

THE HIGH PERFORMANCE PORTFOLIO:

ENERGY EFFICIENCY: MYTHS & MISPERCEPTIONS



BETTERBRICKS
Bottom line thinking on energy.

SUMMARY:

Financial decisions in office real estate require thoughtful analysis, pro forma statements, and a thorough understanding of market conditions. However, when it comes to energy performance in buildings, financial rigor often is victim to outdated “rules of thumb”, faulty assumptions, and myths that permeate the industry.

IN DEPTH:

Energy use in office buildings has long represented an excellent opportunity to reduce costs and build value. Now, with the growing influence of the sustainable building movement, changing dynamics in the marketplace, and greater attention to current and future energy costs, improving building performance is accelerating as a winning business strategy.

But misinformation and uncertainty persist, and can cloud decision-making. In this competitive landscape, office real estate professionals cannot afford to let untested assumptions and long-held beliefs prevent capitalizing on every opportunity. The following list details some of the most common misperceptions, enabling you to make sound decisions based on math, not myths:

The building is already energy-efficient: Building owners and managers often gauge energy performance simply by examining utility bills, if they consider it at all. Because the cost of energy can vary, the billing information can mask what’s really occurring. Many real estate professionals are surprised when they use a normalized energy benchmarking tool, such as the ENERGY STAR® energy performance rating system. When variables such as weather, occupancy, and space type are accounted for, properties don’t always perform as one might expect.

Owners often rely on the word of their staff – if they say the building is efficient – then it must be. But how do they know?



Compounding this problem, owners often rely on the word of their staff or third-party property managers – if they say the building is efficient - then it must be. But how do *they* know? Without an objective assessment or benchmark, no meaningful comparisons can occur.

In other situations, improvements in common areas of a building may promote the belief that the entire building is energy-efficient. However, tenant spaces represent about 80% of a typical office building, and improving building performance requires a holistic view of the entire building.

Also fueling this misconception is the assumption that investing in capital equipment automatically confers greater performance. But performance improvements achieved through the newest technologies and most efficient equipment could be overwhelmed by poor operating procedures, suboptimal startup-schedules, and inadequate training.

Expensive, new equipment is required to improve performance: Surprisingly, the most energy-efficient buildings do not always have the latest technology. Managing energy in buildings is a combination of art and science, and building operations significantly affect performance. Analyses of ENERGY STAR-labeled buildings show that many of the highest performing buildings use *almost exactly the same* technologies and equipment as the lowest performers. What distinguishes the two groups is not so much the physical infrastructure as *how energy is managed*. Operational adjustments, proper maintenance, scheduling, and creative problem-solving are just some of the small, inexpensive, and simple tactics that cumulatively provide large gains in performance.

The building is new, so it is already energy-efficient: Recent building energy codes may have raised the standards for efficiency, but in most areas this still represents a minimal performance threshold. Newer technologies and equipment might also promise higher performance – but there are no guarantees. New buildings that were “value-engineered” to the detriment of efficiency, buildings that were not properly commissioned during construction, and buildings with changes in tenant use can have radically altered energy performance levels from design expectations. A 2005 study conducted by the Lawrence Berkeley National Laboratory examined 34 new construction projects, and found an average of 28 deficiencies in systems and equipment *per building*, contributing to higher energy consumption.

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The building staff has energy performance under control: Dedicated building engineers and property managers strive to improve building efficiency - provided they are not over-tasked with day-to-day issues. But even the most conscientious staff could be challenged by new technologies and increasingly complicated systems that require specialized expertise. In other cases, the building staff may know what improvements need to occur, but have difficulty effectively communicating proposals to senior management in a manner that resonates with the owner's capital budgeting officer. This communication gap in the decision-making chain prevents many worthwhile opportunities from receiving funding.

Energy costs are a 'pass-through' to the tenant: Different lease types (e.g., gross, net, or fixed-base) determine if and how energy expenses are "passed-through" to a tenant. In the case of a fixed-base lease, the only "pass-through" is the amount of energy expense that is above the owner's obligation for that expense. If operating expenses have not increased since the signing of the lease, the owner may still be paying all of the energy costs for the tenant's space, and thus would directly benefit from improving the energy efficiency of that space.

