

EVOLUTION PARTNERS SPEAKER EVENT

05.04.06 – NAIOP Green Building Panel
The Sheraton in Columbia, MD

GREEN BUILDING FINANCE CONSORTIUM Appropriate Value Recognition of Green / ENERGY STAR Buildings for the Real Estate Finance Industry

ABSTRACT

Evolution Partners is co-founder of the Green Building Finance Consortium and was a key organizer of the Green Building Finance Summit held in New York City in late 2005. The Green Building Finance Consortium was formed by numerous leading developers, investors, and real estate industry groups to 1) independently assess the true costs and benefits of Green / ENERGY STAR buildings, and 2) develop a "Value Measurement Methodology" that will enable lenders, investors, and corporations to appropriately recognize the value of Green / ENERGY STAR Buildings. For the value of Green Buildings to be appropriately recognized by the real estate industry, value must be independently measurable at a reasonable cost, substantially quantifiable, and supported with appropriate education, training and related infrastructure.

An important goal of the Consortium is to develop the mechanisms to quantitatively and qualitatively evaluate Green Building / ENERGY STAR benefits, risks, and uncertainty so Green / ENERGY STAR Buildings can be integrated into existing underwriting and due diligence systems of lenders and investors. It is clear that numerous factors can be addressed through this process that will have a direct, meaningful impact on investment risk reduction, underwriting, and asset value.

BIOGRAPHY

Mr. Winters is the managing principal of Evolution Partners, a Washington, DC based real estate investment advisory and private equity firm specializing in high-performance, environmentally responsible real estate projects throughout North America.

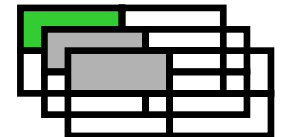
Mr. Winters specializes in securing preferential financing for commercial green projects including construction financing, permanent debt structuring, and joint venture equity capitalization – he has participated in over \$1.5 billion in financing assignments. He also provides strategic consulting to Fortune 500 firms and select real estate firms regarding their short- and long-term corporate environmental strategy as well as real estate asset initiatives and portfolio impacts.

Mr. Winters is a contributing author to several Urban Land Institute texts on real estate development and green building. He has spoken on green building and environmental strategy issues at ULI, USGBC, GreenSense, and ICSC events among others. He holds a masters degree from Harvard in Real Estate Finance and Development and an MBA from Southern Methodist University; he is an alumni of the real estate program at University of Wisconsin.

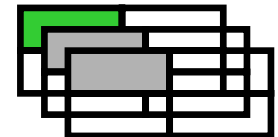


Green Building Finance

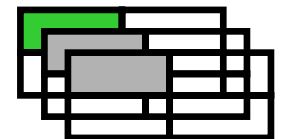
Big Picture Issues / Investor Pressures / Measurement Tools



What do these leading companies have in common?

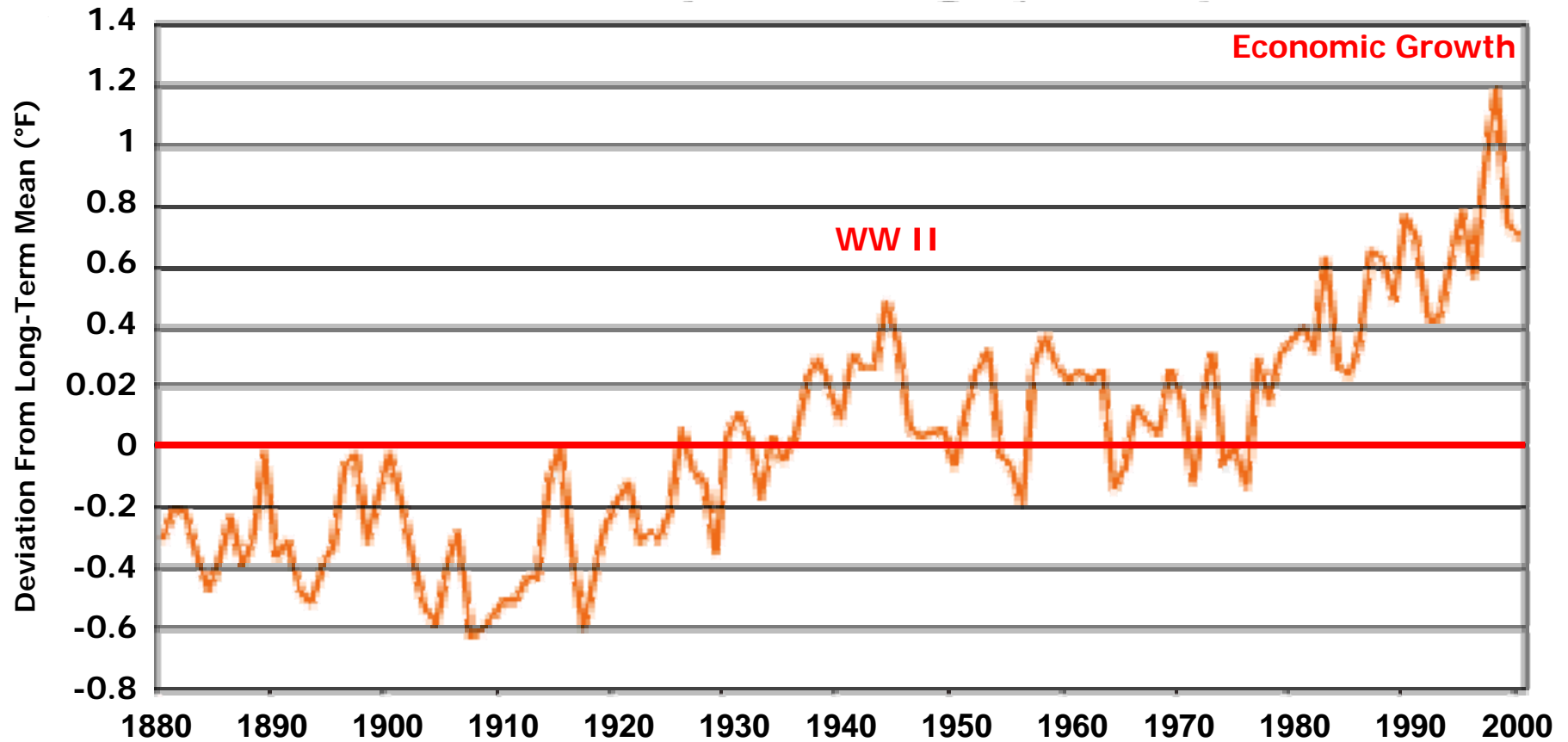


Bad for Long-Term Business

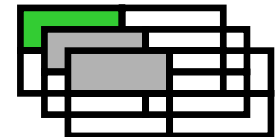


Temperature Trend Lines

Global Temperature Changes 1880 thru 2000



Source: US National Climatic Data Center 2001



Other Facts

Five warmest years on record since 1890

1. 1998
2. 2005
3. 2002 (tie)
4. 2003
5. 2004

Since November 1978, the Arctic atmosphere has warmed seven times faster than the average warming trend over the southern two-thirds of the globe
(Source: NOAA satellite data)

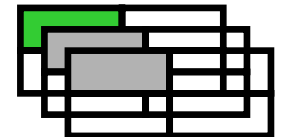
Northern Hemisphere (by total land mass)

