

DRAFT AGENDA

Meeting of the Senate Bill 375
Regional Targets Advisory Committee

Time:

Wednesday, March 4, 2009
10:00 am – 3:00 pm, Pacific Time

Location:

Hearing Room A (first floor)
California Energy Commission Building
1516 Ninth Street
Sacramento, CA 95814

Webcast Information:

<http://www.arb.ca.gov/cc/sb375/rtac/meetings/meetings.htm>

1. Roll Call and Housekeeping Items

2. Factors Influencing the Magnitude of Change in the Land Use and Transportation Sectors

Presentations and discussion will focus on economic considerations such as the price of gas, consumer housing preference, and the cost to develop housing and services. Committee discussion to follow.

3. Data and Modeling for SB 375

Presentations and discussion will focus on what data and modeling capabilities are needed to meet SB 375 requirements, and what regions will need to get there. Committee discussion to follow.

4. RTAC Guiding Principles

Follow up item from February 3 meeting. The committee will discuss the development of a common set of principles to follow when developing its recommendations on factors, methodologies, metrics, etc.

5. Public Comment and Discussion

6. Action Items

7. Adjourn

HOUSEKEEPING PRESENTATION

RTAC Revised Key Questions

Question 1

What are the key factors most directly within the control of MPOs that influence greenhouse gas emissions from passenger vehicle use? How do land use, the transportation system, and pricing specifically affect emissions? What is the magnitude of these factors under a variety of conditions?

Question 2

How do economic and other factors affect the magnitude of change possible in the land use and transportation sectors? This includes such factors as the price of gas and other variables that affect the price of travel, consumer preferences, especially for housing, the economics of different development patterns, environmental considerations, social equity issues, funding levels available for different types of transportation investments, and local government tax structure and other fiscal considerations.

Question 3

What are acceptable data quality and modeling tool standards for implementing various methodologies to process the factors into targets? Are the various models synchronized with their air quality counterparts? What improvements are needed, what assistance can the state provide in expediting these improvements, and which can be made in time to meet the first round of targets? If not, what are the alternatives? What is the cost to make those improvements?

Question 4

What support can state agencies provide to MPOs in the form of implementation tools, (i.e. policies or programs/grants in addition to the modeling issues addressed in #3 above)?

Question 5

How should passenger vehicle trips that cross regional and sub-regional boundaries be treated? What factors need to be considered for trips crossing state boundaries?

Question 6

Should goods movement trips be considered relative to their impact on passenger vehicle emissions?

Question 7

What metric(s) should be used to express regional targets? What are the pros and cons of the various choices? For example, should the metric(s) be per capita or total greenhouse gas emissions for a region? Should the metric(s) be relative to current conditions or a future year baseline? How should the metric(s) account for differences between regions, e.g. growth rates, incomes, current jobs-housing balance? What monitoring programs are needed to assess the usefulness of the metric(s) over time?

Question 8

How should the benefits of external factors such as low-carbon fuel and vehicle efficiency regulations be treated?

Question 9

How can the various methods be evaluated to see if they support the goal of setting the most ambitious achievable targets?

SUGGESTED KEY QUESTIONS FOR THE RTAC TO ADDRESS

California's strategy for reducing greenhouse gas emission from passenger cars includes three elements: vehicle technologies, low-carbon fuel technologies, and reduced vehicle use through changed land use patterns and improved transportation. In the target setting process spelled out in SB 375, ARB is to consider greenhouse gas emission reduction strategies underway to implement AB 32. Since ARB adopts the State's vehicle and fuel technologies regulations, it currently has the tools and methods for considering these strategies in the target-setting process. Therefore, apart from those, ARB needs the RTAC's recommendations on the factors and methodologies for setting targets that relate directly to passenger vehicle use. The following six questions form a suggested framework for the RTAC to focus its efforts on vehicle-use related factors and methodologies.

1. What are the key factors that influence passenger vehicle use, including land use, the transportation system, the price of travel, and others?
2. What are the factors that affect the magnitude of the change in passenger vehicle use that is achievable? This includes ones that cities, counties, and MPOs can control, such as land use decisions, transportation investment, and pricing and other transportation strategies, and those they cannot, such as demographic trends, consumer housing preferences, market economics for development products, the price of gas, and others.
3. What are acceptable standards for data quality and modeling tools for implementing various methodologies for processing the factors into targets? How fast can regions with current data and modeling limitations improve their tools? What is the cost to make those improvements? Can any of these improvements be made in time to meet the first round of targets? In the interim, what ancillary tools can be brought to bear?
4. How should passenger vehicle trips and goods movement trips that cross regional boundaries be incorporated into targets?
5. What metric(s) should be used to express regional targets? For example, should the metric(s) be per capita or total VMT for a region? Should they be changes from current conditions or from future year baselines? How should the metric(s) account for differences between regions, e.g. growth rates, incomes, current jobs-housing balance? Is it important that the metric(s) represent real and permanent reductions?
6. How can the various methods be evaluated to see if they meet the goal of setting the most ambitious achievable targets?

REVISED - SUGGESTED KEY QUESTIONS FOR THE RTAC TO ADDRESS

California's strategy for reducing greenhouse gas emission from passenger cars includes three elements: vehicle technologies, low-carbon fuel technologies, and reduced vehicle use through changed land use patterns and improved transportation. In the target setting process spelled out in SB 375, ARB is to consider greenhouse gas emission reduction strategies underway to implement AB 32. Since ARB adopts the State's vehicle and fuel technologies regulations, it currently has the tools and methods for considering these strategies in the target-setting process. Therefore, apart from those, ARB needs the RTAC's recommendations on the factors and methodologies for setting targets that relate directly to passenger vehicle use. The following six questions form a suggested framework for the RTAC to focus its efforts on vehicle-use related factors and methodologies.

Question #1: What are the key factors most directly within the control of MPOs that influence greenhouse gas emissions from passenger vehicle use? How do land use, the transportation system, and pricing specifically affect emissions? What is the magnitude of these factors under a variety of conditions?

Question #2: How do economic and other factors affect the magnitude of change possible in the land use and transportation sectors? This includes such factors as the price of gas and other variables that affect the price of travel, consumer preferences, especially for housing, the economics of different development patterns, environmental considerations, social equity issues, funding levels available for different types of transportation investments, and local government tax structure and other fiscal considerations.

Question #3: What are acceptable data quality and modeling tool standards for implementing various methodologies to process the factors into targets? Are the various models synchronized with their air quality counterparts? What improvements are needed, what assistance can the state provide in expediting these improvements, and which can be made in time to meet the first round of targets? If not, what are the alternatives? What is the cost to make those improvements?

Question #4: What support can state agencies provide to MPOs in the form of implementation tools, (i.e. policies or programs/grants in addition to the modeling issues addressed in #3 above)?

Question #5: How should passenger vehicle trips that cross regional and sub-regional boundaries be treated? What factors need to be considered for trips crossing state boundaries?

Question #6: Should goods movement trips be considered relative to their impact on passenger vehicle emissions?

Question #7: What metric(s) should be used to express regional targets? What are the pros and cons of the various choices? For example, should the metric(s) be per capita or total greenhouse gas emissions for a region? Should the metric(s) be relative to current conditions or a future year baseline? How should the metric(s) account for differences between regions, e.g. growth rates, incomes, current jobs-housing balance? What monitoring programs are needed to assess the usefulness of the metric(s) over time?

Question #8. How should the benefits of external factors such as low-carbon fuel and vehicle efficiency regulations be treated?

Question #9: How can the various methods be evaluated to see if they support the goal of setting the most ambitious achievable targets?

