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BUILDING ENERGY EFFICIENCY:  
Seeking Strategies that Work  
May 8, 2013



#bldgenergy2013



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## So What does it all mean?

- Change is coming...Gen X is as large as the baby boomers and they have a moral/ethical basis
- There needs to be both operating metrics like Energy Star and design metrics like LEED
- Tenants need tools that give them the ability to measure, monitor, verify, turn off, and turn down
- Transparency will drive results
- We need better financial metrics, financing mechanisms, and consistency on assumptions/measures of the financial return of energy efficiency.
- Energy efficiency investments are competing with other financial priorities.

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## So What does it all mean?

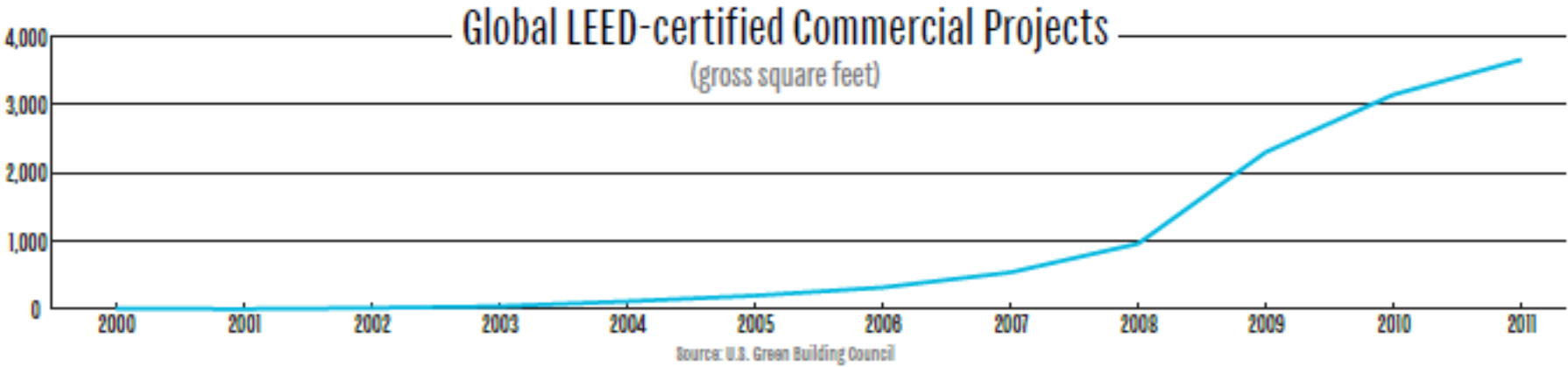
- Adoption remains a key barrier for energy retrofitting...innovative research and incentives are necessary
- There is a low level of knowledge and action about energy efficiency that demands education
- Collaboration like the EEB Hub, public/private organizations, and strategic corporate partnerships are helping to solve the problems
- Innovation will challenge what we accept today as the norm and the future
- Policy changes are necessary and will drive meaningful change in energy efficiency for business and individuals
- There is a “energy efficiency gap” and no clear answers on how to close it
- It is easier to get energy efficiency initiatives adopted if there is a penalty for going to jail for missing implementation targets

