

Three Perfect Storms: America's Energy Challenged

2008 RESNET Building Performance Conference

February 18, 2008

San Diego, CA

Steve Baden - RESNET

www.resnet.us

2008 RESNET Conference Has Carbon Neutral Footprint

RESNET has offset 100% of carbon through purchase of energy efficiency certificates



Into the Storm



Perfect Storm # 1

Peaking Global Oil Production



Perfect Storm # 2

Global Climate Change



Melting Arctic Sea



Columbia Glacier in Alaska



Glacier is Retreating 50 Feet a Day



Columbia Glacier c. 1980



Columbia Glacier 2005

2007 San Diego Wild Fires



This Was Personal



Air My Family Breathed for a Week











Journal of Science – July 2006

Rising temperatures throughout the West have resulted in an increase in large wildfires as spring comes earlier, mountain snows melt sooner and forests dry. ...

If regional temperatures continue to rise, as many computer climate models predict, wildfire activity throughout the West will intensify so long as there is acreage to burn

Perfect Storm # 3

Inadequate Electricity Capacity



Electricity Capacity

Today, the United States' utility grid is being strained by the increasing demand for electricity and the lack of capacity to meet the growing demand.

Power demand is threatening to surpass utility companies' energy capacity.

Recent Examples of Problems with Electricity Capacity

Chicago 1995 – Over 700 deaths from heat stroke when power went out by over demand

California 2001 – Rolling black outs and massive financial losses

Northeast US 2003 – Massive black out resulting in 50 million people without power



Another Important Consideration

National Security

U.S. Annually Funnels Hundreds of Billion Dollars to Regimes Who See U.S. as the Enemy

Key Battleground on War on Terror Must be the Addiction on Imported Oil

Oh, Yea Another Consideration ...

“It’s the Economy Stupid”

"high oil prices are fueling one of the biggest transfers of wealth in history. Oil consumers are paying \$4 billion to \$5 billion more for crude oil than they did just five years ago, pumping more than \$2 trillion into the coffers of oil companies and oil-producing nations this year alone."

“The effects of the oil price hike lowers already anemic consumer savings rates, adds to inflation, worsens the trade deficit, undermines the dollar and makes it more difficult for the Federal Reserve to balance its competing goals of fighting inflation and sustaining growth."

Washington Post – November 10, 2007

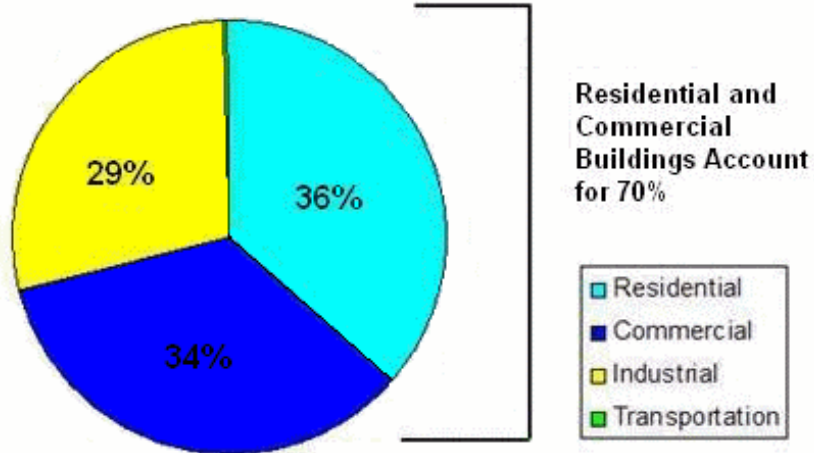
U.S. Government Reaction To Date

“They go on in strange paradox, decided only to be undecided, resolved to be irresolute, adamant for drift, solid for fluidity, all-powerful to be impotent.”