- Permafrost = 24%
- Annual Freeze = 57%

Both declined by 15-20% with significant rate increase in last 15 years

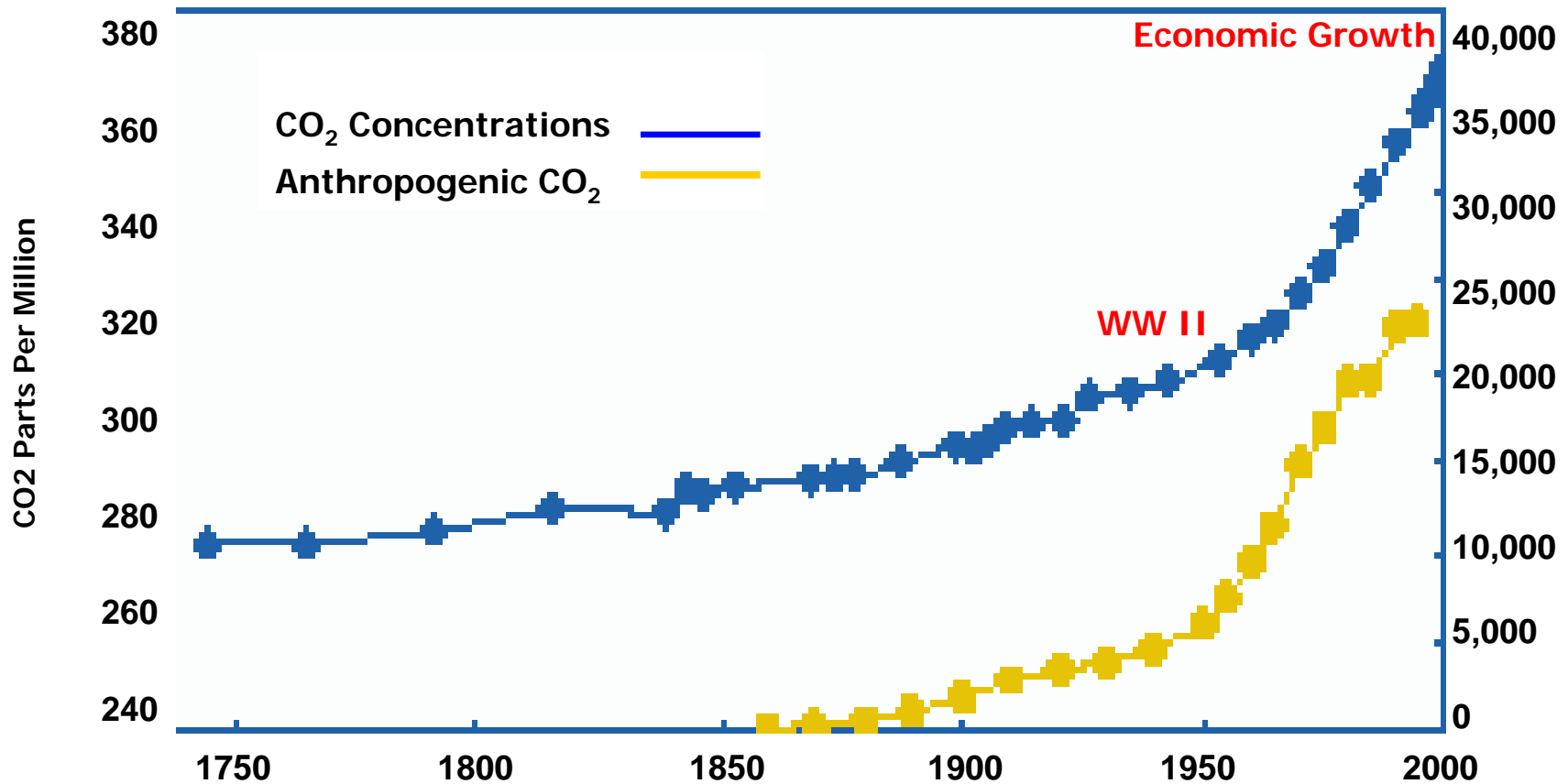


Source: Live Science / Discovery Channel Online

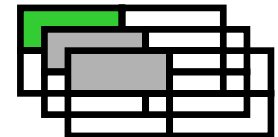


Coincidence?

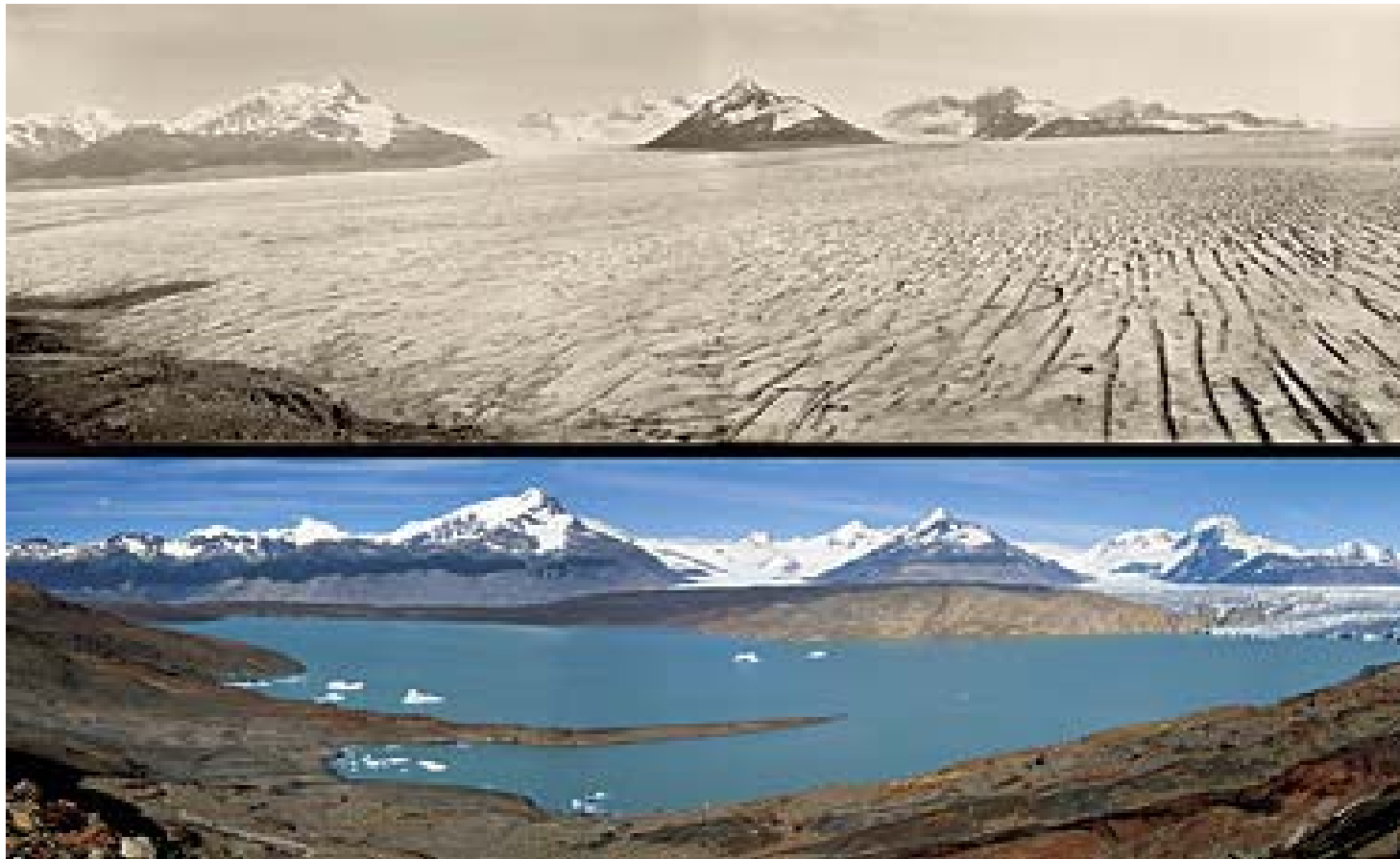
Trends in Atmospheric Concentrations and Anthropogenic Emissions of Carbon Dioxide



Source: EPA / Oak Ridge National Laboratory (2001)

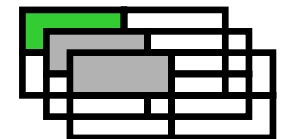


Southern Hemisphere Equally Affected



1928 (above) – Upsala Glacier, South American Andes in Argentina

2004 (below) – Ice is retreating at least 180 feet per year



Ozone Depletion



SEPTEMBER 1985
4.6 million square miles



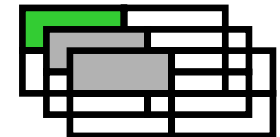
SEPTEMBER 1998
10.5 million square miles



SEPTEMBER 2000
11 million square miles

- **Relative increase in ozone depletion over Antarctica slowing**
- **Absolute reductions in ozone levels continue**

SOURCE: CBS 60 Minutes



McKinsey Consulting Group Projections

Q: Number of coal-fired power plants China plans to build by 2012?

