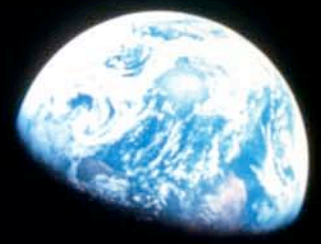
The Temperature's Rising!

A Town Hall Meeting on Solutions to the Global Warming Crisis

Berkeley City College Auditorium, April 14, 2007

Host: Assemblymember Loni Hancock



Bringing it all back home:

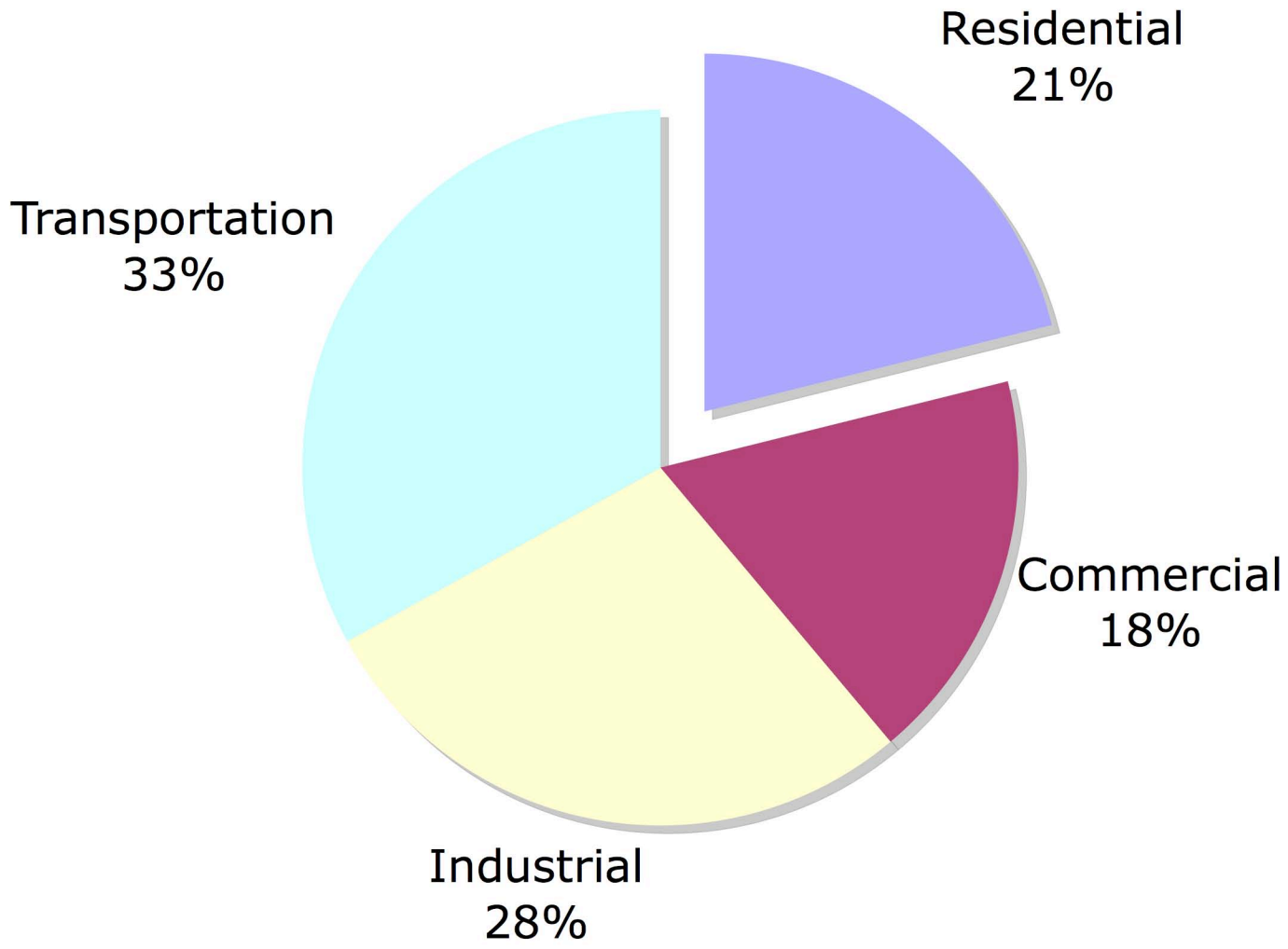
What can individuals do to affect climate change

