June 4-5, 2008
California Transportation Commission
Commission Retreat
Sacramento, California

AB 32 IMPLEMENTATION

Briefing Paper Prepared by John Barna

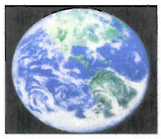
California's major initiatives for reducing climate change or greenhouse gas (GHG) emissions are outlined in Assembly Bill 32 (signed into law 2006), 2005 Executive Order and a 2004 ARB regulation to reduce passenger car GHG emissions. These efforts aim at reducing GHG emissions to 1990 levels by 2020 - a reduction of about 25 percent, and then an 80 percent reduction below 1990 levels by 2050. The main strategies for making these reductions will be outlined in the Scoping Plan, which the California Air Resources Board (ARB) will adopt by the end of the year.

Transportation has two sectors: vehicles and land use. Developing new emission standards for vehicles is part of separate, but related, series of rulemaking that encompasses automobiles, light duty trucks, heavy duty trucks, off-road vehicles and equipment, and ships. By and large the Commission has not been involved directly in these rulemaking efforts. The Commission did discuss the off-road vehicle and equipment rulemaking with manufacturers and stakeholders last year but did not take action or a position on ARB's rulemaking.

With regard to land use, the Commission has been a member of the Land Use Subgroup of the Climate Action Team (LUSCAT). Our role was to provide recommendations in keeping with the direction provided in our response to Senator Perata on how regional transportation plans (RTPs) could be enhanced to incorporate emission reduction into transportation planning, programming and implementation. We are set to amend the RTP guidelines this month with the changes you recommended earlier this year.

Additionally, we have begun to coordinate with ARB directly on two efforts. The first is on incorporating emission reduction factors into the Trade Corridors Improvement Fund (TCIF) program. The second is the one on which we need your guidance: facilitating a scoping plan for local land use. CTC staff has offered to convene discussions between ARB and the state's major municipal planning organizations (MPOs) on what the scoping plan should entail. CTC staff has also offered to reconvene the transportation and environmental stakeholders who assisted in the development of the Commission's RTP guideline recommendations to Senator Perata. ARB staff has advised us that the scoping plans need to be before the ARB members by November, for action by the end of the calendar year.

CLIMATE CHANGE SCOPING PLAN



AB 32 Scoping Plan

The AB 32 Scoping Plan contains the main strategies California will use to reduce the greenhouse gases (GHG) that cause climate change. The Plan, when it is completed, will have a range of GHG reduction actions which can include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

These measures will be introduced for public comment through four workshops between November 30, 2007 and April 17, 2008. A draft Scoping Plan will be released for public review and comment in June, 2008 followed by more workshops in July of that year. The Plan will go to the Board for adoption in November, 2008.

Comments	Stakeholder Calendar	GHG Sectors
Program Design	Economic Analysis	Voluntary Actions

For question or comments regarding the Scoping Plan, please contact Robert DuVall at (916) 324-5930

For questions regarding the content on this Climate Change web page, please contact ARB's Climate Change Webmaster: Johnnie Raymond, at (916) 445-8279

The Board is one of six boards, departments, and offices under the umbrella of the California Environmental Protection Agency.
Cal/EPA | ARB | CIWMB | DPR | DTSC | OEHHA | SWRCB

Scoping Plan Workshop Series

May 28th Informational Board Workshop on Policy Tools

AB 32 Technical Working Groups

Economic Analysis and Program Design Technical Stakeholder Working Group Meetings

Workshop Archive!

GREENHOUSE GAS SECTORS PORTAL

Greenhouse Gas Sectors Portal

The staff of the Air Resources Board (ARB) are currently working on multiple sector specific greenhouse gas (GHG) activities. In order to better define, organize, and control major sources of GHG emissions, these sources have been grouped into "sectors." This page contains information regarding sector control measures, reduction strategies, protocols and other pertinent information. Sector activities are a continuing process so this page will be updated and hyperlinked as new information becomes available.

Agriculture:

Agriculture Stakeholder Working Group on Scoping Plan Development

General Manure Management Activities

Manure Management Strategies

Manure Management Protocols

Research on Emissions from Nitrogen Fertilizer

Agricultural Offroad Equipment

Electrification of Stationary Agricultural Engines

Energy:

AB 32 Energy Subgroup of the Climate Action Team (CAT) NEW!

