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The Business Case for Green Building In Alaska



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Take-Aways



Green building is important for controlling CO₂ production



Green design/development is here to stay

- Growth was still strong in 2009-2010
- 500 new LEED projects each month in 2010



Benefits are significant for all building types



Cost premium is 2% or less

What is a Green Building?



- 🌿 Energy/Water Efficient
- 🌿 Land Use & Materials
- 🌿 Works Better for People
- 🌿 Tested and certified by independent 3rd party
 - 🌿 LEED in the U.S.
 - 🌿 Homer Public Library
 - 🌿 LEED Silver
- 🌿 Performance verified

The Triple Bottom Line



Profit

- Financial return
- Marketing & PR
- Higher productivity

Planet

- Less carbon, waste, energy and water use

People

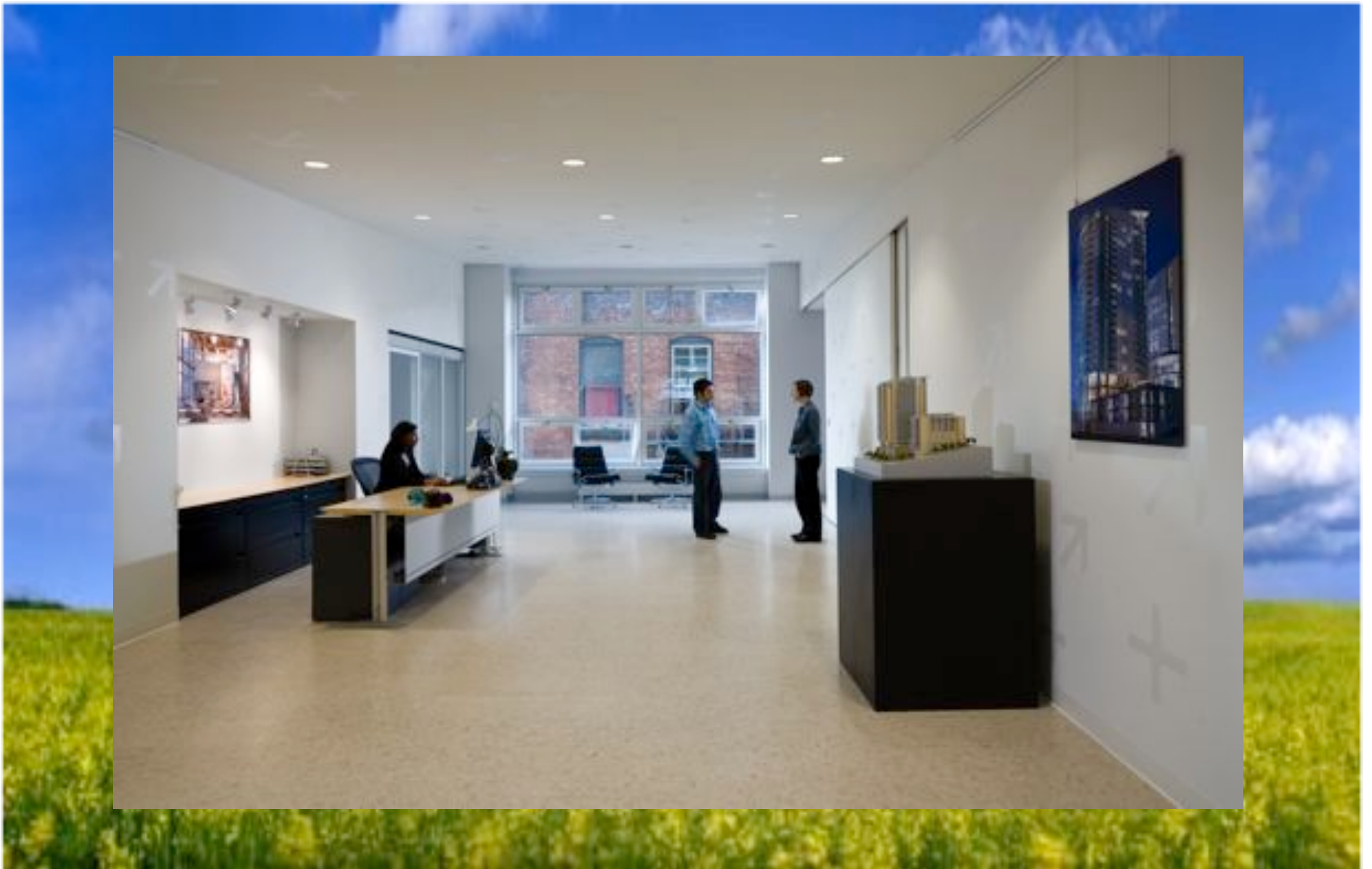
- Job satisfaction
- Work environment

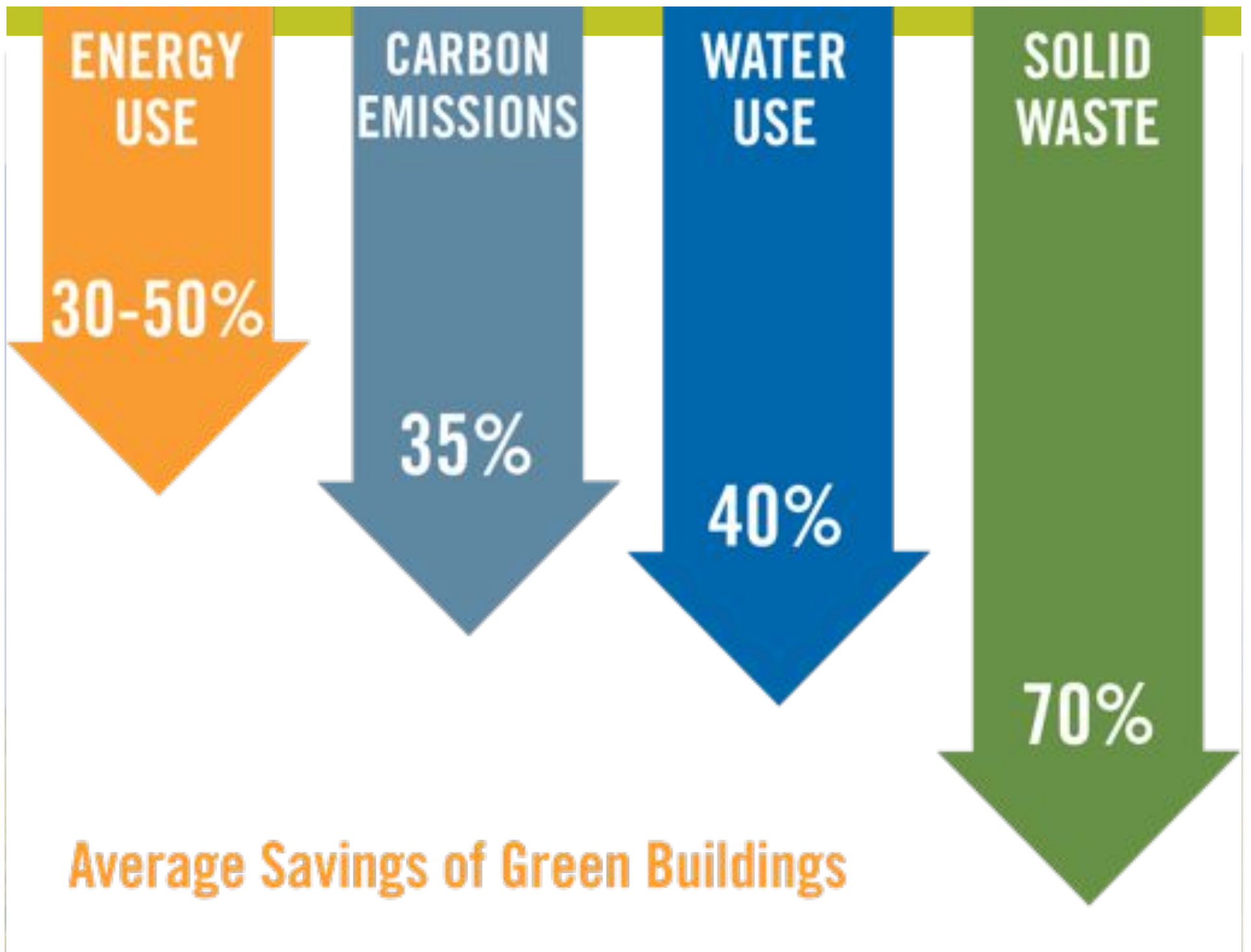
Making the Business Case



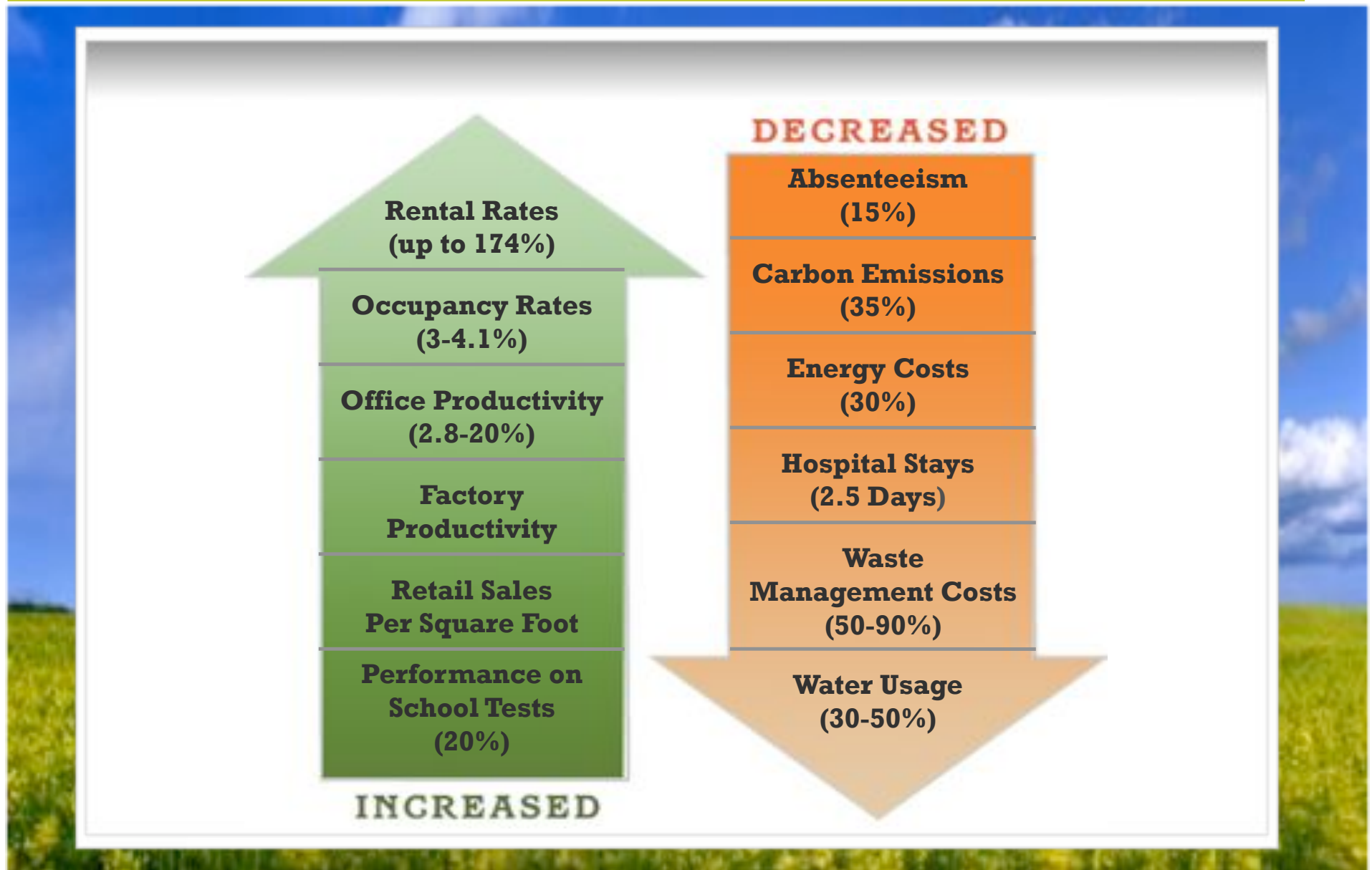
- CBRE/U. San Diego
- 500 tenants in 154 LEED buildings
- 55%: more productive
 - Average gain: 4.9%
 - \$5,200 value add/employee = \$21/sq.ft.
- 45%: fewer sick days
 - Average: 2.88 days less
 - Value: \$5.00/sq.ft.

Green Building Important for Carbon Reduction





Range of Proven Benefits



Importance of Building Green

🌿 In the year 2035, 75% of the built environment will be either new or renovated, vs. 2005.