Evan Mills, Ph.D., Staff Scientist

Lawrence Berkeley National Laboratory

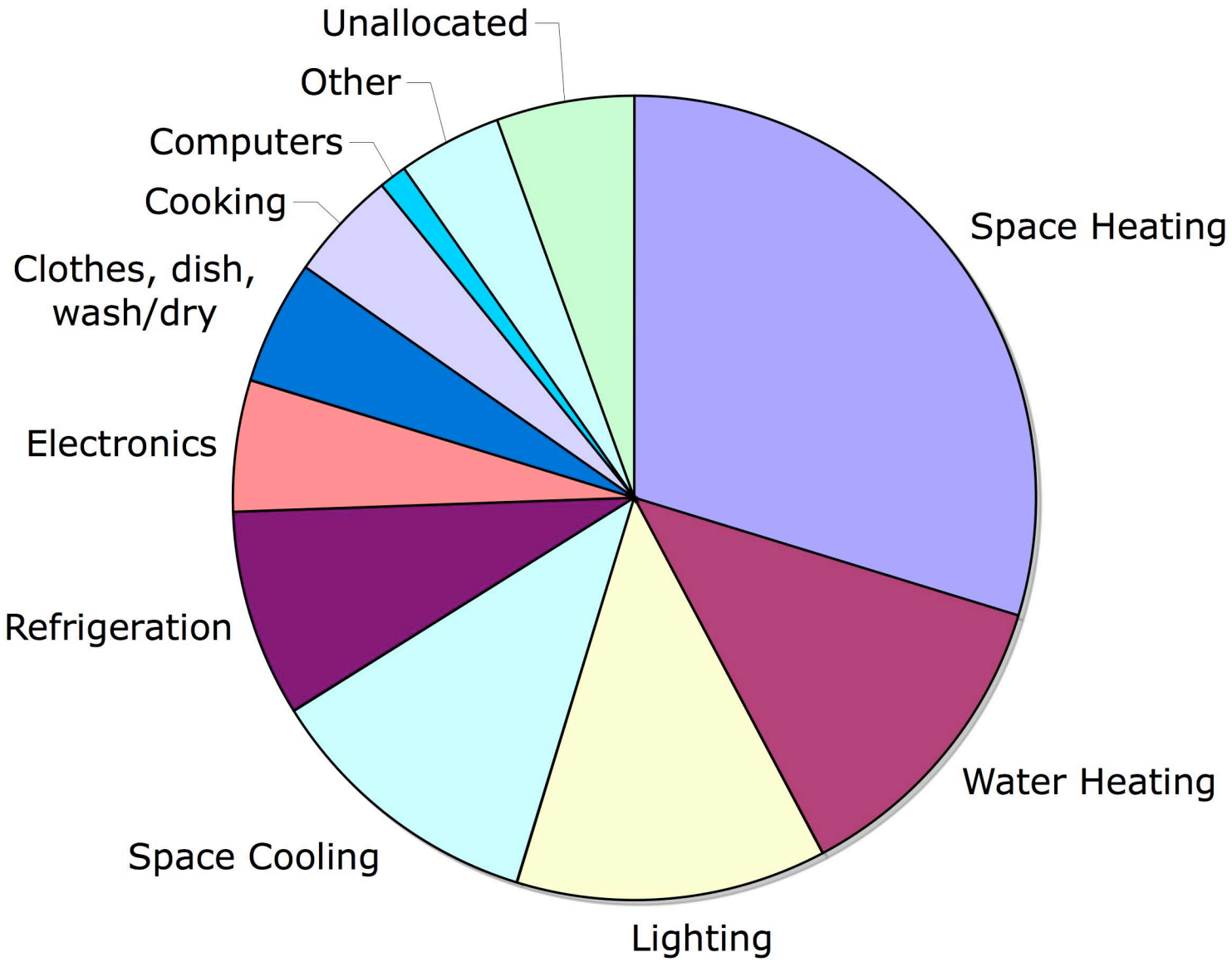
US Carbon Dioxide Emissions: 2005

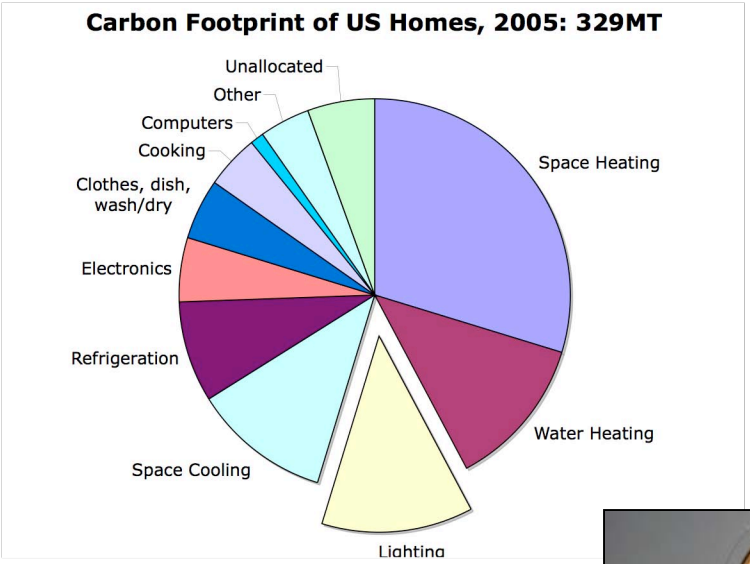
1.6 billion Tonnes Carbon



US Department of Energy, Energy Information Administration

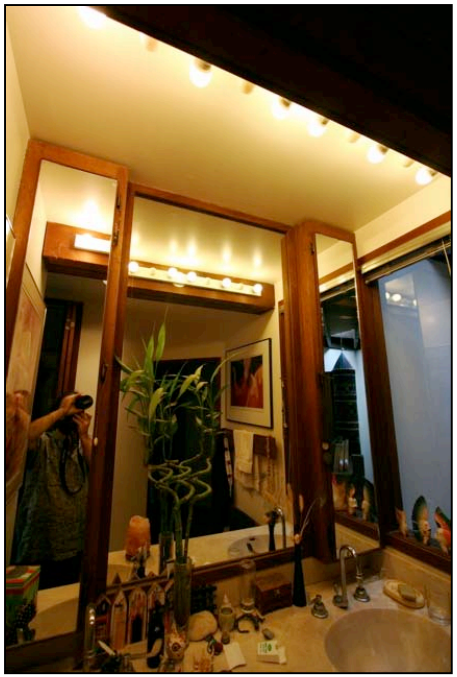
Carbon Footprint of US Homes, 2005: 329MT

