GETTING TO "YES" FOR ENERGY EFFICIENCY

A GUIDE TO DEVELOPING A PERSUASIVE BUSINESS CASE FOR ENERGY EFFICIENCY IN COMMERCIAL AND CORPORATE PROPERTIES

Practical Strategies for Real-World Challenges

- *"Where Do We Start?"*
- *"We Don't Have the Technical Expertise"*
- *"We Can't Afford It"*
- *"It's Not Worth the Investment"*
- *"It's Too Good to Be True"*
- And more…

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A Report on Accelerating Commercial Building Energy Retrofits

WELCOME

Implementing a cost-effective energy efficiency project requires passion and a willingness to invest some time and little money. Energy efficiency improvements offer building owners, tenants, and occupants many benefits, including energy and cost savings, , an increase in building value, and improved comfort.

Surprisingly, many energy efficiency projects are not implemented despite the availability of rebate programs and even affordable capital. Making a persuasive business case to convince skeptical decision-makers to invest time and money can be challenging and usually requires the support of multiple disciplines within an organization. Experience suggests that it takes a "Champion" to lead a project to completion through an organization's decision-making process. This Guide offers a variety of tools and resources for Champions to develop your own strategies to get to "yes." Even if you are the key decision-maker, making an energy efficiency project happen can be complex. This challenge is comparable to running a relay race, where you work with a team of professionals, deal with diverse hurdles, and know when to pass the baton to your teammate.

Successful completion of a project requires:

1. A dedicated **Champion** able to relate energy efficiency to an organization's mission and goals.
2. A strong **team** that understands and supports the project and will benefit from its implementation.
3. Solid **arguments** for the business case based on benefits of energy efficiency.
4. An understanding of **how to pay** for the upgrades.
5. Access to key **resources**.

No two projects or organizations are exactly the same. This Guide will help you develop a persuasive and customized business case for your efficiency project based on its unique challenges. Along the way, it will aid you in identifying potential challenges you'll likely encounter, and provide guidance and suggestions from start to finish.

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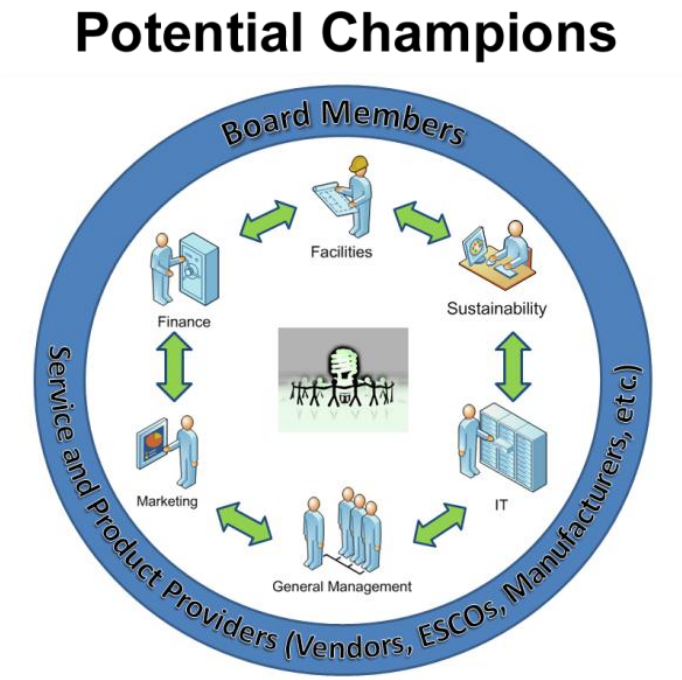
Who Should Use This Guide

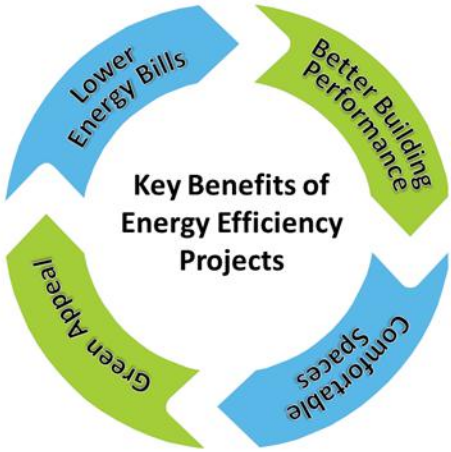


This Guide is intended for anyone working to implement an energy efficiency project in the commercial or corporate building sectors. We refer to this person as the energy efficiency Champion.