A: 562

Q: Estimated year China will overtake the United States as the number-one carbon emitter?

A: 2025

Q: Estimated year CO2 levels will hit 500 parts per million?

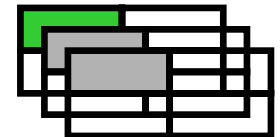
A: 2050

Q: When is the last time CO2 levels hit 500 parts per million?

A: 50 million years ago

Q: Average years it takes a CO2 molecule, once produced, to degrade?

A: 100 years

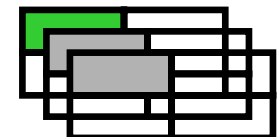
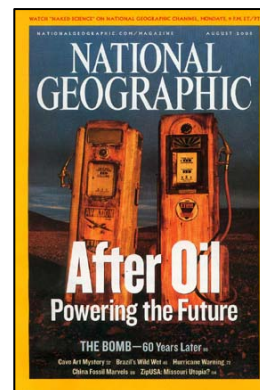
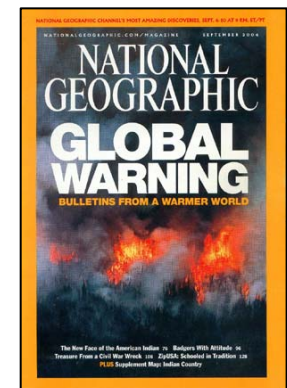
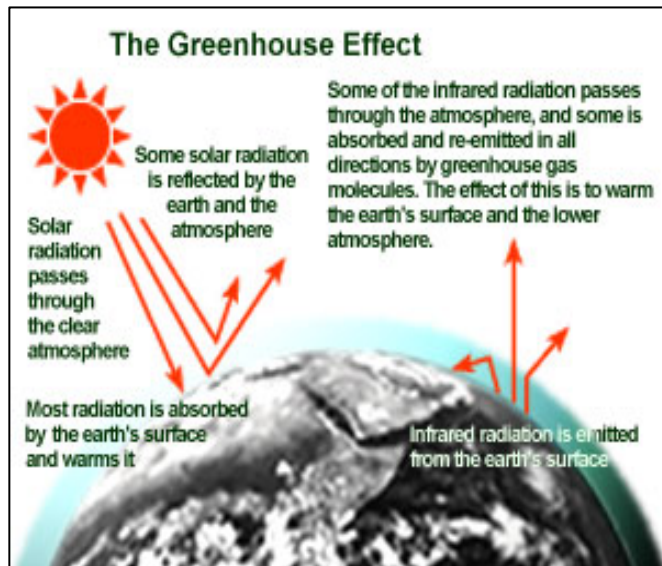


Current Events

National Media Spotlight

- Business Week
- The Economist
- USA Today
- Time Magazine
- National Geographic
- 60 Minutes

US EPA



Who Needs Who?

Goldman Sachs and JP Morgan among several others adopted financing policies in response to global warming concerns

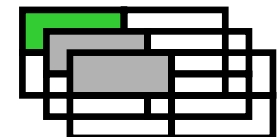
- Carbon Risks
- Location Risks
- Regulation Risks
- Valuation Risk

Pushing White House to adopt new public policies to respond to global climate change threat

Financial community's long term interest is the health and well-being of the capitalist system



The screenshot shows the ClimateBiz website interface. At the top, it says "ClimateBiz The Business Resource for Climate Management" and "A Partnership of GreenBiz.com". There are navigation links for Home, About, Glossary, and Contact, along with a search bar. The main content area is titled "SECTION: News and Columns" and includes a "print this page | email this page" link. The featured article is "Greening Finance: Why Wall Street Needs the White House" by Bruce Piasecki and Peter Asmus, dated February 2006. The article text discusses Goldman Sachs' environmental policy and the impact of carbon risks on its loans to industries that are big polluters.



Financial Dynamic – Investor Pressures

Institutional Investors Demanding “Carbon Footprint” Report

1. Amount of CO2 emitted throughout the supply chain
2. Risk exposure to current/future regulations that limit CO2 and other emissions

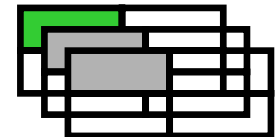
“Carbon Disclosure Project”

- 155 institutional investors representing \$21 trillion
 - CalPERS
 - CalSTERS
 - NY Common Fund
 - City of New York
 - NYC Teachers
- Requested disclosure of greenhouse gas emissions from 500 largest companies in the world in 2005 (by market capitalization)



Additional Financial Pressure Points

- Equator Principals – World Bank and International Finance Corporation
- United Nations Environment Programme (UNEP) Finance Initiative
- Coalition for Environmentally Responsible Economies (CERES)
- Investor Network on Climate Risk (INCR)
- Institutional Investors Group on Climate Change (Europe)
- Global Reporting Initiative





We believe it is inevitable that at some point the U.S. will join the other G8 countries and introduce limitations on the emissions of greenhouse gases.

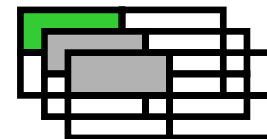
That is why we are leading investor collaboration to gather the data on corporate greenhouse gas emissions required to undertake prudent investment management.

And that is why CalPERS, CalSTRS and the California Treasury are participants in the Carbon Disclosure Project. **We encourage fund managers interested in our business to follow suit.**