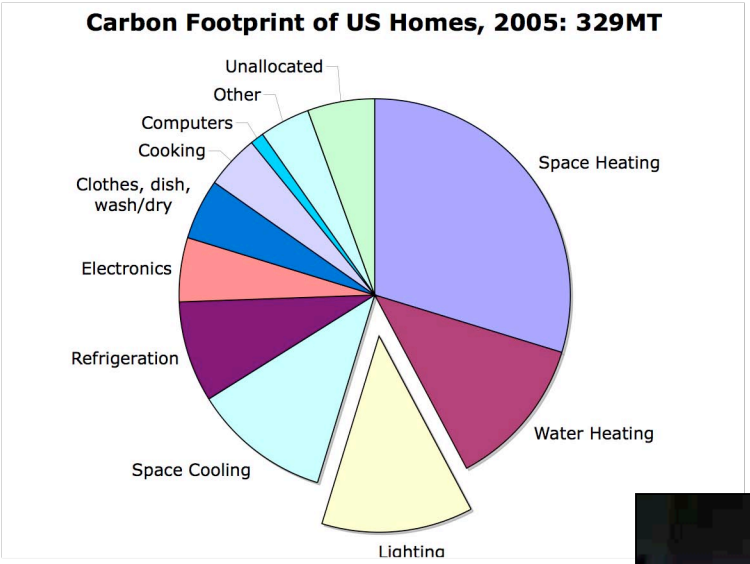




Compact Fluorescent Lights ("CFLs")

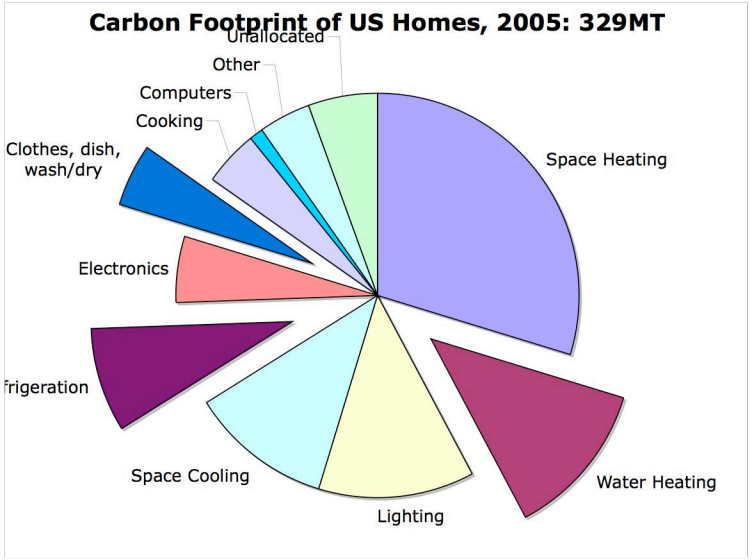
41 million tons carbon/year
[12% of total]





