



Building Smart

How New Homes Stack Up in the Battle to Stop Global Warming

Research into the improved energy-efficiency of
newly constructed homes in California

by

CONSOL Energy Consultants

for the

California Building Industry Association

and the

California Green Builder Program



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- ▶ For years, California homebuilders have been constructing homes with proven energy-saving results:
- ▶ New homes have better engineered heating and air-conditioning systems and require a duct leakage rate that is tops in the nation.
- ▶ Every window in every new home in California is not only double-paned but are also treated to reflect much of the direct sunlight/heat from entering the home.
- ▶ New homes have higher levels of wall and ceiling insulation than those in the rest of the nation.
- ▶ And new homes require radiant heat barriers in the roofs to reduce heat gain in the summer months.
- ▶ Consequently, homes built in 2005 use 47% less heating and cooling than homes built in 1978, saving every new homeowner hundreds of dollars a year on their energy bill.
- ▶ Meanwhile, thanks to the use of state-of-the-art plumbing and other technologies, new California homes save roughly 20,000 gallons of water a year – a 20 percent reduction in water use per household – best in the United States.



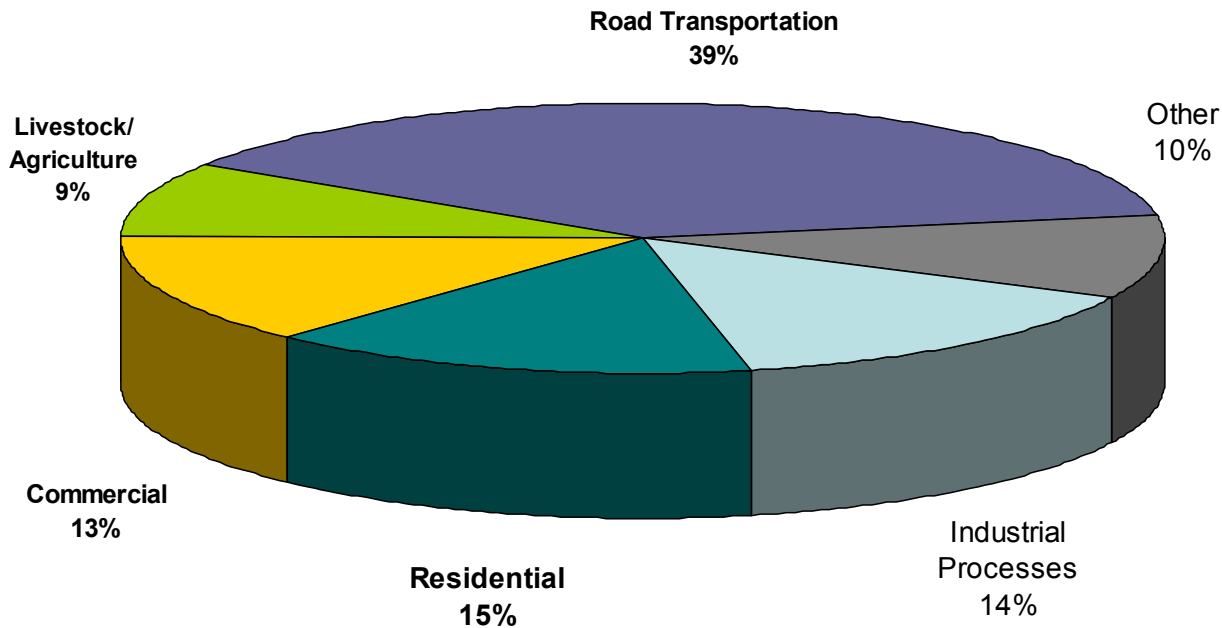
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- ▶ Not surprisingly, new California homes are recognized across the country as being among the most energy-efficient, water-efficient, transit-oriented and generally environmentally friendly in the nation.
- ▶ As the attached study shows, this success is real and casts new homes as models for how to achieve energy efficiency rather than targets for still more mandates.
- ▶ As the study also reveals, California should be concentrating its residential energy-efficiency interests on the existing housing stock where tons of greenhouse gas emission reductions can be achieved.
- ▶ Most of California's housing inventory (approaching 13 million units) was constructed long before energy, water and other resource efficiencies were established as residential standards and before their energy-savings benefits could be realized.
- ▶ Indeed, as the research shows, a dollar spent improving an older, existing home yields five to 10 times more in energy savings than a dollar spent in a new home.
- ▶ For more information on the following research, contact Bob Raymer at CBIA at 916/443-7933, ext. 322 or rreymer@cbia.org.