Renewables Portfolio Standard (RPS) - CPUC

Renewables, Energy Efficiency and the Environment - CPUC

Energy Efficiency Program - CPUC

Forests:

Forest Scoping Plan Work Group

Forest GHG Accounting Protocols

Climate Change and Forestry Protocol Adoption

High Global Warming Potential (GWP):

HFC-134a Reduction from DIY MVAC Servicing

AC Leak Tightness Test / Repair Required for Smog Check

HFC Release Ban from MVAC Service / Dismantling

Low-GWP GHGs Requirement for New MVACs

High-GWP Refrigerant Tracking, Reporting, Repair, Deposit, and Recovery for Stationary RAC

Consumer Products High GWP GHGs Reduction

SF6 Reduction in Non-Electric Sector

Alternative Suppressants in Fire Protection Systems

Commercial Refrigeration Specifications

Residential Refrigeration Program

Foam Recovery / Destruction Program

Land Use and Local Initiatives:

Local Actions for Climate Change

Local Government Protocols for Greenhouse Gas Assessments

Land Use Subgroup of the Climate Action Team (LUSCAT)

Manufacturing:

Semiconductor Industry PFCs Reduction

Blended Cements

California Cement Facilities Energy Efficiency

Oil & Gas/Refining:

Low Carbon Fuel Standard (LCFS)

Oil & Gas/Refining Sector Working Group on Scoping Plan Development

Above Ground Storage Tanks

Gasoline Dispenser Hose Replacement

Reduction of Venting / Leaks from Oil / Gas Systems

Transportation:

Automobile Regulation (Assembly Bill 1493 - Pavley)

Cool Automobile Paints

SmartWay Truck Efficiency

Tire Inflation Program

Anti-Idling Enforcement

Strengthen Light-Duty Vehicle Standards

Privately Owned On-Road Trucks

Hybridization of Medium and Heavy-Duty Diesel Vehicles

Goods Movement:

Port Trucks

Shore Power

Transportation Refrigeration - Electric Standby

Commerical Harbor Craft

Vessel Speed Reductions

Waste Management/Recycling:

Recycling and Waste Management Subgroup of the Climate Action Team

Landfill Methane Control Measure

Technologies and Management Practices for Reducing GHG's from Landfills

ARB's Compost Emissions Working Group NEW!

For questions regarding the content on this Climate Change web page, please contact: ARB's Climate Change Webmaster: Johnnie Raymond, at (916) 445-8279

ARB's Climate Change Program

The Board is one of six boards, departments, and offices under the umbrella of the California Environmental Protection Agency.
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DRAFT

LUSCAT Submission to CARB Scoping Plan on Local Government, Land Use and Transportation

May 5, 2008

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2.3. *Transportation Planning*

2.3.1. Background

Federal government agencies in transportation planning

Most federal transportation functions are consolidated under the U.S. Department of Transportation. Two agencies within the DOT are critical to the transportation programming/funding process in California: The Federal Highway Administration (FHwA) and the Federal Transit Administration (FTA). These two agencies work together to administer ISTEA and its transportation programming and funding requirements. In this capacity, they oversee the work of state, regional and local transportation agencies.

The Federal Transportation Efficiency Act (TEA), reauthorized every six years (but with frequent delays), guaranteed spending, in its delayed 2005 reauthorization, of $286.4 billion dollars over six years. About fifteen percent was guaranteed for transit. This was a 38 percent increase in overall funding from the prior reauthorization; however the allotment for transit did not increase much. The next reauthorization is due in about 2009. Locally, these transit dollars do not go very far to meeting defined needs. Since 2000, about 70 percent of local ballot measures to increase transit funding have passed by voters. In Denver, a very successful transit system that will add 119 miles of light rail track, 18 miles of bus rapid transit and 50 new transit stations was approved. Eighty percent of the $4.7 billion dollar price tag was paid locally by a voter improved sales tax increase.

FHwA is responsible for all federally sponsored highways programming and funding. In this capacity it oversees the preparation of each state's State Transportation Improvement Program (STIP), which is required under federal transportation law. FHwA also oversees the distribution of ISTEA highway money.

FTA is in a parallel position with respect to transit. The agency administers all federally sponsored programming and funding for transit-related projects. FTA has works directly with regional and local transportation agencies.