Champions may hail from different parts of the organization: facilities, operations, finance, sales, or marketing. A Champion may even be external to an organization's day-to-day business, such as a board member or energy service provider.

Champions are committed to leading an energy efficiency project to success. Whether you are just starting out or already encountering resistance to your project proposal, this Guide will provide direction and support in getting to "yes" for energy efficiency.

Even if your organization has already decided to pursue an efficiency upgrade, or you are yourself the decision-maker, the proven strategies offered in this Guide can help resolve issues that might arise during the implementation of the project.



What Is an "Energy Efficiency Project?"

According to ENERGY STAR®, up to 30% of a commercial building's utility bill is spent on wasted or underutilized energy. Energy efficiency projects are designed to reduce or eliminate that waste. Some energy efficiency projects—such as installing more insulation—may be obviously related to energy. Other projects may provide an unexpected opportunity to incorporate efficiency upgrades, such as including a lighting retrofit in a redesign of an office space layout.

How to Use this Guide

Using this Guide is a dynamic and interactive process. As you read through it, you may find some sections will address your project's decision-making hurdles more than others.

Section 1—"Preparing for Success"—outlines the key steps in identifying team members needed to support the project. It provides insight on how to position the project as it relates to the needs of the other team members and suggests language that will resonate with them. By quantifying the cost of delay, it underscores the argument that time is of the essence when dealing with energy efficiency. The longer you wait, the more you pay the utility for wasted energy.

Section 2—"Clearing the Hurdles"—identifies the most common objections heard when proposing an energy efficiency project. It includes a range of common organization and financial hurdles. Specific tools and resources for addressing each hurdle are suggested.

Section 3—"Training for Success" —provides more detailed definitions of terms and concepts used in this Guide, along with in-depth explanations of the suggested strategies.

Section 4—"Resources and Appendices" —is a list of key resources and links that provide additional information relevant to the focus of the Guide. Particular attention should be given to Appendix A, "Complete Hurdles Table."

This Guide provides insight into how and when to pass a critical decision point (the "baton") to the team member best suited to address the challenge. It is a "how-to" manual for moving energy efficiency projects through an organization's decision-making process.

SECTION 1: PREPARING FOR SUCCESS

Like relay races, energy efficiency projects take a team and a winning strategy to succeed. In the race to get to "yes" you must:

- Build a **team** that supports the project.
- Prepare the right arguments that **speak** to different decision-makers.
- Convince management that the **cost of delay** is wasting money.
- Understand the decision-making **process** in your organization.
- Suggest **how to pay** for the energy efficiency project and take advantage of **available resources**.

BUILD A TEAM

Case studies suggest that successful energy efficiency projects often begin with a Champion to lead the effort.[1] However, Champions can rarely implement a project alone. Your support team may be a formally organized task-force or a loose association of colleagues. No matter how formal your team is, two requirements are needed for it to be successful:

1) All members must be in favor of the energy efficiency project.
2) The team should include diverse and powerful voices from within the organization, including those in positions to advocate on behalf of the project.

When building the support team, Champions should recruit members who would gain from the more obvious benefits such as cost savings and decreased maintenance. Think more broadly, too; for example, potential members might include:

- Members of other departments seeking related **capital improvements** that could be paid for with the energy savings.
- A facility manager overwhelmed by **deferred maintenance** and no money in their budget.
- Colleagues with **sustainability or environmental interests**, such as a sustainability officer or a socially responsible board member.
- A **human resources manager** who is concerned about providing a comfortable work environment.
- An **information technology (IT) manager** who needs a more consistent temperature in the server room.