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CARB GREENHOUSE GAS INVENTORY



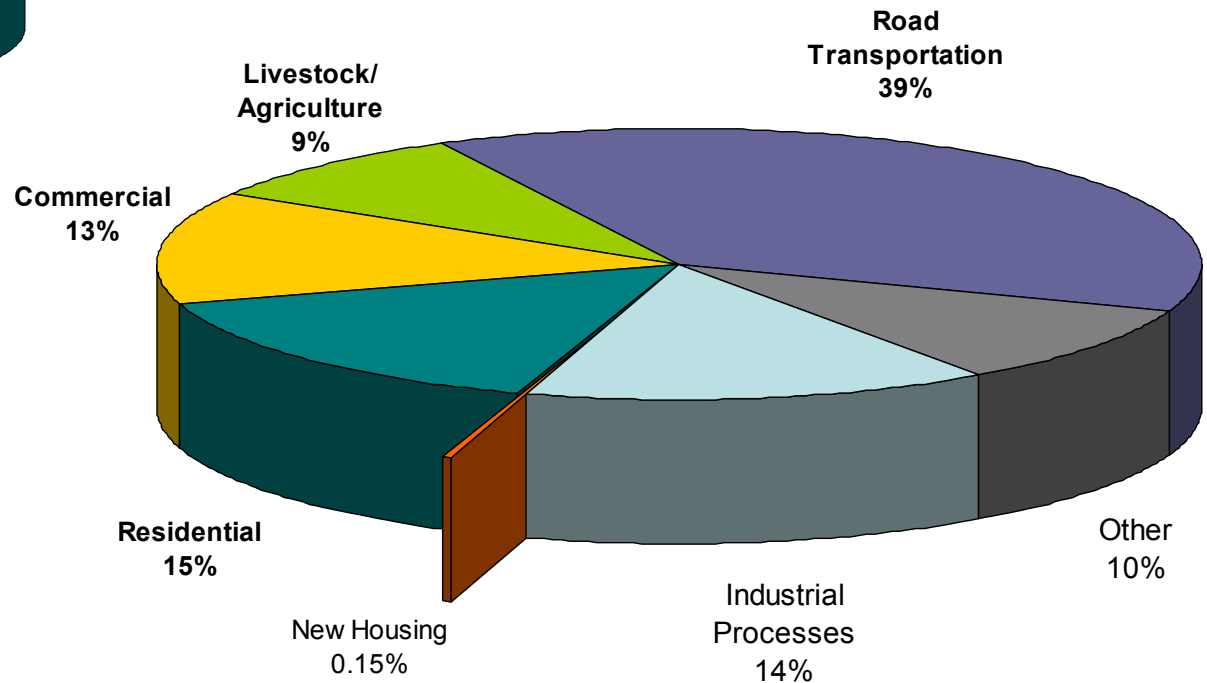
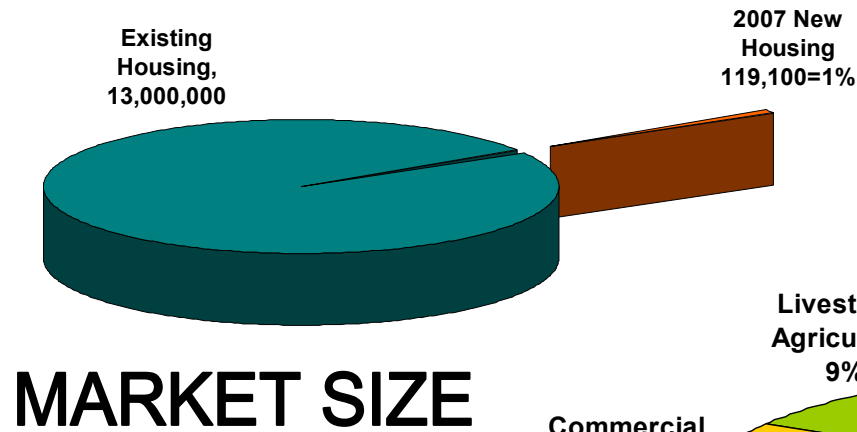
*Includes the 31% of CA's electricity is used in housing





