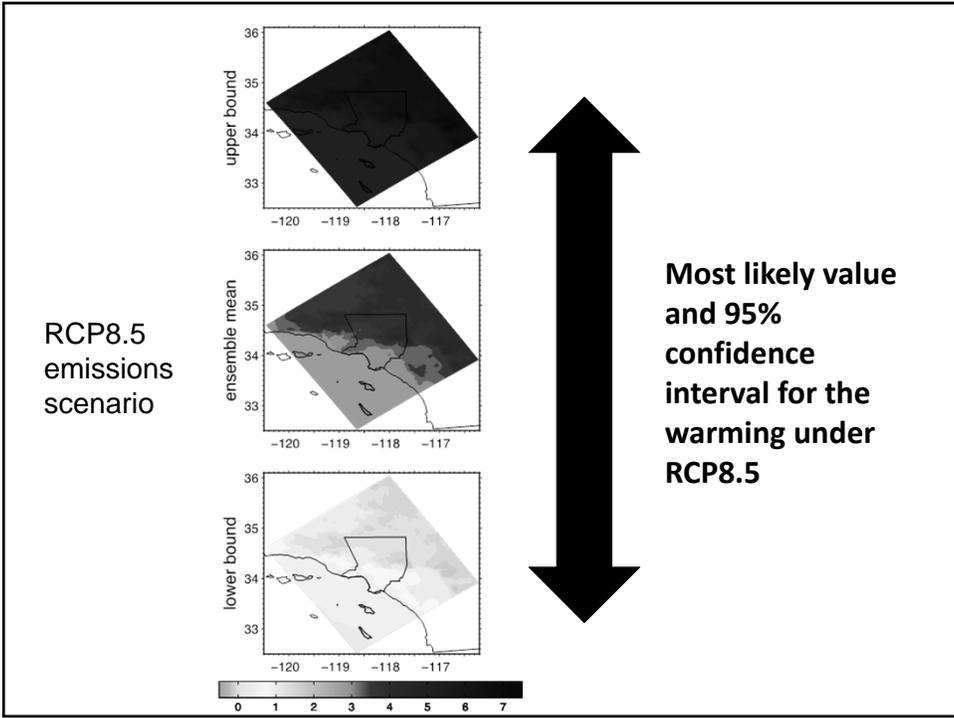
RCP8.5
emissions
scenario



We can average the values from all the models, to produce an annual-mean, ensemble-mean warming under RCP8.5. Note the greater warming inland than at the coast. We deem this the **most likely** warming, based on present knowledge.

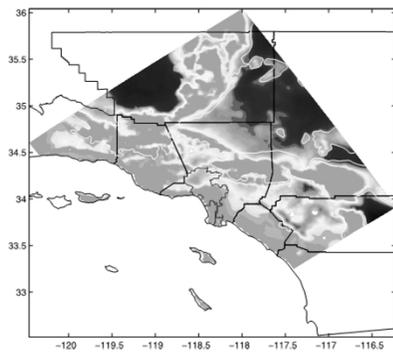




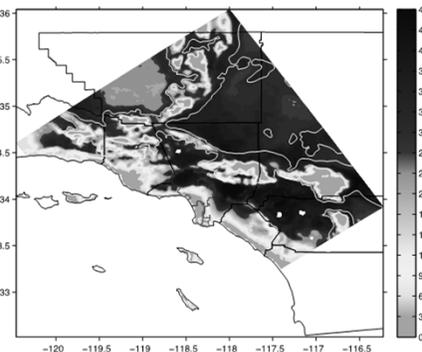


Mid-century increases in the number of extremely hot days...

