

## REGIONAL LOW-CARBON STRATEGIES IMPACT LAND USE PLANNING

### 1. California as a Consumer

Today one in eight Americans, or more than 37 million people, lives in this Golden State. California has doubled its population since 1965, a growth rate faster than any other developed region. If California were a nation, its population would rank 33rd in the world. Population projections indicate that the state will add another 7 million people in the next dozen years, moving toward 60 million residents by 2050. The challenge California faces is continuing to provide a quality environment and reliable energy services to support our world-class economy.

### 2. California's Greenhouse Gas Emissions

California's greenhouse gas emissions are huge and growing. In 2004, California produced almost 500 million metric tons of carbon dioxide (MMTCO<sub>2</sub>) – a greenhouse gas emission equivalent – making the state the second largest emitter of greenhouse gas emissions in the United States after Texas and about twelfth in the world. Eighty-nine percent of California's greenhouse gases are from CO<sub>2</sub> and the remaining gases include methane, nitrous oxide, and other man-made gases. The transportation sector is the largest contributor to California's greenhouse gas emissions, producing more than 38 percent of the state's total emissions in 2004 (Figure 1). Electricity generation is the second largest source.

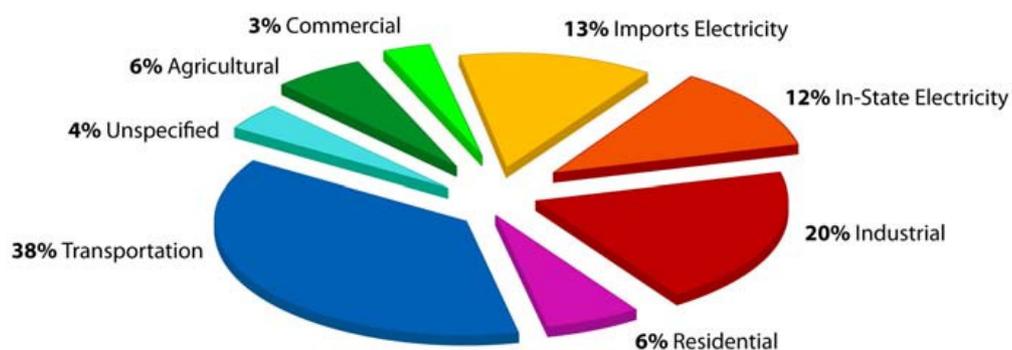


Figure 1: Greenhouse Gas Emissions in California  
California Air Resources Board,  
Greenhouse Gas Emissions Inventory, November 2007

### 3. California's Transportation

***Transportation is responsible for 38 percent of the state's greenhouse gas emissions. Reducing these emissions will require more efficient vehicles, lower carbon fuels, and fewer miles of automobile use.***

Perhaps no other population in the world has embraced the automobile as passionately as California. The autonomy and freedom that comes with this lifestyle also brings with it a high price - the price that is paid by the environment and the consumer.

Vehicles are the major contributor to global warming pollution where more than 38 percent of CO<sub>2</sub> and other greenhouse gases in California come from burning transportation fuels – light trucks and cars.

Decreasing California’s reliance on petroleum fuels is critical. By 2020, at current trends, more than 44 million Californians will consume more than 24 billion gallons of gasoline and diesel fuel each year. The consequences of this business-as-usual scenario are more dependency on foreign energy supplies, and decreased environmental and public health quality.

More than 40 percent of all energy used in the state moves people and goods, and most transportation fuel demand is met by petroleum. The state’s nearly 26 million registered vehicles consume about 380 million barrels of gasoline (16 billion gallons) and almost 100 million barrels of diesel (4 billion gallons) each year. California is the third largest consumer of gasoline in the world, behind the entire United States and China.

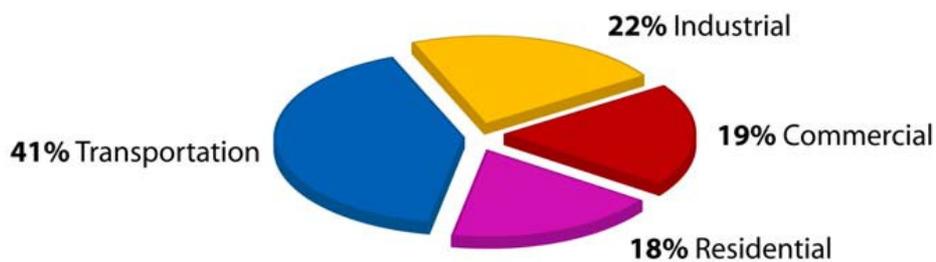


Figure 2: California’s Energy Use by Sector  
*California Energy Commission 2006*

California’s overall energy consumption continues to be dominated by transportation. More than 40 percent of all energy consumed in the state is used to move people and goods – and almost all of this transportation energy is derived from petroleum.