[1] See Section 4—"Resources and Appendices"—for links to case study compendia.

SPEAK THE LANGUAGE OF YOUR AUDIENCE

When promoting an efficiency project, you should ensure everyone in the decision-making chain understands how the project will benefit that person's department or interest area. When speaking with a facilities manager, employing energy terms like "therms" and "kilowatt-hours" probably makes sense. However "lower operating costs," "saved dollars," and "profitability" will have more powerful meanings when talking with the CFO.

Choosing the right argument in the right language is essential for success. When framing your arguments, make sure to frame the project's benefits in terms that speak to your audience's interests.

	Chief Executive Officer (CEO)	Chief Operations Officer (COO)	Chief Financial Officer (CFO)	Sustainability Officer	Marketing and Sales	Building Manager	Human Resources
Concerns	Corporate Strategy	Corporate Operations	Corporate Budget	Sustainability Goals, Carbon Footprint	Public Perception, Prospective Customers	Facilities Functionality, Occupant Satisfaction	Present and Potential Personnel
Responsibilities	Corporate Mission and Strategy, Leadership	Systems (e.g. Facilities, IT)	Financial Health	Benchmarking and Goal Achievement	Market Share, Public Relations	Building Operations; Budget Management	Staff Wellbeing
Energy Efficiency Communication Strategies	Corporate Goals, Competitive Advantage, Profitability	Employee, Tenant and Occupant Satisfaction; Competitive Advantage	Dollars, Profitability, Investment Returns	Carbon Footprint, Sustainability Metrics	Sustainability, Occupant Satisfaction, Public Perception, Competitiveness, New Markets	Maintenance and Capital Budget	Employee Satisfaction, Comfort, Public Perception
Importance of Endorsement	High	High	High	Moderate	Moderate	High	Low

COMMUNICATE THE COST OF DELAY

One of the unique benefits of investing in energy efficiency is that you are literally plugging a cash leak. Every day an energy efficiency project is delayed is another day of leaked—and therefore wasted—energy and money. In energy efficiency circles, this is referred to as the "cost of delay." Understanding and explaining the cost of delay is one of your most important jobs because it is likely to be your most persuasive argument.

The best way to catch the ear of those making the financial decisions is to convey the current waste and potential savings from your energy efficiency project. No organization wants to waste money. Delaying or declining an efficiency project is a decision to waste money. With energy efficiency, time is of the essence—the longer an organization chooses to waste money through energy waste, the more the costs of delay accumulate.

ENERGY STAR's Cash Flow Opportunity Calculator is a perfect way to quantify the cost of delaying an energy efficiency project. Combined with the reduction in your utility bill and the operating and social benefits of implementing an efficiency project, you can create a sense of urgency for your project that is easily understood. This urgency can help move the project up on the priority list, especially when it is combined with equipment replacement needs and other deferred maintenance problems that can be resolved at the same time. Additionally,

when there is no money in the capital budget to implement these projects, the energy savings can be used to cover the project's financing costs.

You can best build a sense of urgency by getting key decision-makers to understand that appropriate and prudent energy efficiency projects:

- Are generally cost-effective over **short periods of time**.
- Generate surprisingly **high rates of return** with **low risk**.
- Produce energy savings that **offset** implementation costs.

FIT YOUR PROJECT INTO THE DECISION-MAKING PROCESS

As a Champion, your chief goal is to implement the energy efficiency project and see potential savings fully realized. To reach that goal, a number of decisions—project- and facility-related, operational, legal, and financial—will have to be made. At every point when a decision is required, you will need to ensure the right people have the right information.

An alignment of the project with the organization's decision-making process is critical. Confusion that leads to out-of-order decision-making can postpone a project and compound the project's cost of delay. To avoid costly delays and get to "yes," Champions should understand the process needed to implement a project, who makes key decisions, what information is necessary for decision-makers, and how these decisions are made.

