

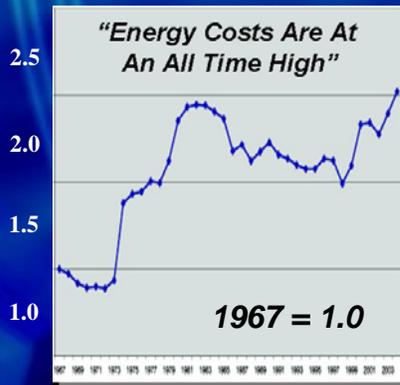
Why Devote Time and Money to Energy Efficiency?



Immediate Energy Concerns

Rising Costs
Affordability
Asset Performance

Energy Costs Are Rising



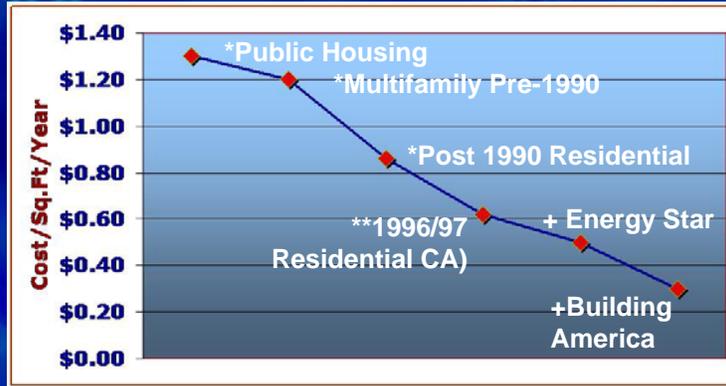
SOURCE: Energy Information Agency

- Energy prices reached an all time high in 2004/2005
- Home energy costs, adjusted for inflation, have more than doubled in real terms since 1970-era Oil Embargo

Comparative Energy Cost Burdens Remain High

- 56% of American households (63 million families) with incomes under \$50,000 will spend 20% of their pre-tax income on energy
- Federally-eligible households expend 13.7% of income on household energy costs

Our Housing Stock Is Inefficient



Source: *2006 Building Energy Data Book; DOE Representative Annual Unit Cost of Energy for 2005 ** California Energy Commission ; + Derived from research studies and anecdotal information.

Building Conditions Affect Energy Performance

- **Aging Buildings:**
 - Most existing housing built prior to energy requirements
 - 85% of HUD-assisted housing built prior to 1985

Built Before 1980	Built After 1980
71%	29%

Source: 2001 Residential Energy Consumption Survey
www.eia.doe.gov/emeu/recs/

Building Conditions Affect Energy Performance

- **Aging Systems:**

- Aging systems may contribute to higher maintenance and operating costs

Percent >10 years old

Heating Equipment	47.7%
Cooling Equipment	27.0%
Water Heaters	31.0%
Refrigerators	31.6%

Source: 2001 Residential Energy Consumption Survey
www.eia.doe.gov/emeu/recs/

Building Conditions Affect Energy Performance

Selected Performance Indicators

Adequacy of Insulation	18.8% - Properties with poor Insulation
Occurrences of Drafts	78.8% - Properties with drafts some or all of the time
Thermostats Controls	80.5% - Units without programmable thermostats

Source: 2001 Residential Energy Consumption Survey
www.eia.doe.gov/emeu/recs/

Building Conditions Affect Energy Performance

Lighting Use

	1-4 hrs per day	4-12 hrs per day	Over 12 hrs/day
Two or more lights turned on	52%	35.5%	4.7%
One or more turned on	90%	68%	18%

Source: 2001 Residential Energy Consumption Survey
www.eia.doe.gov/emeu/recs/

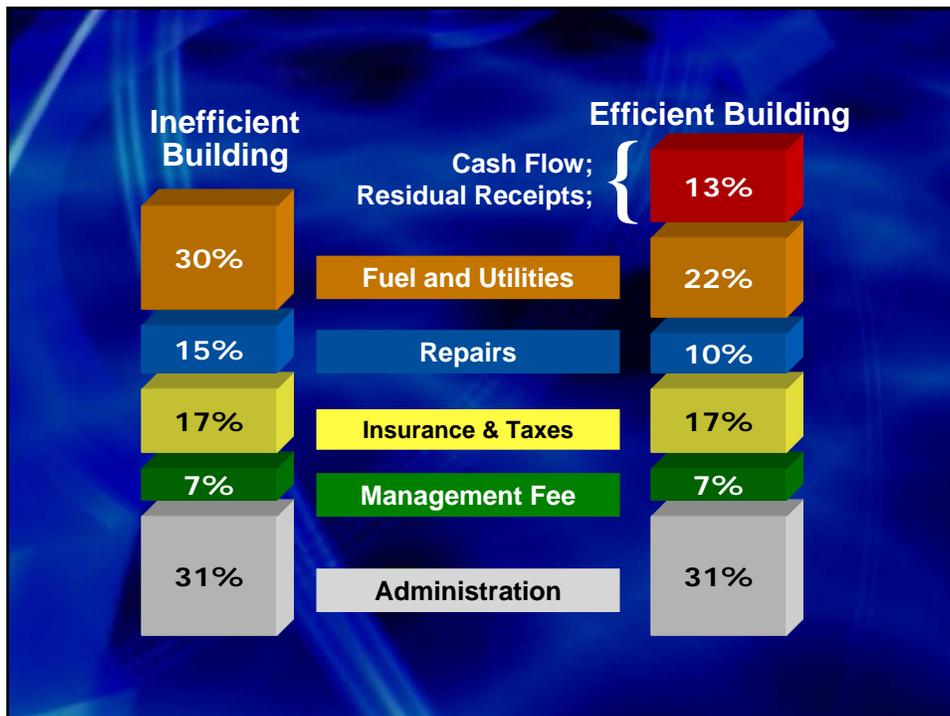
Energy Performance Affects Financial Performance