State government agencies in transportation planning

The two state agencies in California primarily responsible for transportation are the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans). The CTC's primary job is to allocate all federal transportation funds and all state transportation funds, including gas tax and sales tax revenue. The CTC's main programming vehicle is the STIP. This document includes a five-year plan for funding of all transportation capital projects. [8]

The STIP is composed of 1) "regional projects" (that are nominated by regional entities and 2) "interregional projects" (that are nominated by Caltrans in their ITIP). Three quarters of STIP funds go to the regional entities and one quarter goes to Caltrans. Of the 75% that go the

[8] The STIP is funded with both federal (seventy percent) and state (thirty percent) dollars. Although the amount varies each year, about $1.5–$2.0 billion total is allocated annually for the projects prioritized in the STIP.

regional entities, a formula is used that further subdivides the money into county shares, based on population and highway miles.

Caltrans is responsible for engineering and planning, and for the construction and maintenance of all state highways and major arterials and roads. Caltrans also provides funding for a variety of other transportation projects and programs ranging from intercity rail lines to transportation demand management programs to the landscaping of scenic highways.

The California Transportation Plan (CTP) is a statewide, long-range transportation policy plan that provides for the movement of people, goods, services, and information. The CTP offers a blueprint to guide future transportation decisions and investments that will ensure California's ability to compete globally, provide safe and effective mobility for all persons, better link transportation and land use decisions, improve air quality, and reduce petroleum energy consumption.

The CTP, which is the product of extensive public outreach and consultation with transportation partners and stakeholders, presents a vision for California's future transportation system, and defines goals, policies, and strategies to reach the vision. The CTP vision is one of a fully integrated, multimodal, sustainable transportation system that supports the three outcomes (3Es) that define quality of life – prosperous economy, quality environment, and social equity.

The California High Speed Rail Authority

The California High Speed Rail Authority (Authority) was created pursuant to state legislation in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high-speed passenger train system offering intercity service. The Authority does not have responsibility for other intercity transportation systems or facilities used for intercity trips, such as highways, airports, conventional passenger rail or transit.

In June 2000, the Authority adopted the final business plan (Business Plan) (California High Speed Authority 2000) for an economically viable 700-mile-long (1,127-kilometer-long) HST system. This system would be capable of speeds in excess of 200 miles per hour (mph) (322 kilometers per hour [kph]) and would travel on a mostly dedicated system with fully grade-separated tracks with state-of-the art safety, signaling, and automated train control systems. It would connect and serve the major metropolitan areas of California, extending from Sacramento and the San Francisco Bay Area through the Central Valley to Los Angeles and San Diego. Such a system would be expected to carry a minimum of 42 million passengers annually, representing 32 million intercity trips and 10 million commuter trips, by the year 2020 and would have revenues in excess of operations and maintenance costs.

Regional Transportation Planning and RTPs, RTIPs, and RTPAs

State and federal transportation law requires local and or metropolitan agencies to engage in a wide variety of transportation activities. The metropolitan planning organization (MPO) is a regional agency designated by the U.S. Department of Transportation to carry out several

functions specifically required under federal transportation law. Among other things, the MPO is charged with preparing a Regional Transportation Plan (RTP), the long-range plan for transportation in a particular region. Rural Transportation Planning Area (RTPAs) in California serve areas outside of the MPOs. In some cases an RTPA is embedded in a MPOs and benefits from the MPOs resources.

The federal government requires that MPOs and RTPAs prepare RTPs to address transportation needs at least 20, often 25 or more years into the future. These plans must be updated every four years if the MPO is in a non-attainment area according to the Federal Clean Air Act and every five years if in attainment. The result is that MPOs are updating and improving data, modeling capacity, planning methods and outreach on a very regular and frequent schedule. Between now and 2020 it is likely that an additional three RTP cycles will have been completed in most MPOs. By 2020, RTPs will be analyzing and planning for land use and travel at least out to 2040, and more likely 2045 or 2050.

Regional Transportation Improvement Plans (RTIPs) are also produced by MPOs and RTPAs. These are short term versions of the RTP and lay out projects determined to be ready to be built. RTIPs can affect the value of speculative land near the projects listed. In this way, they can be a tool for inducing investment into Blueprint compliant and GHG reducing action. Therefore, the state can develop funding order rules to provide an incentive for sustainable projects within a region. RTIPs are provided to Caltrans and consolidated into the State Transportation Improvement Plan.

RTPs and RTIPs integrate the transportation plans of all of the cities and counties within their jurisdictions. Once the RTIPs are funded and set into motion, transportation fuel demand is essentially set for many decades. Transportation energy consumption associated with the actions included in the RTIP can then only be affected by changes in end-use technology or regulatory intervention.