Steve Westly

Controller of California

Trustee to CalPERS and CalSTRS



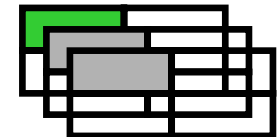
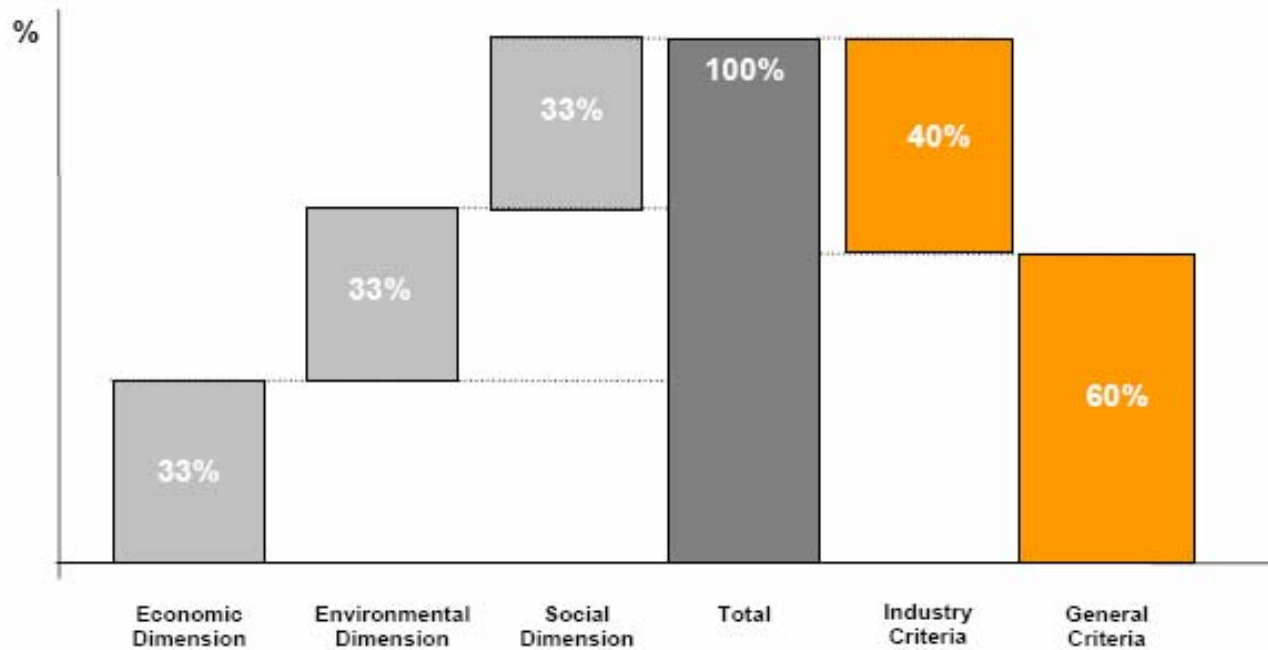
DJ Sustainability Index

Assessment Criteria

Dow Jones
Sustainability
Indexes

DJSI – Assessment Criteria (I)

Overview



DJ Sustainability Index

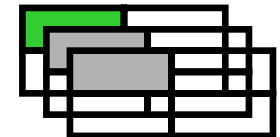
Criteria Weightings

Dow Jones
Sustainability
Indexes

DJSI – Assessment Criteria (II)

Criteria & Weightings

33%	Economic	Weighting (in%)
	Codes of Conduct / Compliance / Anti-corruption	4.8
	Corporate Governance	4.8
	Investor Relations	4.8
	Risk & Crisis Management	4.8
	Customer Relationship Management	4.2
	Industry Specific Criteria	Depends on Industry
33%	Environmental	
	Environmental Performance (Eco-Efficiency)	6.0
	Environmental Policy / Management	4.8
	Environmental Reporting	2.4
	Industry Specific Criteria	Depends on Industry
33%	Social	
	Human Capital Development	4.8
	Labor Practice Indicators	4.8
	Talent Attraction & Retention	4.8
	Stakeholder Engagement	4.2
	Corporate Citizenship / Philanthropy	3.0
	Social Reporting	2.4
	Industry Specific Criteria	Depends on Industry



DJ Sustainability Index

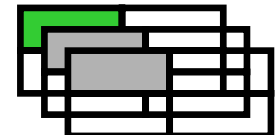
Sector-Specific Requirements

Dow Jones
 Sustainability
 Indexes

DJSI – Assessment Criteria (III)

Examples of Sector Specific Criteria

Automotive	Carbon intensity of sold cars
Banking	Integration of sustainability criteria into project finance
Food	Healthy Living
Pharmaceuticals	Access to drugs in developing countries

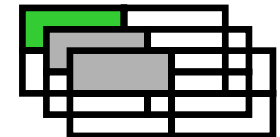
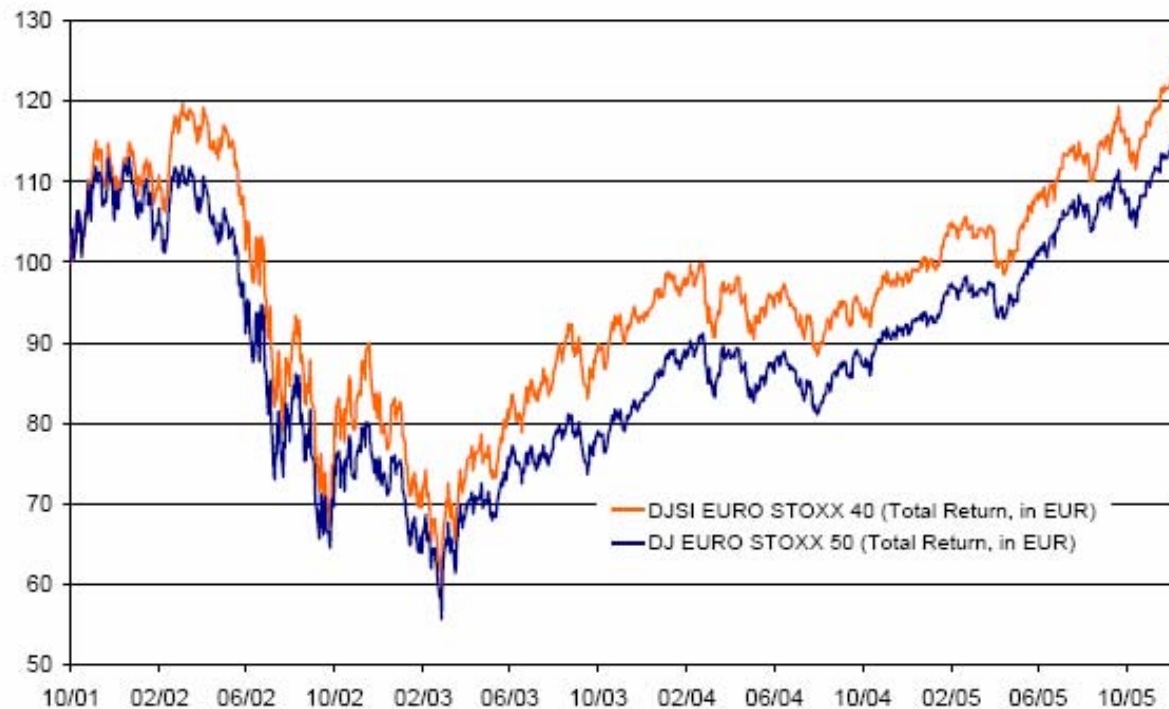