2009 RTAC Meeting Schedule

Date and Time	Purpose	Contact
3/4/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
4/7/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
5/5/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
6/3/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
7/7/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
8/5/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
9/1/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504
9/16/09 10:00am – 3:00 pm	RTAC Meeting	Lezlie Kimura ARB Staff (916) 322-1504

*** A notice and agenda for each RTAC meeting will be posted and sent out to ARB's SB 375 email listserv at least 10 days prior to each meeting date.**

2009 Staff Workgroup Meetings

Date and Time	Purpose	Contact
2/19/09 1:30 pm – 5:00 pm	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
3/18/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
4/21/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
5/19/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
6/17/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
7/21/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722
8/19/09 TBD	Staff Workgroup Meeting	Jamesine Rogers ARB Staff (916) 323-2722

*** A notice and agenda for each staff workgroup meeting will be posted and sent out to ARB's SB 375 email listserv at least 10 days prior to each meeting date.**

Meeting Summary of the Senate Bill 375
Regional Targets Advisory Committee (RTAC)

Tuesday, February 3, 2009
Byron Sher Auditorium
Cal/EPA Headquarters Building
1001 I Street
Sacramento, CA 95814

Discussion Highlights

Market and Economic Trends

RTAC members discussed the influences that current market and economic trends might have on their mission to provide ARB with recommended factors and methodologies for setting targets. No conclusions were reached; however, the RTAC requested additional information for their discussion on the topic. RTAC members discussed a number of issues including:

- Factors that could help achieve an appropriate jobs/housing balance, including the provision of affordable housing near job centers and ensuring that private infrastructure costs and permitting timelines are minimized for commercial relocation or infill housing
- How income impacts consumer choice of location, and how location subsequently affects vehicle choice
- How to determine whether workers living in households located near job locations are commuting to those jobs or going to other job locations farther away
- How ARB would account for the varying costs associated with transportation when setting targets

Modeling

In addition to presentations by SACOG and Jerry Walters on modeling techniques and the “4-D” concepts, the RTAC discussed a number of issues related to available modeling tools, their capabilities, and the ability of the MPOs to use them. The RTAC expressed interest in additional information on this topic area as well. Other modeling issues discussed included:

- The relationship between RTAC efforts and the California Transportation Commission’s modeling guidelines
- The recognition that MPOs have varying modeling capabilities, and how the RTAC recommendations impact an MPO’s ability to provide adequate data to help ARB set regional targets

The Three-Legged Stool

The RTAC discussed the interaction between vehicle technology, fuels, and VMT. Members had differing views about the extent to which each should be considered in the RTAC's recommendations to ARB, and in particular, whether VMT is an appropriate metric. No conclusions were reached. RTAC members discussed a number of issues including:

- The impact of fuel price volatility and the ability to evaluate the impacts of price variations on greenhouse gas emissions
- The relationship between income, housing choice, and VMT generation
- The impact of infrastructure investments on induced travel
- The time component of realizing the benefits of policies that influence development
- The influence of transit service and its proximity to development

Suggested Key Questions for the RTAC to Address

The RTAC discussed and edited ARB staff's suggested key questions. The revisions will be posted separately.

Guiding Principles

The RTAC agreed to discuss guiding principles at a future meeting. The suggested list includes the following:

- Minimize administrative burden in program implementation and tracking
- Encourage sub-regional cooperation rather than competition
- Avoid conflicting statutory requirements, if any
- Maximize integrated system approach allowable under law
- Maximize co-benefits of air quality and economic growth
- Maximum transparency and clarity to gain public support
- Ensure adequate means of monitoring regional emissions to assess the target setting process in the future

Public Comment Highlights

There were six individuals who offered public comment. Their comments included the following observations and suggestions:

- The SACOG blueprint map does not consider existing environmental baselines (e.g. vernal pools, grasslands). SB 375 creates CEQA exemptions that reduce review, which could affect sensitive or irreplaceable habitats or resources.
- SACOG's MTP efforts have achieved significant air quality benefits for the region.
- Health-based issues must be considered.
- If the RTAC only addresses VMT, changing land use patterns could be left out of the discussion.
- Metrics may present a significant challenge for RTAC; greenhouse gas emissions are important as a metric, but the RTAC needs to measure how effective such metrics and strategies are.

RTAC Requests to Staff

1. RTAC requested additional background information on the current economic situation (e.g. the demand for housing, and the general trends of the housing market) so they can discuss how these factors will impact their deliberations.
2. RTAC also requested a Broad assessment of the modeling capabilities of the state's 18 MPOs.

Members Present:

Chesley, A.	Parkinson, P.
Cohen, S.	Parks, L.
Deveraux, G.	Rawson, M.
Doyle, S.	Wallerstein, B.
Eaken, A.	Walters, J.
Gallegos, G.	Whiteside, C.
Katz, R.	Wunderman, Jm.
Leahy, A.	Woo, M.
McKeever, M.	

Meeting Summary of the Senate Bill 375 **RTAC Staff Workgroup**

February 19, 2009
Coastal Hearing Room
Cal/EPA Headquarters Building
1001 I Street
Sacramento, CA 95814

Discussion Highlights

MPO Modeling Assessments

Bruce Griesenbeck of SACOG presented a draft version modeling survey developed to assess the modeling capabilities of the state's MPOs, and determine where improvements in capabilities would benefit SB 375 implementation. Several points were made while discussing the survey:

- Participants, including RTAC members present, had differing opinions on the level of detail necessary for the survey. Opinions ranged from a desire to maintain the level of specificity found in SACOG's survey, to changing the survey to only assess a higher policy level discussion, to the opinion that the survey was unnecessary and distracts RTAC from its designed purpose of setting factors and methods.
- The numbered rating system was also discussed, some participants preferring each MPO to develop their own rubric for flexibility, and others hoping to keep the SACOG rating system to ensure consistency.
- Participants discussed whether the survey should include questions to gauge how sensitive, or scalable, models are (e.g. is a model sensitive to local policies for general plan development, neighborhood changes, or project level development).
- Participants discussed if there should be varying standards for SB 375 between regions (e.g. should an urban area's model, like MTC, need to be identical to a rural area model, like Butte CAG).

Economic Factors Discussion

Staff presented a list of possible economic questions that could help RTAC frame their ongoing factors and methods discussion with. The draft was intended to foster discussion within the group and was not exhaustive. Several points we made while discussing the list of questions:

- One area where most participants agreed is that the questions were too narrowly focused on "smart growth" development. Whereas RTACs efforts must encapsulate the entirety of market trends related to housing choices.

- Most participants agreed further discussion was necessary. Future discussions should center around overall outlook for the economy in the coming years and the housing market over the next few decades, discussion of where “smart growth” housing was successful and why, and also where smart “growth projects” have failed and why they did.
- Participants also noted that numerous factors affect housing choices that are often overlooked, such as the quality of surrounding schools.
- Several key ideas were discussed that many participants felt encapsulated the economic issues RTAC should consider:
 - Broad understanding and discussion of the overall housing, employment markets.
 - How SB 375 policies will impact the cost of building.
 - How development generally impacts property values.
 - Learn from examples where regions have had successes and failures with infill housing.
 - The market’s readiness for change and availability of financing and investment opportunities for infill and other forms of housing. Further, evaluate if some areas are “more ready” than others.
 - Explore business decisions such as what persuades job creators to locate in urban areas.
 - Determine if current market assessments should impact RTACs decisions, (i.e. should regions be planning for a market that will exist in the next 5 years or 30?)

Additional Comments

- As agendas are set and while in meetings, participants should keep asking themselves “How does what we are doing at the moment help RTAC eventually recommend factors and methods to ARB?”

Members Present

Chesley, A.	Parks, L.
Devereaux, G.	Rawson, M.
Eaken, A.	Walters, J.
Libcki, S.	<i>Wynot, J. (Substitute for: Wallerstein, B.)</i>

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Regional Targets Advisory Committee

Government Code 65080 (b)(2)(A)(i): No later than January 31, 2009, the state board shall appoint a Regional Targets Advisory Committee to recommend factors to be considered and methodologies to be used for setting greenhouse gas emission reduction targets for the affected regions. The committee shall be composed of representatives of the metropolitan planning organizations, 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, planning organizations, environmental justice organizations, affordable housing organizations, and others. The advisory committee shall transmit a report with its recommendations to the state board no later than September 30, 2009. In recommending factors to be considered and methodologies to be used, the advisory committee may consider any relevant issues, including, but not limited to, data needs, modeling techniques, growth forecasts, the impacts of regional jobs-housing balance on interregional travel and greenhouse gas emissions, economic and demographic trends, the magnitude of greenhouse gas reduction benefits from a variety of land use and transportation strategies, and appropriate methods to describe regional targets and to monitor performance in attaining those targets. The state board shall consider the report prior to setting the targets.