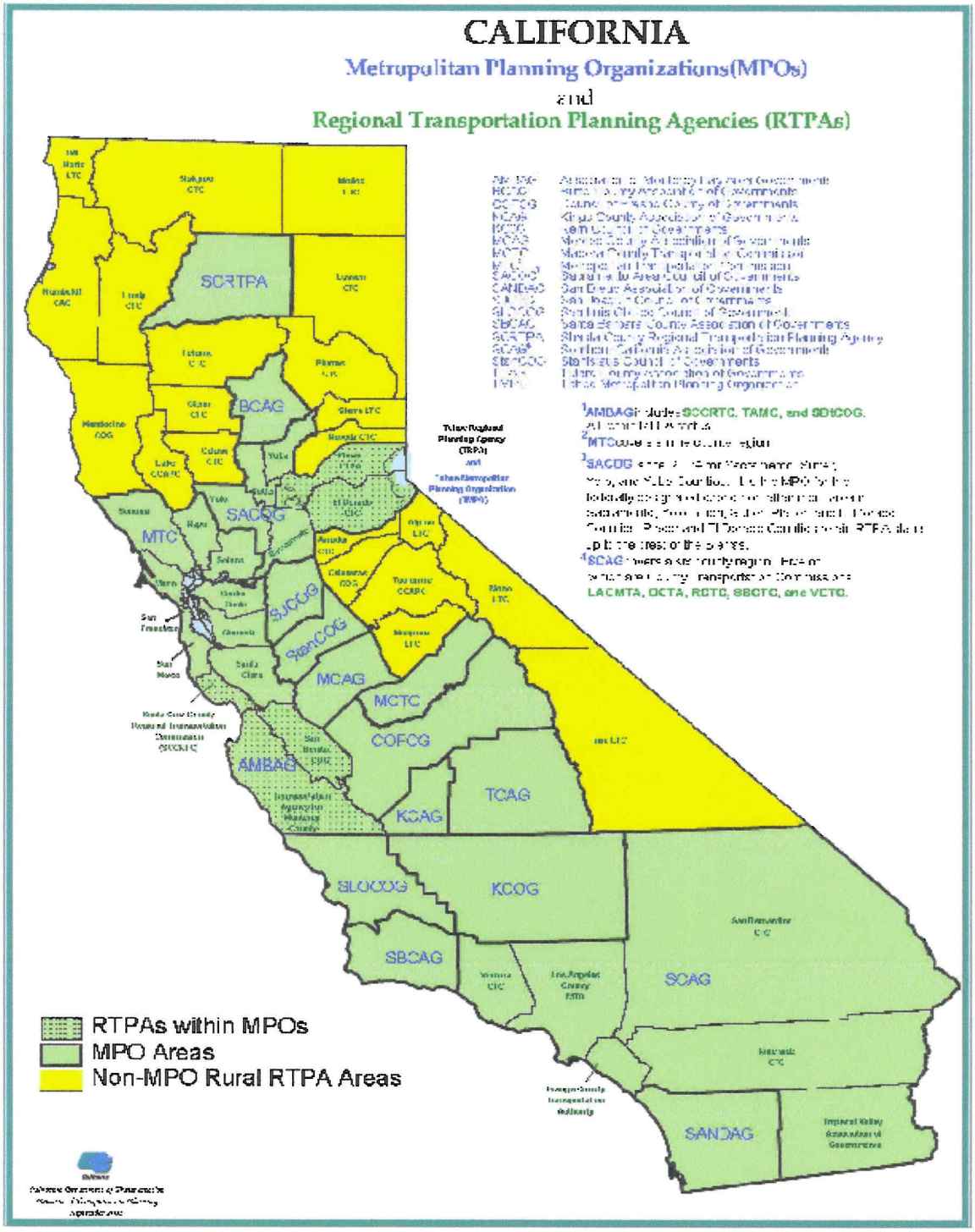
RTP Guidelines

The CTC adopts and updates RTP Guidelines, which are intended to provide direction to MPOs and RTPAs in the development of RTPs consistent with federal and State transportation planning requirements. While MPOs and RTPAs have the flexibility to be creative in selecting transportation planning options that best fit their regional needs, the Guidelines reflect both the mandates of state and federal statute and regulations, as well as the Commission's expectations for the use of best practices.

