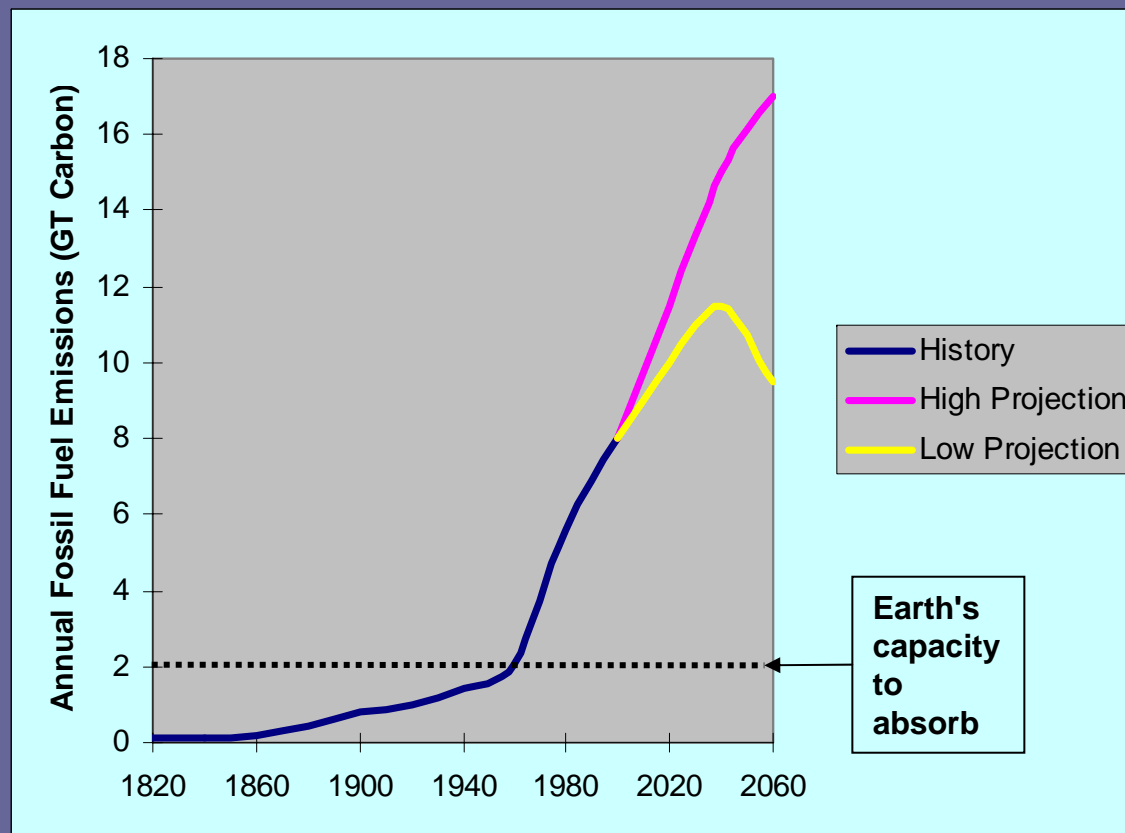


# Energy Consumption, Real Estate, & the Earth...

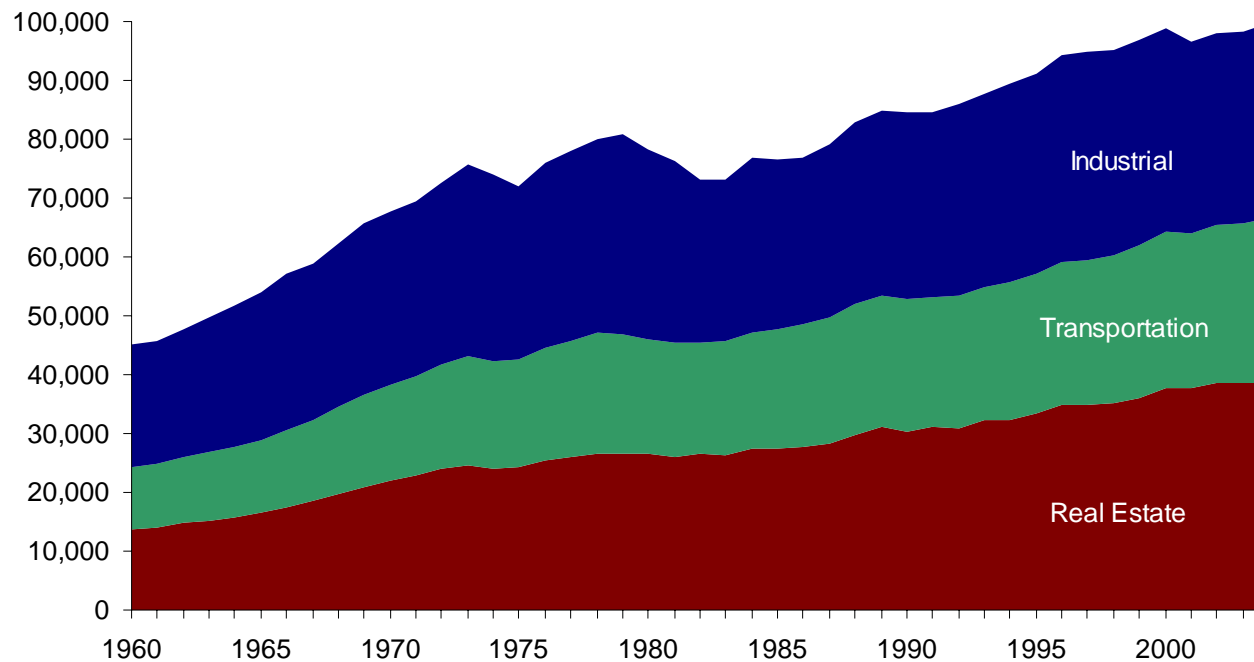
At Present, Energy Consumption Is Closely Related to CO<sub>2</sub> Emissions. Earth's Climate Hangs in the Balance:





# Real Estate is the Largest User of Energy...

**Total U.S. Energy Consumption by Sector, 1960-2004  
(Trillion Btu)**



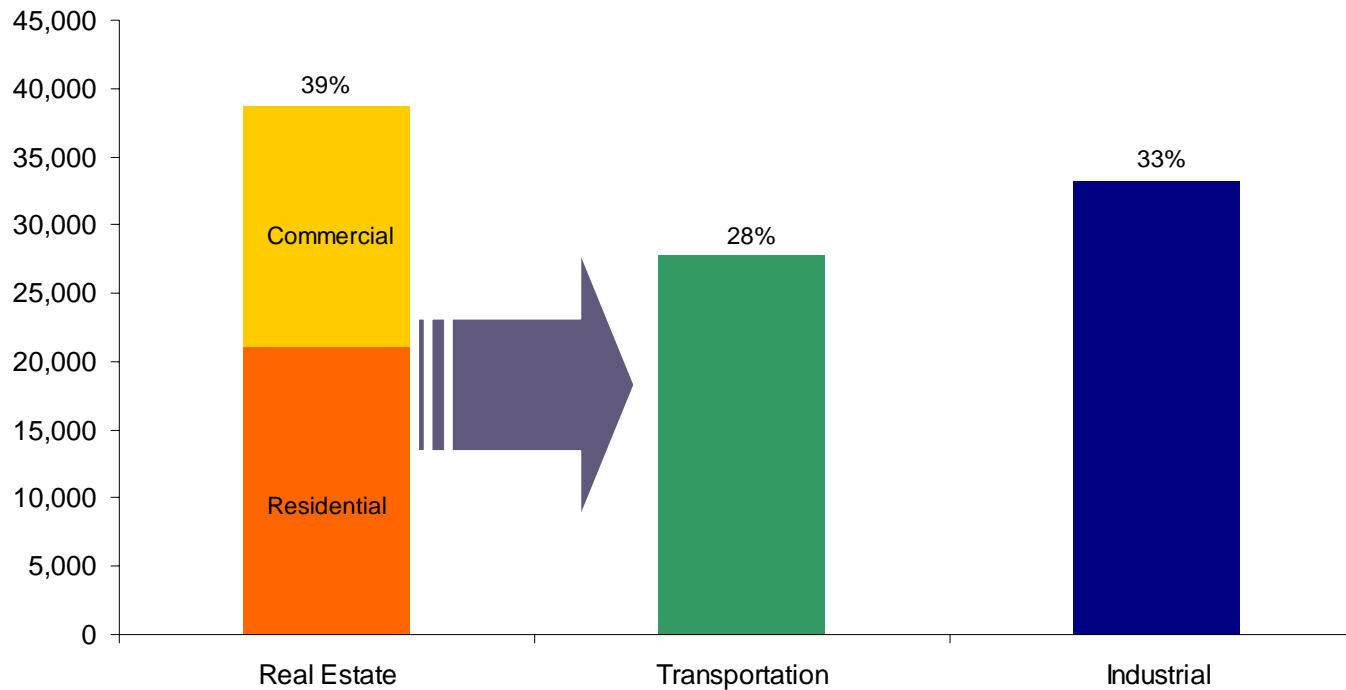
Notes: Total energy consumption includes consumption of coal, natural gas, petroleum, nuclear electric power, hydroelectric power, wood, water, alcohol fuels, geothermal, solar, wind, coal coke net imports, electricity net imports, and electricity delivered to site (adjusted to account for fuels used during production of electricity).