Setting Targets

Government Code 65080 (b)(2)(A): No later than September 30, 2010, the State Air Resources Board shall provide each affected region with greenhouse gas emission reduction targets for the automobile and light truck sector for 2020 and 2035, respectively.

Government Code 65080 (b)(2)(A)(ii): Prior to setting the targets for a region, the state board shall exchange technical information with the metropolitan planning organization and the affected air district. The metropolitan planning organization may recommend a target for the region. The metropolitan planning organization shall hold at least one public workshop within the region after receipt of the report from the advisory committee. The state board shall release draft targets for each region no later than June 30, 2010.

Government Code 65080 (b)(2)(A)(iii): In establishing these targets, the state board shall take into account greenhouse gas emission reductions that will be achieved by improved vehicle emission standards, changes in fuel composition, and other measures it has approved that will reduce greenhouse gas emissions in the affected regions, and prospective measures the state board plans to adopt to reduce greenhouse gas emissions from other greenhouse gas emission sources as that term is defined in subdivision (i) of Section 38505 of the Health and Safety Code and consistent with the regulations promulgated pursuant to the California Global Warming Solutions Act of 2006 (Division 12.5 (commencing with Section 38500) of the Health and Safety Code).

Government Code 65080 (b)(2)(A)(v): The greenhouse gas emission reduction targets may be expressed in gross tons, tons per capita, tons per household, or in any other metric deemed appropriate by the state board.

Sustainable Communities Strategy (SCS)

Government Code 65080 (b)(2)(B): Each metropolitan planning organization shall prepare a sustainable communities strategy, subject to the requirements of Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, including the requirement to utilize the most recent planning assumptions considering local general plans and other factors. The sustainable communities strategy shall (i) identify the general location of uses, residential densities, and building intensities within the region; (ii) 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; (iii) identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Section 65584; (iv) identify a transportation network to service the transportation needs of the region; (v) gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Section 65080.01; (vi) consider the state housing goals specified in Sections 65580 and 65581; (vii) 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; and (viii) allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506)...

Alternative Planning Strategy (APS)

Government Code 65080 (b)(2)(H): If the sustainable communities strategy, prepared in compliance with subparagraph (B) or (C), is unable to reduce greenhouse gas emissions to achieve the greenhouse gas emission reduction targets established by the state board, the metropolitan planning organization shall prepare an alternative planning strategy to the sustainable communities strategy showing how those greenhouse gas emission targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. The alternative planning strategy shall be a separate document from the regional transportation plan, but it may be adopted concurrently with the regional transportation plan. In preparing the alternative planning strategy, the metropolitan planning organization:

(i) Shall identify the principal impediments to achieving the targets within the sustainable communities strategy.

(ii) May include an alternative development pattern for the region pursuant to subparagraphs (B) to (F), inclusive.

(iii) Shall describe how the greenhouse gas emission reduction targets would be achieved by the alternative planning strategy, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for achievement of the greenhouse gas emission reduction targets.

(iv) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the greenhouse gas emission reduction targets approved by the state board.

(v) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

SCS/APS Submission

Government Code 65080 (b)(2)(I): (i) Prior to starting the public participation process adopted pursuant to subparagraph (E) of paragraph (2) of subdivision (b) of Section 65080, the metropolitan planning organization shall submit a description to the state board of the technical methodology it intends to use to estimate the greenhouse gas emissions from its sustainable communities strategy and, if appropriate, its alternative planning strategy. The state board shall respond to the metropolitan planning organization in a timely manner with written comments about the technical methodology, including specifically describing any aspects of that methodology it concludes will not yield accurate estimates of greenhouse gas emissions, and suggested remedies. The

metropolitan planning organization is encouraged to work with the state board until the state board concludes that the technical methodology operates accurately.

(ii) After adoption, a metropolitan planning organization shall submit a sustainable communities strategy or an alternative planning strategy, if one has been adopted, to the state board for review, including the quantification of the greenhouse gas emission reductions the strategy would achieve and a description of the technical methodology used to obtain that result. Review by the state board shall be limited to acceptance or rejection of the metropolitan planning organization's determination that the strategy submitted would, if implemented, achieve the greenhouse gas emission reduction targets established by the state board. The state board shall complete its review within 60 days.

(iii) If the state board determines that the strategy submitted would not, if implemented, achieve the greenhouse gas emission reduction targets, the metropolitan planning organization shall revise its strategy or adopt an alternative planning strategy, if not previously adopted, and submit the strategy for review pursuant to clause (ii). At a minimum, the metropolitan planning organization must obtain state board acceptance that an alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets established for that region by the state board.

Additional Notes on SCS/APS

Government Code 65080 (b)(2)(J): Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (I), shall either one be subject to any state approval. Nothing in a sustainable communities strategy shall be interpreted as superseding the exercise of the land use authority of cities and counties within the region. Nothing in this section shall be interpreted to limit the state board's authority under any other provision of law. Nothing in this section shall be interpreted to authorize the abrogation of any vested right whether created by statute or by common law. Nothing in this section shall require a city's or county's land use policies and regulations, including its general plan, to be consistent with the regional transportation plan or an alternative planning strategy. Nothing in this section requires a metropolitan planning organization to approve a sustainable communities strategy that would be inconsistent with Part 450 of Title 23 of, or Part 93 of Title 40 of, the Code of Federal Regulations and any administrative guidance under those regulations. Nothing in this section relieves a public or private entity or any person from compliance with any other local, state, or federal law.

Government Code 65080 (b)(2)(K): Nothing in this section requires projects programmed for funding on or before December 31, 2011, to be subject to the provisions of this paragraph if they (i) are contained in the 2007 or 2009 Federal Statewide Transportation Improvement Program, (ii) are funded pursuant to

Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2, or (iii) were specifically listed in a ballot measure prior to December 31, 2008, approving a sales tax increase for transportation projects. Nothing in this section shall require a transportation sales tax authority to change the funding allocations approved by the voters for categories of transportation projects in a sales tax measure adopted prior to December 31, 2010. For purposes of this subparagraph, a transportation sales tax authority is a district, as defined in Section 7252 of the Revenue and Taxation Code, that is authorized to impose a sales tax for transportation purposes.

Region-Specific SCS Development

Bay Area

Government Code 65080 (b)(2)(B) ...Within the jurisdiction of the Metropolitan Transportation Commission, as defined by Section 66502, the Association of Bay Area Governments shall be responsible for clauses (i), (ii), (iii), (v), and (vi), the Metropolitan Transportation Commission shall be responsible for clauses (iv) and (viii); and the Association of Bay Area Governments and the Metropolitan Transportation Commission shall jointly be responsible for clause (vii).

Southern California Association of Governments

Government Code 65080 (b)(2)(C): In the region served by the multicounty transportation planning agency described in Section 130004 of the Public Utilities Code, a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy, if one is prepared pursuant to subparagraph (H), for that subregional area. The metropolitan planning organization may adopt a framework for a subregional sustainable communities strategy or a subregional alternative planning strategy to address the intraregional land use, transportation, economic, air quality, and climate policy relationships. The metropolitan planning organization shall include the subregional sustainable communities strategy for that subregion in the regional sustainable communities strategy to the extent consistent with this section and federal law and approve the subregional alternative planning strategy, if one is prepared pursuant to subparagraph (H), for that subregional area to the extent consistent with this section. The metropolitan planning organization shall develop overall guidelines, create public participation plans pursuant to subparagraph (E), ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region.

San Joaquin Valley

Government Code 65080 (b)(2)(M): Two or more of the metropolitan planning organizations for Fresno County, Kern County, Kings County, Madera County, Merced County, San Joaquin County, Stanislaus County, and Tulare County may work together to develop and adopt multiregional goals and policies that may address interregional land use, transportation, economic, air quality, and climate

relationships. The participating metropolitan planning organizations may also develop a multiregional sustainable communities strategy, to the extent consistent with federal law, or an alternative planning strategy for adoption by the metropolitan planning organizations. Each participating metropolitan planning organization shall consider any adopted multiregional goals and policies in the development of a sustainable communities strategy and, if applicable, an alternative planning strategy for its region.