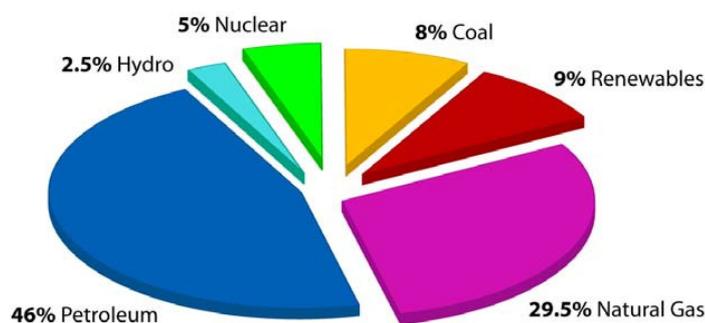


Figure 3: California’s Energy Sources  
*California Energy Commission 2006*

#### 4. California's Climate Change Crisis

California is one of the 10 largest economies in the world and the 12<sup>th</sup> largest producer of greenhouse gases (GHGs) such as carbon dioxide, methane and nitrous oxide, which are byproducts of industry, agriculture and motor vehicle use.

If GHG emissions are not cut, global warming is expected to raise temperatures between 8 and 10.4 degrees in California and diminish the Sierra snowpack — a major source of drinking water — by 90 percent in the next century. Warming could also raise the sea level between 4 and 33 inches, causing coastal erosion and sending salt water surging into Sacramento Delta water supplies. Such effects could harm the state economically by threatening agricultural production, increasing the risk of forest fires and increasing utility costs for cooling. Climate warming could also cause large numbers of heat-related deaths, increase the incidence of some diseases and lead to a higher number of bad ozone days.

#### 5. Formation of Climate Change Policies

***“The debate is over.  
We know the science.  
We see the threat.  
And we know that the  
time for action is now.”***

Governor Arnold Schwarzenegger

With a current population exceeding 37 million and projected to grow to more than 44 million by 2020, California's already over-burdened infrastructure is bound to be strained further to meet the state's increasing demand for energy. Most of the population growth is occurring in the hotter interior areas of the state (Figure 4), while the limited mass transit options, particularly in the inland areas, and the historic tendency toward suburban sprawl, cause residents to rely more heavily on their cars, increasing individual vehicle miles traveled and energy demand.

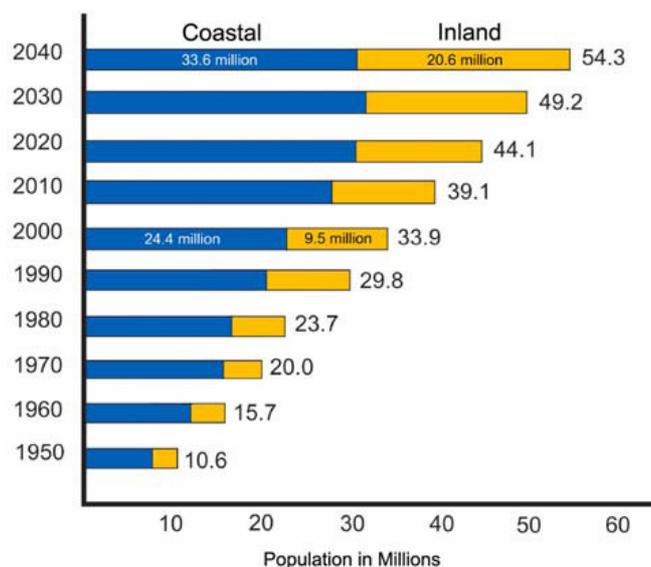


Figure 4: Inland Population Increase in California  
California Department of Finance, Demographic Research Unit projections  
and Public Policy Institute of California

California's vibrant economy is heavily and undeniably dependent on reliable and affordable supplies of energy. Yet, fossil-based energy produces greenhouse gases that contribute significantly to climate change.

***California's challenge is to maintain its growth and vitality while decreasing its greenhouse gas emissions.***

### ***5.1. Passage of California Assembly Bill 32***

***"The big question is this: How can California continue to grow and at the same time maintain the quality of life to which we are accustomed? While that question is usually at the heart of California's thorniest policy debates, this year there's a new wrinkle to the conversation because of landmark environmental legislation passed in 2006. AB 32"*** Darrell Steinberg, *Western City Magazine*, July 28, 2009

In keeping with California's history of trend-setting legislation, California Governor Arnold Schwarzenegger and the State Legislature passed the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Núñez, Chapter 488, Statutes of 2006), capping California's greenhouse gas emissions at the 1990 level by 2020. Achieving that goal requires a 29 percent cut in emissions below projected 2020 levels.