Source: Energy Information Administration, Annual Energy Review 2004, Table 2.1a



# Plus Real Estate Impacts Transportation Energy Consumption Via Urban Design & Location Patterns...

**Total U.S. Energy Consumption by Sector, 2004  
(Trillion Btu)**

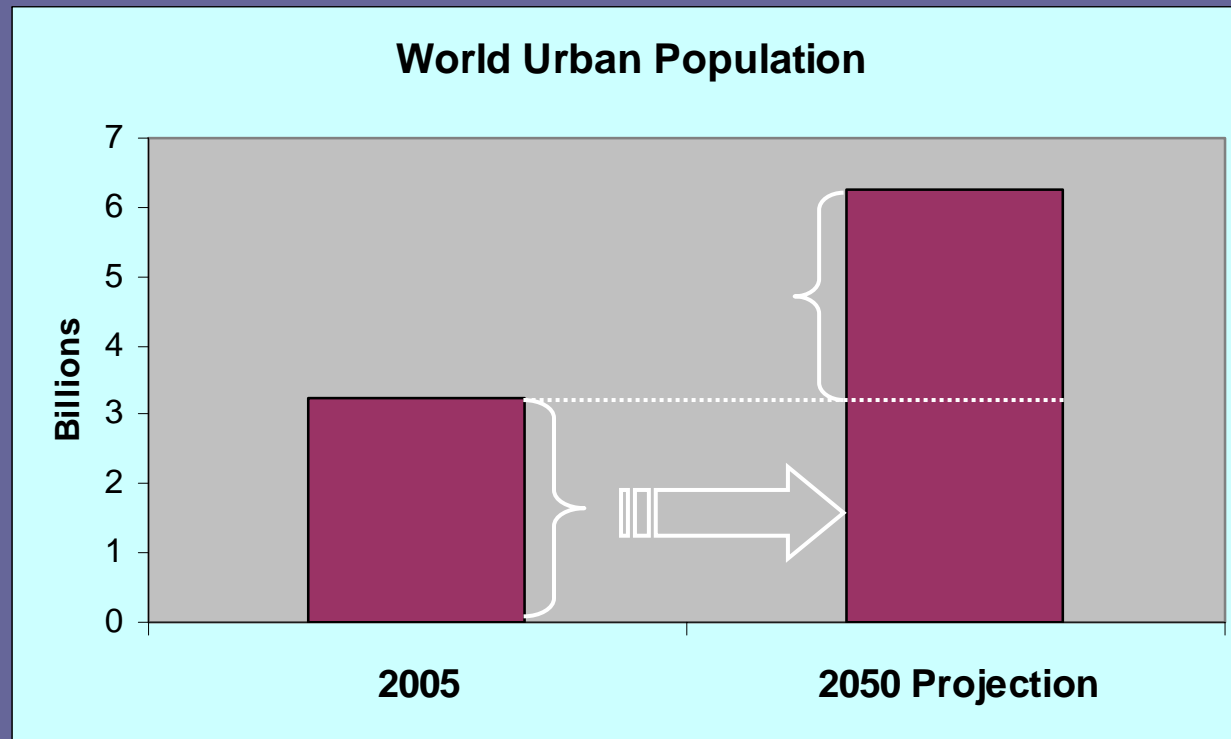


Notes: Total energy consumption includes consumption of coal, natural gas, petroleum, nuclear electric power, hydroelectric power, wood, water, alcohol fuels, geothermal, solar, wind, coal coke net imports, electricity net imports, and electricity delivered to site (adjusted to account for fuels used during production of electricity).

Source: Energy Information Administration, Annual Energy Review 2004, Table 2.1a

## Real Estate Development Will Remake the Physical World Between Now and 2050...

- World urban population will double between now & 2050 ( and then stabilize...)
- Much of the existing building stock will also be rebuilt during the next 45 years...





# *Mens et Manus*

MIT's Mission Is to Help Address This Challenge  
The Center's Mission is to *Link* . . .

## MIT

Engineering

Science

Architecture & Planning

Sloan

Hum & Soc Science



Global  
Real Estate  
Industry



## What is the MIT/CRE doing now?...

- Working “green” into the MSRED curriculum
- Developing a new course (11.946 “Building Sustainability”):
  - John Macomber leading
  - Target Spring 08 roll-out as elective
  - 2009 required in MSRED core
- Enhancing PDC green content:
  - Cynthia Brooks’ “Brown to Green” course
- Executive roundtable (in the works)