

STRATEGIES FOR A LONG GREEN BOOM

How Some of California's Biggest Problems Can Be the Key to a More Sustainable Economy

Lisa Margonelli

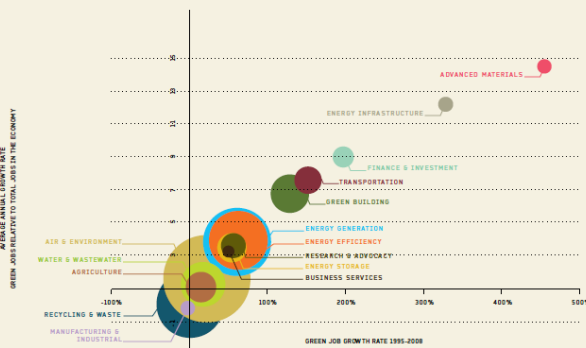
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Where Do Green Jobs Come From?

The 15 segments of California's Core Green Economy are growing at different rates. In the chart below, each "bubble" represents one of the 15 green segments (described in Part I), and its size illustrates the relative employment size.¹ While Advanced Materials is one of the smallest in number of jobs, it has grown the fastest, by 455 percent, between 1995 and 2008. Similarly, employment in Energy Infrastructure expanded by 328 percent. On an average annual rate, ten of the 15 green segments grew at a rate more than three times that of the state as a whole.

GREEN JOBS BY SEGMENT



Data Source: Green Jobs Database

Rethinking “Green” Jobs
How do we make ALL jobs greener
How do we make a green boom last?

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Rethinking “Booms”
by 2050--multiply carbon productivity x 10
the industrial revolution at triple speed

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California's Problems

water	energy	traffic
aging population	affordable housing	local/state budget
air pollution	income disparity	prisons

Traffic

water	energy	traffic
aging population	affordable housing	local/state budget
air pollution	income disparity	prisons

Los Angeles Traffic Jams

Waste 70 hours per commuter/year

Cost LA \$10 billion/year

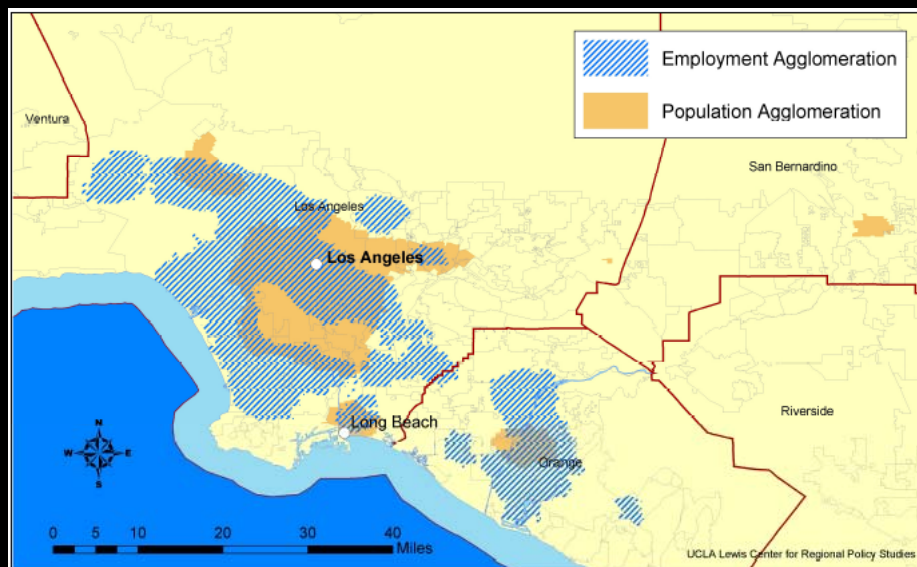
Cost \$1400 per household

Waste 370 million gallons of gas/year

Contribute to CA's \$190 million/year pollution-caused
asthma bill.

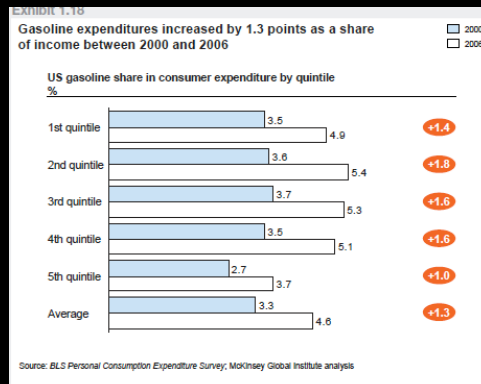
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Long commutes



Blumenberg/UCLA

High gas prices hit the lower middle hard.



Commuter Plans

Save \$1000-\$8000 (or more) per year

Reduce stress

Can increase exercise time

Increase worker job satisfaction.

Insulate workers/employers from high gas prices

Commute Options Also...