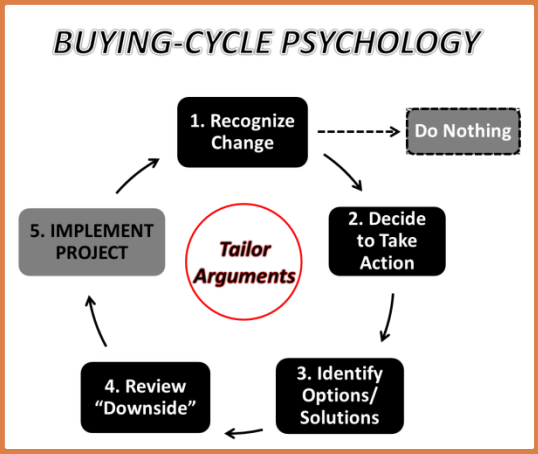
One approach is to research the project and list the steps in the order needed to complete the project, for example: (1) hire an engineer or auditor, (2) apply for available incentives, (3) secure financing, (4) receive legal review, and (5) begin implementation. Ask your support team to review the process and ensure its correctness.

FIVE STAGES OF THE BUYING-CYCLE PSYCHOLOGY

Successful Champions understand how the psychology of buying can engage their decision-makers' support to get to "yes."

There are five steps in the "buying cycle."

1. Recognize that something has changed, (e.g., organization's competitiveness, utility rates, utility usage, new tenants or building uses, new strategic direction, major events, aging infrastructure, broken equipment, etc.).
2. Decide to take action rather than ignore the issue.
3. Identify and evaluate the options.
4. Address what could go wrong with recommendations.
5. Implement the project.



Decision-makers are often on different parts of this buying cycle and your argument should always target the right point of concern. For example, financial stakeholders may need to understand why an energy efficiency project is necessary (step 1) before discussing options (step 3). Facility staff may be evaluating a solution (step 4) after recommending an option (step 3).

Once you identify where your colleague is in the cycle, never "sell" backwards. For example, if the individual is already evaluating solutions, do not start with "we need to fix the problem." Project details should always be tailored to resonate with the particular stakeholder you're working with.

*Based on Neil Rackham (Huthwite, Inc.), "SPIN Selling" 1988, McGraw-Hill Book Company, New York, NY.

Then try mapping your organization's decision-making process or use a flow chart for illustration. Then, consider who within the organization makes which decisions, and how this process can be harnessed to move the project from one step to the next. Different members of your support team might have different perspectives. Questions that might emerge include:

- *Who can authorize hiring an auditor?*
- *Who is the primary utility account contact?*
- *What are the expectations of management during the installation phase?*
- *Does everything need to happen within the same budget period?*

SECTION 2: CLEARING THE HURDLES

COMMON CHALLENGES AND HOW TO OVERCOME THEM

Many hurdles stand between a great idea and a completed project. The hurdles identified in this section often cause organizations to continue to treat energy expenses as unmanageable and uncontrollable. But hurdles are not walls: with preparation and perseverance they can be cleared. As an efficiency Champion, you are likely to hear different reasons why your idea will not work. These will create hurdles and slow your progress toward "yes" for energy efficiency. This section presents the primary hurdles in two general categories: organizational and financial.

This section is organized in the following way to promote your understanding of and success against each hurdle:

- A **translation** of the hurdle into a phrase that represents the decision-maker's perspective.
- A straight-forward **response** to the challenge.
- Insight into **understanding the hurdle** and how it relates to energy efficiency.
- An overview of the approach you might consider in developing the business case for energy efficiency--in other words, **preparing for the race**.
- Common **challenges** that combine to constitute the hurdle.
- Specific **strategies and tools** you can use to make and defend your case
- **Reference numbers** of where more information can be found within this Guide.
- **Resources** for developing even stronger arguments for your business case as needed.
- Two **snapshot tables** of all hurdles, challenges, strategies, tools, and reference numbers in Appendix A.