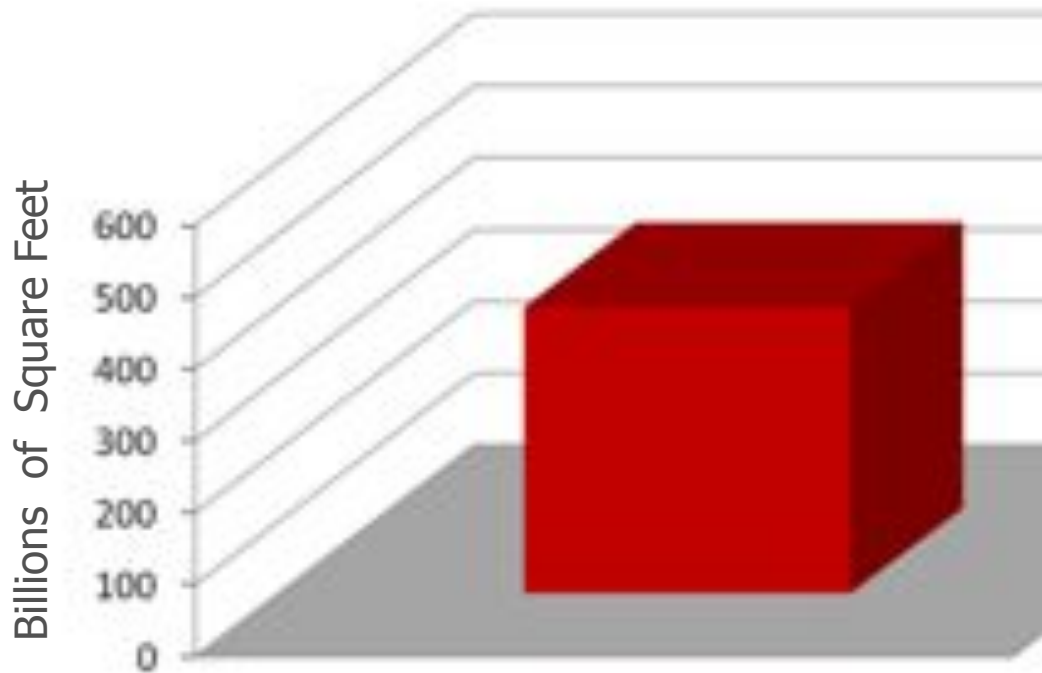
🌿 We can transform our energy consumption and CO₂ production by constructing and renovating all buildings to green standards.



McDonalds Corp. HQ
LEED-EB GOLD

Our Opportunity to Build Green

Current US building stock is approx. 300 billion sf.

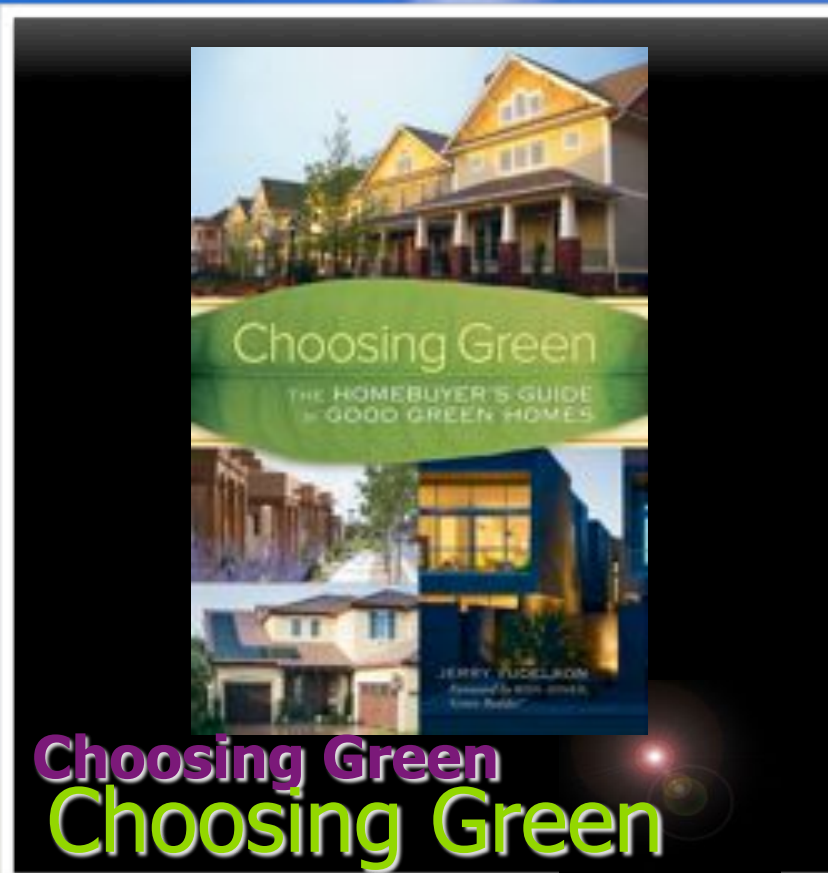


Over the next 30 years:

- 50 billion sf will be demolished
- 150 billion sf will be remodeled
- 150 billion sf will be new construction

Starting 2010, by the year 2040, 75% of building stock will be new or renovated

Life-Cycle Positive Solution



🌿 *Building efficiency investments are the **only** Life-Cycle-Cost-positive solution*