Number of extremely hot days in the baseline (1981-2000) climate



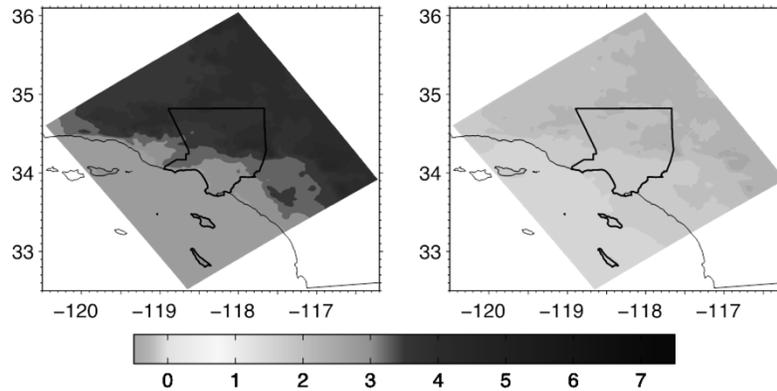
Ensemble-mean (most likely) increase in number of extreme heat days per year



Here is the most likely increase in number of days with extremely hot maximum temperatures (>95°F). The valleys (e.g., San Fernando, San Gabriel, San Jacinto and Coachella valleys) are significantly affected, as are deserts. The coastal zone is less affected because it has a lower temperature in the baseline climate, and it generally warms less.

Sensitivity to Emissions Scenario:
a comparison of **RCP8.5** “business as usual”
and **RCP2.6** “mitigation” outcomes for mid-century

The ensemble-mean (most likely) mid-century warming for RCP8.5 (left) and RCP 2.6 (right)



Though the warming is less under the mitigation scenario, it is still significant—generally about 2/3 as large as that seen under business-as-usual. Therefore, adaptation to a changing climate is very likely to be inevitable.

Note that by the end of the 21st century, the warming is much more dramatically different between the two scenarios.

Summary

- Using downscaling techniques, we projected mid-21st century warming in the Los Angeles region at 2-km (1.2-mile) resolution for all available global models.
- For the business-as-usual scenario, the most likely mid-century warming is roughly 4.6°F averaged over the region's land areas, with 95% confidence that the warming will lie between 1.7 and 7.5°F.
- High elevations and inland areas warm 20 to 50% more than the areas near the coast or within the Los Angeles basin. This pattern is especially apparent in summertime.
- Coastal locations and areas within the Los Angeles basin see roughly 2-3 times the number of extremely hot days, while high elevations and inland areas typically experience approximately 3-5 times the number of extremely hot days.
- Under the mitigation emissions scenario, the majority of the warming seen in the business-as-usual scenario still occurs at all locations, and heat extremes still increase significantly.
- Therefore adaptation to a changing climate in the Los Angeles region over the next few decades is very likely to be inevitable.

Forthcoming studies

Over the next year we will be producing studies similar to the one presented here, quantifying changes in

- precipitation and snowfall
- Santa Ana wind strength, frequency & duration
- stream flow, soil moisture & evaporation
- low cloud (i.e “June Gloom”)

Further information about the project is available at <http://c-change.la/>

DATE: November 1, 2012

TO: Energy and Environment Committee (EEC)

FROM: Huasha Liu, Director, Land Use and Environmental Planning, (213) 236-1838, liu@scag.ca.gov

SUBJECT: Proposal for Additional Funding Under Contract with the California Energy Commission to Support National Public Campaign Regarding Plug-In Electric Vehicles (PEVs)

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:
For Information Only - No Action Required.

EXECUTIVE SUMMARY:
SCAG, in partnership with the South Coast Air Quality District, proposes to seek additional funding in the amount of \$500,000 from the California Energy Commission for the purpose of participating in a national campaign promoting the use of plug-in electric vehicles (PEVs). This report provides information to the EEC regarding the proposal and how it complements SCAG's PEV planning efforts.

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; and Goal 4: Develop, Maintain and Promote the Utilization of State of the Art Models, Information Systems and Communication Technologies.