Improving energy efficiency mid-lease doesn't make sense: Many owners still believe that the best time to improve the energy efficiency of a tenant's space is when the lease rolls over. However, the best time may be at least one year prior. With a fixed-base lease, the "base year" or "expense stop" determines the allocation of energy expenses for the upcoming year. Lowering the operating expenses a year prior to rollover may reduce these "triggers" and make the space more marketable. An owner can leverage this improved efficiency when encouraging a current tenant to renew, or highlight lower occupancy costs to prospective tenants. It may even reduce the amount of tenant improvements that the owner has to fund.

Another risk in delaying improvements is the uncertainty of future financial conditions. For example, many owners and managers take a phased-in approach along a timeline that tracks tenant rollover. They theorize that with a 10% annual churn, improvements can be made to all tenant spaces in a decade. This approach does not adequately account for how the situation may change during that period:

- New leases may have to incorporate higher "base years" as a result of waiting 10 years to complete upgrades. These higher "base years" will dilute the owner's income stream due to performance improvements.

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- The cost of labor and materials will probably rise over time, making upgrades more expensive.
- Utility and government incentives to improve efficiency have never been more robust. Delaying projects until tenants leave may risk losing financial assistance should the situation change.

It's too difficult to calculate the value of energy-efficiency investments in multi-tenant buildings:

Most income properties already have a discounted cash flow model or software package that tracks how leases allocate expenses between the building's owner and tenants over time. These give insight into the financial implications of major investment decisions such as property sales and refinancing.

With these same tools, decision-makers can conduct multiple iterations and analyses to examine cash flows and valuations both before and after a proposed project. Buildings that do not maintain an up-to-date discounted cash flow model of their leases can have one produced by a firm that specializes in this type of analysis.

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All projects must have a simple payback period less than 2 years: Simple payback periods (SPP) are irrelevant if you don't know whether owners, tenants, or both will capture the savings. For example, one 3-year SPP project might allow the owner to capture all energy savings as net operating income and increases in appraised value of the property. Another 2-year SPP project - nominally recouping the investment quicker - might actually distribute savings to tenants due to the nature of the leases. Both projects have clear benefits for energy performance, but the first project with the longer payback period may actually be the preferred option for owners.



Speculative building is more profitable than energy-efficiency upgrades: Depending on market conditions, improving portfolio energy performance can produce greater returns than speculative development projects. Moreover, you can increase net operating income with much less capital by improving efficiency, and these investments are generally less risky than developing new buildings. Spending \$1 per square foot improving the energy efficiency of your current 10-million-square-foot portfolio could be much more profitable than building another income property with the same \$10 million.

Plans to sell the building cancel the need to improve performance: Typically, once an investment property is slated for sale, ownership tends to lose interest in improving efficiency – causing more missed opportunities. Assuming the investor plans to sell a property in the next 12 to 24 months, improvements in performance that reduce operating expenses (and increase net operating income) at least 12 months prior to appraisal can justify a higher sales price.

Increases in appraised value aren't important if the property will not be sold: An investor may assume that since a building will not be sold anytime soon, a possible increase in asset value shouldn't influence financial decisions about improving energy performance. However, many scenarios make higher asset values favorable, regardless of plans to sell the property:

- If debt exists on the property, the loan-to-value ratio would decrease with higher asset values.
- The higher the building value, the more equity can be pulled out in a refinance.
- In the case of publicly traded companies, financial analysts regularly review building portfolio financials as they evaluate the company's prospects, whether or not the company's buildings are listed for sale.

THE BOTTOM LINE:

- Assumptions about energy efficiency can lead to missed opportunities to build value.
- Financial decisions will be incomplete without an objective, normalized comparison of energy performance against other properties.
- New buildings and new technology alone do not guarantee greater efficiency.
- Building operations – and the people behind them - are as critical to achieving high performance as the physical infrastructure.
- Leasing intricacies, property holding periods, tenant rollover cycles, and arbitrary investment hurdles all need to be examined in order to make the best decisions regarding capital improvements.

USEFUL LINKS:

The High Performance Portfolio Framework
www.betterbricks.com/office/framework



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