- **Reduced Cash Flows -**
 - Increases financial risks
- **Insufficient Project Reserves -**
 - Limits investment in high performance equipment with higher “first costs”

Energy Performance Affects Financial Performance

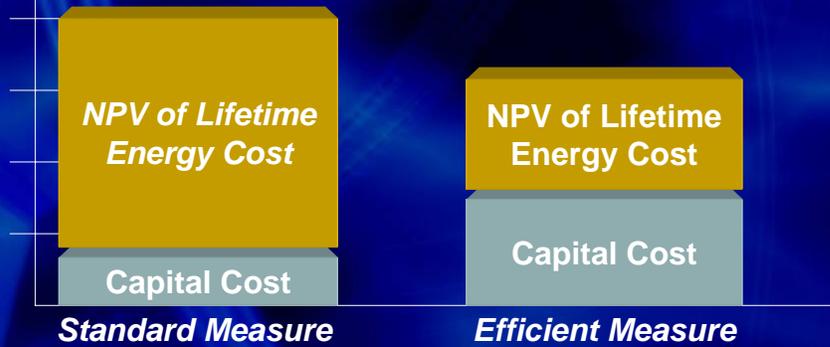
- Limitations on Revenues -
 - Lower Net Operating Income affects financial capacity to support investments for lower operating costs
 - NOI affects property valuation

[Calculated: NOI divided by Capitalization Rate]



Life Cycle Perspective

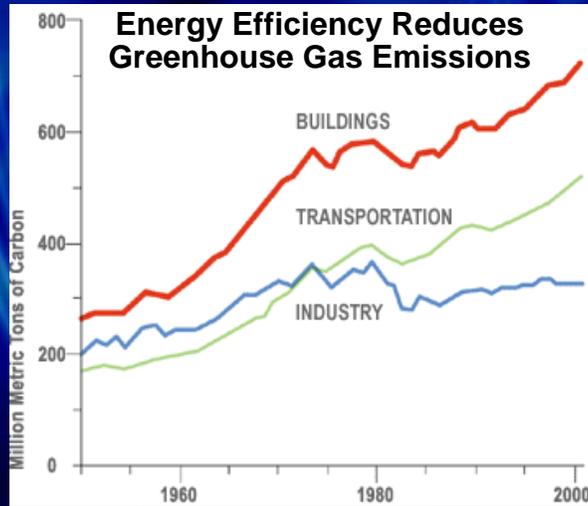
- Energy Efficiency Measures may cost more BUT... *generate lower life-cycle energy costs*



Energy Efficiency Improves Community Cash Flow

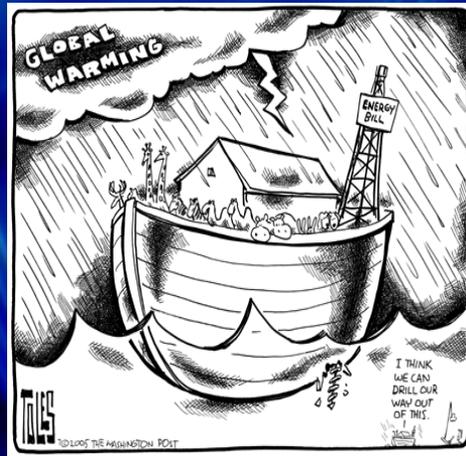
Leakage of energy dollars from local economy
 – \$0.60 to \$0.80 of each energy dollar leave our communities

Investments in Energy Efficiency Projects	+	Economic Multiplier Effects	=	Local Economic Growth
<ul style="list-style-type: none"> ✓ <i>Direct, Indirect and Induced Effects</i> ✓ <i>Spending of Energy Dollar Savings</i> 				<ul style="list-style-type: none"> ✓ <i>New jobs/wages</i> ✓ <i>New sales and profits</i> ✓ <i>New tax revenues</i>



American Institute of Architects, [Architects and Climate Change](#)

Are these trends sustainable?



"I think we can drill our way out of this."