Pursuant to a request forwarded in a letter to the CTC from Senate Pro Tempore Don Perata in January 2007, the CTC undertook a review of its RTP Guidelines to determine how climate change emission reduction measures could be incorporated. As a result of this process, the Guidelines have been amended to include considerations and strategies for developing GHG-reduction strategies within RTPs. Furthermore, as part of this process, recommendations for statutes requiring RTPs to include a GHG reduction strategy were forwarded to the legislature.

Each RTP cycle offers an opportunity to advance the GHG technology and programs. Locally elected city and county officials comprise the Board of MPOs. This provides a direct mechanism to transfer information from regional to local planning tables and back again. The relationship between RTPs and General Plans provides an opportunity to link GHG reduction assistance, mandates, and incentives with federal investment in transportation infrastructure, transit planning, land use and economic development planning, and citizen participation into one arena. It also provides access to one of the larger infrastructure planning cycles to integrate advanced 2050 goals and climate change adaptation policy as those portions of the California climate change effort evolve.

Figure 1 – California MPOs and RTPAs



Rural Transportation Planning Area (RTPAs)

In California there are 21 RTPAs not embedded in MPOs. Land use planning in rural areas often is less rigorous and provides less informed input into transportation planning efforts. According to the Federal Highway Administration, independent RTPA plans tend to be project lists rather than longer term system-wide assessments of local, region, state, and national

needs.[9] More integrated, longer term plans will benefit transportation planning by coordinating multiple levels of government in rural areas, produce plans that are more consistent and comparable, and potentially contribute to rural economic development and environmental protection.

An opportunity exists to improve the land use, transportation and GHG reduction planning capacity of RTPAs by providing education, training and better on line access to planning software. If the MPOs use similar software, the integration of urban and rural plans will be simplified. Additionally, if MPOs gather and share data, analytical capacity could be improved and resources could be conserved.

MPOs are working to improve the ability to integrate rural lands into regional plans by improving rural data, land use practice knowledge, and economic strategies. This will help to promote land use practices in rural areas that are economically viable for land owners and environmentally sustainable. Issues the planning development effort will address include, but are not limited to: alternative agricultural practices, natural resources protection, infrastructure needs in rural areas (e.g., processing facilities and worker housing/schools), energy production, and methods to promote jobs-housing balance (with a specific emphasis on effective job-generating practices in appropriate areas). Because this information can be integrated with urban and suburban components, it will improve the regional planning capacity for flood control, groundwater recharge, and carbon sequestration, which all are enhanced through a comprehensive approach to urban and rural planning.

2.3.2. Transportation Planning Activities Underway

CalTrans Climate Action Program

In June of 2007 CalTrans started a new interdisciplinary effort intended to promote and facilitate GHG emission reduction measures and greening within the Department. The overall objective of the Climate Action Program is to encourage innovative ways to balance progressive program delivery and responsible environmental stewardship such that:

- transportation strategies, plans, and projects as a whole contribute to the State's GHG emission reduction targets, and
- proper guidelines, procedures, and a quantifiable set of reporting protocols are in place to monitor GHG footprints and provide feedback for program development and implementation.

The Climate Action Program serves as a resource for technical assistance, training, information exchange, and partnership-building opportunities.

California Regional Blueprint Planning Program

The Regional Blueprint Planning Grants Program was initiated in 2005 by the Secretary of Business, Transportation and Housing and is currently managed by Caltrans and OPR. This

[9] Federal Highway Administration, Planning for Rural Needs, http://www.fhwa.dot.gov/Planning/rural/planningfortrans/appendixb.html

program, which has distributed nearly $5 million annually in the last three grant cycles, funds the enhancement of linkages between land use and transportation planning by using planning scenarios to support coordinated regional and local decision-making. The program promotes the pro-active engagement of community residents, as well as critical stakeholders such as business interests, academia, builders, environmental advocates, conservationists and state entities to foster consensus on a vision and a preferred transportation land use plan. Regional Blueprint Planning is underway in 16 of 18 MPOs within California. In addition, Caltrans has recently initiated rural Blueprint grants.

Two key goals of the state Blueprint Planning Program are to:

- Foster a more efficient land use pattern that (a) supports improved mobility and reduced dependency on single-occupant vehicle trips, (b) accommodates an adequate supply of housing for all incomes, (c) reduces impacts on valuable habitat, productive farmland, and air quality, (d) increases resource use efficiency, and (e) results in safe and vibrant neighborhoods.
- Provide consumers more housing and transportation choices.