Housing

Government Code 65588(b): Except as provided in paragraph (7) of subdivision (e), the housing element shall be revised as appropriate, but not less than every eight years, to reflect the results of this periodic review, by those local governments that are located within a region covered by (1) a metropolitan planning organization in a region classified as nonattainment for one or more pollutants regulated by the federal Clean Air Act or (2) a metropolitan planning organization or regional transportation planning agency that is required, or has elected pursuant to subparagraph (L) of paragraph (2) of subdivision (b) of Section 65080, to adopt a regional transportation plan not less than every four years, except that a local government that does not adopt a housing element within 120 days of the statutory deadline for adoption of the housing element shall revise its housing element as appropriate, but not less than every four years. The housing element shall be revised, as appropriate, but not less than every five years by those local governments that are located within a region covered by a metropolitan planning organization or regional transportation planning agency that is required to adopt a regional transportation plan not less than every five years, to reflect the results of this periodic review. Nothing in this section shall be construed to excuse the obligations of the local government to adopt a revised housing element no later than the date specified in this section.

Government Code 65584.04 (h)(i)(1): It is the intent of the Legislature that housing planning be coordinated and integrated with the regional transportation plan. To achieve this goal, the allocation plan shall allocate housing units within the region consistent with the development pattern included in the sustainable communities strategy.

Government Code 65583(c)(1)(A): Where the inventory of sites, pursuant to paragraph (3) of subdivision (a), does not identify adequate sites to accommodate the need for groups of all household income levels pursuant to Section 65584, rezoning of those sites, including adoption of minimum density and development standards, for jurisdictions with an eight-year housing element planning period pursuant to Section 65588, shall be completed no later than three years after either the date the housing element is adopted pursuant to subdivision (f) of Section 65585 or the date that is 90 days after receipt of comments from the department pursuant to subdivision (b) of Section 65585, whichever is earlier, unless the deadline is extended pursuant to subdivision (f).

Notwithstanding the foregoing, for a local government that fails to adopt a housing element within 120 days of the statutory deadline in Section 65588 for adoption of the housing element, rezoning of those sites, including adoption of minimum density and development standards, shall be completed no later than three years and 120 days from the statutory deadline in Section 65588 for adoption of the housing element. (B) Where the inventory of sites, pursuant

CEQA

Public Resources Code 21159.28 (a): If a residential or mixed-use residential project is consistent with the use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board pursuant to subparagraph (I) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code has accepted the metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets and if the project incorporates the mitigation measures required by an applicable prior environmental document, then any findings or other determinations for an exemption, a negative declaration, a mitigated negative declaration, a sustainable communities environmental assessment, an environmental impact report, or addenda prepared or adopted for the project pursuant to this division shall not be required to reference, describe, or discuss (1) growth inducing impacts; or (2) any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network.

(b) Any environmental impact report prepared for a project described in subdivision (a) shall not be required to reference, describe, or discuss a reduced residential density alternative to address the effects of car and light-duty truck trips generated by the project.

ECONOMIC FACTORS PRESENTATION

Economic Factors

Regional Targets Advisory Committee

Justin R. Paddock
March 4, 2009

1

Context

- February thru April
 - Factors influencing travel, modeling, and other tools
- April thru May
 - Addressing geographic boundaries, goods movement, and benefits from fuel and vehicle efficiency

continued...

2

Context

- June thru July
 - Framework for RTAC recommendations
 - Metrics
- July thru August
 - Supporting MPO implementation and evaluation techniques for recommended factors and methods
- September
 - Draft and final recommendations complete

3

Questions Discussed at the Staff-Level Workgroup

1. What will influence consumers to buy or rent a “smart growth” housing product?
2. What affects a family's decision to buy or rent a home?
3. How do smart growth houses affect a developer/builder's business model?

continued...

4

Questions Discussed at the Staff-Level Workgroup

4. What are the opportunities and constraints to smart growth development?
5. How will fiscal consideration influence local government land use decisions regarding smart growth housing products?

5

Workgroup Suggestions

- Discuss impact of overall economy, housing and employment markets
- Discuss how policies impact the cost to build
- Discuss development impacts on property values

continued...

6

Workgroup Suggestions

- Provide examples of infill project successes and failures
- Discuss the market's readiness for change and availability of financing
- Determine role of market assessments in RTAC's recommendations

7

Potential Next Steps

- Further discussions should focus on:
 - Overall market outlook
 - Examples of successes and failures in infill development
- Possible April RTAC Meeting Speakers
 - Mr. Steve Levy, Center for the Continuing Study of the California Economy
 - Mr. Randall Lewis, Lewis Operating
 - Others?

8

DATA AND MODELING PRESENTATION

Data and Modeling for SB 375

Regional Targets Advisory Committee

March 4, 2009

1

Why Modeling Assessment?

Regional Targets → Regional Planning to Meet Targets (RTPs)

↑
RTP Modeling

2

Different Modeling Capabilities

- Recognized in CTC RTP Guidelines
 - 5 categories of regions
 - 5 recommendations regarding capabilities of transportation and land use modeling
- Raised in RTAC Workgroup Meeting
 - Recognize and understand different modeling capabilities
 - How should RTAC balance this relative to recommendations for target-setting?

3

Modeling Assessment Survey

- Travel Demand Model
- Land Use Model
- Data Collection and Monitoring Programs

4

MPO Modeling Assessment

Factors Influencing Travel Demand → How Well Model Captures (Sensitivity)

- Land Use strategies
- Transportation infrastructure
- Exogenous factors

5

Survey: Factors Influencing Travel Demand

Travel Demand Model

<p>Policy Factors:</p> <ul style="list-style-type: none"> Land uses Road projects Transit projects Pricing 	<p>Exogenous Factors:</p> <ul style="list-style-type: none"> Gas prices Auto operating costs Age, income Vehicle fleet External travel
---	--

6

Survey: Factors Influencing Travel Demand (cont.)

Land Use Model

Policy Factors:

Land use policy:
Current zoning
Planned changes
Other changes

Exogenous Factors:

Residential location
(e.g. affordability)
Development-related
(e.g., land cost, etc.)
Regional production
Other factors

Data Collection/ Monitoring

Land use, demographics, transportation use,
transportation supply

7

Assessment: Summary

- Dispels any impression that MPOs have comparable modeling capabilities.
- Points out where improvements can be, and are being, made.

8

Travel Demand and Land Use Models: Policy Factors

- Larger MPO's:
 - Reasonable sensitivity to key factors
 - Plans for model improvements
- Smaller MPO's:
 - Simpler models, without sensitivity to many key factors.
 - Very few capable of modeling transit. Many factors not applicable.
- No or untested capacity, or insensitivity to factor:
 - Micro-level land use factors (including many of the "Ds")
 - ITS and traffic management
 - Intercity transit
 - Pricing policies

9

Travel Demand and Land Use Models: Exogenous Factors

- Larger MPOs:
 - Policy variables similar to travel model assessment
 - Models capture more exogenous factors
- Smaller MPOs:
 - Policy variables similar to travel model assessment
 - Models capture less exogenous factors
- No or untested capacity, or insensitivity to factor
 - external travel (originating out of region)
 - key economic factors
 - Vehicle fleet characteristics mostly done post hoc

10

Data Collection / Monitoring

- Most common assessment:
"Inconsistent" (e.g., data are collected but not on a regular schedule or in a consistent way)

11

Some Possible Questions for Discussion

- How should the RTAC deal with differing modeling capabilities relative to recommendations for target-setting?
- Do all models need to have similar capabilities?
 - If yes, by when?
- What other methods might be used (in conjunction with models or separately) to help more accurately assess impacts of land use and transportation actions?
- Is there a need for common definitions and values (e.g., for exogenous factors like fuel price, income, estimates of external travel)?

12

Other Efforts

- Modeling improvement efforts
 - Assistance from State
 - Making the case for assistance
- Scenario development

13

Figure 1a.
MPO TRAVEL DEMAND MODEL ASSESSMENT SUMMARY—POLICY SENSITIVITY (PRELIMINARY)

This chart focuses on policy variables which significantly influence travel in a region, and over which local agencies and system operators have some level of control.