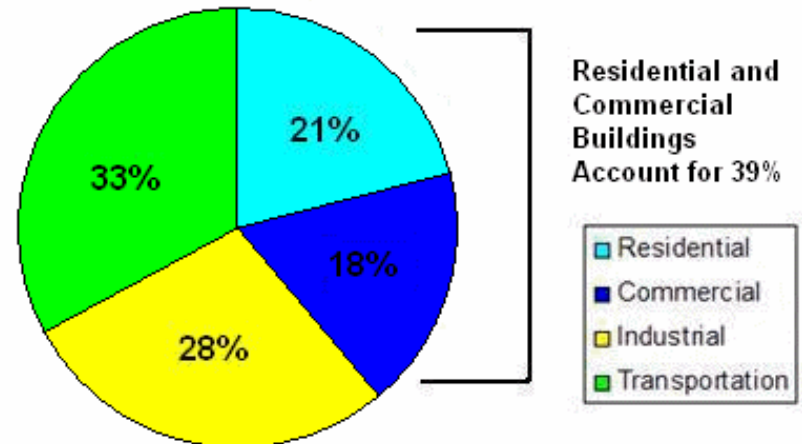
Winston Churchill

Why Buildings are Important

U.S. Consumption of Electricity



Producers of Carbon Dioxide Emissions in the U.S.



What Needs to Be Done

“We must foment the nonviolent overthrow of bad engineering”

Amory Lovins

EU Directive on Energy Performance of Buildings

“Energy saving is without doubt the quickest, most effective, and most cost-effective manner for reducing greenhouse gas emissions.”

Carbon Labeling of Consumer Products

Throughout Europe

Examples

- + Potato Chip Packages (UK)**
- + Buildings (Germany)**
- + Automobiles (France)**

Germany



zukunfts haus
Energie sparen. Wert gewinnen.

ENERGIEPASS

Nummer: dena 01-075-0018 | Erstellt am: 15. Januar 2004

Gesamtbewertung

Erreichte Leistung: 290,5 kWh/m²a

Objekttyp/Objektart	Mehrfamilienhaus / Wohnen
Adresse	Hauptstraße 28, 10456 Berlin
Eigentümer	K. Wertbau AG
Baujahr Gebäude	1928
Baujahr Modernisierung	1982
Anzahl Wohneinheiten	9
Beheizte Wohnfläche	575 m ²
Energiepass erstellt mit	<input checked="" type="checkbox"/> Ausführlichem Inhalt <input type="checkbox"/> Kurzversion

Eigentümer: K. Wertbau AG
Müllerstr. 182
10456 Berlin
030 765 54 32

Architekturbüro Meyer
Fassadenstr. 182
10123 Berlin
Hans Meyer

dena
Deutscher Energie-Agentur

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Consommation

4,9 l / 100 km

CO₂

131g / km

AVENIR

RAV⁴ EMP⁴ NOVED

???



It's Coming to the U.S.