DJ Sustainability Index Performance – European Equivalent

Dow Jones
Sustainability
Indexes

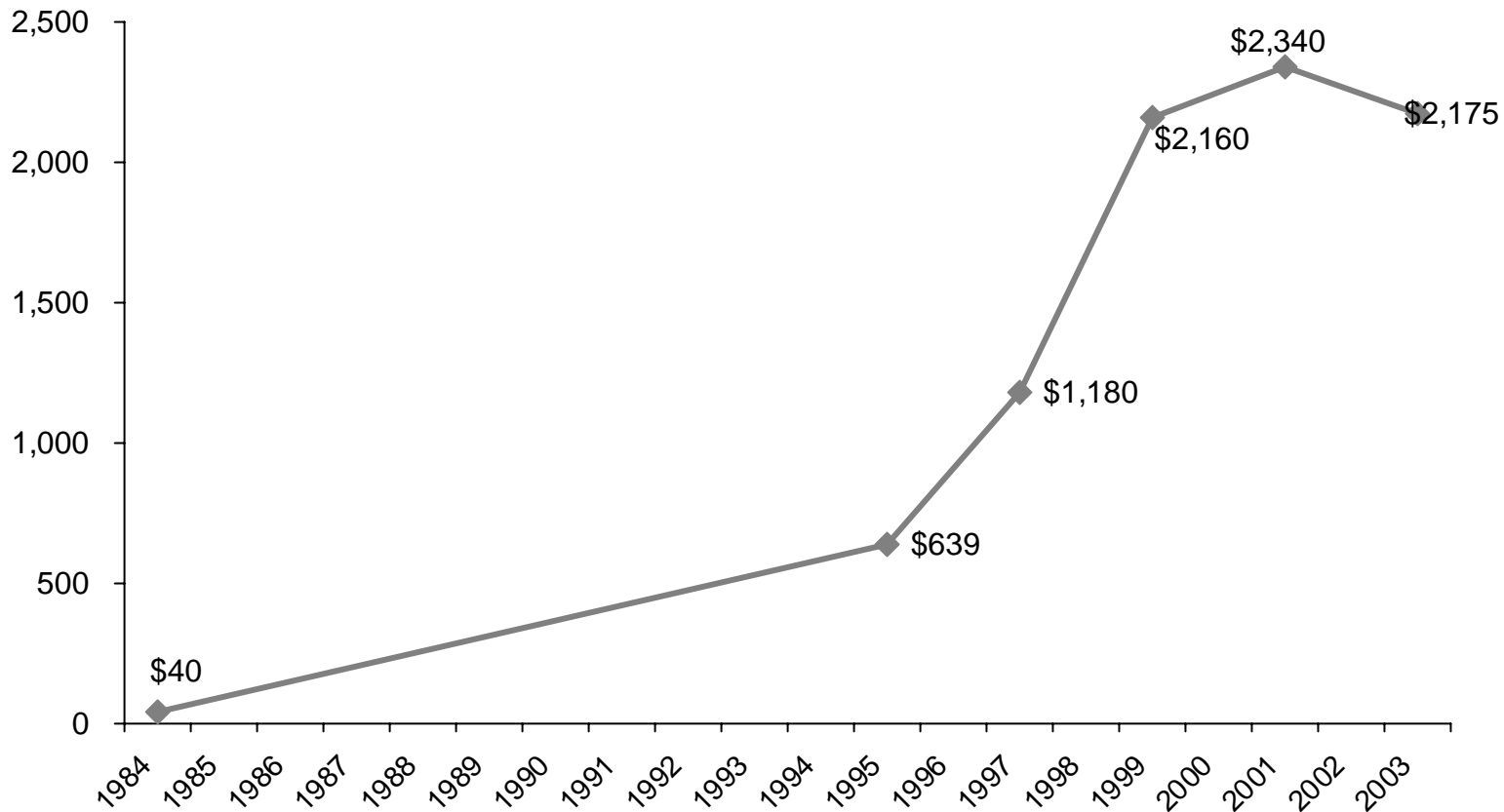
DJSI EURO STOXX 40 – Performance

Backtracking data since 15/10/2001 (i.e. since launch of the DJSI STOXX)

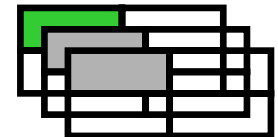


Socially Responsible Investment Funds

\$ Billions



Source: Smith Barney



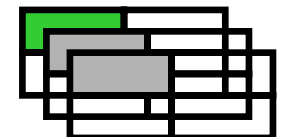
Real Estate Finance Industry – Missing Element

Methodology Valuing “Green” in Underwriting Standards

- Quantitative recognition of qualitative features
 - Appropriate valuation of superior assets
 - Standard underwriting overlay with sustainable metrics
- | | |
|-----------------------|--|
| 1. Revenue | Asset desirability on lease-up / turnover |
| 2. Rent Growth | Contextual fit w/ surrounding buildings |
| 3. Operating Expenses | Utility cost efficiency, system maintenance, longevity |
| 4. Depreciation | Adaptability within/across use |
| 5. Risk Premium | IAQ, tenant desirability, carbon emissions |
| 6. Cash flow | Overall assessment based on above |

Current Initiatives

- Green Building Finance Consortium (US)
- Royal Institute of Chartered Surveyors (UK / Canada / Australia)
- Sustainable Property Appraisal Project (UK)



Real Estate Value

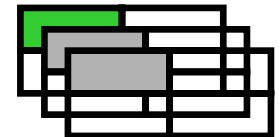
1. Cash Flow
2. Timing
3. Risk

Disprove Null Hypothesis

Green buildings have no added value over buildings built to municipal code standards

Q1: Where is the value?

Q2: Who gets the value?



Green Building Finance Consortium

OBJECTIVE: Translate “Green” into financial value via “Underwriting Translation”

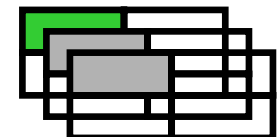
GOAL: Underwriting “Bonuses” – Market Rent / Vacancy, OpEx, Reserves
Lower Risk-Adjusted Capital Via Lending Rate Spreads

METHOD: **Green Buildings Rated As Higher Collateral**

Well-Designed High-Performance Buildings	↑ Collateral Value
Top-Of-Market Rents (new / re-lease)	↑ Revenue
Financially Strong Tenants	↓ Default Risk
More Likely To Renew Upon Expiration	↓ Re-Lease Expense
Below BOMA Average Operating Costs	↓ Operating Costs
Reduced Maintenance / Upkeep	↓ Replacement Reserves
Lower Insurance Liability (Mold, IAQ, etc.)	↓ Op Ex / ↓ Default Risk

POTENTIAL IMPACTS: **Greater Cash Flow Certainty For Debt Service Coverage**

1. CMBS AAA buyers receive higher quality assets in underlying pool
2. Buyers bid higher leading to spread reductions
3. BB Buyers (First Loss) Have Greater Margin For Error
4. Spread reductions lead to lower lending costs upon loan origination