The Governor's long-term target is far more ambitious and requires reducing emissions to 80 percent below 1990 levels by 2050. This is the level of worldwide reduction believed by many climate scientists as necessary to limit global temperature gains this century to 2 to 3 degrees Celsius. The legislation marks a significant change in California's energy policies. Before its passage, energy policy makers focused on minimizing and stabilizing energy costs, ensuring supply, limiting dependence on imports and fossil fuels, protecting the environment, and benefiting the state's economy. With AB 32, California's energy policy goals must now also include reducing the state's greenhouse gas footprint.

With this bill Governor Arnold Schwarzenegger declared the debate on climate change over and directed a "Climate Action Team" made up of representatives from various state agencies to devise a plan to cut the state's greenhouse gas (GHG) emissions to following goals: meet 2000 levels by 2010, 1990 levels by 2020 and 80 percent below 1990 levels by 2050.

The California Energy Commission's (CEC) notes the arguments where some believe that a single dimensional approach focusing on price, such as a carbon tax or a cap-and-trade program, would be the simplest approach for California to meet its AB 32 greenhouse emission goals. Others argue that the state's existing programs for energy efficiency and demand-side management, along with the Renewables Portfolio Standard, should be expanded as these programs will provide the earliest and most reliable emission reductions.

The Energy Commission believes that the most prudent avenue for addressing California's climate issues is to pursue both a pricing and program approach. The state must aggressively pursue and expand its energy efficiency and demand-side management programs, as well as meet its 33 percent Renewables Portfolio Standard. These important programs will provide early greenhouse gas emission reductions and serve as a solid foundation for cap-and-trade or carbon tax pricing.

## **5.2. Passage of California Senate Bill 375**

***“Air quality, traffic congestion, and carbon know no artificial boundaries.” Darrell Steinberg***

With the passage of AB 32, California has a stringent mandate to significantly reduce greenhouse gas emissions requiring government, consumers, and businesses to take a hard look at exactly how energy is used in the state and ways to choose an energy system that is less carbon intensive. To reach the goals of AB 32, California governments (both state and local) must find ways to reduce their carbon footprints. The California Air Resources Board (ARB) is developing a program to reduce carbon emissions from a variety of sources. Cars and light trucks are the single greatest source of carbon emissions -- generating about 40 percent.

While AB 32 has set in motion a very aggressive hunt for strategies to reduce carbon emissions from energy use, it does not speak to either transportation or land use strategies. California Senate Bill 375 is the first legislation to create the link between climate change and land use and transportation in trying to meet the goals set by AB 32.

Now signed into state law, Senate Bill 375 (SB 375), requires the California Air Resources Board (ARB) to set regional targets for the purpose of reducing greenhouse gas emissions from passenger vehicles, for 2020 and 2035. If regions develop integrated land use, housing and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain review requirements of the California Environmental Quality Act.

Senator Darrell Senator, author of SB 375 notes that with the passage of AB 32, it's very clear that addressing mobile sources and stationary sources is not enough and that land use is an essential element of achieving our climate change goals under AB 32. It is set up to take an over arching role of setting targets to be achieved by every region where it requires the 18 metropolitan planning organizations (Figure 5) across the state of California to show that their future planning scenarios will result in a reduction in carbon. The requirement will engage regions in a process similar to a process pioneered in the region of Sacramento, known as “the blueprint,” which emphasizes planning as a region, not just as individual cities and counties. Air quality, traffic congestion, and carbon know no artificial boundaries. These issues must be tackled regionally.



locating and mixing uses to achieve jobs-housing balance and reduce vehicle miles traveled will require employing several planning techniques that have so far only been a novelty. Over the past few decades, a mixed use community or a traditional neighborhood has been dismissed as an idea for the downtown or for the young urban professionals. The 'American Dream' has perpetuated growth in a pattern that, no-matter how it's looked at, is defined as sprawl.

In its direction to MPOs, SB 375 calls for the creation of a 'Sustainable Communities Strategy' to meet a region's carbon reduction targets. The sustainable communities strategy is a growth strategy for the region which, in combination with transportation policies and programs, strives to reduce greenhouse gas (GHG) emissions and, if it is feasible, help meet ARB's targets for the region.

Specifically, a Sustainable Communities Strategy (SCS) will:

- Identify the general location of uses, residential densities, and building intensities within the region;
- 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;
- Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region;
- Identify a transportation network to service the transportation needs of the region;
- Gather and consider the best practically available scientific information regarding resource areas and farmland in the region; and
- Quantify the reductions in GHG emissions the SCS is projected to achieve and any shortfall in reaching the regional target.

It is important to emphasize that this development pattern must comply with federal law, which requires that any pattern be based upon "current planning assumptions" that include the information in local general plans and sphere of influence boundaries. If the sustainable communities strategy will not achieve the region's greenhouse gas reduction target, the region must also prepare a separate document called the "alternative planning strategy." Projects consistent with this strategy also qualify for CEQA incentives.

