

# THE HIGH PERFORMANCE PORTFOLIO: CARBON, ENERGY, AND YOUR BUILDING



BETTERBRICKS  
Bottom line thinking on energy.

## SUMMARY:

Carbon dioxide, the primary pollutant of energy production in the United States, has been scientifically linked to climate change. Increasingly, climate change and carbon issues are directly and indirectly altering the economic landscape of the real estate industry. Whether through tenant demands, investor pressures, regulatory and legal requirements, or the influence of sustainable business practices – accounting for and managing your building’s “carbon footprint” will likely affect your competitive standing and the bottom-line.

## IN DEPTH:

Energy and climate change are closely related. Most energy produced today in the U.S. and the rest of the industrialized world comes from the combustion of fossil fuels – namely coal, natural gas, and crude oil. In the U.S., fossil fuels account for about 80% of energy production, according to the Energy Information Administration (EIA).

This production of energy in the form of fossil fuel combustion is the largest single contributor to greenhouse gas emissions in the U.S. and the world. Of total 2005 U.S. carbon dioxide emissions, about 98 percent, or 5,903.2 MMT of carbon dioxide, resulted from the combustion of fossil fuels. Greenhouse gases like carbon dioxide, in turn, trap heat in the Earth’s atmosphere, contributing to climate change.

## REAL ESTATE’S ROLE

The real estate industry has a unique opportunity to demonstrate leadership. Buildings use by far the largest proportion of energy consumed in the United States. According to the EIA, almost one fifth (18%) of the carbon dioxide emissions in the U.S. comes from producing energy for commercial buildings. In urban areas, properties may be responsible for up to 80% of all carbon produced.

...policy makers and governmental authorities will likely focus on the commercial real estate market...



Consequently, commercial buildings have an enormous potential to impact overall energy consumption pollution emissions. Reducing energy consumption in your buildings lowers the demand for energy production; with demand reduced, fewer pollutants are emitted into the atmosphere.

Furthermore, property owners will find themselves in a unique position in broader efforts to reduce carbon emissions. Based on studies by Princeton and McKinsey and Company, of the 15 major actions society can take to address climate change, improving building energy performance is one of the most economically rational – providing a “net positive” result. Because of this, policy makers and governmental authorities will likely focus on the commercial real estate market – and continue to pursue incentives, regulations, and other programs to reduce energy consumption.

### **ENERGY AND CORPORATE SOCIAL RESPONSIBILITY**

Corporate social responsibility and sustainability initiatives are becoming a strategic imperative for many leading organizations. Recognizing the potential shift in customer preferences and market opportunities, these firms are positioning themselves in a leadership role.

For real estate organizations, high performance buildings are an excellent way to take a proactive approach. Because the relationship between buildings, energy, and carbon is so direct, a commitment to improve operational efficiencies in your portfolio has a much more visible, immediate impact on the amount of overall energy produced and transmitted. In this way, firms can demonstrate corporate responsibility as well as mitigate any risks related to carbon regulation.

Your tenants may also have sustainability policies and goals. Selecting and leasing space in high-performing buildings offers a quick, practical, and cost-effectively means to make progress on these efforts. In turn, real estate firms with a portfolio of energy efficient buildings will have a competitive advantage in negotiations with these tenants.

Cap-and-trade systems pose a profitable opportunity for real estate organizations with high-performing portfolios, and a potential threat to those who delay energy efficiency improvements.

### **POTENTIAL FOR CAP-AND-TRADE SYSTEMS**

Cap-and-trade (otherwise known as carbon trading or emissions trading) systems create a financial incentive for emissions reductions by assigning a direct, monetary cost to polluting. The emissions allowed under a set cap are divided up into permits, which represent the right to emit a certain amount. Companies can buy and sell permits, so those that can reduce emissions at a low cost might sell their extra permits to companies who have less flexibility or find it prohibitively expensive to reduce emissions.

A similar system would allow market incentives to drive improvements in energy efficiency. This would entail capping the energy consumed for electricity and transportation, then gradually reducing the amount of energy consumed by increasing efficiencies. Organizations that couldn't meet efficiency targets would be able to buy credits from those who exceed their targets.

Cap-and-trade systems pose a profitable opportunity for real estate organizations with high-performing portfolios, and a potential threat to those who delay energy efficiency improvements. Pilot programs are emerging in U.S. states, and have been in place in Europe for years.

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#### THE MOVEMENT TOWARD CARBON DISCLOSURE

Climate change poses potential financial risks to businesses on multiple fronts. Most directly, the costs of doing business can dramatically shift due to rising insurance rates, energy and transportation price volatility, and the threat of increased regulation. Longer-term, global shifts in weather patterns, rapidly evolving consumer demands, disrupted supply-chains, and currency value fluctuations could conceivably threaten a firm's - or region's - risk profile.

Investors are thus increasingly encouraging carbon disclosure - corporate reporting of greenhouse gas emissions - as a means to evaluate the risk implications of how exposed a given stock or asset might be. For example, the Carbon Disclosure Project surveys many of the largest companies in the world on behalf of institutional investors representing \$41 trillion of investments. In 2007, over 1,300 companies (including over half of the S&P 500) completed the disclosure questionnaire, detailing the implications of greenhouse gases on their business. Additionally, many private companies like Innovest and Trucost prepare detailed sustainability assessments of companies which they market to the institutional investment community, providing further transparency.



*The Seattle Municipal Tower, managed by CBRE for the City of Seattle.*

This trend could well prompt investors, regulators, tenants, and other stakeholders to expect similar reporting of building energy consumption, since the energy used in buildings is a major cause of carbon emissions. Real estate organizations that proactively reduce energy consumption and associated greenhouse gas emissions - and account for their doing so - will be best prepared to answer these questions as they arise.

#### THE BOTTOM LINE:

- Most energy comes from the combustion of fossil fuels, which is the largest single contributor to greenhouse gas emissions.
- Buildings use by far the largest proportion of energy consumed in the U.S.
- High performance buildings are a practical route to sustainability and carbon reduction goals – for you and your tenants.
- Investors are increasingly encouraging carbon disclosure to evaluate a given firm’s risk profile.
- Real estate firms that factor carbon mitigation issues into their strategy now will be better positioned should carbon/emissions trading, reporting, or regulations emerge.

#### USEFUL LINKS:

The High Performance Portfolio Framework  
[www.betterbricks.com/office/framework](http://www.betterbricks.com/office/framework)

EPA climate change Web site  
[www.epa.gov/climatechange](http://www.epa.gov/climatechange)

Intergovernmental Panel on Climate Change  
[www.ipcc.ch](http://www.ipcc.ch)

Chicago Climate Exchange  
(national cap-and-trade system)  
[www.chicagoclimatex.com](http://www.chicagoclimatex.com)

Carbon Disclosure Project  
[www.cdproject.net](http://www.cdproject.net)



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