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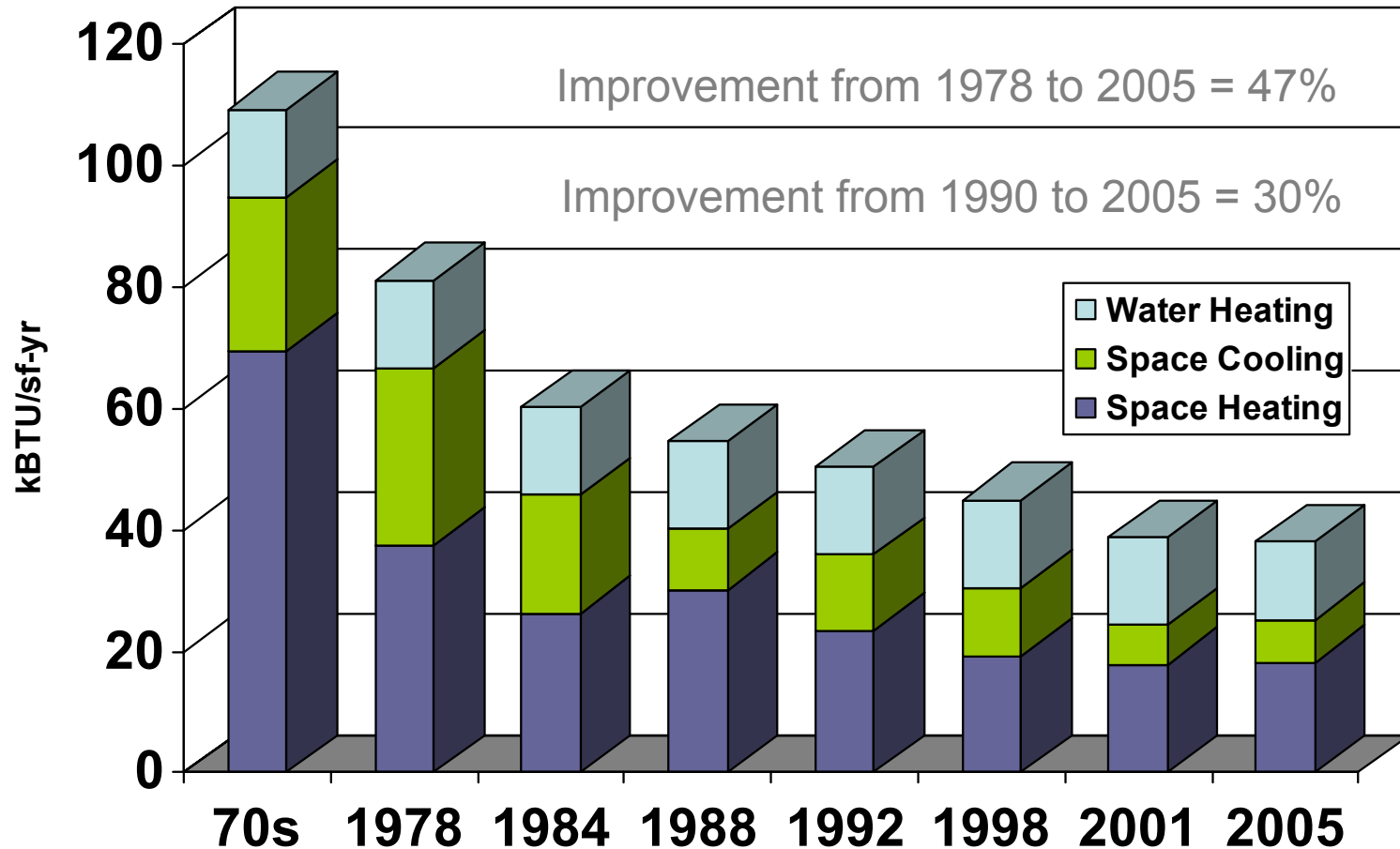
IMPACT OF NEW HOUSING