Organizational Hurdles

1. "You're a Champion without a Mandate"
2. "Where Do We Start?"
3. "We Don't Have the Technical Expertise"
4. "This Isn't a Core Competency"
5. "Our Organizational Culture Is Too Conservative"

Financial Hurdles

6. "We Can't Afford It"
7. "Other Projects Offer Better Returns"
8. "It's Not Worth the Investment"

Remember, as a Champion, you may need to dig a little to make sure you address the underlying issues and not just the "smoke screen" hurdles that decision-makers may present hoping you will go away. Your leadership and initiative will move your organization to wiser energy use, money savings, and more efficient operations.

ORGANIZATIONAL HURDLES

1. "You're a Champion without a Mandate"

Anyone with initiative and the right support team can make an efficiency project happen.

UNDERSTANDING THE HURDLE

The lack of a manager, director, executive, board member, or other interested party committed and empowered to make efficiency improvements stops many organizations from realizing the benefits and savings of efficiency projects. Your organization may want to embrace energy efficiency but internal impediments, bureaucracy, and breakdowns in communication might hold back the project. This hurdle might be indicative of:

- An un-empowered Champion.
- Insufficient staff levels.
- Communications breakdowns and inefficient decision-making.

These problems compound the hurdles that arise when no one in the organization is tasked with making the efficiency project happen. Organizational hurdles are not limited to the realm of energy efficiency, but they can be exacerbated when organizations decide to implement a project for the first time.

Finally, management may choose not to prioritize an energy efficiency improvement project because personnel are already fully allocated to existing projects. Concern about adding more projects to an already-full agenda can postpone many worthwhile initiatives indefinitely.

PREPARING FOR THE RACE

A Champion must first be empowered to pursue successful implementation. Once a Champion has a mandate to move forward, specific roles and tasks can be assigned to team members to implement the efficiency project. Even if you are moving toward being authorized to make the project happen, the process may get derailed by occasional communications and decision-making breakdowns. Organizations require adequate information to properly consider the options and make a decision. A breakdown in one part of the process can derail a project completely. As a Champion, you should identify inefficiencies in your organization's decision-making process and adjust accordingly, ensuring that the right decision-makers have sufficient and timely information.

If internal staff simply is not available to manage this project, your organization may choose to engage external resources. Industry experts are available to help you navigate the process without overtaxing your human resources. While an internal point-person is always essential, consultants can be found to handle everything from project management to technical evaluation and financial modeling. See Hurdle 3—"We Don't Have the Technical Expertise"—later in this section for more information on accessing external experts.

STRATEGIES AND TOOLS

Challenge: Un-empowered Internal Champion

- ☐ Identify relevant industry and market trend data for a competitive analysis **[R]**
- ☐ Collaborate with colleagues who want to reduce costs and operate more efficiently **[PfS]**
- ☐ Determine your organization's stage in the Psychology of Buying **[PfS]**

Challenge: No Extra Staff Capacity

- ☐ Hire an energy auditor **[O3]**
- ☐ Ask your utility about the availability of turn-key projects
- ☐ Contact an energy service company **[F2]**

Challenge: Inefficient Decision-Making Process

- ☐ Prepare a proof-of-concept argument with case studies **[R]**
- ☐ Identify relevant industry and market trend data for a competitive analysis **[R]**
- ☐ Use terminology associated your mission and daily operations **[PfS]**
- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Quantify the potential for energy savings **[F5]**

Challenge: Communication Lapses

- ☐ Prepare a proof-of-concept argument with case studies **[R]**
- ☐ Research green building certifications **[O1]**
- ☐ Identify relevant market trend data for a competitive analysis **[R]**
- ☐ Use terminology associated with your mission and daily operations **[PfS]**

Strategies and Tools that Apply to All Challenges

- ☐ Frame the savings in a way that boosts your bottom line
- ☐ Collaborate with colleagues who want to reduce costs and operate more efficiently **[PfS]**

Reference Number Key

PfS = Preparing for Success in Section 1
F = Finance in Section 3
O = Organizational in Section 3
R = Resources in Section 4

2. "Where Do We Start?"