General Observations:

- Larger MPO's reported having models with reasonable sensitivity to more key factors, as well as more plans for model improvements and active development work, than did smaller MPO's.
- Smaller MPO's reported having simpler models, without sensitivity to many key factors. Very few smaller MPO's have models capable of modeling transit.
- For several policies/key factors, most MPO's reported their models had no capacity, untested capacity, or insensitivity to the factor:
 - o Micro-level land use factors (including many of the "Ds")
 - o ITS and traffic management
 - o Intercity transit
 - o Pricing policies, especially those for toll roads and HOT lanes

KEY	Policy Not Applicable in Region	No Capacity to Model Factor	Sensitivity Unknown / Untested	Insensitive to Factor	Reasonably Sensitive to Factor
No Planned Improvement					
Planned Improvement					
Improvement Under Development					

MPO (Listed by Population in Descending Order)	POLICY VARIABLE OR FACTOR																
	MACRO LAND USES		MICRO LEVEL LAND USES (e.g. the "Ds")			ROAD PROJECTS			TRANSIT PROJECTS				PRICING				
	Distribution	Mix	Density	Mix	Pedestrian Environment	Gen'l Purpose	HOV	ITS / Traffic Management	New Lines	Increase Service	Upgrade (e.g. bus > LRT)	Intercity Transit	Tolls/Toll Roads	HOT Lanes	Parking	VMT	Transit Fares
SCAG																	
MTC/ABAG																	
SANDAG																	
SACOG																	
FRESNO COG																	
KERN COG																	
AMBAG																	
SJ COG																	
STAN COG																	
TULARE CAG																	
SBCAG																	
SLO COG																	
MERCED CAG																	
BUTTE CAG																	
SHASTA CO. RTPA																	
KING CAG																	
MADERA CTC																	
TAHOE MPO																	

This information was assembled by SACOG staff, based on information provided by staff at each reporting MPO, and is labeled "Preliminary" for two reasons: 1) some MPO's haven't prepared assessments; 2) assessments of sensitivity to key factors based on individual judgements by MPO staffers, without feedback between the MPO's to normalize the assessments.

Figure 1b.
MPO TRAVEL DEMAND MODEL ASSESSMENT SUMMARY—EXOGENOUS FACTORS (PRELIMINARY)

This chart focuses on variables which are not directly controlled by local agencies and system operators, but which nonetheless significantly influence travel in a region.

General Observations:

- Reports of model capabilities mirror those for travel modeling for policy variables:
 - o Larger MPO's reported having models which capture more factors, and had more planned or ongoing improvements
 - o Smaller MPO's reported having models which capture fewer factors, with fewer planned improvements.
- Accounting for characteristics of vehicle fleets (i.e. what sort of vehicles travelers use, in aggregate) or vehicle type was not reported as being accounted for within any travel model. (Note: fleet characteristics are usually attached to travel predictions from models *post hoc*, for emissions estimation).
- Very few MPO's reported any capacity or known sensitivity to external travel, whether it be trucks or household-based trip purposes.

KEY	Policy Not Applicable In Region	No Capacity to Model Factor	Sensitivity Unknown / Untested	Insensitive to Factor	Reasonably Sensitive to Factor
No Planned Improvement					
Planned Improvement					
Improvement Under Development					

MPO (Listed by Population in Descending Order)	EXOGENOUS FACTORS						
	Gas Prices	Auto Operating Cost	Age	Income	Vehicle Fleet	External Travel—Trucks / Freight	External Travel—Household-Based
SCAG							
MTC/ABAG							
SANDAG							
SACOG							
FRESNO COG							
KERN COG							
AMBAG							
SJ COG							
STAN COG							
TULARE CAG							
SBCAG							
SLO COG							
MERCED CAG							
BUTTE CAG							
SHASTA CO. RTPA							
KING CAG							
MADERA CTC							
TAHOE MPO							

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**Figure 1c.
MPO TRAVEL DEMAND MODEL ASSESSMENT SUMMARY—OTHER FACTORS (PRELIMINARY)**

This chart focuses on variables which were added to the assessment by one or more MPO's in the process of filling out the initial assessment; these policies or factors have NOT yet been presented to all MPO's.

General Observations:

- Two MPO's (SANDAG and SCAG) reported the capacity to model an array of TDM strategies. Among the policies/factors were: carsharing, vanpool/buspool, guaranteed ride home programs, telecommuting, etc.
- One MPO (SCAG) reported the capacity to model an array of goods movement policies, including development of freight corridor, port access and freight facility improvements, truck lanes, and operational improvements focused on goods movement.
- SANDAG reported the capacity to model transit accessibility, including slope of walk to transit.

KEY	Policy Not Applicable In Region	No Capacity to Model Factor	Sensitivity Unknown / Untested	Insensitive to Factor	Reasonably Sensitive to Factor
No Planned Improvement					
Planned Improvement					
Improvement Under Development					

MPO (Listed by Population in Descending Order)	OTHER FACTORS					
	TDM Strategies	Goods Movement (e.g. freight corridors, truck lanes, etc.)	Aviation / Airport Ground Access	Other Demographics (e.g. household composition, etc.)	Transit Accessibility	
SCAG						
MTC/ABAG						
SANDAG						
SACOG						
FRESNO COG						
KERN COG						
AMBAG						
SJ COG						
STAN COG						
TULARE CAG						
SBCAG						
SLO COG						
MERCED CAG						
BUTTE CAG						
SHASTA CO. RTPA						
KING CAG						
MADERA CTC						
TAHOE MPO						

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Figure 2.
MPO LAND USE MODEL ASSESSMENT SUMMARY (PRELIMINARY)

Land use models are used to forecast or project future land use quantities and spatial distributions within a region. The simplest models allocate future growth to areas based on available capacity and forecaster judgement. The most advanced models are based on analysis of economic activities within a region, and include feedback to travel demand models.

General Observations:

- As with travel models, larger MPO's reported having land use models with reasonable sensitivity to key factors, as well as more plans for model improvements than do smaller MPO's.
- Very few MPO's have land use models with known sensitivity or capacity to capture key economic factors like housing affordability, factors which influence land development (e.g. land costs, returns-on-investment, etc.) or basic economic production within the region.
 - o Two larger MPO's (SCAG and SACOG) reported active development of an integrated land use/transport model which is intended to capture many economic factors.
 - o SCAG reported all capabilities as "under development" without an assessment of current capabilities.
- Most regions account for state-sanctioned control totals, such as the DOF population projections, although some reported that regional control totals were locally generated or derived.

KEY	Policy Not Applicable In Region	No Capacity to Model Factor	Sensitivity Unknown / Untested	Insensitive to Factor	Reasonably Sensitive to Factor
No Planned Improvement					
Planned Improvement					
Improvement Under Development					

MPO (Listed by Population in Descending Order)	FACTORS INFLUENCING FUTURE LAND USE							
	LAND USE POLICY			ECONOMIC FACTORS			OTHER	
	Current Zoning / Gen'l Plans	Planned Changes to Z/GP (E.g. SOI)	Other Land Use Policy Changes	Resid. Locatin (e.g. affordability)	Development-Related (e.g. ROI, land cost, etc)	Regional Production	Historic Growth Trends	State-Sanctioned Control Totals
SCAG								
MTC/ABAG								
SANDAG								
SACOG								
FRESNO COG								
KERN COG								
AMBAG								
SJ COG								
STAN COG								
TULARE CAG								
SBCAG								
SLO COG								
MERCED CAG								
BUTTE CAG								
SHASTA CO. RTPA								
KING CAG								
MADERA CTC								
TAHOE MPO								

This information was assembled by SACOG staff, based on information provided by staff at each reporting MPO, and is labeled "Preliminary" for two reasons: 1) some MPO's haven't prepared assessments; 2) assessments of sensitivity to key factors based on individual judgements by MPO staffers, without feedback between the MPO's to normalize the assessments.

Figure 3a.
MPO DATA COLLECTION / MONITORING PROGRAM ASSESSMENT SUMMARY (PRELIMINARY)

Data collection and monitoring programs are intended to gather, organize, and report observed land uses, demographics, characteristics of the transportation system, and utilization of that system in a region. The data are used for evaluating trends and changes over time, updating the base year datasets for forecasting models, and validating the models themselves.

