California’s transportation system accounts for more than 40 percent of the state’s greenhouse gas (GHG) emissions, with about 75 percent of these emissions coming from passenger vehicles. The Sustainable Communities and Climate Protection Act of 2008, Senate Bill 375 (SB 375), is designed to help California reach the greenhouse gas (GHG) emissions reductions targets set by Assembly Bill 32 (AB 32) by creating incentives for smarter and resource-efficient land use and transportation planning and implementation. SB 375 calls for the California Air Resources Board (ARB) to set GHG targets for 2020 and 2035 for each of the areas covered by the largest 18 Metropolitan Planning Organizations (MPOs) within California,
and for each MPO to create a “Sustainable Communities Strategy” (SCS) that specifies how the region plans to meet its targets.

From January to March 2014, the UC Davis Policy Institute for Energy, Environment and the Economy and the National Center for Sustainable Transportation hosted a policy forum series— bringing together researchers, policymakers, and stakeholders to explore the latest research and real-world applications of SB 375. Each forum session featured presentations by recognized experts in the field followed by a panel discussion with the audience. Sixteen presenters from state agencies, universities, and non-governmental organizations shared their experiences with the evidence, effects, modeling, evaluation, and implementation of SB 375 and related policies. The four forum sessions were:

Session 1 – Sustainable Communities 101 (Jan. 22, 2014)
Session 2 – Evaluating Effects and Evidence (Feb. 5, 2014)
Session 3 – Improving the Models (March 5, 2014)
Session 4 – Increasing Implementation Follow-through (March 19, 2014)

Key findings from the Sustainable Communities Policy Forum Series included the following:

**Session 1 – Sustainable Communities 101**

- Regional emissions reduction targets set by ARB for regions represented by the 18 MPOs range from 5 to 8 percent by 2020 and 10 to 16 percent by 2035.
- California is investing in sustainable communities by directing funding toward modeling efforts, interagency coordination, and sustainable development to achieve greenhouse reduction targets. In addition to reducing GHGs, sustainable community planning and development has the potential to improve public health, preserve land, conserve resources, and create fiscal savings for local jurisdictions.
- Planning for sustainable communities with multiple transportation options, ample open space, high levels of accessibility, and active urban centers will be central to California’s long-term environmental goals. It will require collaboration between local, regional, and state agencies to develop policies and strategies to achieve sustainable community development statewide.
- Increasing numbers of local jurisdictions have adopted or plan to adopt regional measures called for by the SCSs. The Metropolitan Transportation Commission’s *Plan Bay Area* contains provisions to integrate land use, transportation, and housing; forecast areas of future growth; and encourage focused growth in targeted areas.
- According to analysis prepared by Calthorpe Associates on behalf of the Governor’s Office of Planning and Research, adopting smart growth policies provides the potential to save billions of dollars in health costs and tens of billions in infrastructure costs. Smart growth policies can potentially reduce new land consumed by development by two-thirds.
Session 2 – Evaluating Effects and Evidence

- Research is needed to assess the effectiveness of different strategies that attempt to reduce vehicle miles traveled (VMT) and GHG emissions. Much of the existing research features cross-sectional studies of the impact of land use characteristics on VMT. More before-and-after data collection and analysis is needed to produce empirical evidence of the effects of adopted policies.
- Researchers from the USC Price School of Public Policy and the Institute of Transportation Studies at UC Davis evaluated results from studies estimating the VMT reduction potential for land use, transit, pricing, behavioral, and other policies based on disaggregated data from hundreds of research articles. The policy briefs developed from this review can be used to provide some quantitative guidance on the implications of individual and combined strategies to reduce VMT.
- The UC Irvine School of Social Ecology, in conjunction with the USC Price School of Public Policy, conducted a before-and-after study from Sept. 2011 to Dec. 2013 of a new rail transit implementation in Culver City. Their research found a reduction in VMT of about 10 miles per day out of the average 32 miles per day for residents in core areas served by new transit stations.
- Evaluation of the effects of new policies should be tailored to each region and formulated to establish causal relationships. Policy effectiveness may vary with context.

Session 3 – Improving the Models

- By forecasting household travel choices, taking into account the transportation system, land use patterns and demographics, travel demand models can be used to test the impact of transportation investments and proposed policies. Models have become more capable of assessing specific strategies.
- Models are capable of estimating the VMT and GHG effects of the implementation of land use policies, pricing policies, and transit and highway capacity enhancements included in the SCSs. Models capture drivers’ savings in travel time and travel costs resulting from policies and/or capacity enhancement projects. However, these costs and benefits do not encompass the full benefits of the policies and projects, which include changes in travel time and costs for walking and biking, housing prices and choice, and economic productivity.
- The largest four MPOs in California are developing complex economic land use-transportation models to forecast travel demand while accounting for interactions between transportation investments, land use patterns and economic efficiency — including analysis of the costs and benefits of SCS plans.
- The Southern California Association of Governments (SCAG) SCS demonstrates how the Southern California region is planning for regional growth and transportation investments to meet its GHG emissions reductions targets of 8 percent by 2020 and 16 percent by 2035. The modeled benefits of the SCAG SCS include a return on investment of $2.90
per $1 spent, twice as many households living next to transit, reduced congestion, land conversion and air pollution, and increased safety.

- The integration of transportation and land use planning to enhance community sustainability requires up-front costs but produces long-term benefits. Such costs are only a fraction of the total cost of roadway construction projects and can often be more than offset by avoiding just one roadway project.

- If the development and application of land use and transportation models include the best available theory and data available, they provide reasonable estimates of plausible change due to SB 375 and SCS implementation. The modeled benefits of smart growth appear to be significant.

Session 4 – Increasing Implementation Follow-through

- Implementation of SB 375 has already begun with the development of SCSs by many MPOs in California. The extent to which local land use plans and policy decisions support implementation of these regional SCSs will determine SB375’s success in reducing GHG emissions through land use and transportation planning. Local implementation involves focusing on land use policy, pre-development actions, and infrastructure investments.

- The Strategic Growth Council (SGC) provides coordination between agencies and funding support for sustainable communities planning. A total of $200 million in cap-and-trade revenue—$100 million annually over two years—is available to the SGC to create a Sustainable Communities Implementation Program that will support local efforts to promote infill development, among other objectives.

- General Plans provide an opportunity for cities and counties to institutionalize the goals of SB 375. Most General Plans would benefit from a greater focus on sustainable community planning principles such as mixed-use development, and infrastructure for walking, biking and transit.

- Regions can support local adoption of policies related to SB 375 through innovative use of available funding as incentives, geographically targeted investments, and support for implementation. Many MPOs have already adopted programs encouraging the communities within their regions to initiate smart growth programs.

- To complement initiatives that provide incentives to infill development, measures are needed to ensure that public reviews of proposed greenfield developments consider the true costs of providing, operating, and maintaining new infrastructure.
Suggested Further Reading


About the Co-Sponsors of the Sustainable Communities Policy Forum Series:

The UC Davis Policy Institute for Energy, Environment and the Economy is a bold new initiative that leverages world-class university expertise to address pressing societal challenges. The Policy Institute delivers credible, relevant, and timely information and analysis to decision-makers to inform better energy and environmental policy.

The National Center for Sustainable Transportation aims to help federal, state, regional, and local agencies reduce the greenhouse-gas emissions from passenger and freight travel that contribute to climate change through research in four thematic areas: zero-emission vehicle and fuel technologies; low-carbon infrastructure and efficient system operation; low-impact travel and sustainable land use; and institutional change.