

## ***Global Climate Change & Policy Responses: Impacts of AB32/SB375 on Regional Planning Framework and Process in California***

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## ***Background: Global Climate Change & Policy Responses***

- World Urbanization Prospects (UNPD, 2009)  
48.6% of world total population in 2005 (6.5 billion) concentrated on urban areas, and 69.6% of world population in 2050 (9.2 billion)
- Urban and Regional Development
  - City is Brain in World Economy (Sassen, 2006)
  - Borderless Coalition - C40 Conference
  - Clinton Climate Initiative
  - UN 5th International Urban Research Symposium
  - United Nations Environment Program
  - United Nations Climate Change Conference (Climate Change: Global Risks, Challenges and Decisions) in December 2009, Copenhagen / Carbon Emission

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## ***Background: Global Climate Change & Policy Responses***

- The Clinton Administration of the United States once adopted the 1993 Climate Change Action Plan, which intended to bring GHG emissions to 1990 levels by the year 2000.
- Environmental Policy in the U.S. relies more on public information disclosure, more flexible and cooperative approaches to regulation, and further decentralization of power to the states (Davies and Mazurek, 1998; Dietz and Stern, 2003; Durant, Fiorino, and O’Leary, 2004)....

New Public Management / Governance / Sustainability

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## ***Background: Global Climate Change & Policy Responses***

- AB 32 (2006): reduce GHG emissions to 1990 levels by the year 2020.
- SB 375 (2008): Regional Transportation Plan (RTP) & Sustainable Communities Strategy (SCS). A land use element in SCS includes general location of land uses, residential densities, and building intensities as a land use element of the RTP.

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## ***SB 375 Timeline***

- 1/31/09: ARB appointed the Regional Targets Advisory Committee (RTAC) for setting regional GHG reduction targets.
- 9/30/09: The RTAC must provide its recommendations to ARB.
- 6/30/09: ARB must provide draft GHG reduction targets to each region for review.
- 9/30/10: ARB must issue final regional reduction targets.
- 10/1/10: MPOs must begin preparation of sustainable communities strategies (SCSs) reflecting the GHG reduction targets.

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## ***Purpose***

- The paper overviews the recent policy efforts of California in addressing the climate change. The paper particularly discusses the impacts of AB32/SB375 on regional planning framework and process (e.g., RTP, Blueprint, RHNA) and urban development (e.g., CEQA)

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### ***California Model: (1) Integration of Federal and State Mandated Planning Processes***

- Integration of Planning Efforts for Regional Land Use and Transportation: Traditional Approach vs. Regional Approach (two-directional interaction)
  - (1) Regional Transportation Plan (RTP) and Regional Transportation Improvement Programs (RTIP): 3C (continuing, comprehensive, cooperative) Planning Process, ISTEA of 1991 (1965)
  - (2) California Environmental Quality Act (CEQA) (1970)
  - (3) Regional Housing Needs Allocation (RHNA): Fair Share Planning (1972)
  - (4) Regional Blueprint Planning Program (2002)

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### ***California Model: (2) Financial and Regulatory Incentives***

- Incentives for the implementation of SCS
  - (1) Financial: Federal Transportation Funding Consistency with SCS, Financial Incentives for Local Resource Areas, Farmland, Countywide Growth Policies for GHG Emission Reductions
  - (2) Regulatory: CEQA Exemption or Streamlined Process for Transit Priority Projects

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### ***California Model: (3) Enhancement & Standardization of Modeling Practices***

1. Trip-Based Regional Transportation Demand Model
  - (1) Four major model components: Trip Generation - how often do people travel; Trip Distribution - where do people travel to work, school, for activities; Mode Choice - how many people drive alone, share a ride, or take transit; Network Assignment - what routes do people use experience
  - (2) Performance Measures: vehicle miles and vehicle hour travelled (VMT and VHT), speeds and delay, and other performance measures
  - (3) Unit of Analysis: Census Block Group (10,569). 9

### ***California Model: (3) Enhancement & Standardization of Modeling Practices***

2. PECAS (Production, Exchange, Consumption, Allocation System) Land Use Model:
  - (1) Allocates economic activity over a geographic space such that land uses associated with economic activity can be assessed from changes in transportation investment and policies.
  - (2) The effects of transportation and land use policy changes will be assessed through interactions and feedbacks in an integrated transportation model and land use model system.

### ***California Model: (3) Enhancement & Standardization of Modeling Practices***

#### 3. Activity-based Travel Demand Model:

- (1) Activity-based travel demand model is based on the concept that travel is a derived demand for activity participation.
- (2) This approach predicts passenger trip travel demand based on assumptions of travel behavior and, unlike the trip-based model, takes trip chaining (e.g. home to work to day care to home) into consideration.