### **SB 375, General Plans and Local Land Use**

Contrary to the belief of several jurisdictions throughout California, the intention of SB 375 is that local officials will be key decision-makers in how the provisions of SB 375 are ultimately implemented. While the Air Resources Board is responsible for setting region-wide greenhouse gas emission targets MPOs, each MPO will be responsible for developing its own sustainable communities strategy (and alternative planning strategy if necessary), the only local connection being that MPOs are governed by local elected officials.

The bill and its proponents emphatically state that neither the "sustainable communities strategy" nor the "alternative planning strategy" will supersede a city's or county's general plan or other planning policies or authorities. Nor must a local agency's planning policies be consistent with either strategy. Rather, these strategies provide a basis for determining eligibility of residential development or transportation projects for SB 375's CEQA streamlining incentives, if cities or counties choose to offer them.

In another part of the bill, it states that transportation funding will be tied to a jurisdiction's refusal to comply with the plans to reduce carbon emissions or the strategies created by MPOs. The missing link here seems to be how and when will a jurisdiction forfeit its transportation funding if it cannot comply with the sustainable communities strategy. This

concern has been voiced by several city and county governments as to the consequences of not being able to follow such a strategy. Communities that are rural but not agricultural in nature do not fall into the category of propagating sprawl and may lie just outside of heavily developed urban centers. By their inherent nature, such areas will struggle to accommodate new housing per the Regional Housing Needs Assessment, new jobs per the jobs-housing balance analysis or dense mixed-use centers or transit-oriented developments. The bill does not make clear how such exceptions to urban development will be dealt with, where by the shear nature of California's growth patterns such areas are really not an exception but just the other half of the urban story in the state.

Since the bill ties transportation funding to being compliant with the MPOs strategies, the fear of losing funding when they are unable to accommodate urban growth and dense patterns, is very real until the bill clarifies the exact methods of dispersing or denying such funding. That being the reality, it is also unclear how such areas will benefit from the economic advantages claimed by the AB32 and SB375, specifically the advantages of cutting vehicle miles traveled, costs for petroleum, lost cost benefits of higher density or the lack of mass transit choices owing to the lack of density.

An plausible option maybe the application of smart growth and traditional neighborhood principles where the core is comprised of existing or growing dense urban areas radiating out to lesser dense areas which form the agricultural or greenbelt areas. These outcomes remain to be seen once the carbon reduction targets are set and when the MPOs layout their sustainable communities strategies depicting the growth scenarios in every region.

### **5.3. California Environmental Quality Act – Incentives and Streamlining**

Rather than mandating specific land use or transportation planning results, I have insisted that the bill proceed with the use of incentives. For years, local governments and developers have asked for changes to CEQA to spur development in urban centers, and that is what the bill contains.

The bill proposes four CEQA changes for primarily residential projects:

1. Projects that can mitigate their impacts may use a new "sustainable communities environmental assessment" that would be reviewed under the substantial evidence standard and would not be subject to legal challenges in the same way as mitigated negative declarations;
2. Projects that need an EIR because the impacts cannot be fully mitigated are only required to review the "project-specific" impacts;
3. Projects can be relieved from the imposition of additional traffic mitigations under CEQA if they comply with traffic mitigation policies adopted in advance by the local jurisdiction; and
4. Projects that are consistent with the sustainable communities strategy will not be required to do a separate environmental analysis of the greenhouse gas impacts of traffic associated with the project.

Again, these CEQA incentives are designed specifically to accommodate developments that will reduce the miles that Californians drive every day. If only the four major metropolitan areas in California adopted plans that reduced VMT by 10 percent, 250 tons of pollution would be eradicated from our air -- the equivalent of eliminating all air pollution from electric utilities, petroleum refining, oil and gas production and all waste disposal *combined*.

## References

California Air Resources Board (ARB) Scoping Plan -AB 32 (2008):  
<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>

California Senate Bill 375 (2008)

California Planning & Development Report (Sept 2008). Regional Planning Bill Approved: SB 375 Links Blueprint Planning, Greenhouse Gases, Transportation Funding.

California Planning & Development Report (2008). SB 375 Is Now Law --But What Will It Do? : <http://www.cp-dr.com/node/2140>

League of California Cities -Technical Overview of SB 375 (2009)

Jones, Susanne Garfield (2007) *Integrated Energy Policy Report: California Energy Commission*

The Planning Report (2007). SB 375 Connects Land Use and AB 32 Implementation:  
[http://www.planningreport.com/tpr/?module=displaystory&story\\_id=1257&format=html](http://www.planningreport.com/tpr/?module=displaystory&story_id=1257&format=html)