2020 VISION

Forecasting the future

Let us point you in the right direction -
There are signs everywhere if you know where to look.

MCKINSTRY | SUSTAINABLE BUILDINGS

Micro-Area-Partnerships (MAPS)

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COLLIERS INTERNATIONAL

Our *Knowledge* is your Property

2020 VISION

FAST FACTS – ENERGY RESOURCES

Market trends suggest that the demand for energy resources will rise dramatically over the next 25 years.

- Global demand for all energy sources is forecast to grow by 57% over the next 25 years.
- U.S. demand for all types of energy is expected to increase by 31% within 25 years.
- Electricity demand in the U.S. will grow by at least 40% by 2032.
- New power generation equal to nearly 300 (1,000MW) power plants will be needed to meet electricity demand by 2030.
- Currently, 50% of U.S. electrical generation relies on coal, a fossil fuel, while 85% of U.S. greenhouse gas emissions result from energy-consuming activities supported by fossil fuels.

Sources: Annual Energy Outlook (DOE/EIA-0383(2007)), International Energy Outlook 2007 (DOE/EIA-0484(2007), Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005 (April 2007) (EPA 430-R-07-002)

GREEN BUILDING SAVINGS STATISTICS

The average savings of high performance buildings are:

- 20% - 50% reduction in energy consumption
- 40% decrease in water
- 40% decrease in greenhouse gases (GHG) emissions
- 70% decrease in solid waste

An example would be that a 100,000 square foot, high performance municipal building, generating 20 percent energy savings, would have the same impact as taking 45 cars off the road.

FOR THE LIFE OF YOUR BUILDING

IMPROVED OPERATIONS **THROUGH KNOWLEDGE CAPITAL**

The benefits and advantages of high performance buildings are considerable. The goal is to achieve the optimal balance between capital and operational expenses, occupant satisfaction and environmental stewardship. The primary challenge is determining what the best process is to reach this desired balance. The first step is to identify the challenges.

Rising utility costs. Utility rates are constantly increasing at higher percentages. Without a program to focus on usage, owners lack any control on the rising cost of utilities. Aging and inefficient equipment in many buildings costs more to run. A recent McKinsey Group report predicted that the commercial sector would show 2.2 percent growth in energy consumption through 2020. The same source reports that the major hurdle in tapping these areas is overcoming market imperfections related to a lack of information to make good conservation decisions.

Measurement. Measurement of vendor and staff performance on a building does not exist in most cases and certainly is not consistent across organizations. This creates an environment that is wrought with inefficiencies—processes, procedures and outcomes are inconsistent; and data and documentation are not available for accurate, consistent measurement. Unstated or inconsistent performance expectations make measurement difficult.

Optimal leveraging of resources. While building management would like to have an organized approach to resource allocation, due to budgets, aging equipment and current staff limitations, the reality is more reactive than proactive. Technology solutions to fill resource gaps are not typically utilized to their fullest.

"Do more with less" is often the reality of O&M annual budgets. Budgets usually do not keep up with inflation or increased expectations. One often-implemented solution is to defer maintenance. This approach achieves the immediate cost-cutting goal, but is risky as the repair will likely cost more in the long run and will be extremely disruptive for occupants.

Occupant satisfaction. Management is pressed to increase occupant satisfaction amid all of the budget constraints and aging infrastructure. Occupants may be dissatisfied with current levels of performance, and expect more over time. Without Key Performance Indicators (KPIs) or service level agreements between providers and owners/customers, there is no definition of what satisfactory service is.

Integrated system approach. O&M systems and processes are fragmented due to a focus on each function rather than on an integrated system approach. Energy and facility management strategies are not fully aligned. However, given the percentage of the budget allocated to facility management, energy focus should be a central part of the strategy.

The Future of Real Estate is Surrounded by Green Buildings

FINANCIAL AND SOCIAL OPPORTUNITIES

Finding a solution for these challenges can have a significant impact on building owners. With any income-generating (rental) property, reducing operating costs can boost the property value. Lower operating costs increase the building's net operating income (NOI).

