ARB Staff Release

Draft Regional Greenhouse Gas Emission Reduction Targets For Automobiles and Light Trucks Pursuant to Senate Bill 375

June 30, 2010

California Environmental Protection Agency
Air Resources Board

Electronic copies of this document can be found on ARB's website at http://www.arb.ca.gov/cc/sb375/sb375.htm. Alternatively, paper copies may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1st Floor, Sacramento, California 95814, (916) 322-2990. If you are a person with limited English and would like to request interpreter services, please contact ARB's Bilingual Manager at (916) 323-7053.

For individuals with sensory disabilities, this document is available in Braille, large print, audiocassette, or computer disk. Please contact ARB's Disability Coordinator at (916) 323-4916 by voice or through the California Relay Services at 711, to place your request for disability services.

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Written comments
ARB maintains a web-based comment system to provide an ongoing opportunity for public comment during the target-setting process. Interested stakeholders may submit comments on this document to ARB through the following website: http://www.arb.ca.gov/cc/sb375/comments.htm.

Written comments may also be sent directly to:
Attn: Ms. Lezlie Kimura Szeto
SIP and Local Government Strategy Section
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812
Fax: (916) 322-3646

For general questions, contact:
Mr. Douglas Ito, Manager
SIP and Local Government Strategy Section
phone: (916) 322-0285
email: dito@arb.ca.gov

INTRODUCTION

For the first time statewide, Senate Bill 375 (SB 375), also known as the Sustainable Communities and Climate Protection Act of 2008, requires regional transportation plans to include a Sustainable Communities Strategy (SCS) that links transportation and land use planning together into a more comprehensive, integrated process. This more integrated approach to planning is not new. There are communities in California that are already taking actions that will support a more sustainable future. Over the past decade, many California regions have pursued regional blueprint planning efforts to explore growth scenarios to help guide local land use and transportation decisions. These efforts are broad-based, collaborative local planning exercises. Many of the regional transportation plans (RTPs) that the Metropolitan Planning Organizations (MPOs) have in place today are beginning to reflect these initial efforts.

SB 375 is a mechanism to help further these sustainable planning efforts. The SCS adds more detail to the traditional land use allocations used by MPOs to "...set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce greenhouse gas emissions from passenger vehicles to achieve, if there is a feasible way to do so, the greenhouse gas targets set by the state board...[1]." Put most simply, the SCS is a mechanism for more effectively linking a land use pattern and a transportation system together to make travel more efficient and communities more livable. The result is reduced greenhouse gas emissions from passenger vehicles along with other benefits.

Under SB 375, the California Air Resources Board (ARB) is required to set passenger vehicle greenhouse gas emission reduction targets for 2020 and 2035 for each of the 18 MPO regions in California. ARB must set targets by September 30, 2010. The law also recognizes ARB's target-setting responsibility as a recurring process, allowing ARB to update the targets every four years.

To assist ARB in setting targets, SB 375 calls for ARB to appoint a Regional Targets Advisory Committee (RTAC) composed of representatives of MPOs; affected air districts; the League of California Cities; the California State Association of Counties; local transportation agencies; and members of the public, including homebuilders, environmental organizations, environmental justice organizations, affordable housing organizations, and others. ARB established the 21 member committee in January 2009 to recommend factors to be considered and methodologies to be used in setting targets. The RTAC delivered its recommendations to ARB in September 2009.

The RTAC's final report contains a number of recommendations on SB 375 implementation issues. One key technical recommendation is for the targets to be expressed in terms of a percent reduction in per capita greenhouse gas emissions from a 2005 base year. The metric is simple, easily understood, can be developed

[1] Government Code Section 65080(b)(2)(A)(i)

with currently available data, and is used by MPOs today. This metric also has the advantage of directly addressing growth rate differences among the regions. Beyond its technical recommendation on the target metric, the RTAC also made recommendations on the target-setting process. The Committee emphasized the need for a high degree of collaboration among ARB and the MPOs, since MPOs are directly responsible for carrying out the planning requirements in SB 375. To help guide the collaboration through the target-setting process, the RTAC outlined a multistep "bottom-up" approach. ARB and the MPOs have been following this approach over the past nine months, to the extent that time and resources have allowed.

In addition to its recommendations on target-setting, the RTAC also made recommendations on longer-term implementation issues. In particular, the RTAC recognized the importance of highlighting the additional benefits, beyond greenhouse gas reductions, that communities and local governments can realize from sustainable planning efforts under SB 375. Some of these potential benefits include increased mobility, cleaner air, improved health, better protection of our State's natural resources, and cost savings. The RTAC recommended that MPOs identify, quantify, and highlight these and other co-benefits in their planning processes. MPOs can quantify some of the benefits, such as reduced congestion, through their own local planning processes using their existing travel models. The RTAC did recognize the limitation in the available methods, and acknowledged that additional tools are needed to help quantify community co-benefits.