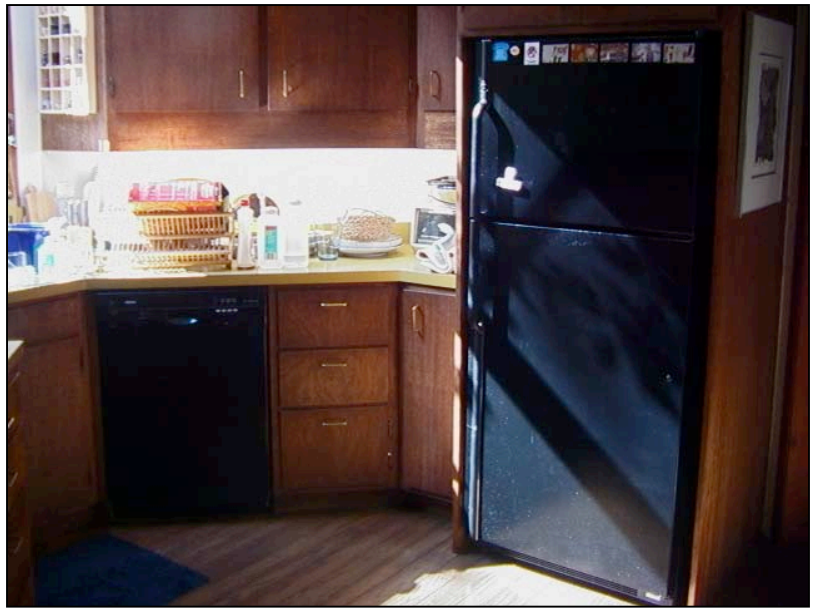
Dimmable“Linear” Fluorescent Lights

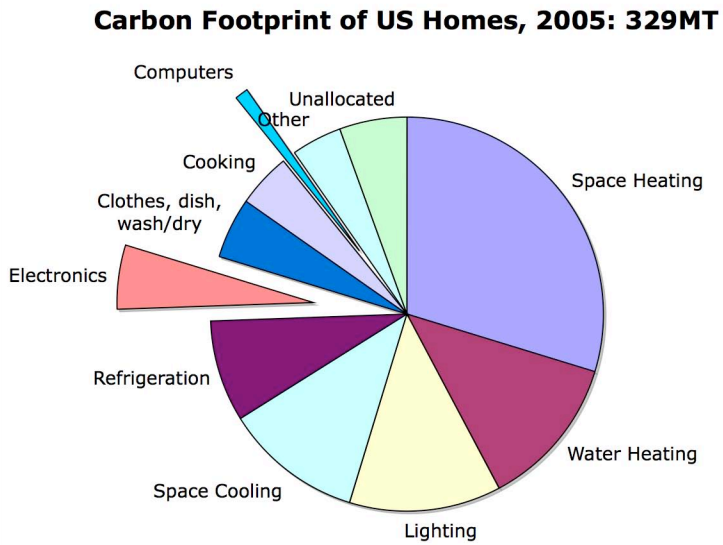
41 million tons carbon/year
[12% of total]



Efficient Appliances

100 million tons carbon/year
[30% of total]

