California Energy Commission
Public Interest Energy Research (PIER) Program
Transportation Energy Research

# Methods to Develop Energy Baselines for California's Regions

Research Powers the Future
PIER Transportation Research
www.energy.ca.gov/research/transportation

May 2011

Fact Sheet

## The Issue

New methods and baseline data are needed to measure and track progress toward sustainability goals, examine the comprehensive impacts of land use policies and infrastructure investments, and guide future land use decisions that reconcile tradeoffs between energy, environmental, and socioeconomic policy goals and regulations. Sustainability assessment has become increasingly important for regions and cities as they develop and implement land use and transportation policies designed to reduce energy consumption and its negative impacts. There is currently no set of integrated tools and methods to analyze and evaluate the sustainability of California's regions.

Source: images.businessweek.com

## Project Description

This research will address recommendations from the Senate Bill 375 (Steinberg, Chapter 728, Statutes of 2008) Regional Targets Advisory Committee regarding research and development of models that can estimate greenhouse gas reductions from such things as energy efficiency improvements that result from the various land use and transportation strategies considered throughout the implementation of SB 375. This research will further estimate the potential benefits of various land use scenarios such as increased mobility; economic savings; reduced air and water pollution; preservation of open space; farm and forest land; and healthier, more equitable and sustainable communities. This research will also quantify the effect land use has on regional energy systems and update existing modeling decision-support tools to improve the integration of energy use into future planning and development.

## PIER Program Objectives and Anticipated Benefits for California

- Create standardized methods for developing and analyzing regional energy baselines in California, including methods for measuring the life cycle and socioeconomic impacts of regional energy use.
- Develop a comprehensive urban metabolism framework for identifying, quantifying, and explaining urban energy use patterns in California.
- Develop a regional energy baseline for Los Angeles County that will include the life cycle and socioeconomic impacts of Los Angeles County's regional energy use.

- Address 2020 regional transportation-related greenhouse gas reduction targets of a potential 5 million megatons of carbon dioxide from Land Use Strategies as outlined in the Assembly Bill 32 (Nuñez, Chapter 488, Statutes of 2006) Scoping Plan.

## Project Specifics

Contractor: UCLA's Institute of the Environment
City/County: Los Angeles/Los Angeles County
Assembly District: 47
Senate District: 23
Application: Statewide
Contract Number: 500-10-033
Amount: $1,000,000.00
Term: April 2011 to October 2013

For more information, please contact:

Dan Gallagher
California Energy Commission
PIER Program, Transportation Research Office
Phone: 916-327-1315
E-mail: dgallagh@energy.state.ca.us

Dr. Stephanie Pincetl
UCLA's Institute of the Environment
Phone: 310-825-2434
E-mail: spincetl@ioes.ucla.edu