Following the completion of the RTAC report, MPO staff formed a technical working group, which included ARB staff, to coordinate the development of various land use and transportation policy scenarios for ARB's target-setting process. These scenarios were developed to test the effectiveness of implementing various transportation and land use policies. The MPOs discussed technical issues including: land use and transportation strategies that could be tested in the MPO scenarios, different approaches to interregional travel, travel cost assumptions, and future revenue assumptions. A number of MPOs provided the initial results of their scenario analyses and target-setting approaches to ARB and the public in time for the final RTAC meeting on May 25, 2010.

Over the last six months, a number of MPOs developed planning scenarios that use travel models and other technical tools to show how a region's land use and travel patterns can change over time using different assumptions about land use and transportation policies. Many MPOs started developing these scenarios by building on existing blueprint efforts and other sustainable planning actions in their regions. While these scenarios are not the official long-range plans adopted by the regions, they do provide insight into the potential benefits that may result from different sets of local and regional land use and transportation policy decisions. The MPO scenarios are intended to inform the target-setting process and show ARB and the public the possible benefits of more integrated planning under SB 375.

Over the long-term, these potential benefits are expected to grow as land use and transportation plans shift to reflect changing demographics, market trends, and sustainability goals. When looking at the data provided by the MPOs, it is clear that it will take several four-year RTP planning cycles for the land use forecasts and transportation investments to fully reflect the changes envisioned by SB 375.

DRAFT TARGETS

For the 2020 targets, two points have consistently been made over the past few months by MPO staff and other stakeholders. First, significant change in land development patterns and transportation infrastructure will take time. As a result, a significant portion of the built environment in 2020 will be defined by decisions that have already been made, and a large portion of the near-term benefits will come from improving the efficiency of each region's existing transportation network. Second, the timing of economic recovery, including the recovery of the housing market and resources for local planning and implementation, will matter. Many MPOs have reported that their forecasts are adjusted to account for some of the near-term effects of the recession in their regions. Given the relatively short forecast period between now and 2020, those adjustments are important.

For the 2035 targets, ARB staff recognizes that the forecasting uncertainties are much greater than for the 2020 scenarios. While significant changes in land use patterns and transportation infrastructure can be expected over the next 25 years, predicting the pace and nature of change is challenging. A number of MPOs are continuing to develop additional land use and transportation scenarios which will be considered in the final staff target proposal.

In recognition of the additional MPO work underway, ARB staff is releasing a draft 2020 target range for the four largest MPOs, placeholder 2035 target ranges for the four largest MPOs, and placeholder target ranges for the San Joaquin Valley MPOs for both 2020 and 2035. While the draft targets for these MPOs are now ranges, ARB staff will propose specific targets for each region for ARB Board consideration in September. For the remaining six MPOs, ARB staff proposes an alternative approach for setting targets. These approaches are described in greater detail below.

Four Largest MPOs

The four largest MPOs in the State[2] clearly demonstrated the capability to bring significant staff and technical resources to the target-setting process. These MPOs have provided the most complete technical information and scenario results. Based on the information provided, ARB staff is proposing a 2020 draft target range of five to ten percent per capita reduction in greenhouse gas emissions from 2005 levels. This range is based on the potential reductions from land use and transportation planning scenarios provided by the MPOs.

[2] Metropolitan Transportation Commission, Sacramento Area Council of Governments, San Diego Association of Governments, and Southern California Association of Governments

Table 1. Four Largest MPOs
Draft Greenhouse Gas Reduction Targets for 2020
(Percent Reduction in Per Capita Emissions Relative to 2005)*

MPO Regions	2020 Draft Targets
Metropolitan Transportation Commission (MTC) Sacramento Area Council of Governments (SACOG) San Diego Association of Governments (SANDAG) Southern California Association of Governments (SCAG)	5 - 10%

* Percent reduction numbers do not include emission reductions expected from Pavley Greenhouse Gas Vehicle Standards and Low Carbon Fuel Standard measures.

There is less complete information available for setting the long-term 2035 targets than for 2020. This is evident in the variability of the scenario results for the four large MPOs, which the MPOs point out, include policy scenarios that would be easily achievable by the region, as well as extremely aggressive policy scenarios that could not realistically be implemented[3].

At this time, only the Southern California Association of Governments has identified a target range for 2035: a five to six percent reduction in per capita greenhouse gas emissions from 2005 levels. However, the Executive Directors for each of the four largest MPOs have acknowledged the need for additional work to be done prior to setting final targets, and have committed to continuing the technical work in the coming weeks.

Given the status of work on 2035 scenarios, ARB staff is proposing to use each MPO's individual 2035 scenario range as the 2035 placeholder targets.

Table 2. Four Largest MPOs
Placeholder Greenhouse Gas Reduction Targets for 2035
(Percent Reduction in Per Capita Emissions Relative to 2005)*

MPO Regions	2035 Placeholder Targets
Metropolitan Transportation Commission (MTC)	3-12%
Sacramento Area Council of Governments (SACOG)	13-17%
San Diego Association of Governments (SANDAG)	5-19%
Southern California Association of Governments (SCAG)	3-12%

* Percent reduction numbers do not include emission reductions expected from Pavley Greenhouse Gas Vehicle Standards and Low Carbon Fuel Standard measures.