BACKGROUND:
In June 2011, SCAQMD and SCAG in conjunction with their regional partners applied for two (2) PEV readiness grants and were successful in both applications. Both grants include an education and outreach component in addition to other common tasks that are efficiently and effectively performed jointly. The first grant, awarded by the U.S. Department of Energy (DOE), will result in the development of six (6) Regional PEV Readiness Plans throughout the state of California, including one for Southern California.

The second successful grant was awarded by the California Energy Commission (CEC) and was the result of a collaborative effort between SCAG and SCAQMD in partnership with Southern California Edison; Western Riverside Council of Governments (WRCOG); and South Bay Cities Council of Governments (SBCCOG). The purpose of the project is to develop two (2) complementary subregional plans in collaboration with WRCOG and SBCCOG. SCAG is the lead entity authorized by CEC to accept and administer the award.

The scope of work under the CEC Regional Plans to support PEVs includes four interrelated components, which are: 1) develop the materials that describe the guidelines and best practices for PEV infrastructure permitting, installation, deployment, maintenance, and inspection as well as a plan for sharing them with the State; 2) plan and facilitate at least four (4) EV 101 events throughout the region in collaboration with Clean Cities Coalitions; 3) develop subregional outreach plans for WRCOG and SBCCOG; and 4) develop a catalogue of educational materials including presentations, brochures, and web content. It is anticipated that the outreach would build on the successful EV 101 workshops held in Southern California and increase public awareness about the benefits of PEVs.

REPORT

Most recently, the Electric Drive Transportation Association (EDTA) and its board members created “The Go Electric Drive” Foundation (GED) in 2012. The mission of GED is to accelerate mass-market adoption of electric drive vehicles by the American public. The foundation is embarking upon a multi-year, multi-million dollar education campaign timed to create consumer interest as the market introduction of new electric drive vehicle (EV) products reaches a peak in 2013 and 2014.

Market studies have confirmed that communicating PEV values to the vehicle consumer is the critical item contributing to successful market penetration. Sufficient market information has been developed by federal and state agencies, the utility industry, PEV proponents and the automotive manufacturers that have entered the PEV market to stimulate customer demand. The current lack of consumer buy-in is contributing to PEVs being perceived as experimental and futuristic, which discourages consumers, reduces demand and hinders market growth.

Having learned of GED’s national campaign efforts, SCAG and SCAQMD determined it important to represent California interests. The agencies have proposed that the CEC provide additional funding to be used to support the national campaign. Specifically, if SCAG is successful in being awarded the additional funding from the CEC, the funds will added as part of the existing grant agreement between the CED, SCAG and SCAQMD regarding the Regional Plans and enhance the GED’s national education campaign.

SCAG and SCAQMD, as leaders of the Southern California PEV Coordinating Council, shall represent the state and regional planning efforts that are part of the DOE and CEC PEV readiness grants as a member of the EDTA/GED National PEV Education and Awareness Campaign. SCAQMD and SCAG will ensure that the national campaign represents the best interests of the State of California which has over 40% of the nation’s PEV market. SCAG and SCAQMD will engage with the Campaign management team to ensure that the creative messaging and media outreach includes the key themes important to the California market.

The EDTA/GED National PEV Education and Awareness Campaign contribute directly to the work components in the SCAG CEC grants’ education and outreach tasks, as well as the agency’s PEV planning efforts in general, in the following manner:

- 1) National branding, education and marketing of PEVs to encourage consistency of approach to a national market. Messaging can be targeted and will depend on region-specific content to reach prospects in a timely manner with the right message at the right time
- 2) Create interest and provide the facts and data readily available at sites such as GoElectricDrive, DOE Clean Cities, AQMD, and CEC.
- 3) Campaign will include a compelling call to action – to investigate and consider transportation options and to test vehicles on the road today in order to meet air quality, GHG, and transportation goals for the region and state.

FISCAL IMPACT:

California Energy Commission contract amendment would add \$500,000 in grants under WBS# 13-225.SCG01641.03

ATTACHMENT:

None