The analysis of GHG reduction is not required by the Blueprint grants but it is recommended and Blueprints that address GHGs and climate change are given extra consideration. Many of the MPOs have been independently working on GHG and energy issues in an attempt to understand the risk imposed on regional mobility from energy supply disruptions, peak oil, cost increases, and emission regulation changes, including GHG emission reduction. In addition, Blueprints analyze the VMT created or reduced in each scenario. Since VMT is roughly equivalent to GHG, all the Blueprint scenarios give some idea of the GHGs they create or reduce.

The California investment in regional blueprint planning could have tremendous benefits to both transportation and building energy savings and GHG gas emissions reduction. This program could serve as the analytical regional and local government backbone of the state's efforts to affect sustainable energy use and greenhouse reduction in multiple disciplines.

Of key importance is the fact that Blueprint Plans are the joint product of MPO and local government collaboration. MPOs hold transportation planning and funding authority. Cities and counties possess land use authority. The MPO Board of Directors is comprised of elected officials from the cities and counties of the MPO's jurisdiction. The MPO, then, is an ideal forum to build consensus and political will, deploy legal authority to take action and schedule funding to implement sustainable land use, transportation and energy plans. However, given the complexity of the challenge and diversity of stakeholders the State should provide technical assistance, resources and clearer direction to ensure more effective stakeholder engagement and actual implementation of Blueprint plans.

Blueprint Learning Network

The Business, Transportation and Housing Agency (B,T&H) established the Blueprint Learning Network (BLN) to bring together state, regional and local decision makers to support regional blueprint planning. The purpose of the BLN is to work with regional teams (MPOs and stakeholders) to establish a forum, including a series of workshops on overcoming the

challenges and obstacles to effective regional blueprint planning, and to share experiences and advice.

2.3.3. Improving Transportation Planning

Blueprint Program Improvements

The Blueprint Program and the data, integrated planning process, and public awareness it has created, can serve as an established vehicle for integrating climate change policy into RTPs and into local government General Plans that implement the RTPs. The comprehensiveness and detail of the many Blueprint Plans developed with state grant funding should be both improved and made more consistent statewide. In addition, the State must ensure the regions move beyond planning and developing Regional Blueprint Plans and begin to effectively implement. Any additional Blueprint funding resources should be tied to demonstration of progress in implementation across all blueprint goals, including housing, transportation, and resource protection. GHG emission reduction objectives can also be more effectively achieved if existing Blueprint Plans improve their progress and focus on increasing opportunities for higher density and affordable housing.

Transportation Modeling

Transportation demand modeling (TDM) has been used for many years to predict effects of new development on roadway congestion and mass transit ridership. However, predictive models in use today by many metropolitan planning organizations are out of date resulting in many planners being unable to accurately account for the benefits of urban infill and smart growth. As a result, development strategies with recognized benefits and VMT reduction potential may be discounted.

A few of the California MPOs[10] are using or developing activity based travel modeling capacity known to be better at quantifying smart growth options needed for GHG-efficient land use planning, quantification and tracking. These tools also provide co-benefits including better air quality conformity studies, policy analysis (if parcel based) and prioritizing of transportation projects for funding.

Data Development and Maintenance Opportunities

If regional data collectives are established and activity-based travel models become the standard, then GHG emission reduction quantification, planning and tracking of results should be improved within each MPO and across the state's major MPOs. As new technical data linking land use and GHG emissions is developed, it can be formatted to be more readily integrated into data bases and models if they have, over the RTP cycles, become more standardized. A central state-supported system to provide technical and policy assistance could be used to inform MPOs and local governments and to deploy new data and tools in a quality controlled manner.

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[10] San Francisco County Transportation Authority (SFCTA), the Metropolitan Transportation Commission (MTC) in the Bay Area, the Southern California Association of Governments (SCAG), and the Sacramento Area Council of Governments (SACOG).

Training, Education and Resources

Local and regional governments need training and technical assistance to ensure transportation planners and engineers have a working knowledge of climate issues and ability to address these issues in the development of transportation plans and projects. State guidelines and policies should include provisions for the integration of GHG emission reduction measures.

Transportation Financing Program Criteria

Criteria for State programs that fund local transportation projects do not consider the role of projects proposed for funding in mitigating climate change. State agencies with transportation funding programs should examine their criteria and, when within their statutory authority, incorporate climate change considerations.