[3] See Appendix for MPO descriptions of scenarios. Full MPO data submittals can be viewed on ARB's website: http://www.arb.ca.gov/cc/sb375/data/data.htm

San Joaquin Valley MPOs

The San Joaquin Valley (Valley) MPOs[4] have a long history of multi-county coordination that is recognized in SB 375 through a special provision granting the Valley MPOs the option of developing a joint SCS. To address SB 375, the Valley MPOs are using the existing valleywide planning structure to coordinate on SB 375 implementation.

The San Joaquin Valley is a rapidly growing region, with population growth rates double those in most other areas of the State. Whether it is done collectively as a Valley or as individual counties, the local and regional planning efforts to accommodate this expected population growth are extremely relevant to the long-term success of SB 375.

Consistent with their history of coordination on air quality, transportation, and other regional issues, the Valley MPOs have been working together to provide baseline data to ARB. This effort culminated in data submissions from Fresno and Kern, and a joint effort from the remaining six Valley MPOs.

Four of the eight Valley MPOs provided target-setting scenarios and three provided recommended targets[5]. The San Joaquin Council of Governments provided a target-setting scenario based on data from the local blueprint effort and supplemented by updated information about local jurisdictions' planned growth and General Plan updates. The Council of Fresno County Governments submitted scenarios and suggested greenhouse gas emission reduction targets that reflect ongoing discussions with their local jurisdictions about the region's approach to target-setting. The Kern Council of Governments provided scenarios and suggested targets that are based on existing plans; removed the travel impacts from strategic employment resources, defined as military bases, wind farms, and prisons; and reflected an increase in per capita greenhouse gas emissions. The Kings County Association of Governments recommended a target that relies on current baseline projections and reflects progress that has been made to implement the local blueprint. To date, the San Joaquin Valley MPO submittals span a range in per capita greenhouse gas emissions from a seven percent reduction to a twelve percent increase.

Overall, the data from the Valley MPOs provides a limited technical foundation for target-setting. ARB staff intends to work closely with the San Joaquin Valley MPOs before recommending final targets. In the interim, staff is guided by the principle that the targets in the San Joaquin Valley should reflect a reduction, not an increase, in per capita greenhouse gas emissions. As a result, staff is releasing a placeholder target range of one to seven percent reduction for both the 2020 and 2035 targets in

[4] Council of Fresno County Governments, Madera County Transportation Commission, Merced County Association of Governments, Kern Council of Governments, Kings County Association of Governments, San Joaquin Council of Governments, Stanislaus County Council of Governments, and Tulare County Association of Governments

[5] See Appendix for MPO descriptions of scenarios. Full MPO data submittals can be viewed on ARB's website: http://www.arb.ca.gov/cc/sb375/data/data.htm

the San Joaquin Valley, reflecting the portion of the Valley MPOs' submitted ranges that result in per capita greenhouse gas emission reductions.

Table 3. San Joaquin Valley MPOs Placeholder Greenhouse Gas Reduction Targets for 2020 and 2035 (Percent Reduction in Per Capita Emissions Relative to 2005)*

MPO Regions	2020 Placeholder Targets	2035 Placeholder Targets
Council of Fresno County Governments Madera County Transportation Commission Merced County Association of Governments Kern Council of Governments Kings County Association of Governments San Joaquin Council of Governments Stanislaus County Council of Governments Tulare County Association of Governments	1-7%	1-7%

* Percent reduction numbers do not include emission reductions expected from Pavley Greenhouse Gas Vehicle Standards and Low Carbon Fuel Standard measures.

Remaining Six MPOs

Collectively, the remaining six MPOs[6] represent about five percent of both the State's greenhouse gas emissions and vehicle miles traveled from passenger vehicles. They have the most limited resources, staffing, and technical expertise to bring to the target-setting process.

For these MPOs, ARB staff is proposing to use the most current greenhouse gas per capita projections from each MPO, adjusted for the impacts of the recession, as the basis for individual MPO targets for this first target-setting cycle. This approach allows the focus of this first target-setting cycle to appropriately remain on the largest and fastest growing regions of the state.

ARB staff will continue to work closely with these six MPOs to ensure the most current projections from each region are used. Based on the MPO submittals to date from this group, ARB staff anticipates some will identify greenhouse gas emission reductions beyond what is currently reflected in their adopted RTPs.

NEXT STEPS

These proposed draft targets will be revised after a public workshop process. A final staff proposal will be released in August and the Board will consider adoption of targets in September.

[6] Association of Monterey Bay Area Governments, Butte County Association of Governments, San Luis Obispo County Council of Governments, Santa Barbara County Association of Governments, Shasta County Regional Transportation Planning Agency, and Tahoe Metropolitan Planning Organization