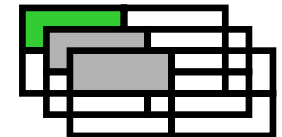


Low Hanging Fruit

Exposure to Energy Price Volatility

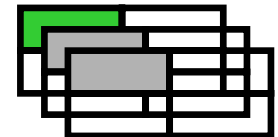
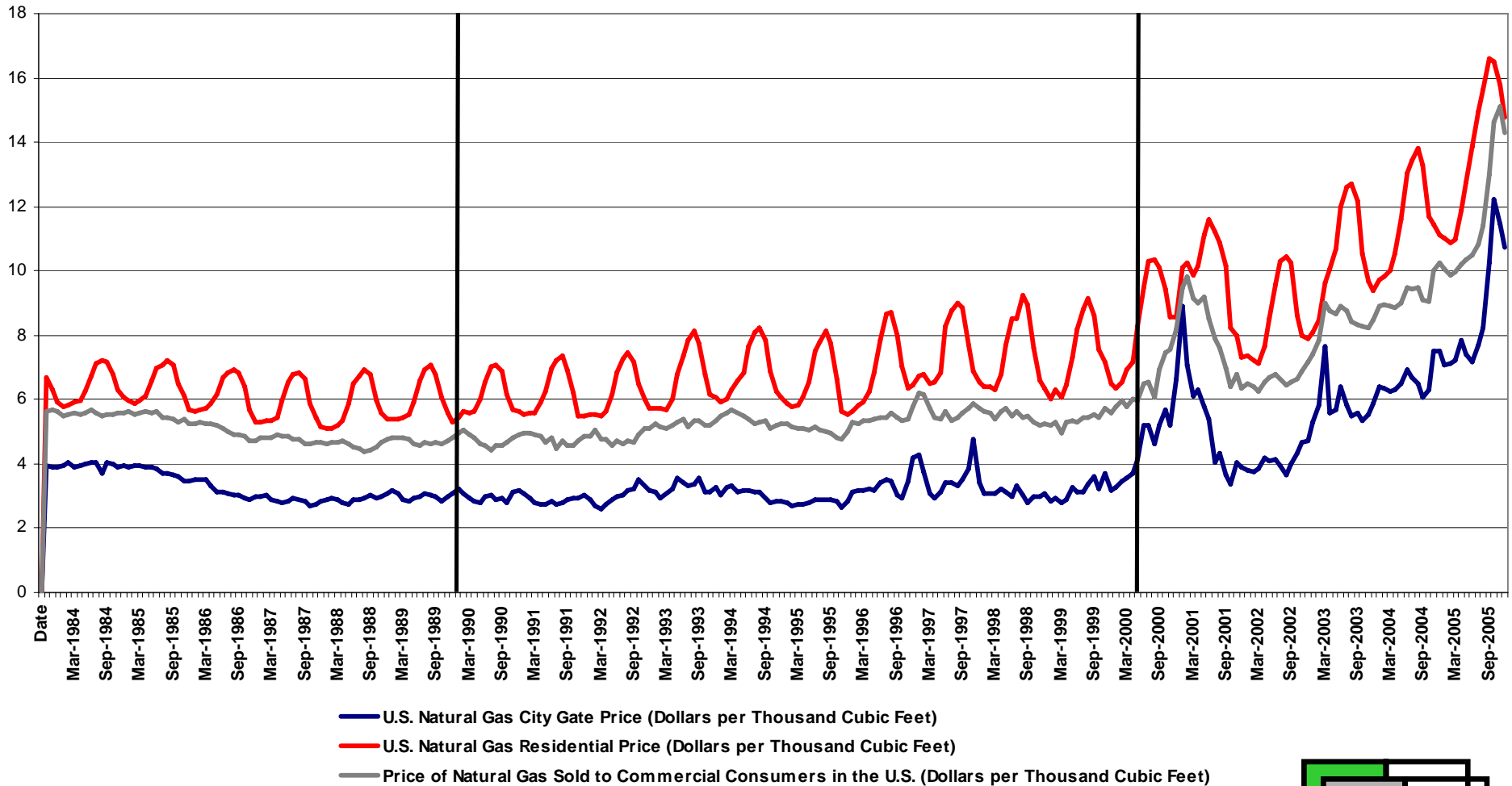
Year-Over-Year Price Increases

- **Light Sweet Crude Futures Contracts – April '06**
 - High Price = \$75.17
 - Low Price = \$27.10
 - Volatility = 1.70x
 - Increase from 1 year ago = 25.3%
- **Wholesale Refined Gasoline Futures Contracts – April '06** (NY Regular Oxygenated)
 - March 15, 2006 = \$1.72
 - High Price = \$2.07
 - Low Price = \$1.45
 - Volatility = 0.42x
 - Increase from 1 year ago = 22.0%
- **Natural Gas Futures Contract – April '06**
 - Current = \$7.00
 - High Price = \$11.68
 - Low Price = \$3.79
 - Volatility = 2.08x
- **Other Inputs**
 - Home Heating Oil = 55% year-over-year increase
 - Coal = 46% to 67% increase since January '04 (grade dependant)

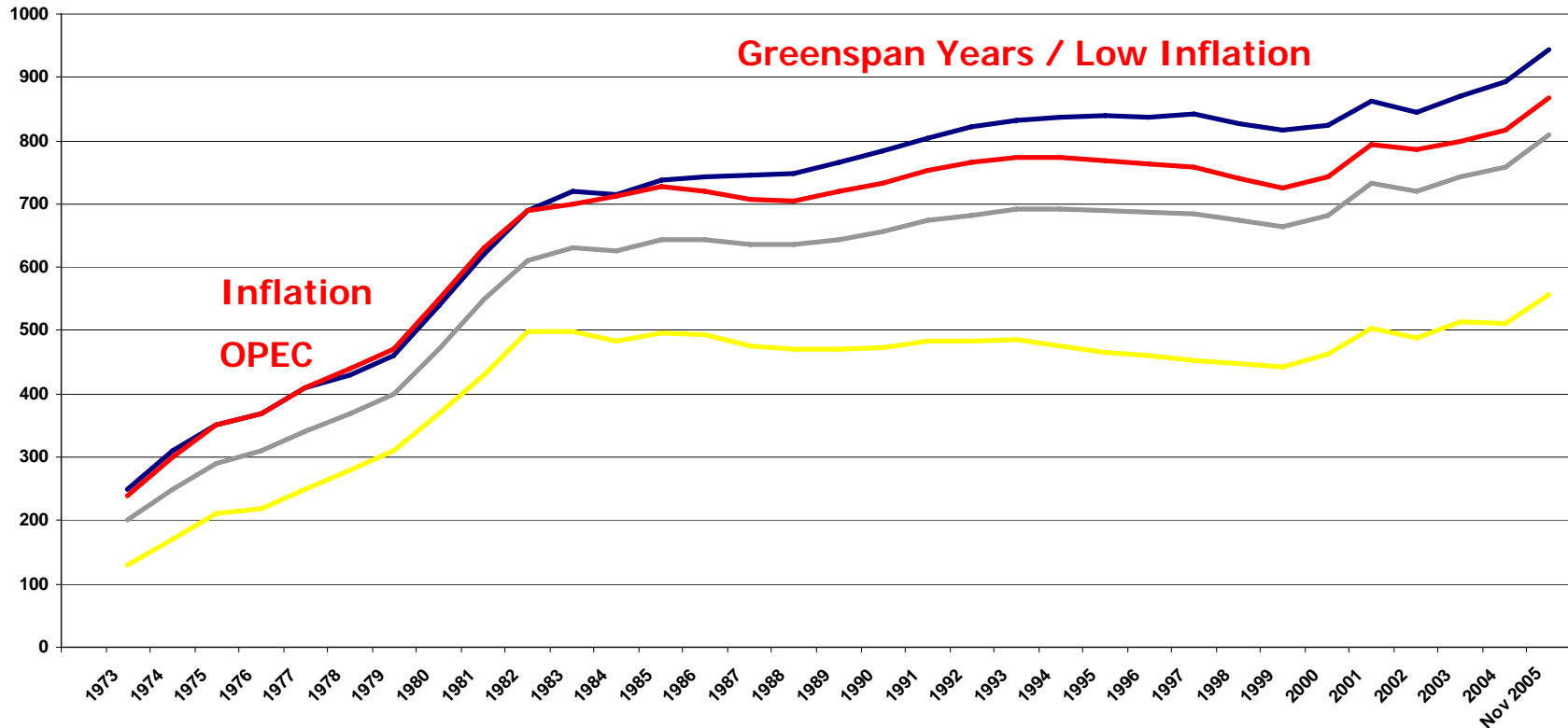


Natural Gas Spot Prices (1984 – 2005)