EMISSIONS



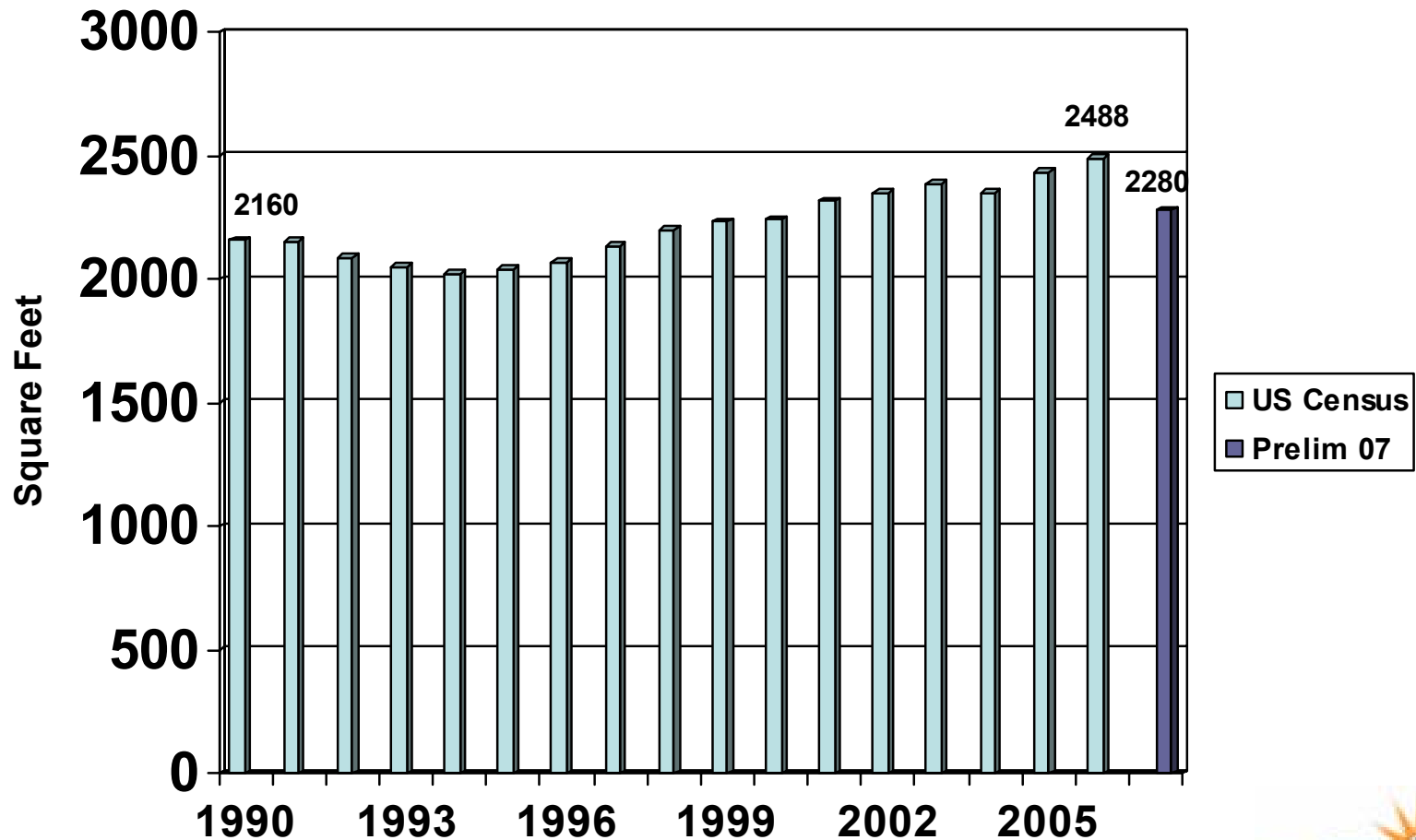
STEADY REDUCTION IN ENERGY USE





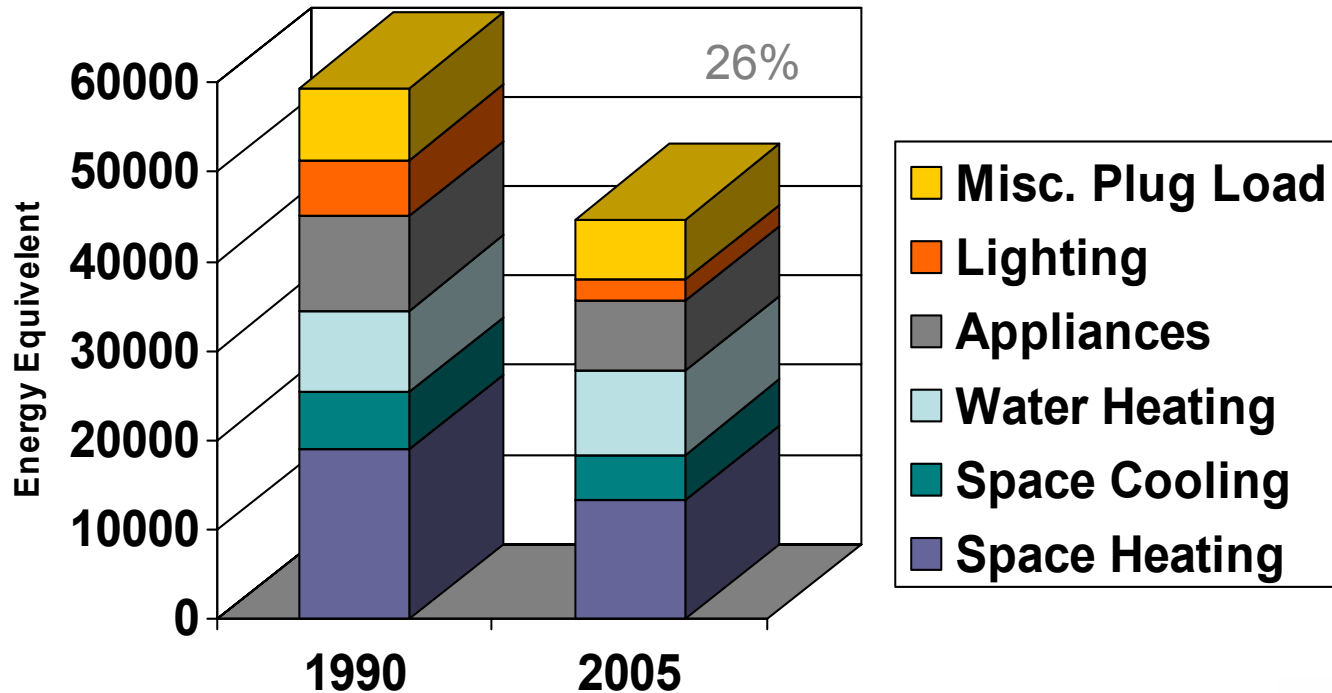
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HOUSE SIZE IN CALIFORNIA