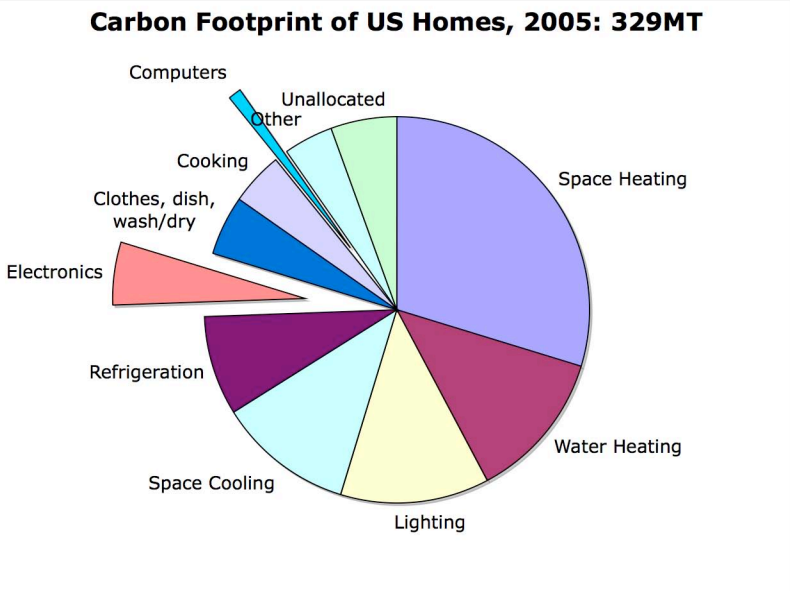




EnergyStar Home Electronics

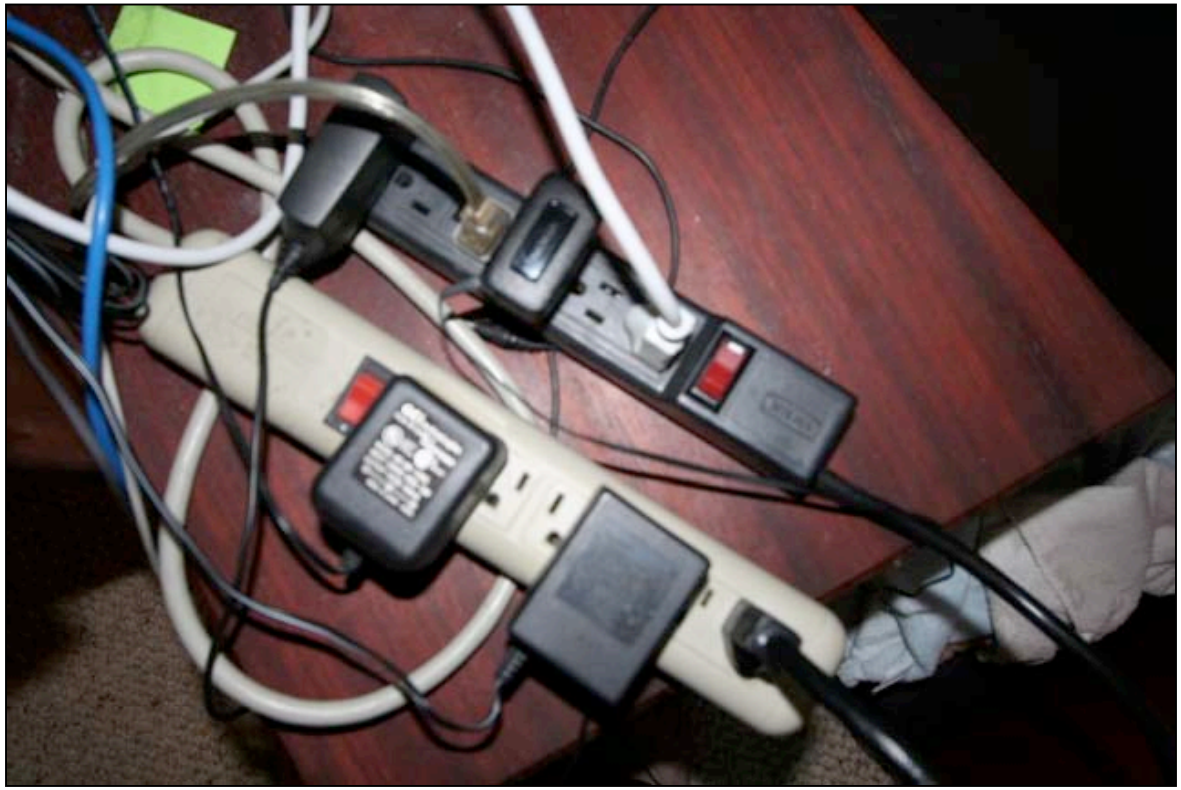
17 million tons carbon/year

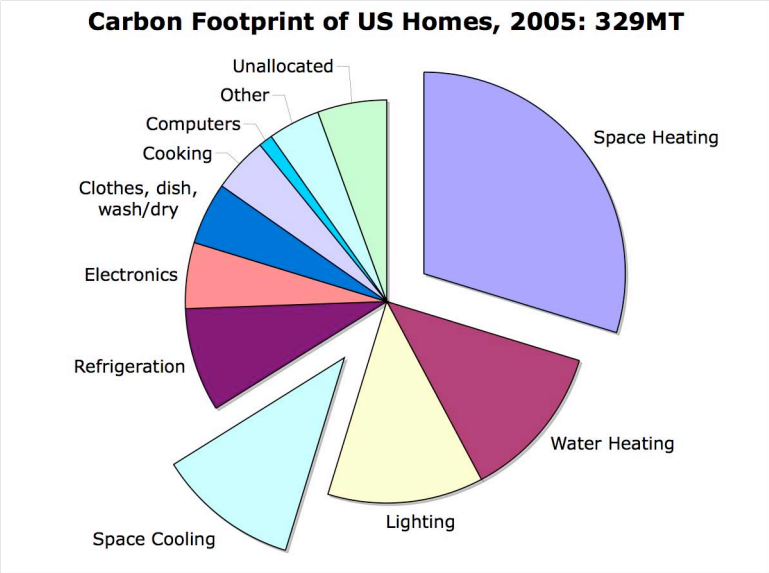
[5% of total]



Kill the Vampires

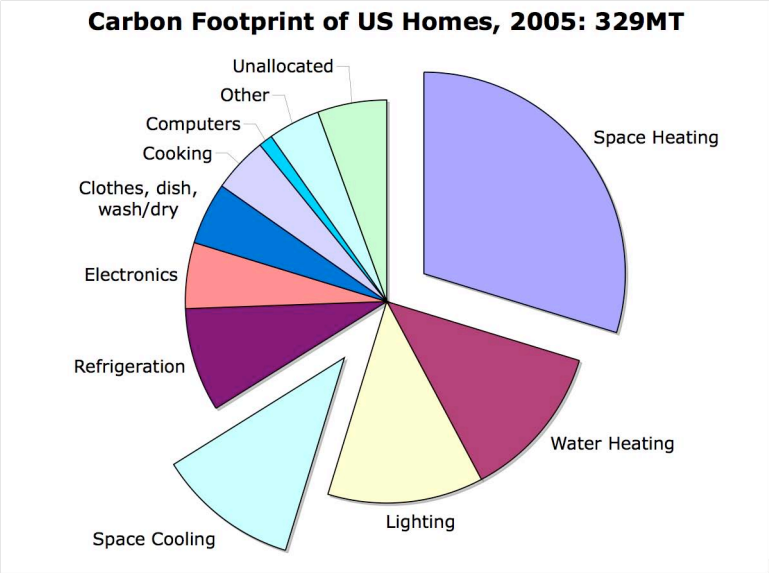
17 million tons carbon/year
[5% of total]