🌿 **25%** of total carbon solution can come from buildings

Green Building Statistics

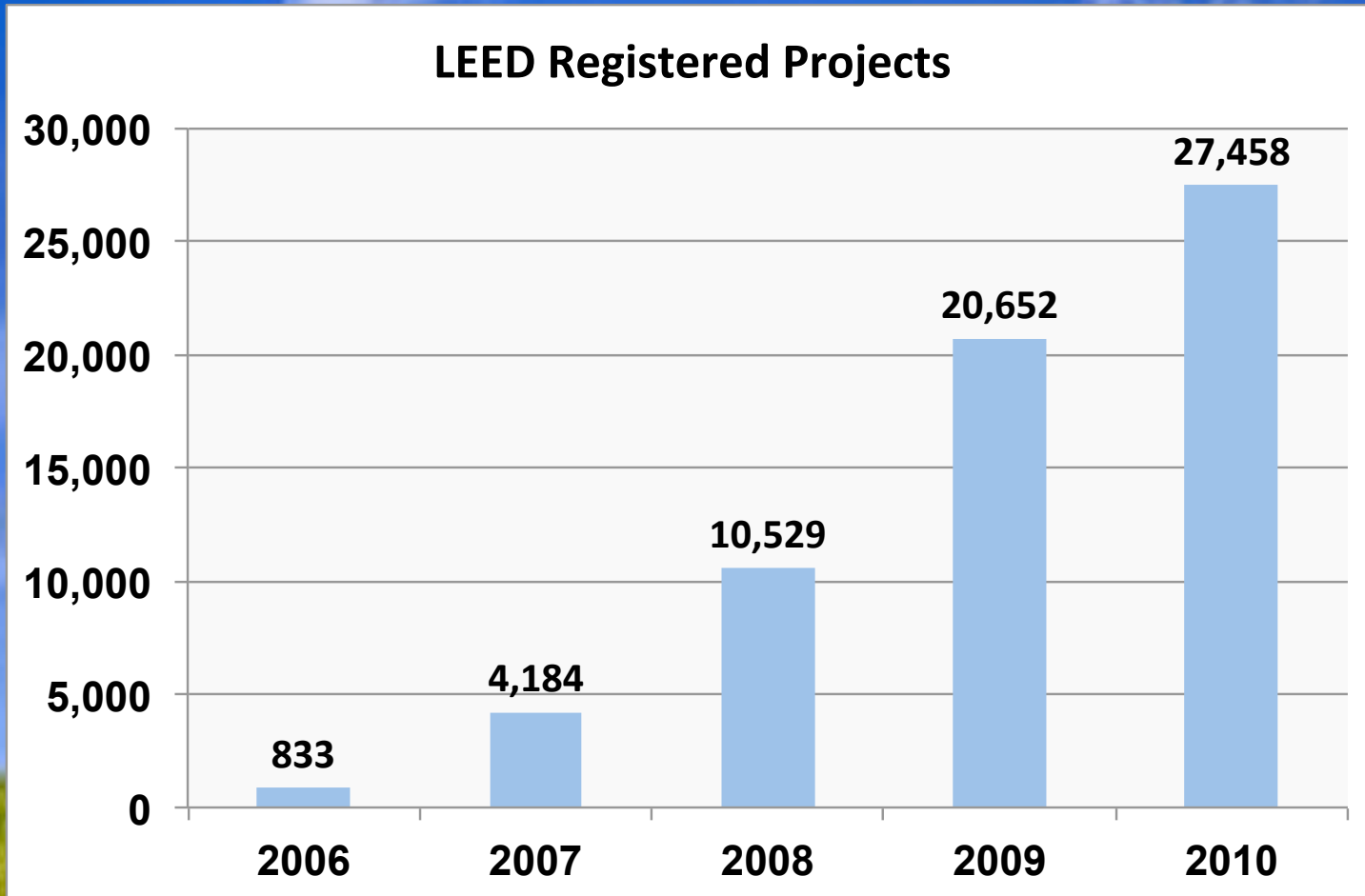


- ❧ USGBC: 16,000 corporate members
- ❧ 28,000 LEED registered projects
- ❧ 7,000 LEED certified projects
- ❧ 155,000 LEED accredited professionals

“In God We Trust; All Others Must Bring Data.”

-W. Edwards Deming

Green Buildings



Greening Existing Buildings: The Next Big Challenge



🌿 4,800 LEED-EBOM

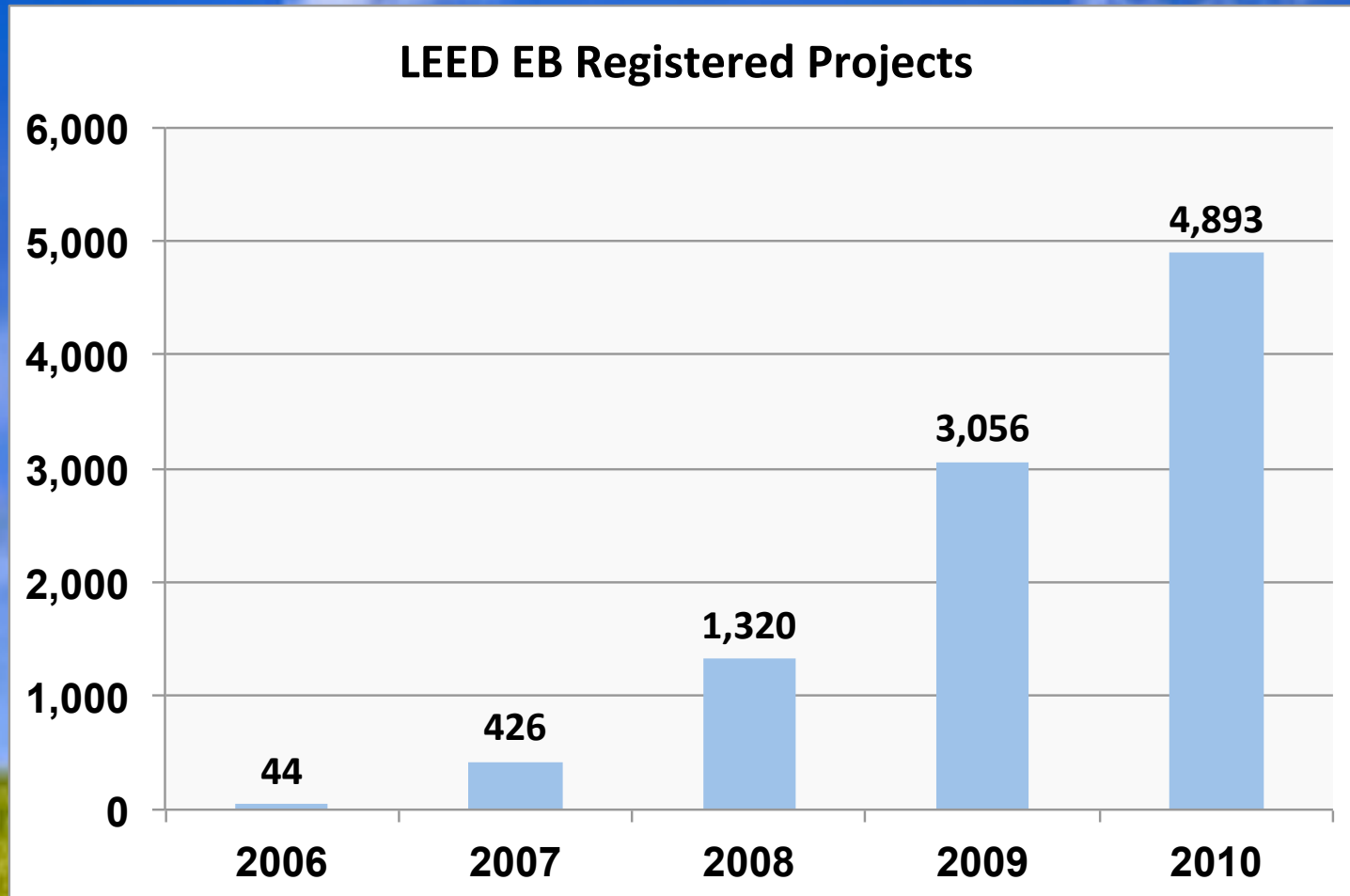
🌿 900 in 2010

🌿 CBRE (100 Bldgs.)