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# \$40 BILLION

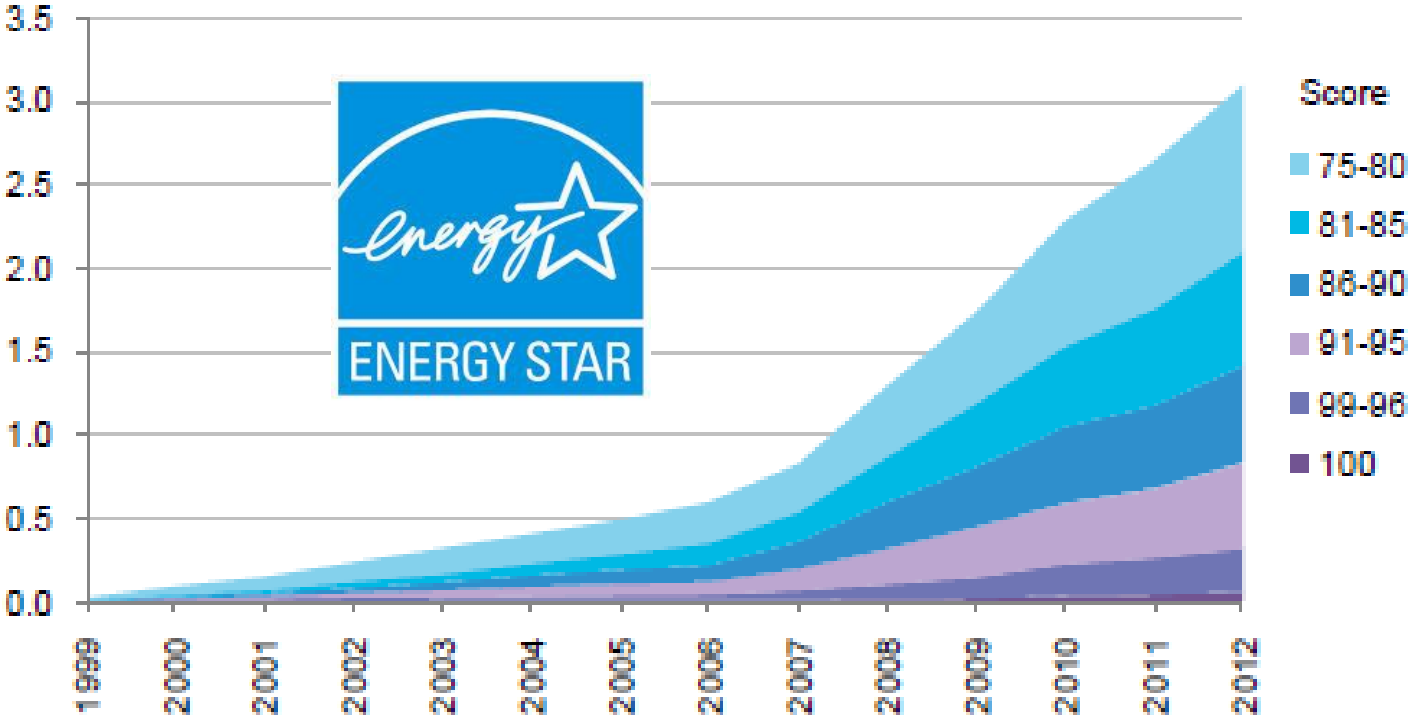


# We are making progress...LEED



# We are making progress...Energy Star

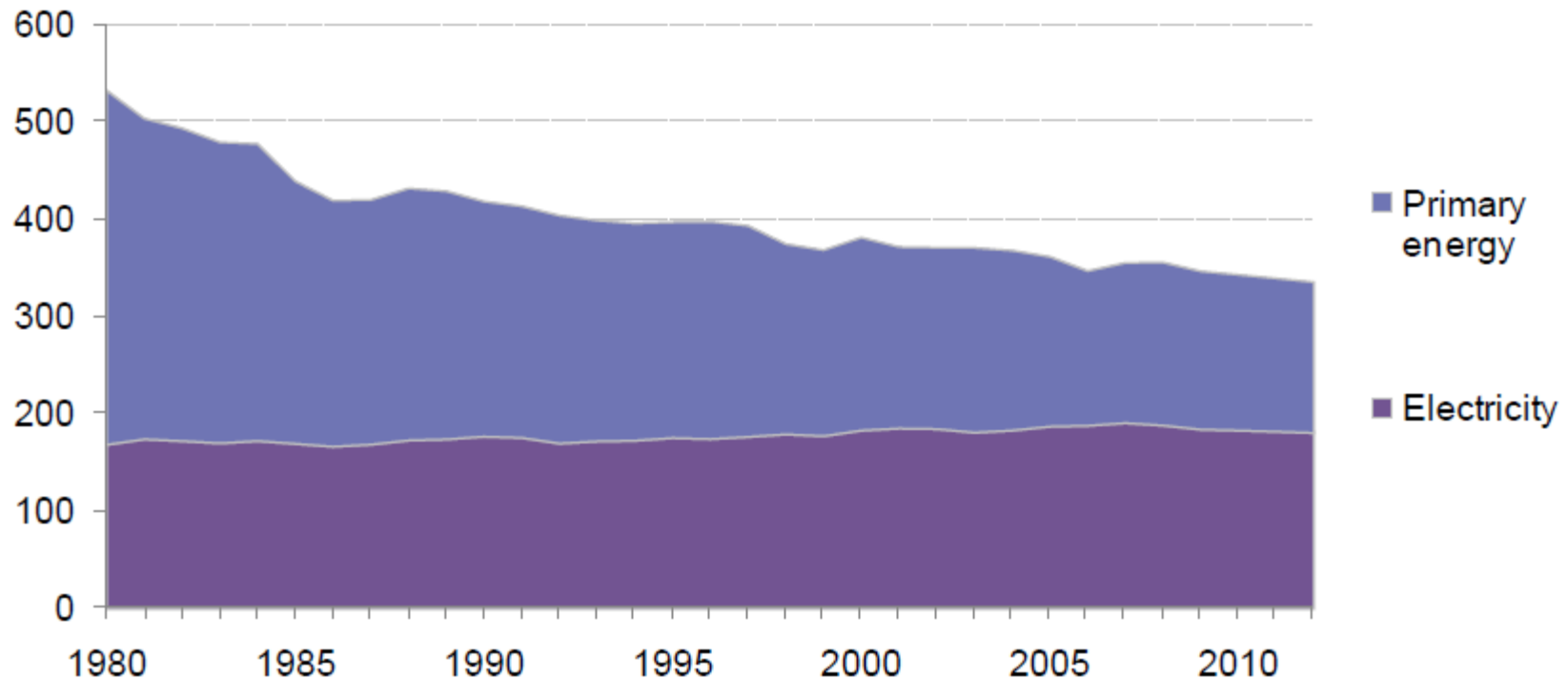
Figure 92: Energy Star-certified floor space in US commercial buildings, categorized by score, 1999-2012 (bn ft<sup>2</sup> of floor space)