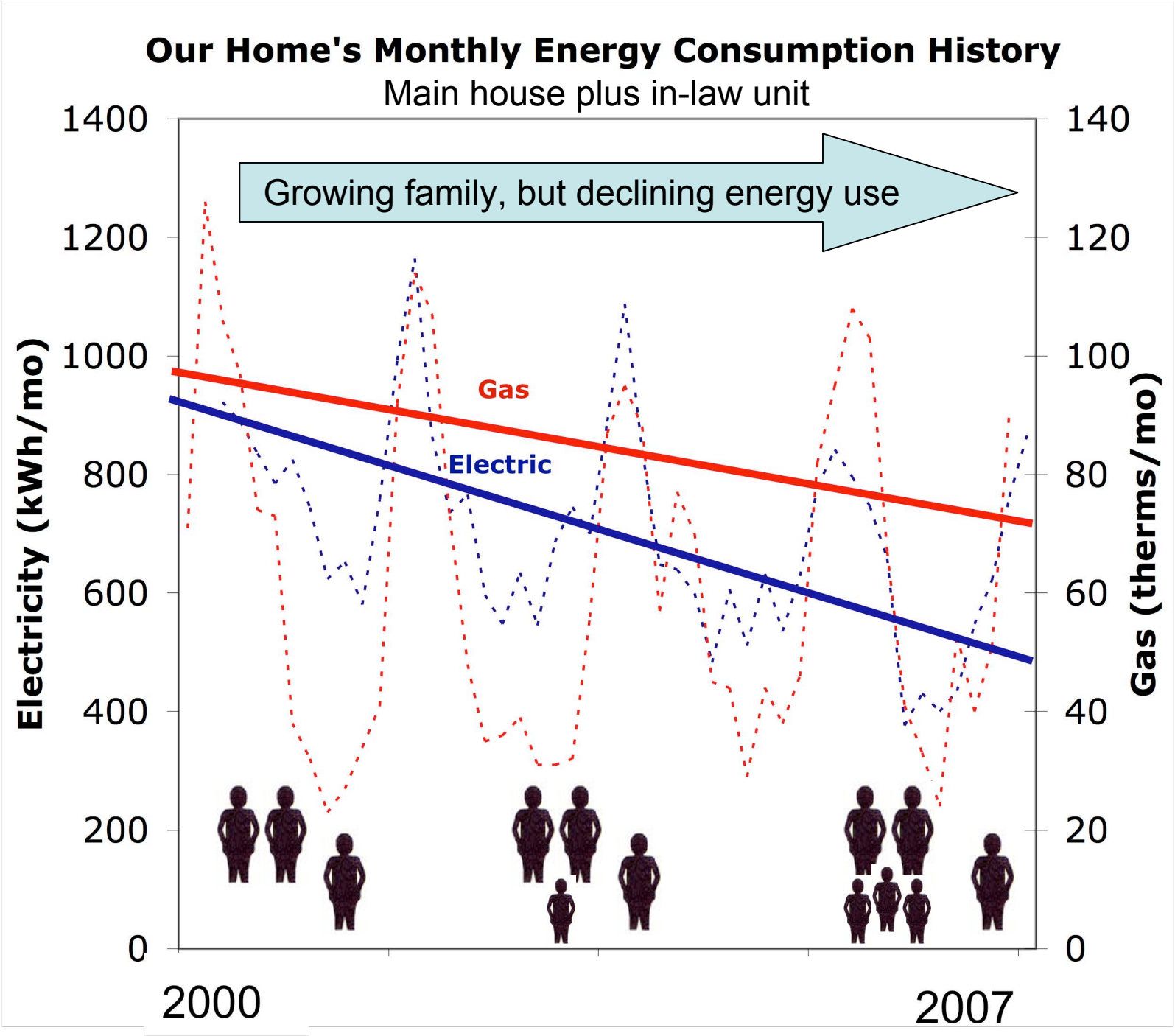
"Low-e" Windows & Skylights

136 million tons carbon/year [41% of total]



Insulated/Sealed Ductwork

136 million tons carbon/year [41% of total]