🌿 Merchandise Mart
(4 Million SF)

🌿 Empire State Bldg.

Greening Existing Buildings



Empire State Building

- 🌿 Completion: late 2012
- 🌿 38% expected energy savings
 - 🌿 \$4.4 Million Annual Savings!
- 🌿 Goal: LEED-EB Gold



Green Rebranding

- 🌿 LEED-EB ideal tool
- 🌿 Office/retail properties
 - 🌿 Government bldgs.
- 🌿 Save energy, water, waste costs
- 🌿 Payback in 1-2 years!
- 🌿 Low-cost option



51 Stores
LEED-EB

Business Case for Green



Northfield Stapleton, Denver

LEED Silver



- ❖ Financial/economic
- ❖ Investment capital
- ❖ Risk mitigation
- ❖ Marketing/PR
- ❖ Productivity & health
- ❖ Recruitment & retention
- ❖ Sustainability concerns

CoStar Study Results



Clinton Presidential Library
Arkansas, LEED Platinum

Energy Star Buildings vs. Peers



- \$2.40/sf rent premium
- 3.6% higher occupancy
- Selling for \$6/sf more

CoStar Study Results



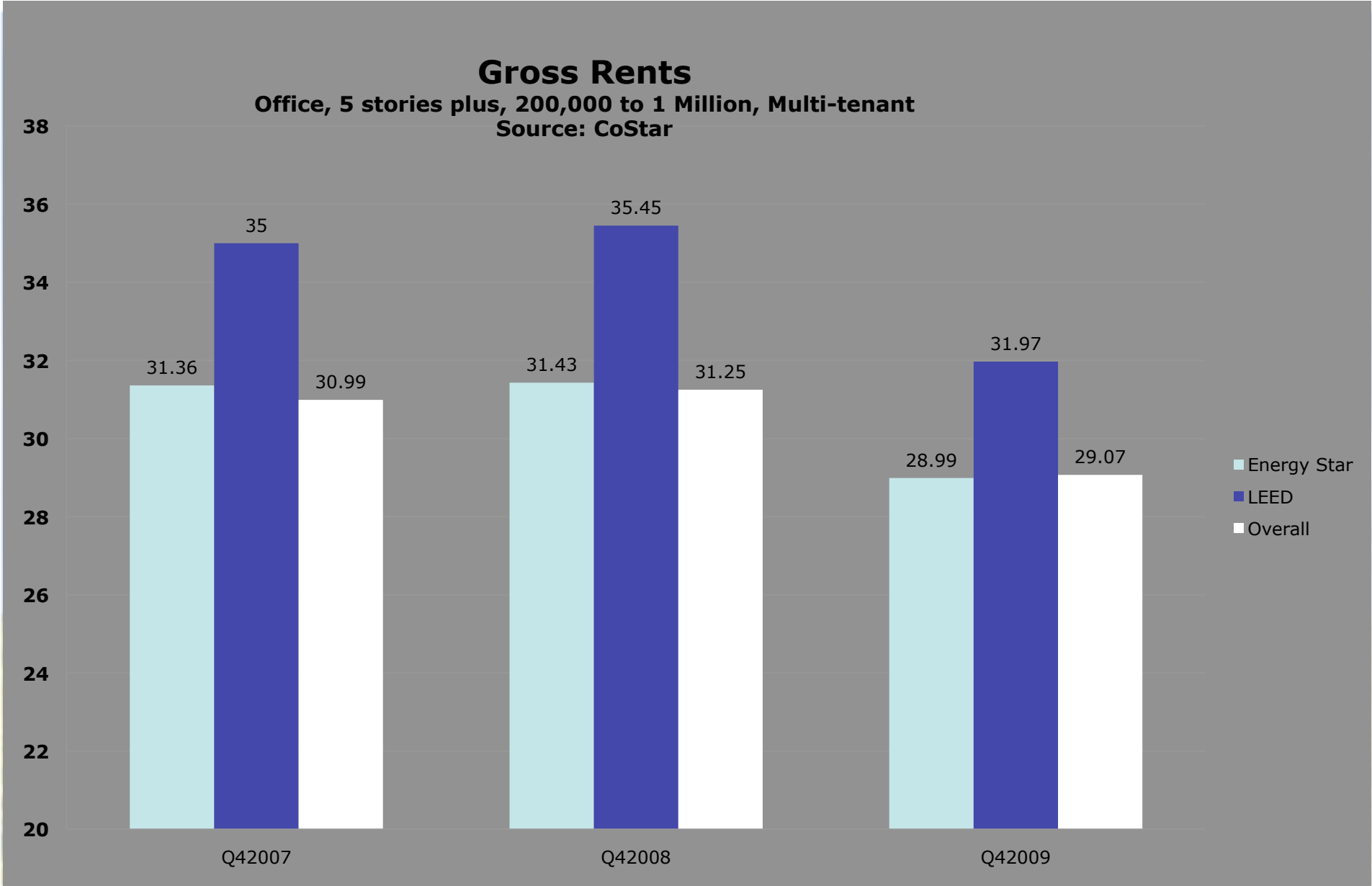
Clinton Presidential Library
Arkansas, LEED Platinum