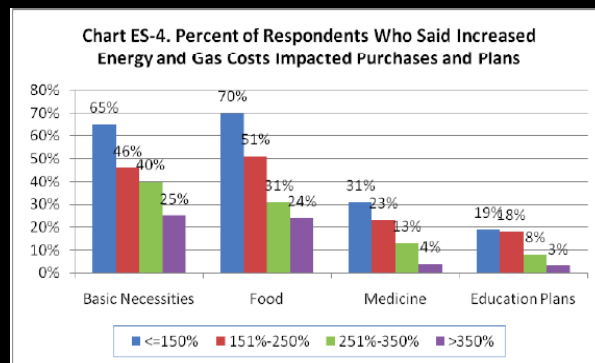
Reduce risk of home mortgage default significantly.

Increase disposable income.

Decrease auto and credit card debt.

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Low and moderate income households feel burden



NEADA survey

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Traffic: Ugly Silver Bullet

water*	energy	traffic
aging population	affordable housing	local/state budget
air pollution	income disparity	prisons

* Refining a gallon of gas requires 1.5 g water

Transit Options

Change how we “buy” transportation

Change who makes money from transportation

Change who’s responsible for transportation

Tax highway miles and congestion

Provide incentives for reducing miles and congestion

Aging: Greening Boomers

water	energy	traffic
aging population	affordable housing	local/state budget
air pollution	income disparity	prisons

New Retirement

More compact, integrated communities

Make water/energy/transit efficiency part of permitting

Reduce city infrastructure burden

Reduce costs/increase disposable income

California's Green Solutions

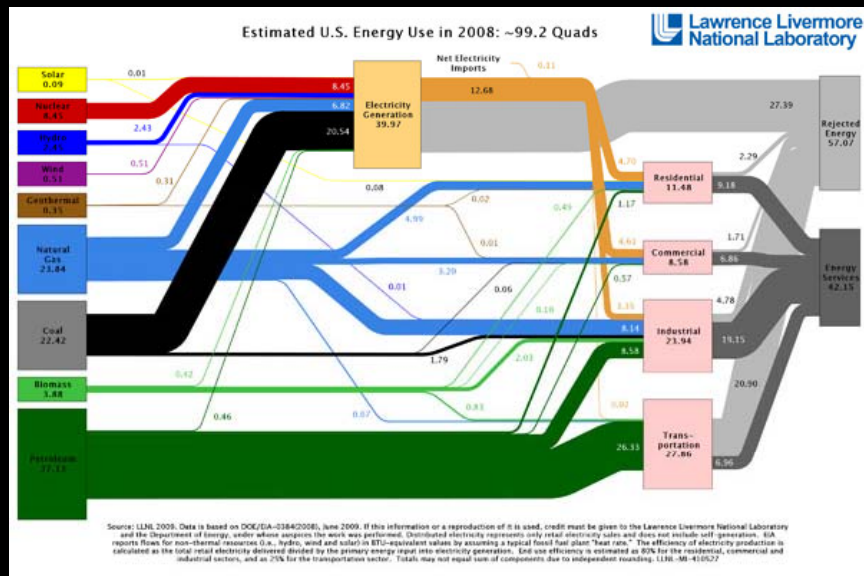
water	energy	traffic
aging population	affordable housing	local/state budget
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**How do we plan for long green growth--
green jobs, but also green households,
green employers, sustainable education?**

Change the way we see
 regulation
 incentives
 technology
 finance
 jobs

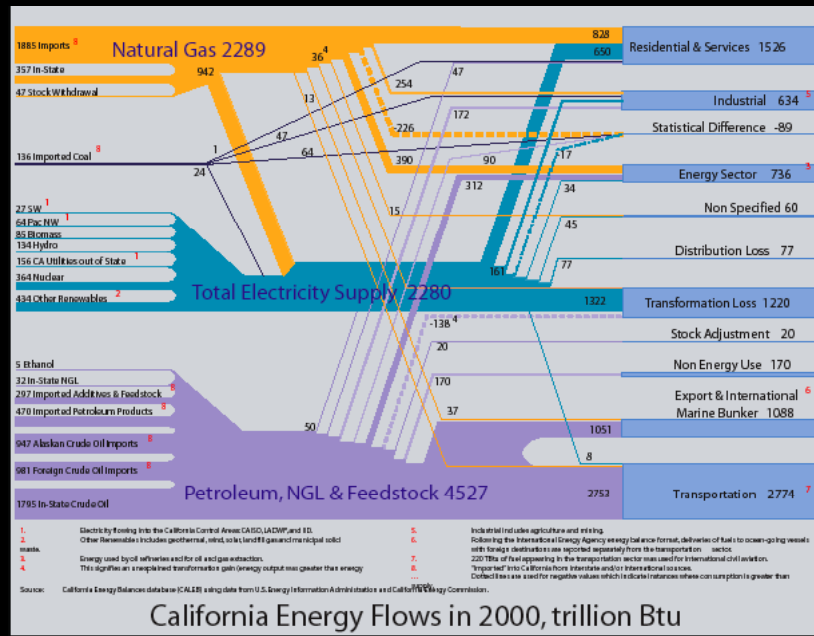
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Systems-based analysis