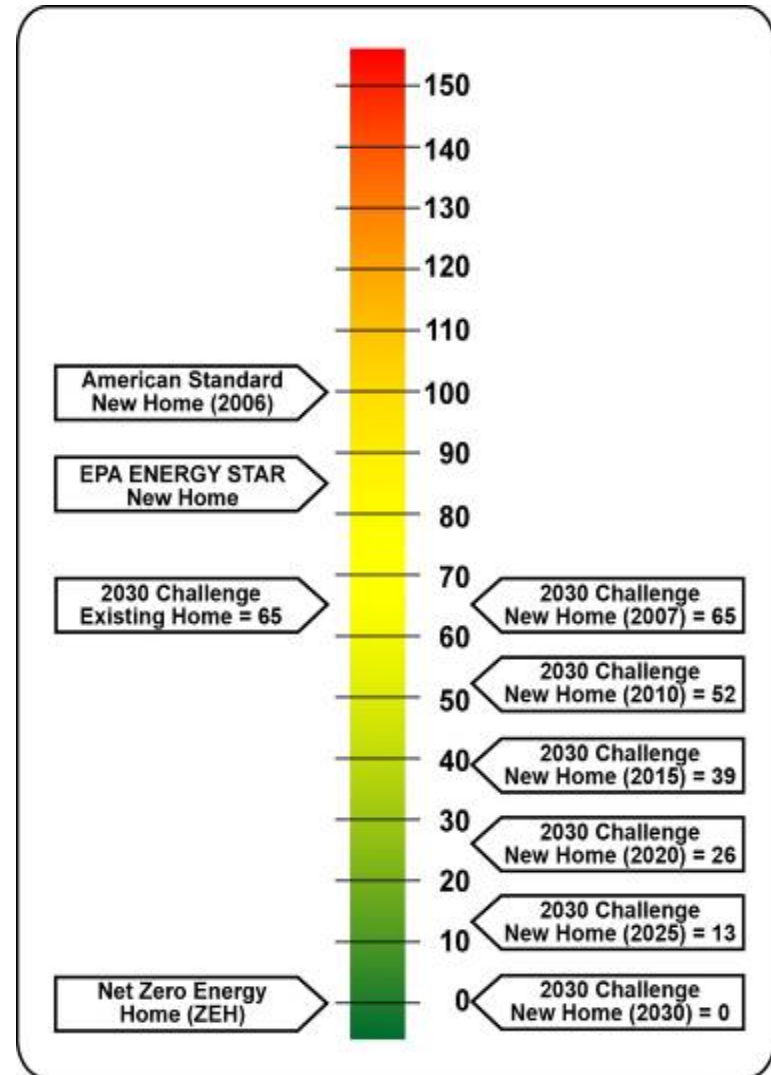
Already,

The states of California, Massachusetts, Nevada, New Jersey, and New Mexico has either introduced or passed legislation of energy audits at time of sale of home.

Senator Alexander (R-TN) drafting legislation to make national requirement

The 2030 Challenge

- Challenge that all new American homes will be carbon neutral by 2030
- Adopted by:
 - U.S. Conference of Mayors
 - American Institute of Architects
 - ASHREA
- Adopted RESNET HERS Index for residential challenge

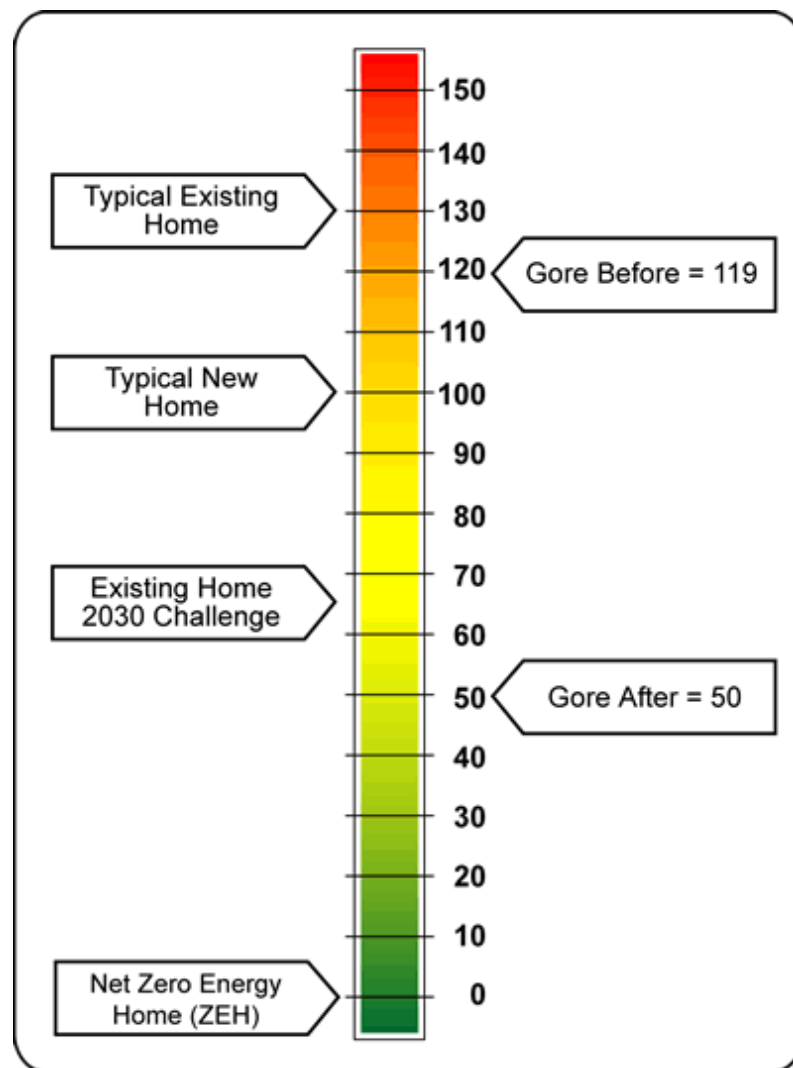


2030 Challenge/RESNET Agreement

“The HERS Index's is widely used by homebuilding professionals throughout the US and abroad to evaluate residential building energy performance to comply with both private and public programs, making it a perfect tool for those professionals and municipalities that wish to meet the targets of the 2030 Challenge.”

Edward Mazria
Founder
Architecture 2030

Al Gore's Home



Join the Parade