LEED Certified Buildings vs. Peers

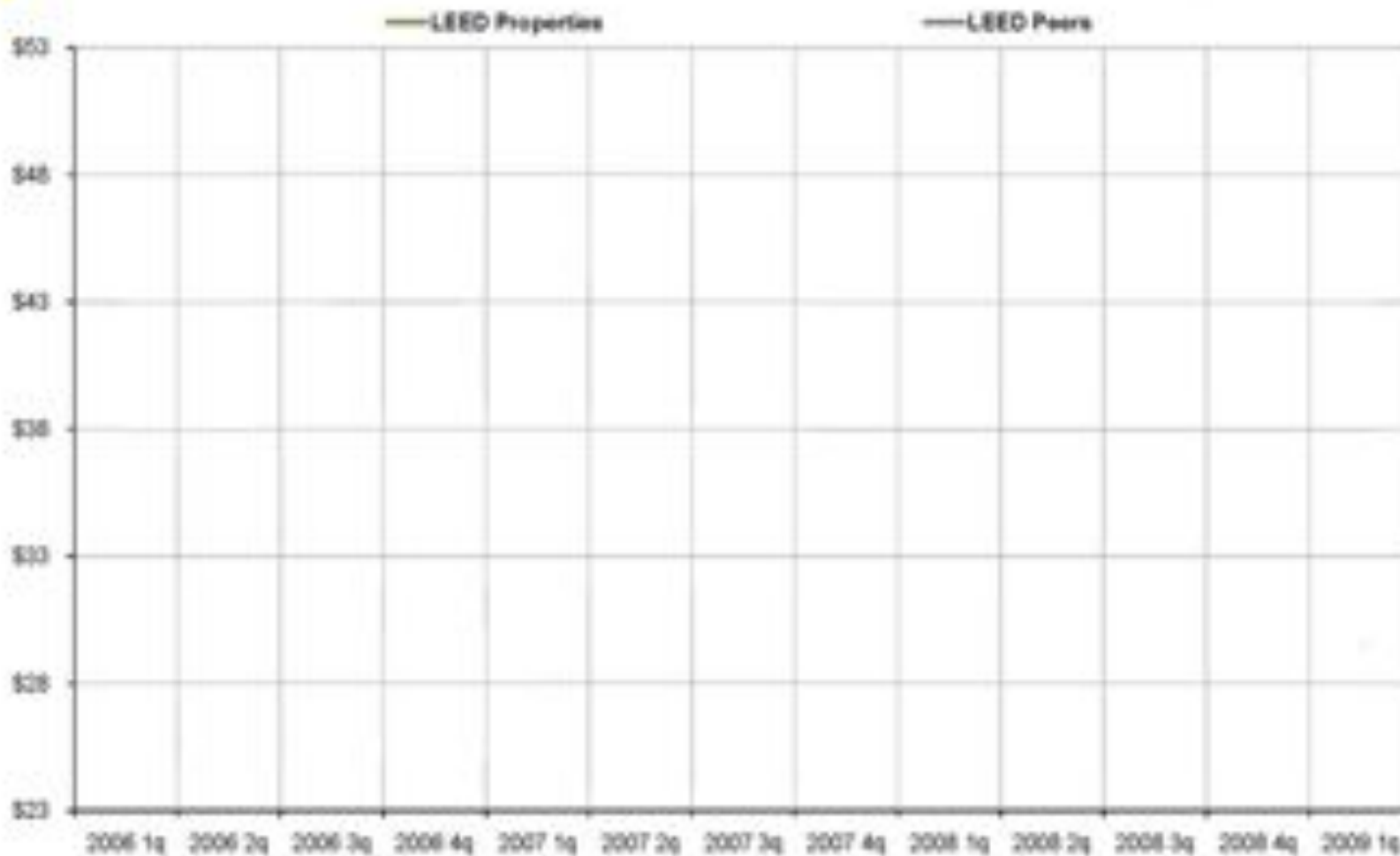


- \$11.33/sf rent premium
- 4.1% higher occupancy
- Selling for \$174/sf more!

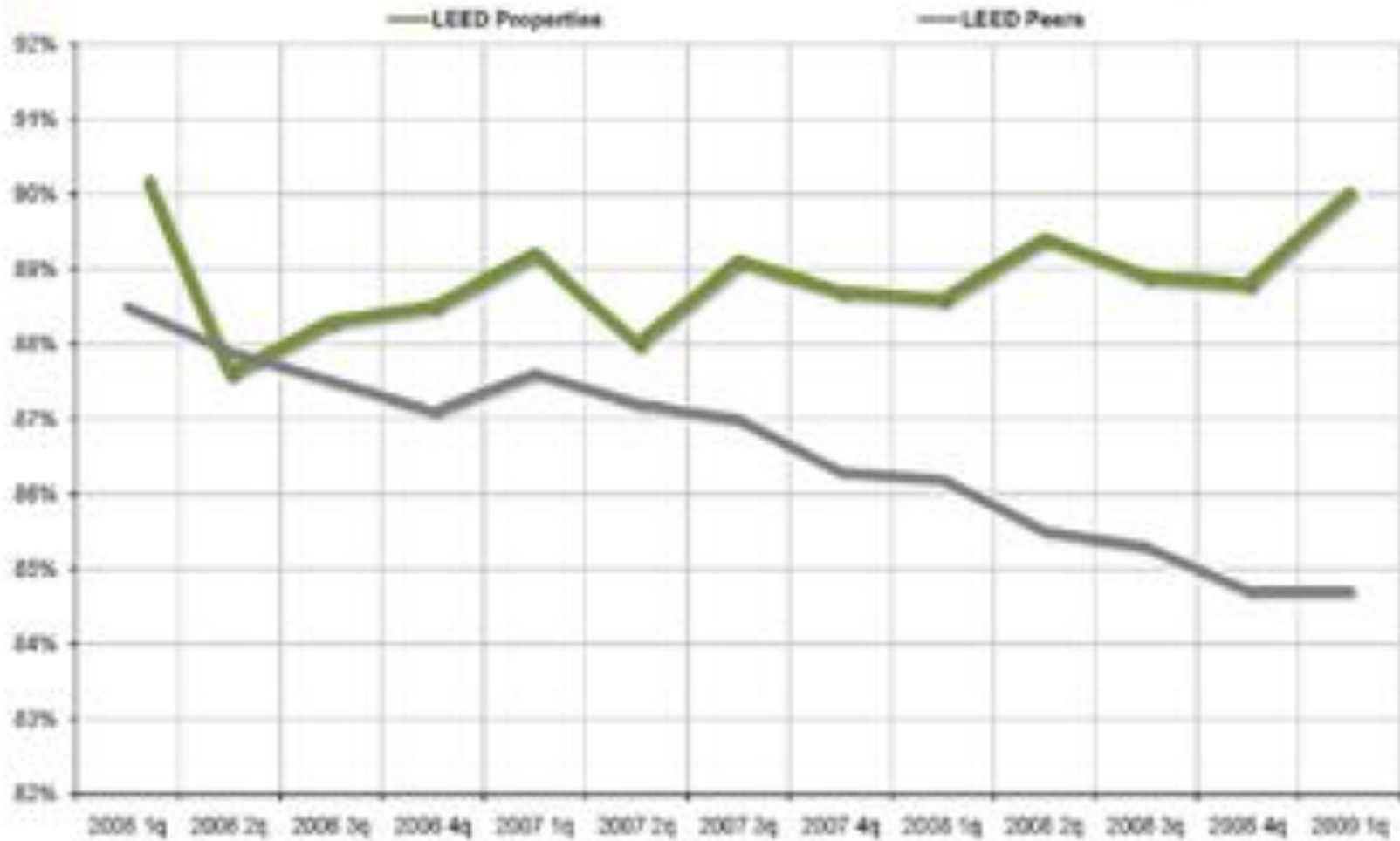
LEED Rent Premium



LEED Direct Rental Rates vs. Peers



LEED Occupancy Rates vs. Peers



RICS Study Results



Marks & Spencer

Plan A

Because there
is no Plan B



2008 Data: 893 certified buildings, 10,000 non-certified within ¼ mile

Conclusions:

- Effective rent 6% higher
- Sales price 16% higher
- Green upgrades add \$5.5 million value

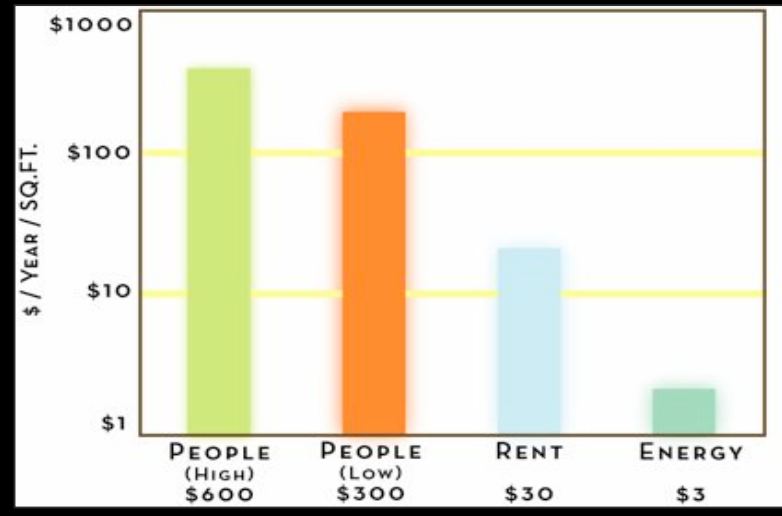
2010 International Survey

- CoreNet Global & Jones Lang LaSalle
- 50% of corp. RE exec's willing to pay more rent
 - Vs. only 13% in 2009
 - Up to 10% more rent
- 73% would pay more with lower energy costs
 - 92% consider sustainability
 - 31% productivity/health

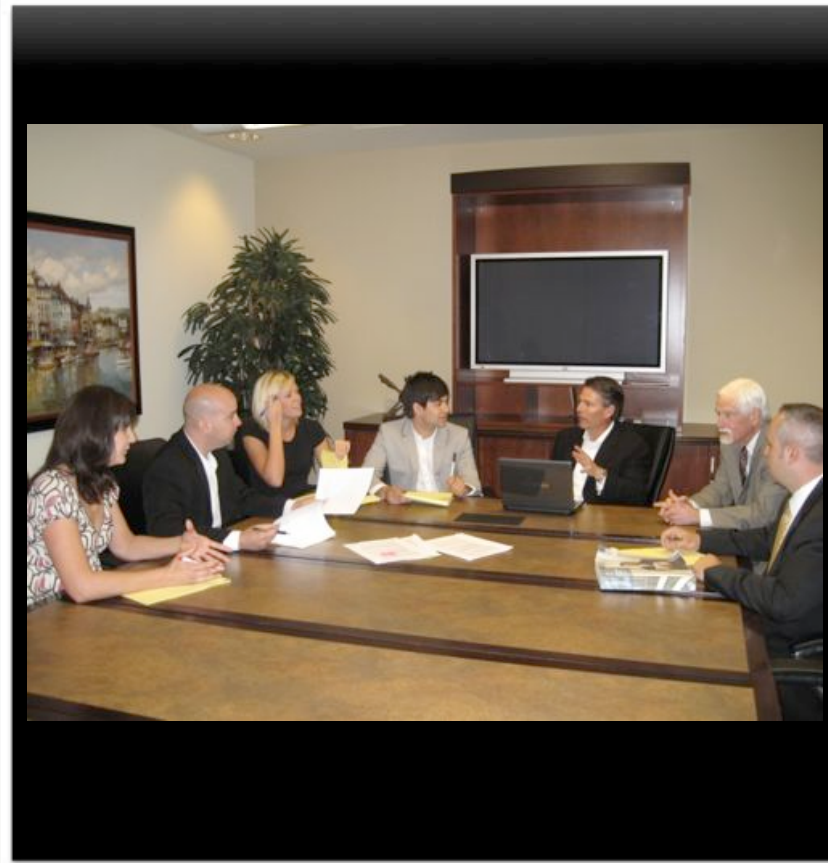


Productivity Counts

- Most costs are ***“people costs”***
- Studies show 3-7% gain in workplace productivity
 - A 1% gain in productivity pays all the energy bills



Green Cost Premium



Green cost premium

- Current range: <2%
- One retailer: 1.5% - 2.0% for new LEED, slightly more to retrofit
 - Impact of extra capital cost on return: <15 basis points (0.15%)

Business Case is Solid!

This is the biggest thing going in the building industry!

- Get out in front – green building revolution
- Big issue: creating value in TBL terms
- Now know how to build green on a budget
- Prevent “value erosion” of existing buildings
- Build a profitable new base of green jobs, products, technologies & know-how

Next: Zero Net Energy (ZoNE)

- ZoNE: the next big trend
- Start with efficient building design
 - 20 kWh/yr/sf (EUI = 68,000 BTU/yr/sf)
- Add 20-KW solar per 1,000 sf
 - Cost (today) = \$100/sf, before incentives
- Adopt European building design, cut energy use 50% or more
 - Suddenly solar becomes cost-effective!

Who Benefits Most?