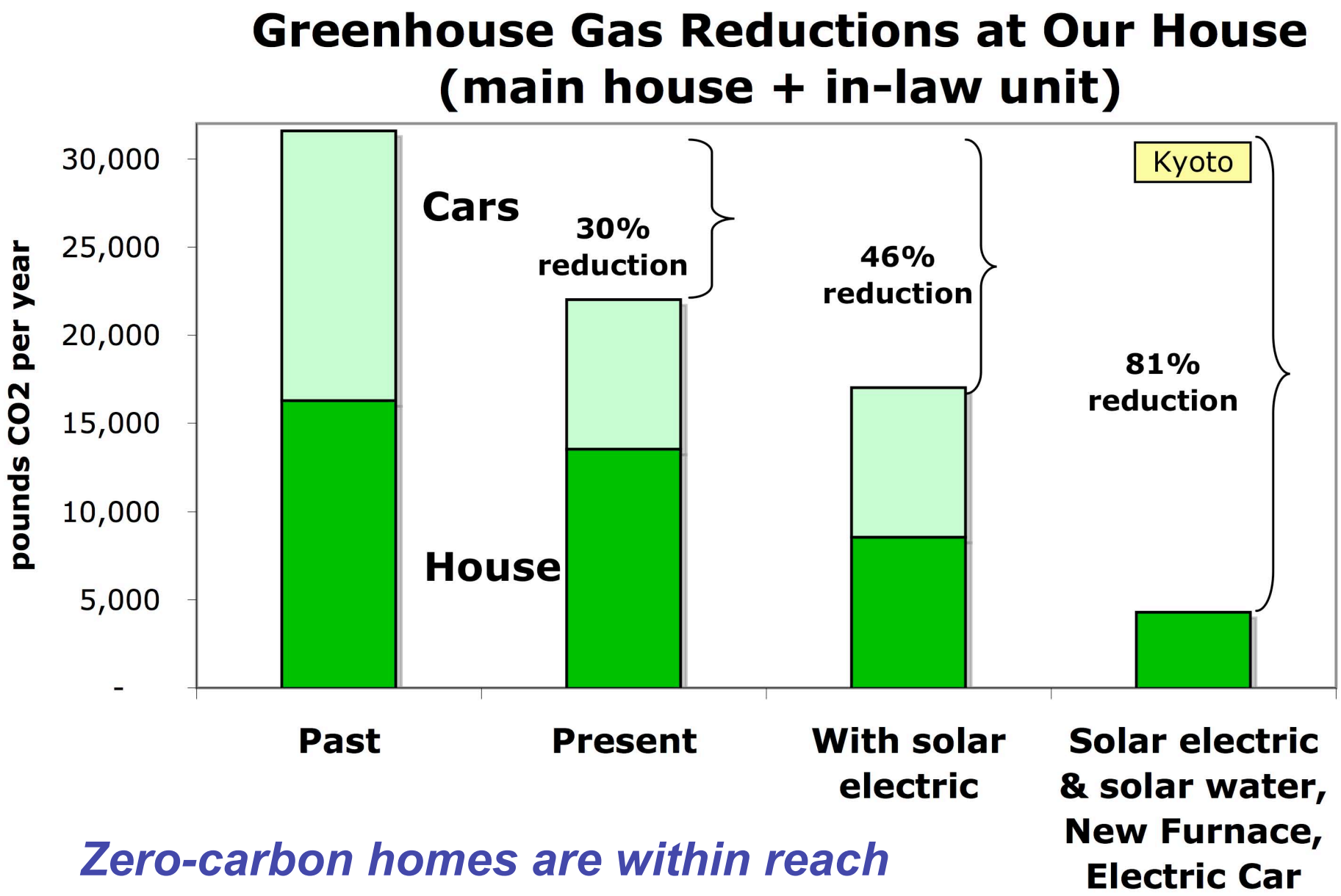

Our Home's Monthly Energy Consumption History
Main house plus in-law unit
Growing family, but declining energy use
Gas
Electric
Electricity (kWh/mo)
Gas (therms/mo)
1400
1200
1000
800
600
400
200
0
140
120
100
80
60
40
20
0
2000
2007

Time-of-Use (TOU) Electricity Tariff

Advanced digital metering - logs electricity use by time of day and year

Encourages use of electricity during off-peak periods; maximizes payments for solar-generated electricity sold back to grid

Improved vehicle fuel efficiency [3x savings vs prior vehicle]