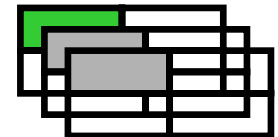
Average Consumer Prices



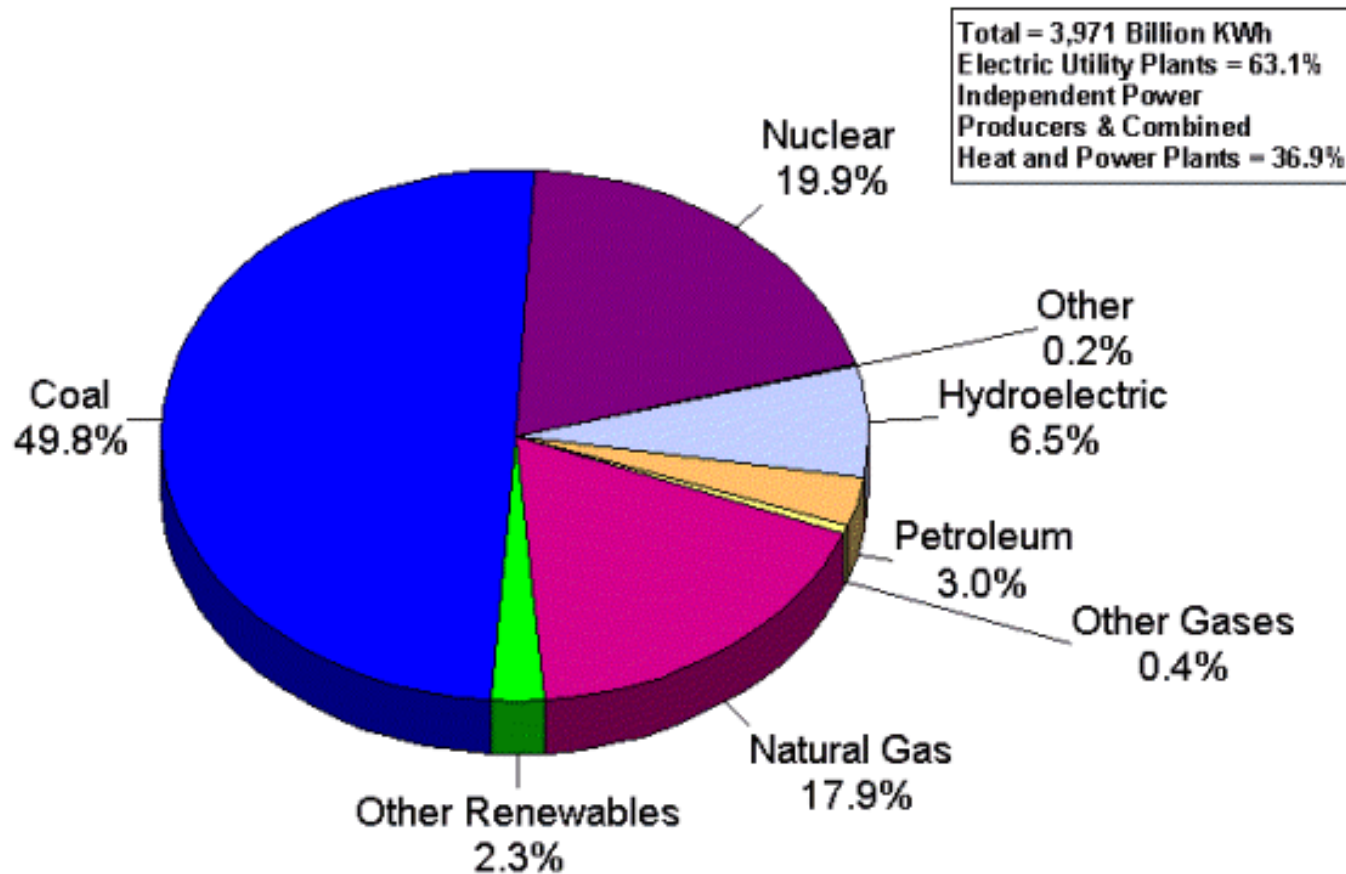
Electricity Prices (1973 – 2005)



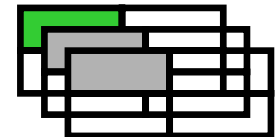
— Average Retail Price of Electricity, Residential
 — Average Retail Price of Electricity, Commercial
— Average Retail Price of Electricity, Industrial
 — Average Retail Price of Electricity, Total



US Electric Power Generation Sources (2004)

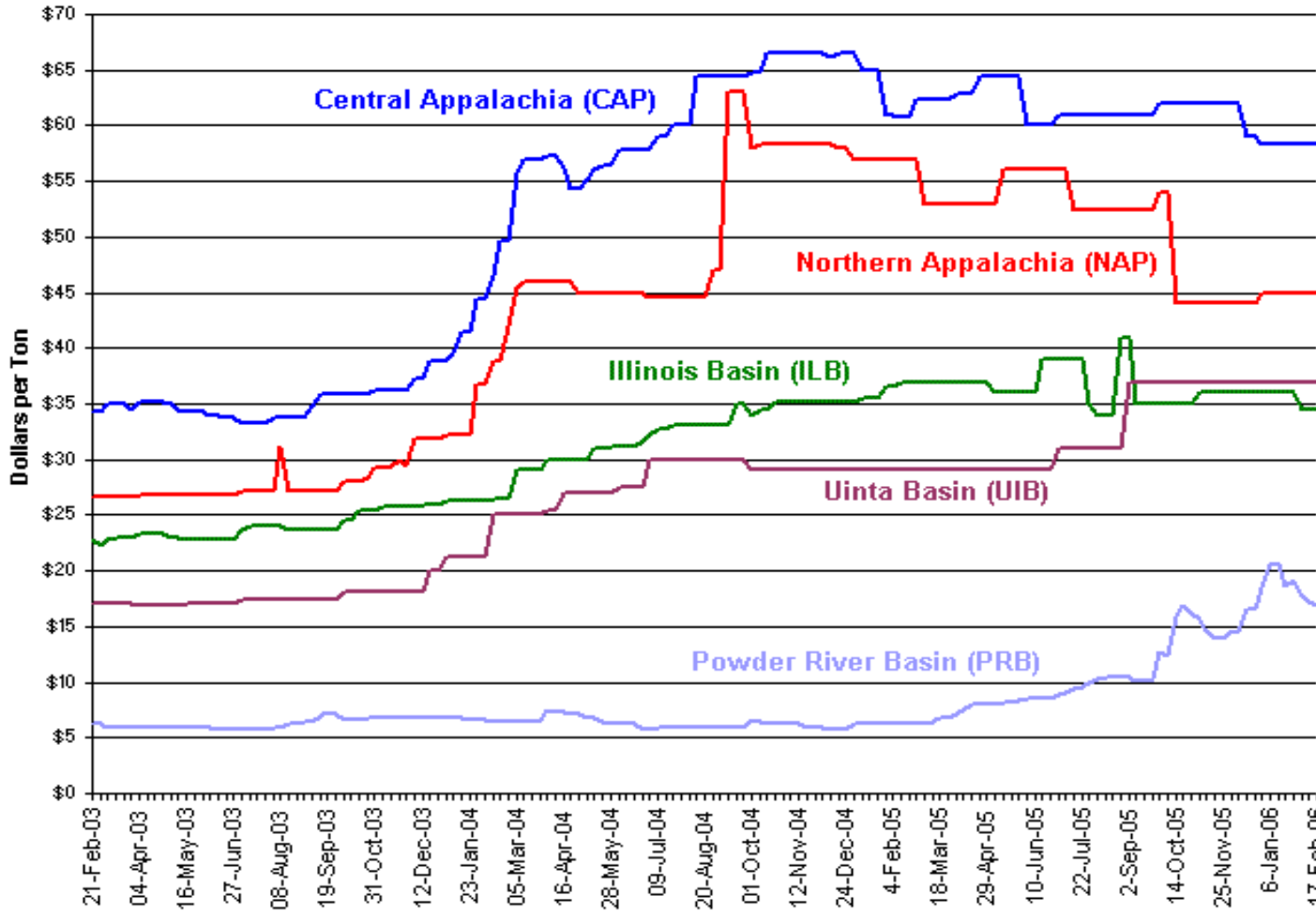


Note: Conventional hydroelectric power and hydroelectric pumped storage facility production minus energy used for pumping.