General Observations:

- Most common assessment reported was “inconsistent...”--that is, data are collected but not on a regular schedule or in a consistent way.
 - o Especially true of housing and employment monitoring—only one MPO gave themselves an “adequate” assessment.
- Decennial census and household travel surveys (normally about every 10 years) were the most often reported as “adequate”.
- The American Community Survey (ACS) was reported by several MPO’s as “not monitored” because the complete geography, 5-year rolling average sample datasets have not yet been released.
- HPMS (primary source of geographically-specific VMT data) was reported by many MPO’s as “inconsistent” with no plans for improvement, in large measure because they have little control over key aspects of the program.
- Only two MPO’s reported monitoring of external travel as anything but “not monitored”.
- For transportation supply, monitoring of roadways was generally assessed as adequate; monitoring of transit services and pedestrian or bicycle facilities was often not monitored by smaller MPO’s.

KEY	Data Item Not Relevant to Region	Data Item Relevant, but not Monitored	Current Monitoring Inconsistent—No Plans for Improvement	Current Monitoring Inconsistent—Improvement Planned	Current Monitoring Adequate for Expected Needs
	○	●	●	●	●

MPO (Listed by Population in Descending Order)	DATA COLLECTION / MONITORING PROGRAM ELEMENTS															
	LAND USE				DEMO-GRAPHICS		TRANSPORTATION UTILIZATION						TRANSPORTATION SUPPLY			
	Housing	Employment	Schools	Policy (e.g. Zoning)	Decennial Census	Am. Comm. Survey	HPMS (VMT)	Other VMT	Traffic Counts	Transit Bdgs.	On-Bd. Surveys	Household Travel Surveys	External Travel Surveys	Roadways	Transit Service	Ped/Bike Facilities
SCAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MTC/ABAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SANDAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SACOG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FRESNO COG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
KERN COG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
AMBAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SJ COG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
STAN COG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TULARE CAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SBCAG	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●
SLO COG																
MERCED CAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
BUTTE CAG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SHASTA CO. RTPA	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●
KING CAG	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●
MADERA CTC	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●
TAHOE MPO																

This information was assembled by SACOG staff, based on information provided by staff at each reporting MPO, and is labeled “Preliminary” for two reasons: 1) some MPO’s haven’t prepared assessments; 2) assessments of data collection and monitoring programs based on individual judgements by MPO staffers, without feedback between the MPO’s to normalize the assessments.

Figure 3b.
MPO DATA COLLECTION / MONITORING PROG.—OTHER ITEMS (PRELIMINARY)

The items listed below were identified by one or more MPO's as additional items they monitor, or plan to monitor. Since these were not on the initial assessment form, most MPO's have not evaluated them.

General Observations:

- Two MPO's reported acquiring data from integrated sources, such as Claritas.
- Two MPO's reported acquiring migration/immigration data from various sources.

KEY	Data Item Not Relevant to Region	Data Item Relevant, but not Monitored	Current Monitoring Inconsistent—No Plans for Improvement	Current Monitoring Inconsistent—Improvement Planned	Current Monitoring Adequate for Expected Needs
No Planned Improvement	○	●	●	●	●

MPO (Listed by Population in Descending Order)	OTHER FACTORS									
	DEMOGRAPHICS					SYSTEM UTILIZATION				
	CA Dept. of Finance Estimates	Integrated Data (econdata.net, Claritas)	Migration / Immigration	Fertility / Mortality	Non-Motorized Travel Surveys	Airport Surveys				
SCAG	●	●	●	●	●	●	●			
MTC/ABAG		●								
SANDAG	●		●	●	●	●	●			
SACOG										
FRESNO COG										
KERN COG										
AMBAG										
SJ COG										
STAN COG										
TULARE CAG										
SBCAG										
SLO COG										
MERCED CAG										
BUTTE CAG										
SHASTA CO. RTPA										
KING CAG										
MADERA CTC										
TAHOE MPO										

This information was assembled by SACOG staff, based on information provided by staff at each reporting MPO, and is labeled "Preliminary" for two reasons: 1) some MPO's haven't prepared assessments; 2) assessments of data collection and monitoring programs based on individual judgements by MPO staffers, without feedback between the MPO's to normalize the assessments.

Date: February 24, 2009
To: MPO Contacts for Modeling Assessments
From: Bruce Griesenbeck, SACOG

Subject: MPO Modeling Assessment for March 4 RTAC

A presentation of current MPO data and modeling capabilities is planned for the March 4 Regional Targets Advisory Committee. The presentation is intended to give the RTAC information on the current capabilities of the MPO's to collect data on key factors related to travel demand and land use, and to account for those factors in forecasts of transportation in each region.

This item was discussed at the RTAC Working Group meeting on February 19. The discussion ranged widely, but two themes were stated by two-or-more RTAC members present:

- 1) the desire to have an understanding of the current level of sensitivity of models to key factors influencing travel demand (in the case of travel models) or development patterns (in the case of land use models); and
- 2) the desire to have some assurance that models used by the MPO's were "on a level playing field", and that the forecasts were comparable across regions, at least for the purposes of evaluating SB 375 targets.

The attached form is intended to assemble information from MPO's related to the first issue only (model sensitivity to key factors). The second issue (consistency of modeling methods across MPO's) may be the subject of future RTAC or RTAC Working Group discussions.

In order to assemble the information and allow for your review of the final format and content to be presented to the RTAC on March 4, the assessment for your MPO data and modeling is requested to be returned by Friday, February 27. Understanding the shortness of the requested turn-around of these forms, and the desire to get information to the RTAC in March, please provide whatever assessments you can complete by February 27, and note where additional assessments will be forthcoming after that date. A sample form filled out by SACOG is provided to assist you in filling out the form.

Assessment Instructions

The travel demand modeling page of the form presents a listing of factors generally considered to be very important in predicting and forecasting travel demand. The factors are split into two categories: policy factors, and exogenous or other factors. The policy factors are intended to be factors which are subject to some level of policy control by local agencies or system operators. The exogenous factors are intended to be factors over which local agencies have very limited control, but are still influential in determining travel demand.

The land use modeling page presents a listing of factors generally considered to be important in forecasting or allocating future land use growth within a region.

Blank rows are provided for you to add factors that are not included in the form, but are relevant to your region or your modeling tools.

For each of these two pages, you are requested to use the following assessment scale:

- 1 = Factor not applicable to region
- 2 = No capacity to account for factor in models
- 3 = Model sensitivity to factor unknown or not tested
- 4 = Model insensitive to factor
- 5 = Model reasonably sensitive to factor

Page 3 of the form covers MPO data collection and monitoring programs for land use, demographics and transportation. The format and assessment scale differs from the modeling pages, though. The data and monitoring assessment is intended to document the breadth and scale of current MPO data collection and monitoring programs, and to identify any major concerns with these programs for purposes of SB 375 implementation.

Your effort in completing this assessment and sharing the information with the RTAC is very much appreciated. If you have any questions or comments regarding this, contact me at SACOG (tel: 916-340-6268, email: bgriesenbeck@sacog.org).

MPO DATA/MODELING ASSESSMENT
ASSESSMENT FOR: SACOG

Assessment Requested by CARB Staff, in support of SB 375 RTAC

Assessment Scale:

- 1=Factor not applicable to region
- 2=No capacity to account for factor in models
- 3=Model sensitivity to factor unknown or not tested
- 4=Model insensitive to factor
- 5=Model reasonably sensitive to factor

Travel Demand Model (p. 1 of 3)