Understanding building systems is smart business, no matter what comes next.

UNDERSTANDING THE HURDLE

To provide context for your energy efficiency business case you need to understand the energy usage for your entire building. If you only know the energy usage in a portion of a building, you will have incomplete financial arguments making it more difficult to justify the project. This hurdle can be compounded by these challenges:

- Difficulty accessing aggregated utility data.
- Lack of understanding of building systems.
- Timeliness and seasonality of energy usage.

PREPARING FOR THE RACE

Realistic knowledge of the energy use in a building, maintenance issues, and the full range of efficiency benefits will help you argue for deeper efficiency improvements, which will generate greater savings. Buildings are

complicated machines that serve many purposes, meet many needs, and use energy in many different ways. Understanding your building can help you make a real-world case for energy efficiency. For example, the mechanical systems in your building—such as ventilation, air handling and filtration, lighting, and water and plumbing—affect the well-being and productivity of its occupants. As a Champion, you should know which fuels are consumed in your building and understand where opportunities for savings exist.

Benchmarking your building's energy usage over a period of time (usually the previous 12 months) is a good place to start. ENERGY STAR's Portfolio Manager is a free tool to go further and input a variety of building data and create a profile of energy use in your building. If tenants occupy space in your building, you also need to know their energy usage. You may also request energy usage data from your utility.

Once you have established a baseline through benchmarking, you will have a sense of energy use trends. Some systems (i.e., heating and cooling) could be in greater demand at certain times of the year, which might provide obvious opportunities for timely energy efficiency investments. To the extent possible, consider scheduling energy efficiency discussions around related activities within your organization such as other major building improvements, equipment replacement, or when refinancing debt.

Combining energy efficiency with another large (and perhaps seemingly unrelated) capital improvement project could be an opportunity to leverage existing funds or acquire financing for little added effort. Plus, the energy savings that result from the energy efficiency portion will help pay for the combined project. Be sure to consult with members of your support team to learn of opportunities around the organization.

STRATEGIES AND TOOLS

Challenge: Lack of Access to Aggregate Data

- ☐ Discuss energy use and potential savings with your tenants **[R]**
- ☐ Use ENERGY STAR's Portfolio Manager **[O4]**

Challenge: Lack of Understanding of Building Systems

- ☐ Contact your state energy office and utility **[F3]**
- ☐ Hire an energy auditor **[O3]**

Challenge: Timeliness and Seasonality

- ☐ Hire an energy auditor **[O3]**
- ☐ Recommend efficiency projects at opportune times **[PfS]**
- ☐ Learn which fuels your building consumes
- ☐ Use terminology associated with your mission and daily operations **[PfS]**
- ☐ Discuss energy use and potential savings with your tenants **[R]**

Strategies and Tools that Apply to All Challenges

- ☐ Create a baseline of your energy use **[O2]**

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3. "We Don't Have the Technical Expertise"

Resources to evaluate energy efficiency potential and verify savings are available at little or no cost.

UNDERSTANDING THE HURDLE

Finding and vetting qualified auditors, contractors, and vendors is a big responsibility. This hurdle is composed of two main challenges that face many Champions:

- Lack of technical expertise.
- Difficulty verifying benefits.

This poses a serious challenge to many Champions. Adding an energy management project to anyone's existing responsibilities may be met with resistance because everyone is already busy "putting out fires." Plus, energy efficiency technology is constantly changing and up-to-date expertise may not reside within the organization. Fortunately for Champions, certified professional energy auditors are standing by to lend assistance.