WHOLE HOUSE ENERGY USE

SINGLE FAMILY DETACHED (2,488 square feet)

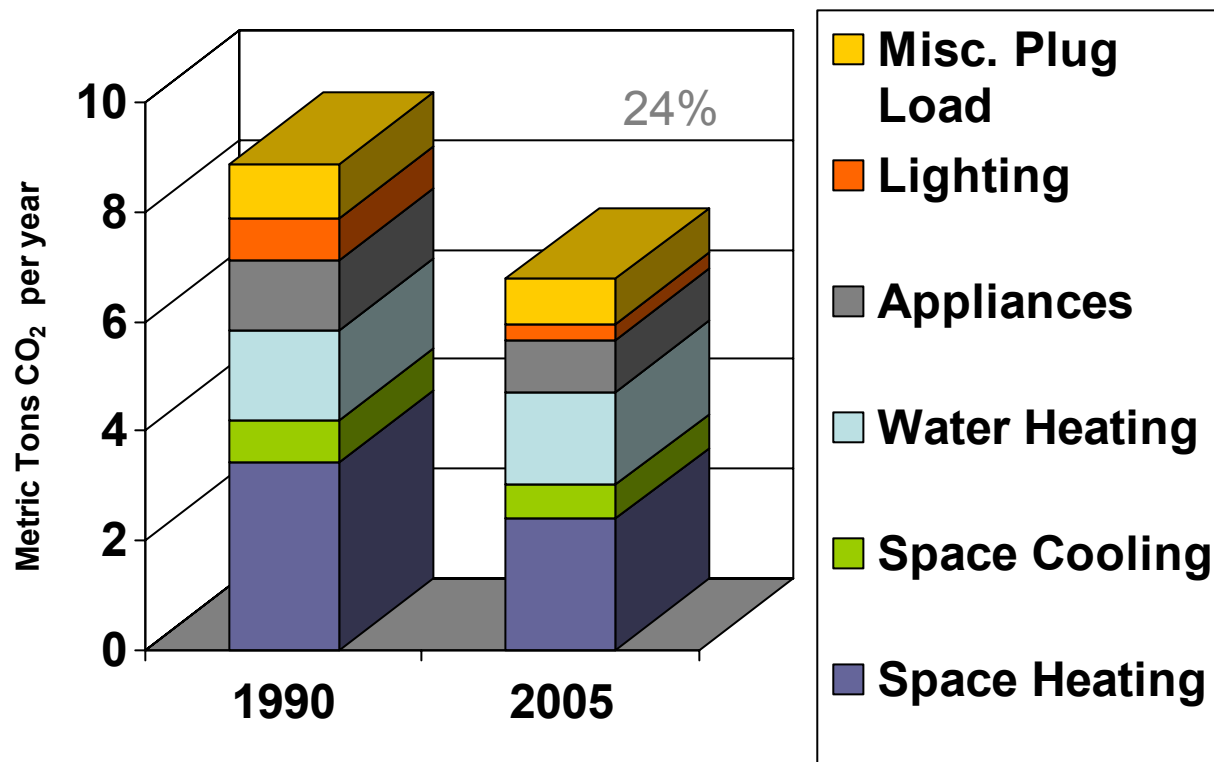




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CARBON FOOTPRINT

SINGLE FAMILY DETACHED (2,488 square feet)





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CARBON-EMISSION REDUCTION POTENTIAL