According to the New Building Institute's "Benefits Guide: A Design Professional's Guide to High Performance Building Benefits," increasing the NOI of a building increases the building's appraised value by 10 times the annual cost savings—a capitalization rate (cap rate) of 10%. For example, a 75,000 square foot (7,000 m^2) office building that saves $0.50 per square foot ($5/m^2) per year in operating costs ($37,500/year) will see the value of the building increase by $375,000.

For many organizations, the future holds triple bottom line financial accounting, which was first fully explained by John Elkington in his 1997 book, "Cannibals With Forks: The Triple Bottom Line of 21st Century Business." This approach continues to measure profits, but also measures the organization's impact on people and on the planet. It is a way of expressing a company's impact and sustainability on both a local and a global scale.

With all these challenges, there lies a significant financial opportunity as well as a social opportunity. Many organizations convey a corporate social responsibility with an edict from their CEO on how they will run their business.

CARBON FOOTPRINT—**MAKING A DIFFERENCE**

High performance buildings not only improve energy efficiency, but also have a significant impact on their carbon footprint. Carbon footprint is a measure of the amount of carbon dioxide (CO_2) emitted through the combustion of fossil fuels as part of everyday operations. For example, a 100,000 square foot, high performance municipal building, generates 20 percent energy savings and has the same impact as taking 45 cars off the road. Now extrapolate this over the 10 billion square foot inventory of municipal buildings across the country. The impact would be the same as taking 4.5 billion cars off the road. Include the broader inventory of buildings and homes and you can draw a significant conclusion—together we can make a considerable impact on our carbon footprint!

Together, we can make a considerable impact on our carbon footprint!

The challenges in achieving high performance buildings are tied to funding, risk mitigation and focus. First and foremost, building owners must navigate alterative, creative and best funding scenarios and optimize and secure all available grant funds. Utilities are offering billions in rebates and incentives. There are state and federal tax credits and state and safety grants available in many locations. These can support a broad spectrum of approaches that span day-to-day operational efficiency strategies, ranging from retro-commissioning of buildings, ENERGY STAR or LEED® certification to larger building retrofits that could be driven by performance based contracts.

KNOWLEDGE RESPONSE CENTER
COMBINING SERVICE AND TECHNOLOGY

Building related expenses typically account for a significant portion of overall operating costs for large corporations. Not only are these expenditures unavoidable, but for decades they have also been virtually impossible to significantly reduce while maintaining a positive and productive workplace. Platforms such as McKinstry's Knowledge Response Center (KRC) combine service and technology to translate operational data into knowledge and action, and delivers the results building owners want to smoothly run facilities with less downtime, increased occupant satisfaction, and significant energy and operational savings.

McKinstry's tailored approach includes using and enhancing existing facility tools and technologies to take advantage of previous investments. We deliver on the KRC's value by customizing communications, processes, actions and reports to ensure they are directly associated with facility goals. We provide quantifiable performance benchmarks, continuous and near real time performance assurance, a partner/consultative approach, relation of your progress to Energy Star and LEED® benchmarks, and an integrated technical platform with 24x7, 365-day industry professional support.

The KRC's innovation comes from the marriage of expert energy analysts, professional service representatives trained on the nuances of facilities, and the most powerful facility management software in the industry. We take facility information out of the realm of reaction and translate data into active, forward thinking action that results in better-run facilities, higher occupant satisfaction, and decreased costs.

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For The Life Of Your Building

QUANTUM CHANGE IN THE REAL ESTATE INDUSTRY

- Market is driving massive change.
- Tenants are driving change from building owners.
- Corporate real estate is tied to the emerging LEED® standards.
- Competition is driving down the cost of a "green" building.

NUMBER OF LEED-CERTIFIED BUILDINGS IN U.S.

2002	2007	2020
32	1,300	100,000

BOMA

Building owners will be at a disadvantage if they do not have a "green" building

Educate yourself, develop a plan and make an impact! Achieving our conservation potential will save everyone money.

McKinstry projects have eliminated 150,000 metric tons of CO_2 emissions in the past five years, which equates to planting 9 million trees or removing 8,500 cars from local highways

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