Source: US EPA, Bloomberg New Energy Finance

# Commercial Building Energy Intensity Declines

Figure 91: US commercial building energy intensity (electricity, primary energy), 1980-2012 (kWh/m<sup>2</sup>/year)

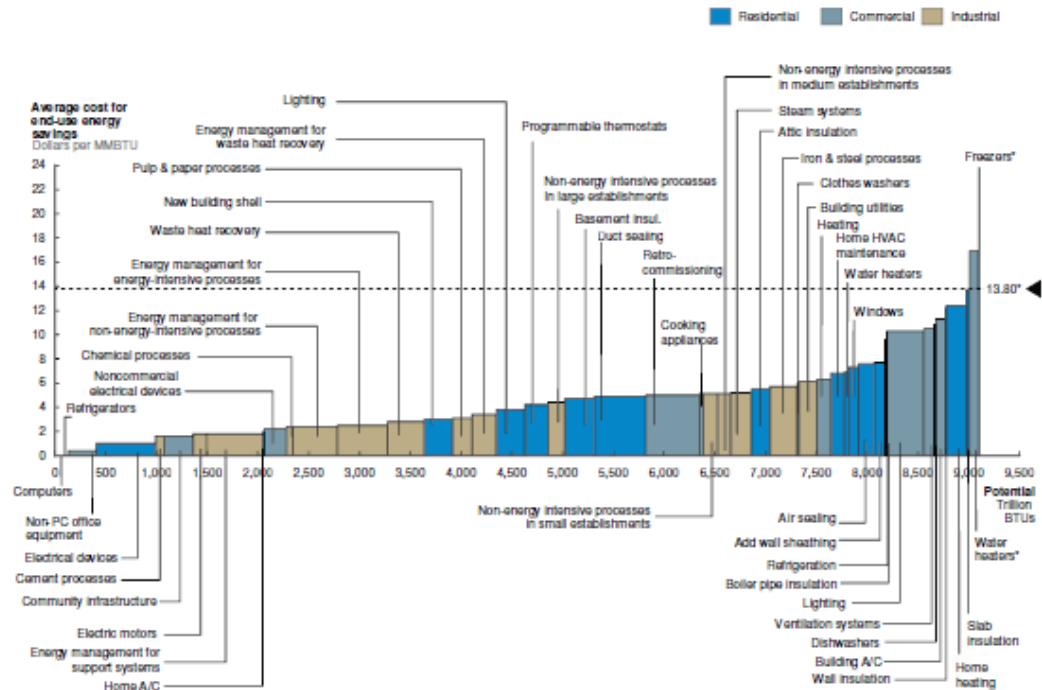


Source: EIA, Bloomberg New Energy Finance

# A significant opportunity

Exhibit D: U.S. energy efficiency supply curve – 2020

The width of each column on the chart represents the amount of efficiency potential (in trillion BTUs) found in the named group of measures, as modeled in the report. The height of each column corresponds to the average annualized cost (in dollars per million BTUs of potential) of that group of measures.