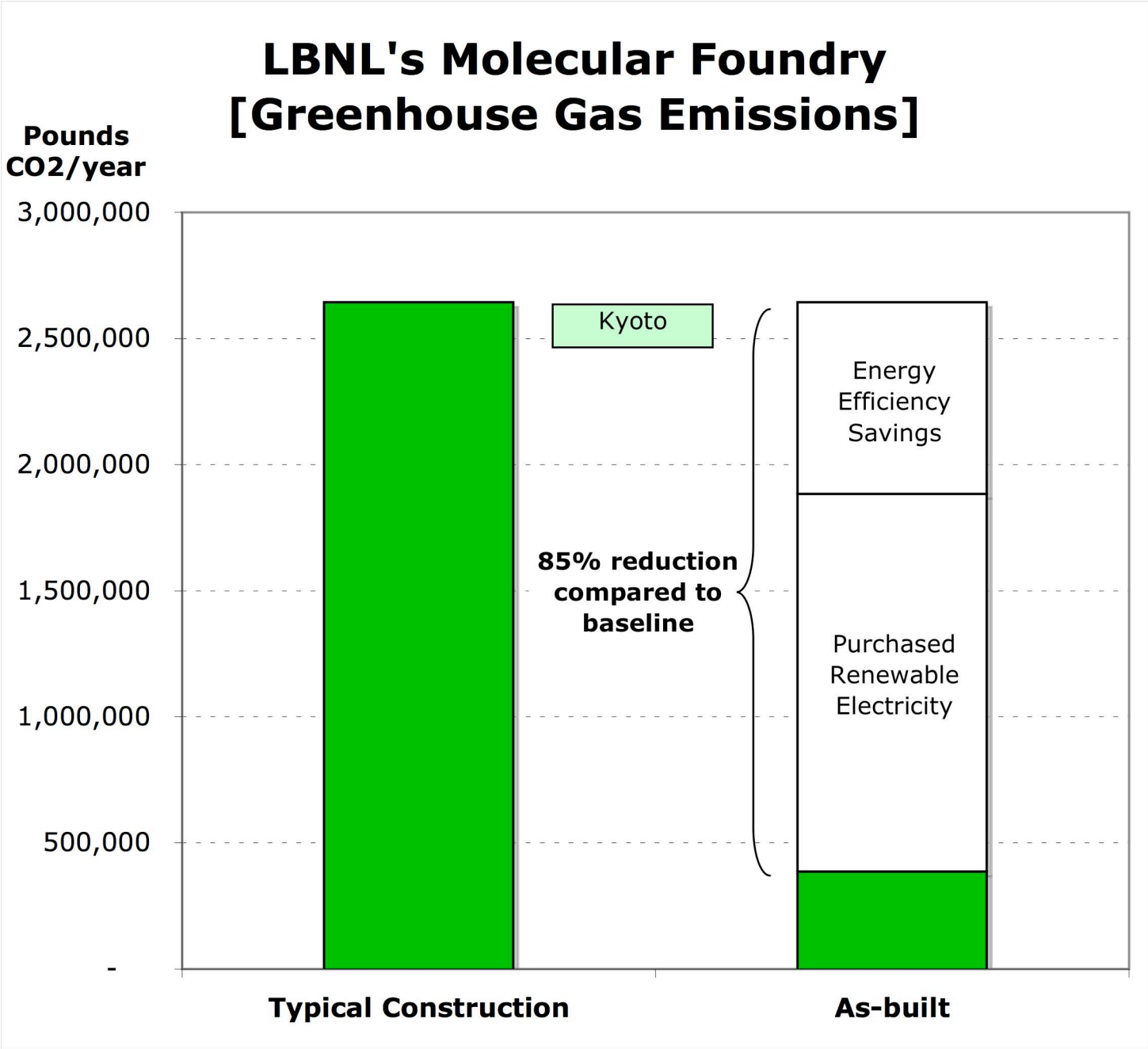
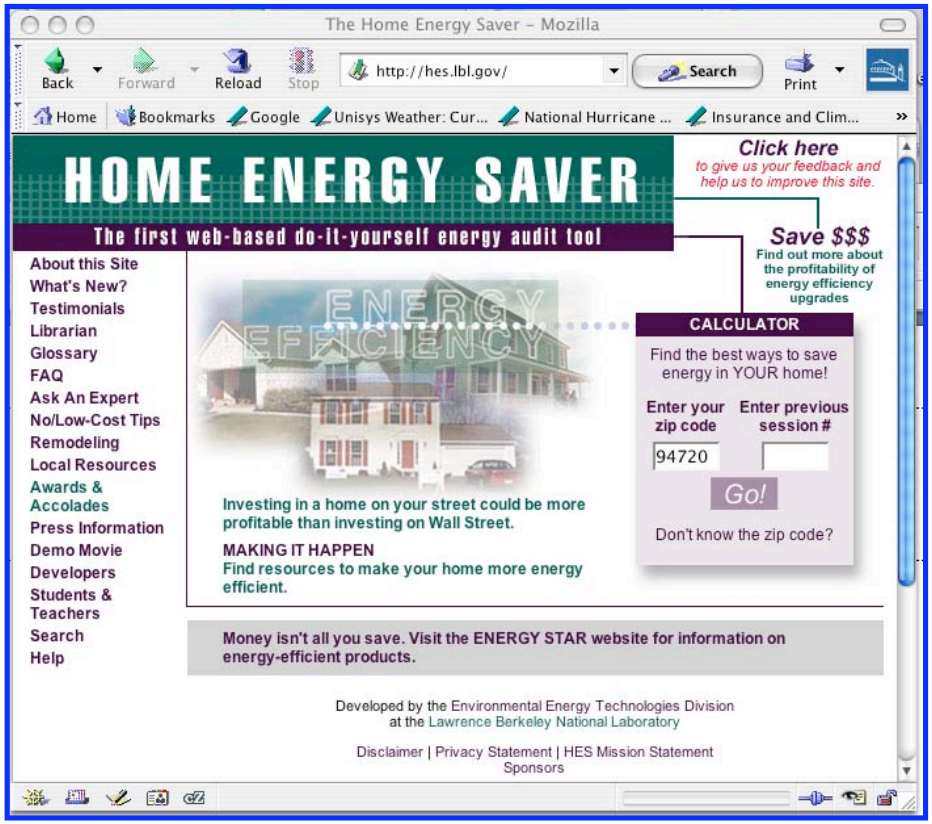
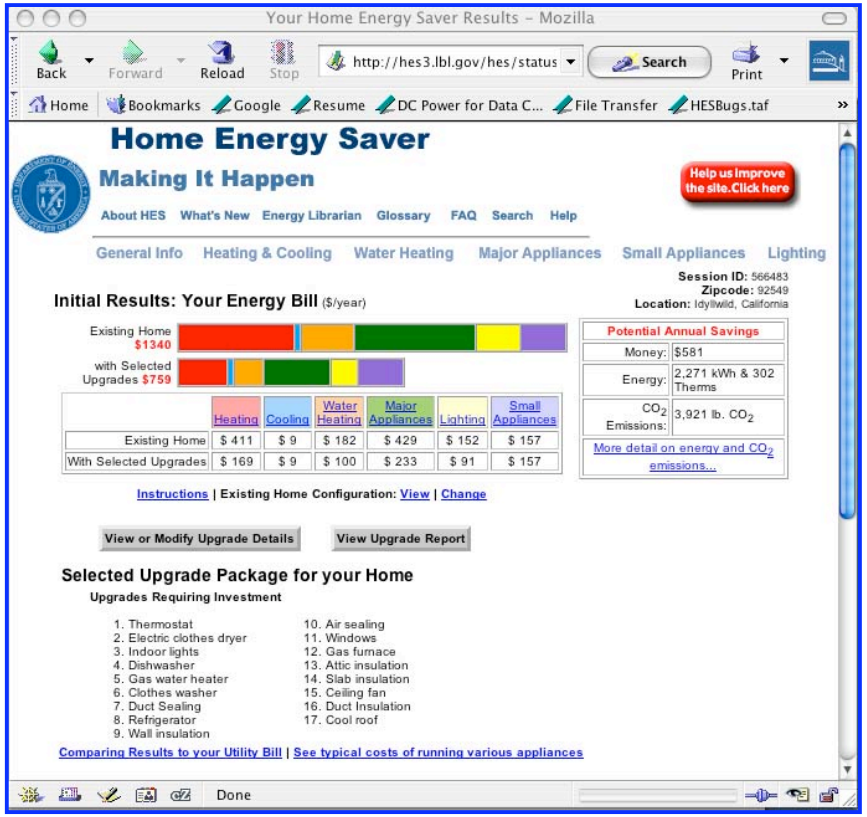


Zero-carbon homes are within reach

Other things...

- Roof insulation
- Telecommuting - 50% time
- Composting and recycling (reduced methane from landfill)
- Emphasize organic & locally produced foods

The Molecular Foundry - High-tech can be green


LBNL's Molecular Foundry
[Greenhouse Gas Emissions]
Pounds CO2/year
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
-
Kyoto
85% reduction compared to baseline
Energy Efficiency Savings
Purchased Renewable Electricity
Typical Construction
As-built

http://HomeEnergySaver.lbl.gov