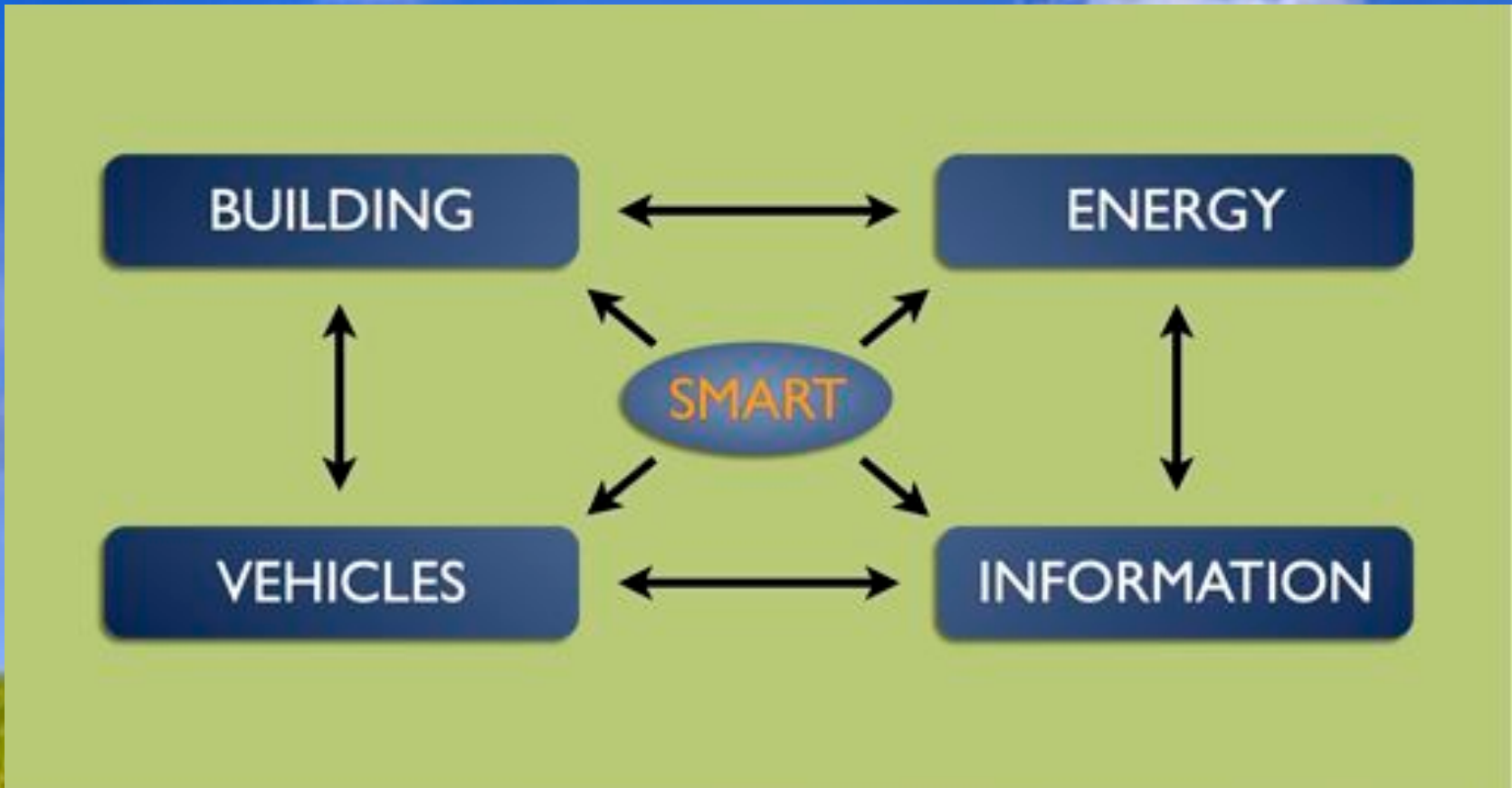
NREL RSF, Golden, CO

LEED Platinum



- ❖ Government offices
- ❖ Corporate offices
- ❖ Commercial offices
- ❖ Universities
- ❖ Research Institutions
- ❖ Schools
- ❖ NGOs
- ❖ Retail/Hotel/Healthcare?

Smart Cities



The Future is Green!



Sidney Crosby, Pittsburgh Penguins
2009 Stanley Cup Winners
2010 Olympic Champions

- 🌱 Skate where the puck is headed, not where it is.
- 🌱 What will the built environment look like in 2015?
- 🌱 What's the "Next Normal"?
- 🌱 Build accordingly!

Jerry Yudelson

Yudelson Associates

THANK YOU!



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Further Resources

Books by Jerry Yudelson:

Dry Run: Preventing the Next Urban Water Crisis (2010)

Greening Existing Buildings (2009)

Sustainable Retail Development: New Success Strategies (2009)

Green Building Trends: Europe (2009)

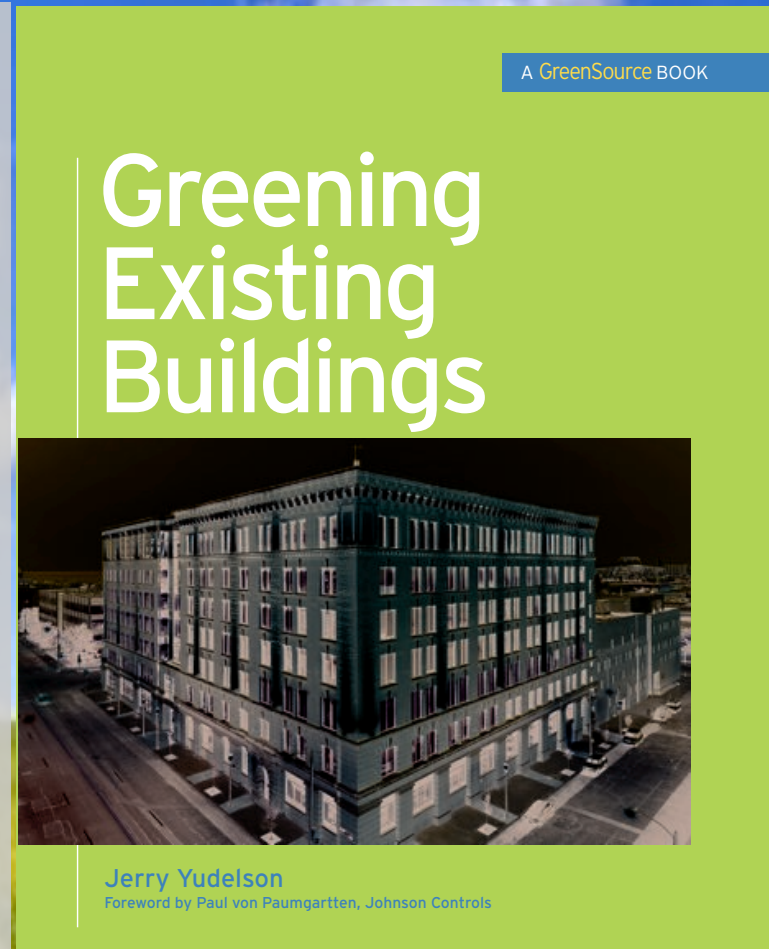
Green Building through Integrated Design (2008)

Choosing Green: The Home Buyer's Guide to Good Green Homes (2008)

Green Building: A to Z (2007)

The Green Building Revolution (2007)

Marketing Green Building Services: Strategies for Success (2007)



Let's Stay Connected!

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Homer Library, again!