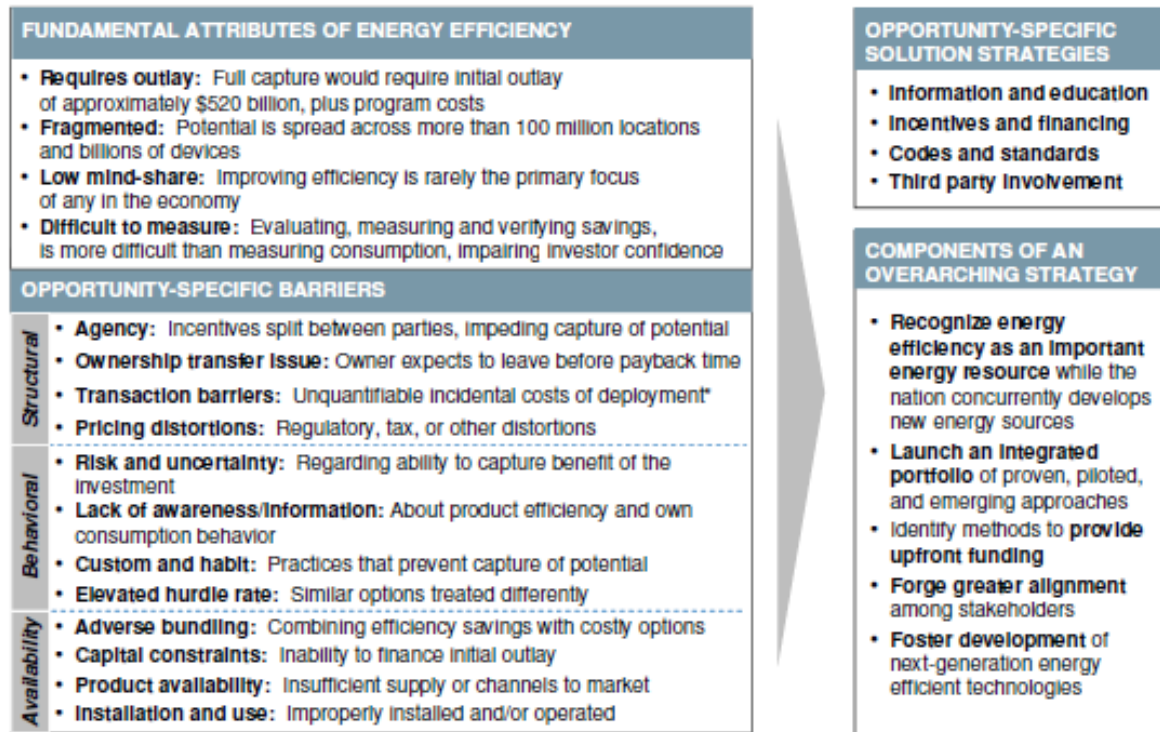


\* Average price of avoided energy consumption at the industrial price; \$35.60/MMBTU represents the highest regional electricity price used; new build cost based on AEO 2008 future construction costs  
 Source: EIA AEO 2008, McKinsey analysis

Source: McKinsey, *Unlocking Energy Efficiency in the Economy*, 2008



# But...there are barriers to unlocking the full potential



\* Financial transaction barriers and actual quality trade-offs are factored into the initial NPV-positive potential calculation as real costs.

Source: McKinsey analysis

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# What are we going to do today?

- **Panel #1: Advancing Energy Efficiency: Seeking Best Practices**
- **Panel #2: Raising Demand for Energy Efficiency**
- **Panel #3: Investment Opportunities for Companies in the Building Energy Efficiency Marketplace**
- **Panel #3: Policy & Regulatory Framework**



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