Factor Influencing Travel Demand		Assessment of Model	Notes/Comments	Model Development Planned to Improve Sensitivity of Model	
Policy Variables/Capacities	Land Use - Macro-level Land Use Distribution (e.g. TAZ-level land uses)	5	Parcel based travel model (SACSIM)		
	Land Use - Macro-level Land Use Mix (e.g. Mix Across TAZ's)	5	"		
	Land Use - Micro (i.e. below TAZ level) Density	5	Parcel based travel model (SACSIM)		
	Land Use - Micro (i.e. below TAZ level) Mix of Use	5	"		
	Land Use - Micro (i.e. below TAZ level) Design / Pedestrian Environment	5	"		
	Roads/Highways - Adding New Conventional Roadways (Mixed Flow)	5			
	Roads/Highways - Adding New HOV Roadways	5			
	Roads/Highways - Implementing Traffic Operations/Traffic Management Improvements	2	Current networks and assignment are limited	In long term, switch to dynamic traffic assignment	
	Transit Service - New Transit Lines	5		Plan to add more service periods and detail to existing	
	Transit Service - Increasing Transit Frequency	5		Plan to add more service periods and detail to existing	
	Transit Service - Upgrading Services (e.g. Std bus to BRT, etc.)	4	Current mode choice doesn't differentiate sub-modes	Add sub-modes to mode choice model	
	Transit Service - Intercity Rail or Bus	4	Transit mode not available for intercity travel		
	Pricing - Tolling / Congestion Pricing	2	Current model does not include pricing	Plan to augment model and networks to include pricing	
	Pricing - HOT Lanes	2	"	"	
	Pricing - Parking Pricing	3	Model include pricing; no forecast methodology		
	Pricing - VMT Pricing	5	Model sensitive to avg. auto costs--VMT pricing an variant	Plan to move to disaggregate modeling of costs	
	Pricing - Transit Fares	5	Model sensitive to average costs	Plan to move to disaggregate modeling of fares	
	Exogenous Variable	Fuel Prices	5	Model sensitive to average fuel costs	Plan to move to disaggregate modeling of costs
		Auto Operating Costs	5	Model sensitive to average auto operating costs	Plan to move to disaggregate modeling of costs
		Demographics - Age Distribution	3	Model tested, but not "normed" to objective source	Complete testing
Demographics - Household Income / Income Distribution		5			
Vehicle Fleet - Characteristics of Vehicles (e.g. mileage, type of fuel)		2	Auto ownership doesn't include vehicle type	Plan to move to veh type choice + dissag. Treatment of costs	
External Travel - Commercial Vehicles and Trucks (IX, XI, XX Trips)		3	XX=fixed table; IX,XI partially modeled (fixed gateway)	Forecasts difficult--Statewide model?	
External Travel - Household Generated (IX, XI, XX Trips)		3	"	"	

MPO DATA/MODELING ASSESSMENT

ASSESSMENT FOR: SACOG

Assessment Requested by CARB Staff, in support of SB 375 RTAC

Assessment Scale:

- 1=Factor not applicable to region
- 2=No capacity to account for factor in models
- 3=Model sensitivity to factor unknown or not tested
- 4=Model insensitive to factor
- 5=Model reasonably sensitive to factor

Land Use Model (p. 2 of 3)

Factor Influencing Land Uses and Future Growth Forecasts	Assessment of Model	Notes/Comments	Model Development Planned to Improve Sensitivity of Model
Land Use Policy - Current Zoning or General Plans	5	iPlace3s includes current zoning/GP designations	
Land Use Policy - Formal Studies for Changes to Zoning or General Plans (e.g. SOI's)	5	Future changes to policy from local agencies	
Land Use Policy - Other Expected Changes to Zoning or General Plans	5	Future changes to policy from local agencies	PECAS integrated model
Economic Factors - Residential Location (Housing Affordability, etc.)	3	Travel model "freezes" residence, workplace choice modeled	PECAS integrated model
Economic Factors - Development-Related (Land Costs, Returns-on-Investment, etc.)	3	iPlace3s include ROI in scenario analysis	"
Economic Factors - Regional Production (Labor Markets, Commodity Flows, etc.)	2	Flows all from travel model; no dynamic spatial allocation	"
Other Factors - Historic Growth Trends in the Region	5	Forecasts take account of growth trends	
Other Factors - State-Sanctioned Control Totals (e.g. DOF population allocations)	5	Forecasts use DOF population control totals at region level	

MPO DATA/MODELING ASSESSMENT

ASSESSMENT FOR: SACOG

Assessment Requested by CARB Staff, in support of SB 375 RTAC

Assessment Scale:

- 1=Data item not relevant to transportation in the region
- 2=Data item relevant to transportation, but not monitored
- 3=Current monitoring program inconsistent; no improvements planned
- 4=Current monitoring program inconsistent; improvements planned
- 5=Monitoring program adequate for expected needs

Data Collection and Monitoring Programs (p.3 of 3)

Subject of Monitoring/Data Collection		Assessment of Program	Brief Description of Current Program	Concerns Related to Monitoring Programs for SB 375 (if any)
Land Use	Housing and Residential Development	4	3-5 year updates of inventory and base year	2 year cycle needed?
	Employment and Non-Residential Development	4	"	"
	Schools	5	"	"
	Current Policies and Plans (e.g. Zoning, General Plans, etc.)	4	"	"
Demographics	Decennial Census	5	Assemble, disseminate dec. census data	
	American Community Survey	4	Monitoring ACS releases; not used yet	
Transportation	Utilization - HPMS for Vehicle Miles Traveled	3	HPMS implementation is spotty	Sampling and counting not robust enough for stable VMT estimates
	Utilization - Other Vehicle Miles Traveled Data (e.g. DMV/BAR odometer)	2	Not currently assembled for use by MPO's	Potential legislative or administrative hurdles
	Utilization - Traffic Counts	4	3-5 year updates of count database	More counts needed, especially classification (e.g. truck) counts
	Utilization - Transit Boardings	4	3-5 year updates of boardings database	
	Utilization - On-Board Transit Surveys	4	Approx. 5-7 year updates	5 year cycle
	Utilization - Household Travel Surveys	5	Taken in concert w/ dec. census	Funding for 2010 survey; longitudinal panel would be beneficial
	Utilization - External Travel Surveys (e.g. video license plate or intercept surveys)	2	Currently counts only	Not done for many years, will be an issue
	System Supply - Roadways	4	GIS road centerline file	Inconsistent reports through State HSE program and HPMS
	System Supply - Transit Services (Routes, Service Types, Frequencies)	4	GIS lines; schedules used for service freq., fares	
System Supply - Pedestrian / Bike Facilities	3	Street pattern only	Sidewalk coverage and major facility data needed--expense	

Excerpts from

**Addendum to the 2007 Regional Transportation Plan Guidelines
Addressing Climate Change and Greenhouse Gas Emissions
During the RTP Process**

Adopted by the California Transportation Commission
on May 29, 2008

TRANSPORTATION MODELING

The goal of applying transportation models and analytical techniques, as part of the RTP process, is to enhance the quality of information and analysis presented to educate public decision makers and the public at large regarding the implications of various policy options, while recognizing that the final decisions on policy choices are their responsibility.

1. For preparation of the RTP required under Sections 65080 et seq. of the Government Code, by July 1, 2008, each MPO or RTPA over 200,000 in population is urged to establish transportation modeling and analytical techniques that facilitate its evaluation of one or more alternative planning scenarios under the provisions of Section 65080.3.

2. As part of the four-year RTP process each MPO or RTPA should strive to enhance, to the extent that data and resources permit, its modeling and analytical techniques in order to improve its assessment of the likely implications of key policy options. Such improvements should educate decision-makers and the public regarding how such options would potentially affect trip making, choice of travel modes, VMT, major land use development decisions, and quality of life issues.

3. The transport sector produces almost half of GHG in California. To evaluate the effectiveness of policies to reduce GHG, the ARB and others need to compare modeling outputs across all regions in the State. To be able to compare travel projections across regions in California, some basic recommended modeling protocols should be adopted. These should be specific to groups of regions, according to policy problems encountered. California Department of Transportation (Caltrans) District Offices should follow the same practices as used by the MPOs, RTPAs, Congestion Management Agencies (CMA) and Councils of Government (COG). MPOs, RTPAs, CMAs, and COGs may be grouped according to modeling needs. For each group, we define: Model features and data, possible applications of the model, and policy analysis capabilities. These recommendations are cumulative, with each set of model guidelines including the earlier ones on the list.

A. Counties with very slow growth in population and jobs, little or no congestion, and no significant new road or transit construction plans (i.e., Modoc, Inyo, Siskiyou, which have 1990-2000 population growth rates below 3%)

Features and data: These counties do not need to run a network travel model.

Possible applications of the model: No model.

Policy analysis capabilities: Road congestion is not increasing rapidly. Emission changes from higher-MPG vehicles can be factored or derived from the ARB inventory.

B. Regions with attainment Air Quality (AQ), slow growth, or virtually no transit, plus the rural, isolated non-attainment areas.