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### ***California Model: (3) Enhancement & Standardization of Modeling Practices***

#### 4. Local Sustainability Tool:

- (1) Helps local planners visualize their process as related to various land use strategies, and see the effects of certain policy choices “on the ground”;
- (2) Displays instant results estimating directional and order-of-magnitude VMT and emission reductions as result of community design, and other land use decisions made by stakeholders
- (3) Be scalable to various geographic levels.

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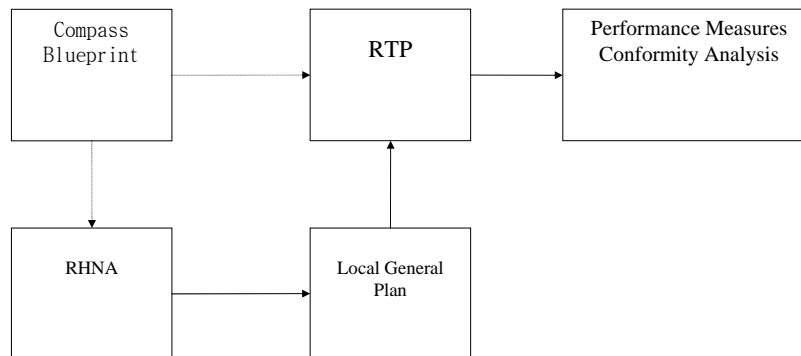
## ***California Model: (3) Enhancement & Standardization of Modeling Practices***

### 5. REMI Model

- (1) Is used to conduct an economic impact analysis for the 2012 RTP and its major policy components. For the 2012 RTP and SCS,
- (2) The economic impact analysis/report will focus on Region-wide employment, income, economic output, productivity impacts, and local government finance from impacts of major policy components, including land use, transportation investment, TDMs/TSMs, pricing, and others.

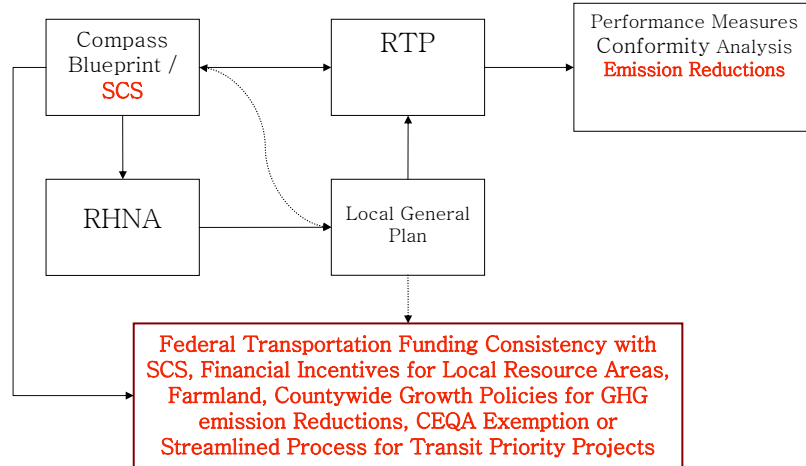
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## ***Relationship of Major Plans and Programs: Before SB375***



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## ***Relationship of Major Plans and Programs: After SB375***



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## ***California Model: (4) Regional Planning Approach***

- (1) California Air Resources Board (CARB) sets regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles, for 2020 and 2035.
- (2) 18 MPOs in California develop SCS/APS for reducing the regional GHG emissions target.
- (3) Local jurisdictions and CTCs are involved in development activities through the financial and regulatory incentives.

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## ***California Model: (5) Local General Plan is Still a Key Development Guide***

- (1) Federal law requires MPOs to use “current planning assumptions” (based on the local general plan) for the conformity analysis.
- (2) A land use element of sustainable communities strategy (SCS) would be consistent with the local general plan (best case scenario). If SCS can not achieve the regional emission target, Alternative Planning Strategy (APS) will be prepared. “smart growth principles” might be embedded in the local general plan update process to achieve the GHG emission target.
- (3) Neither a SCS nor a APS regulates the use of land. The bottom up process becomes very important.

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## ***Conclusion***

- AB32/SB 375 has a significant impact on the current regional planning and local development process. Impacts are categorized into three major aspects of the regional and local planning and development frameworks.
  - (1) Integration of Federal and State Mandated Planning Processes
  - (2) Financial and Regulatory Incentives
  - (3) Enhancement & Standardization of Modeling Practices.

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## ***Conclusion***

- AB32/SB 375 does not have a significant impact on the current regional planning and local development process in the following two aspects of the regional and local planning and development frameworks.
  - (1) SB 375 relies on the existing regional planning and governance framework/approach
  - (2) Local General Plan is still a key development guide

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## ***Thank You***

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