Coal Spot Prices

02.21.03 – 02.17.06



Jan '03 - Present

65.7% Increase
2.0x Volatility

66.7% Increase
2.4x Volatility

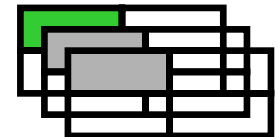
52.2% Increase
1.8x Volatility

201% Increase
4.0x Volatility

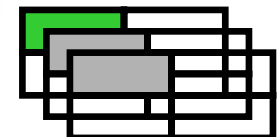
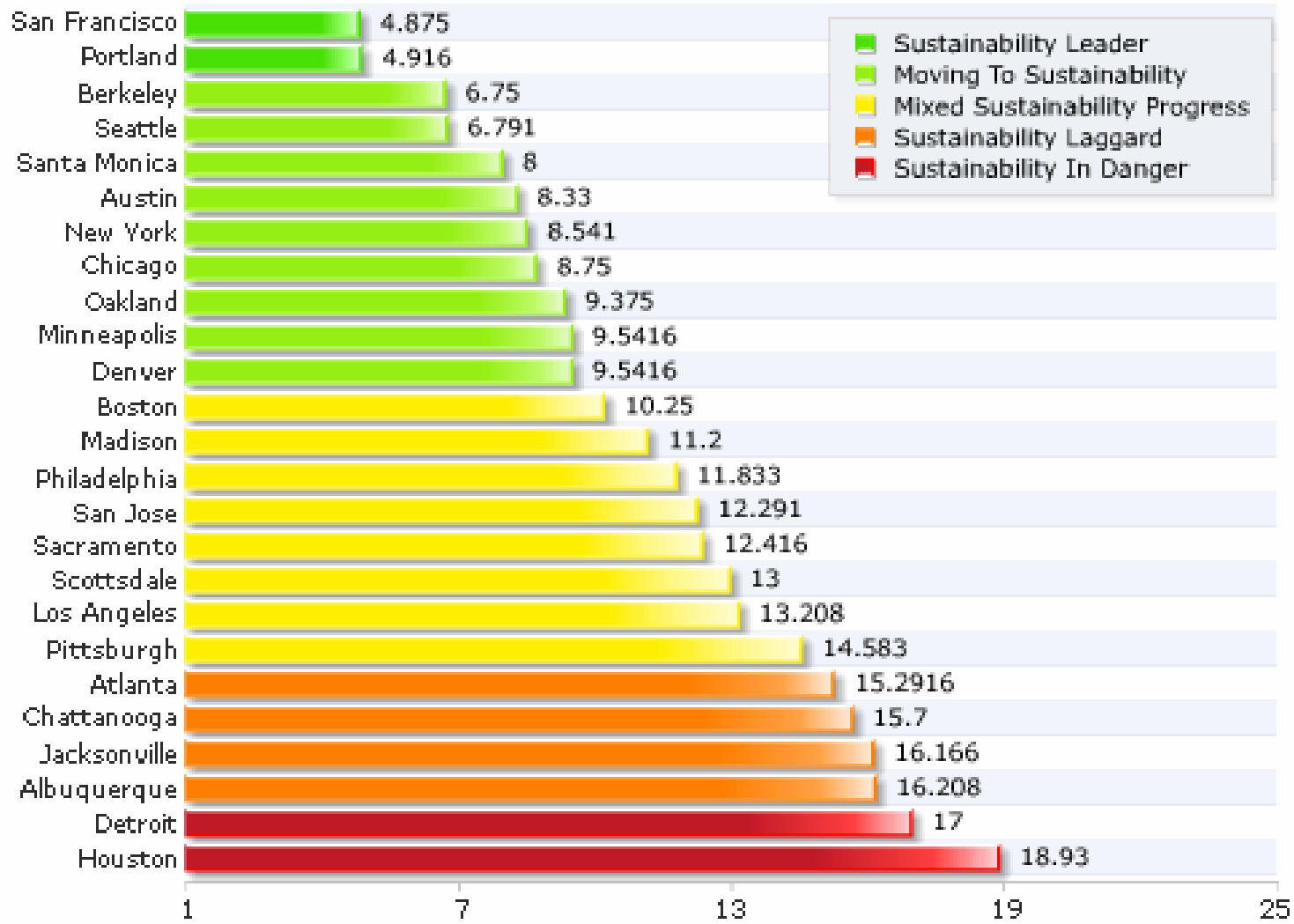
Key to Coal Commodities by Region¹

Central Appalachia: Big Sandy/Kanawha 12,500 Btu, 1.2 lb SO₂/mmBtu
Northern Appalachia: Pittsburgh Seam 13,000 Btu, <3.0 lb SO₂/mmBtu
Illinois Basin: 11,800 Btu, 5.0 lb SO₂/mmBtu

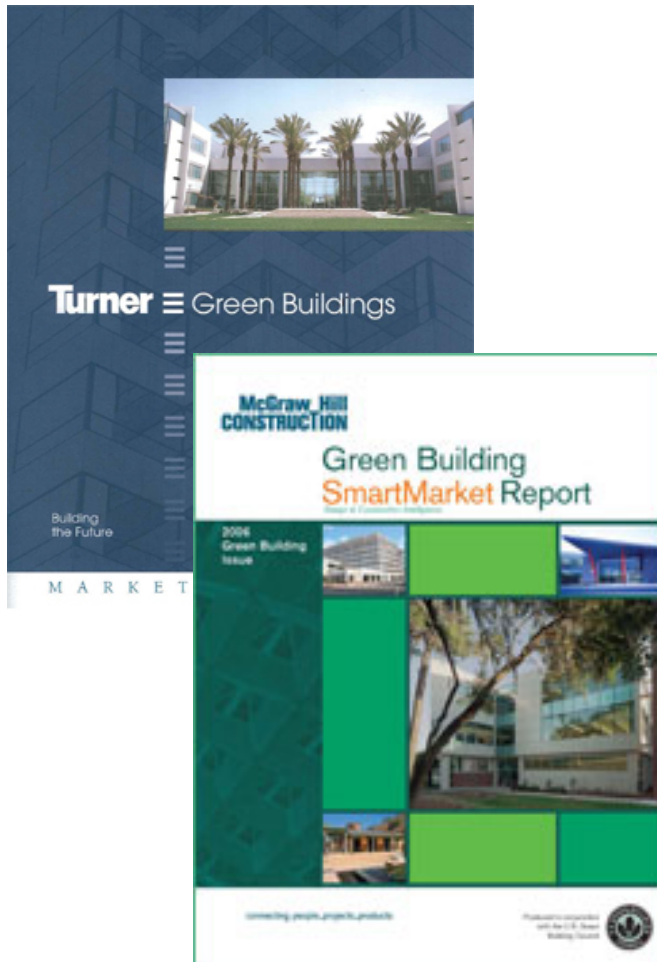
Powder River Basin: 8,800 Btu, 0.8 lb SO₂/mmBtu
Uinta Basin in Colo.: 11,700 Btu, 0.8 lb SO₂/mmBtu



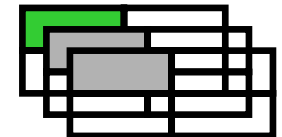
Progress



Trends and Surveys – Real Estate Executives



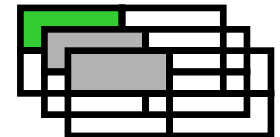
- **Green building interest continues to increase**
 - **70% project growth**
 - Lowered lifecycle costs
 - Lowered energy costs
 - Higher asset value
- **Client driven**
- **72% responded being part of an industry that values the environment as a reason to pursue green buildings**



Long-Term Real Risk of a “Follower” Strategy

EXCEEDS

Perceived Risk of Energy and Environmental Leadership



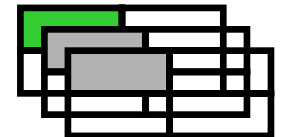
Your Choice.....



OR



Your Move.....





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