Features and data: These RTPAs and CMAs can run 3-step models, at least for the next few years. These models should be run to equilibrium. They should implement 4-Ds add-on models, to account for the effects of land use characteristics on travel, in the short term. See the recent *Assessment of Local Models and Tools For Analyzing Smart-Growth Strategies* Final Report developed by DKS Associates for Caltrans, which can be found at:

[http://www.dot.ca.gov/hq/research/researchreports/reports/2007/local model tools.pdf](http://www.dot.ca.gov/hq/research/researchreports/reports/2007/local%20model%20tools.pdf)

The travel model should be documented, including all statistical goodness-of-fit measures derived from sub-model specification. The model should also be put through sensitivity tests and other validation tests, with these tests documented, and then formally peer-reviewed, also resulting in a written report. The models should address changes in regional demographic patterns. Geographic Information Systems (GIS) capabilities should be developed in these counties, leading to simple land use models in a few years. All natural resources data should be entered into the GIS. Parcel data should be developed within a few years and an existing land use data layer created.

Possible applications of the model: Agencies can define and evaluate trend forecast, combined general plans, preferred RTP, and low-VMT scenarios. The low-VMT scenario should achieve the regional VMT and GHG targets, if they are adopted by the ARB. Otherwise, the low-VMT scenario can simply reduce VMT substantially and increasingly over time, compared to the proposed RTP.

Policy analysis capabilities: These models can be used to evaluate increased density and mix, urban growth limits, and improved neighborhood walkability and bikeability. Performance measures can include on-road emissions of pollutants and GHG.

C. Regions with rapid growth, nonattainment AQ, or the potential for significant transit use.

Features and data: These regions should develop 4-step travel models as soon as is possible. In the near-term, 4-Ds add-on models should be used. Simple land use models should be used, such as GIS rule-based ones, in the short term. Economic, market-based land use models should be developed within a few years. A simple freight model should be used. Several employment types should be used, along with several trip purposes. Time periods should include peak and off-peak. The travel model set should be run to full equilibration across all model steps. All road capacities and speeds should be validated with surveys. The urban development footprint in GIS should be used to calculate environmental impacts on terrestrial and aquatic ecosystems. The travel model and land use model should be documented and tested, as above. Parcel data and an existing urban layer should be developed as soon as is possible. A digital general plan layer also needs to be developed in the short-term.

Possible applications of the model: More policy scenarios can be run. The same policies as in *B* could be run, plus one or more transit improvement proposals, as well as demand management and pricing strategies.

Policy analysis capabilities: In addition to the policies and performance measures in *B*, these agencies can evaluate policies for their effects on lower-income households, as required by Federal and State law. This can be done by evaluating traveler welfare measures based on the mode choice log sums for each household income class, or based on travel costs for them. In addition, these agencies can evaluate simple road pricing, parking charges, and higher fuel taxes or carbon taxes in the plan, or in the Government Code Section 65080.3 alternative.

D. Regions with serious or worse ozone or CO non-attainment.

Features and data: These agencies should achieve the requirements of the Federal AQ Conformity Rule, meaning 4-step models with full feedback across travel model steps and some sort of land use modeling. In addition to the conformity requirements, they should also add an auto ownership step and make this step and the mode choice equations for transit and walk and bike and the trip generation step sensitive to land use variables. Walk and bike modes should be explicitly represented. They should implement simple land use models for the next RTP and develop formal, economic land use models in the next few years. Freight models should be implemented in the short term and commodity flows models within a few years. Simple Environmental Justice analyses should be done using travel costs or mode choice log sums, as in *C*. Four or five time periods should be modeled. Agencies should develop and test joint mode-destination choice models. Small Traffic Analysis Zones (TAZ) should be used, to increase sensitivity to densification near to rail stations and in Bus Rapid Transit (BRT) corridors. These regions should monitor the large RTPAs and MPOs, in *E* below, as they develop tour-based travel models and activity-based travel models. The next household travel survey should include activities and tours. Floor space rent data should be collected. Parking quantity and cost should be represented in the travel model. The carpool mode should be included, along with access-to-transit sub modes. Speed post-processing should be used and take into account the effects of corridor capacity continuity and bottlenecks on congested speeds and emissions.

Possible applications of the model: Five-step models permit the agencies to design and evaluate more land use policies, such as in *D*, plus complex combinations of transit, land use, and pricing policies.

Policy analysis capabilities: A full range in performance and impact measures could be developed, for economic, environmental, and equity effects, as required by SAFETEA-LU, National Environmental Policy Act, CEQA, and other laws. Traveler welfare could be measured and, if possible, locator welfare. Various measures of economic development could also be created, such as wages, jobs, production, and exports.

E. The largest four MPOs and other COGs and RTPAs with rapid growth and established transit systems.

Features and data: These regions should develop tour-based travel models in the short term and activity-based travel models within a few years. They should also build formal microeconomic land use models, as soon as is practical, so that they can be used to

evaluate economic welfare (utility) and economic development (wages, jobs, exports). Commodity flows models should be developed, with truck and van tours, in a few years. The next household travel survey should include activities and tours. Geocoded employment data with occupational code should be purchased for two or more past years. Floor space quantity and rent data should be gathered. Freight data also should be collected. Full sample enumeration of households in the travel model and land use model should be studied and implemented in a few years, if feasible. Households should be geocoded to location. Stated preference surveys of households and firms should be performed, as necessary, for use in location choice models. Microsimulation of households and firms should be investigated and developed, if feasible.

Possible applications of the model: The effects of transportation policies and land use policies interact with feedbacks in an integrated model set and so projections will be more accurate. With a market-based land use model, the agency can evaluate land-pricing policies, such as infill subsidies.

Policy analysis capabilities: Economic measures from the land use model could be implemented. These measures are more complete than those from the travel model and include locator welfare, wages, and exports. Equity analysis could include change in welfare by household income class. Water quality, housing affordability, and fire hazard analysis are examples of the measures that such model sets can also produce. These microsimulation land use models can evaluate the energy use and GHGs produced by households and workers in building space. Economic development impacts may be comprehensively evaluated with this model set. Time-of-day road tolls can be evaluated.

The following recommendations for quality control through model consistency and peer review are essential in creating confidence in modeling results. These process recommendations should be implemented by all agencies as soon as is possible.

Consistency of RTP Modeling

For modeling groups *C*, *D*, and *E*, the No Action alternative and the Proposed Plan alternative in an RTP should be modeled consistently. This means both should be done using the same land use model and the same travel model. The inputs for the models, including alternative land use policies; will be different, of course. This practice will reduce the arbitrariness of zonal projections for households and employment in travel models. This practice also should apply to Environmental Impact Reports (EIR)/Environmental Impact Statements (EIS) studies. The same land use model used in the RTP modeling should be used in the impact assessment for the No Action alternative, the Proposed Plan alternative, and the Environmentally Preferable Alternative. Only in this way, will all of the outputs in the RTP and EIR be comparable. An alternative-planning scenario under Government Code Section 65080.3 should also be evaluated with the same models. County and corridor studies performed by Caltrans districts and by county agencies may use more-detailed networks and zones than the MPO uses, but the models should be otherwise consistent, structurally and in operation, with the MPO model.

Peer Review and Model Testing

All travel and land use models should be fully documented, with the documents on the web. They should also be validated and tested for sensitivity to changes in inputs, parameter values, and policies. Agencies should have an on-going model improvement program to increase model accuracy and policy sensitivity. All substantial model

changes should be subjected to peer review and written up. The four largest MPOs should use the Travel Model Improvement Program (TMIP) national peer review process, but include two California modelers, for their understanding of California laws. Other agencies should set up reviews using California modelers. The California Inter-Agency (CIA) Forum or other body of California modelers may develop validation guidelines. Also, these bodies could develop guidelines for which types of VMT should be reduced in GHG-reduction scenarios and alternatives.

GUIDING PRINCIPLES DISCUSSION

Potential Guiding Principles

(Suggested at February 3, 2009 RTAC Meeting)

- Minimize administrative burden in program implementation or tracking;
- Encourage sub-regional cooperation rather than competition;
- Avoid conflicting statutory requirements, if any;
- Maximize integrated system-approach allowable under the law;
- Maximize co-benefits of air quality and economic growth;
- Maximize transparency and clarity to gain public support;
- Use cost-effective metrics