LLNL

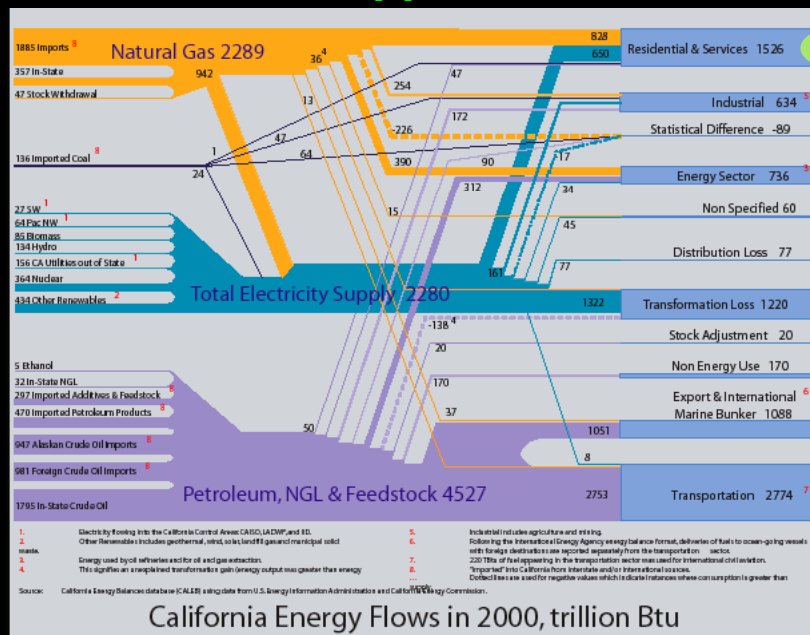
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LBL/CEC

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Green Opportunities



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Shifting Paradigm: Public vs Private Infrastructure



Green is as much about finance as technology

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Risk-based analysis

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The Cool Air Challenge

Central Valley population is growing rapidly

Electric infrastructure is already stressed

Air conditioning is 30 percent of peak loads

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Vicious, very un-green cycle



The screenshot shows a USA Today news article. At the top, there is a navigation bar with links for Home, News, Travel, Money, Sports, Life, Tech, and Cars. Below this is a weather section with a search box for "Find a forecast" and a "GO" button. The main headline is "141 deaths later, heat wave appears over". The article text discusses a heat wave in California that caused 141 deaths and damage to crops. It mentions that authorities raised their toll of possibly heat-related deaths by more than 40 on Friday. The article also notes that Stanislaus County, which includes Modesto, has reported 29 heat-related deaths. A video link is provided at the bottom: "VIDEO: Dozens of heat-related deaths in Calif.".

USA TODAY

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Weather Inside Weather

Find a forecast: Enter ZIP/City GO Provided by The Weather Channel weather.com

141 deaths later, heat wave appears over

Updated 7/29/2006 12:54 AM ET E-mail | Save | Print | RSS



Enlarge By Dan Ocampo, The Bakersfield Californian via AP

Josh Tores soaks himself at the water park Thursday with several of his friends at Jefferson Park in Bakersfield, Calif., during the 13th consecutive day of triple-digit heat.

FRESNO, Calif. (AP) — The state appeared to break out of its nearly two-week heat wave Friday, but not before it caused as many as 141 deaths and did untold damage to crops.

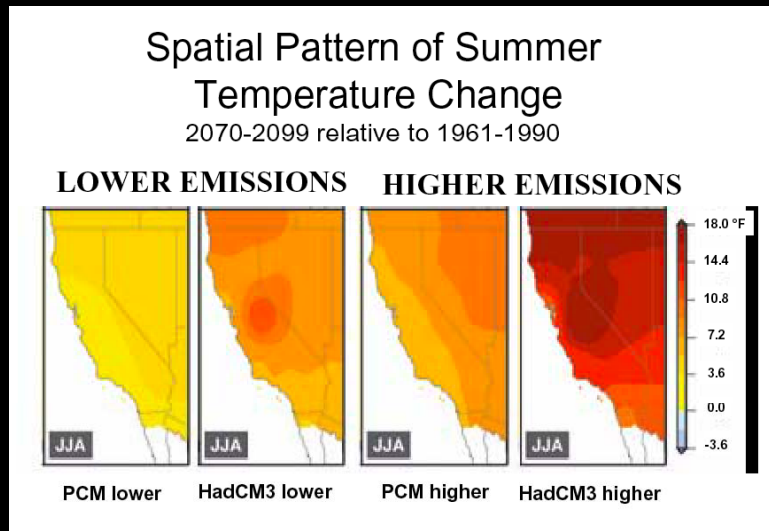
Authorities raised their toll of possibly heat-related deaths by more than 40 on Friday. The big increase came primarily from Los Angeles County and the Central Valley counties of Merced and Stanislaus, where coroners struggled to keep up.

Stanislaus County, which includes Modesto, has reported 29 heat-related deaths. It normally sees just one such death a year, county emergency services spokesman David Jones said.

VIDEO: [Dozens of heat-related deaths in Calif.](#)

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Warming trend



UCB

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POSSIBILITIES:

Make evap coolers standard

Design non-grid/solar AC

or AC that works like a battery

Save money, Save energy, Save the grid, Save lives

Create industry and jobs

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**In a global knowledge economy we need a self-sustaining education system. Lurching from year to year isn't working for us.
How can industry support education?**

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