PREPARING FOR THE RACE

Experienced experts from local utilities, state energy offices, consulting engineering firms, and energy service companies (which may be abbreviated to the acronym "ESCOs") are available to assist with the evaluation of efficiency projects. Many utilities and state energy offices can provide some project support that, while not necessarily deep, comes at little or no cost. State energy offices may not be able to give recommendations or referrals to specific firms offering energy consulting, but your state or utility may have a program that could help you find qualified experts and play matchmaker. In any case, a phone call to a state energy office or utility can be a helpful first step.

An energy efficiency audit is one of the most important phases in the energy efficiency process. Audits involve an analysis by an energy efficiency expert to identify opportunities for savings. More detailed and intensive evaluations and engineering studies are time consuming and have an associated cost. If you, the Champion, anticipate embarking on an extensive or expensive project, it could be wise to contact an energy service company or energy auditor first for advice on appropriate next steps and what kinds of arrangements could be appropriate. Beginning with a (typically free) walkthrough assessment, Champions can weigh the benefits of going further and hiring a professional for an "investment grade" audit. Although this support may come with a price tag, these costs can be folded into the total project cost and financed when your project launches.

STRATEGIES AND TOOLS

Challenge: Lack of Technical Expertise

- ☐ Contact your state energy office and utility **[F3]**
- ☐ Hire an energy auditor **[O3]**
- ☐ Contact an energy service company **[F2]**

Challenge: Difficulty Verifying Benefits

- ☐ Recommend efficiency projects at opportune times **[PfS]**
- ☐ Create a baseline of your energy use **[O2]**
- ☐ Use ENERGY STAR's Portfolio Manager **[O4]**

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4. "This Isn't a Core Competency"

Eliminating operating budget waste leaves more money for key business investments.

UNDERSTANDING THE HURDLE

For many companies, managing energy may not seem important compared to other initiatives. To compound this problem, estimated energy savings and other benefits can seem unclear, irrelevant, confusing, or unavailable to organizations that are not accustomed to thinking seriously about energy usage. The perception of unclear benefits is doubly challenging if savings are not effectively couched in terminology associated with your organization's mission and day-to-day operations. Three tactics can help you clear this hurdle:

- Quantify and verify potential benefits.
- Demonstrate the importance of energy efficiency to occupants and tenants.
- Calculate the value to potential future buyers.

This issue is even more complicated when you are dealing with leases in rental properties. There are unique challenges that come from one party paying the utility bill and a different party being responsible for maintenance and property improvements. This "split incentive" often causes energy efficiency projects to languish.

PREPARING FOR THE RACE

Demonstrating and quantifying energy savings can turn a seemingly abstract efficiency project into a high-value, expense-reduction priority. Property improvements that reduce both operations and maintenance costs make efficient buildings more compelling investments. Owners may be sparked by awareness that energy efficiency is increasingly a tenant expectation. Others may see it as a way to stand out from the competition.

In addition to attracting more investors, appraisers are beginning to attach a price premium to energy efficient buildings. In particular, buildings that have achieved highly regarded green building certifications—like an ENERGY STAR label or a LEED (Leadership in Energy and Environmental Design) certification—provide tangible, quantifiable proof of savings built into an energy efficient property.

Building owners who lease space in their buildings make strategic maintenance decisions based on their assumptions about attracting and retaining tenants. Whether the consideration is new flooring, decorations in the foyer, or window upgrades, each improvement is designed to entice tenants to move in and stay. To invest in energy efficiency improvements, property owners need to believe it will have a positive impact on their rental income.

Energy efficiency is increasingly a market differentiator in the office building sector. Potential tenants are aware of their rental options and attentive to their bottom line. Recent studies suggest tenants are choosing more sustainable office spaces and that they are willing to pay more for the privilege of doing so. Rental premiums between three and nine percent have been identified for "green" buildings compared to a peer group. An energy efficient building is often more comfortable and may indicate a higher level of attention by building managers.

(Unfortunately, building owners and facility managers probably hear more complaints about building comfort from tenants and occupants than compliments!) Tenant companies may also have corporate sustainability goals. Choosing a "green" certified building can help these companies attain their sustainability benchmarks.

Tenants and building owners alike are closely attentive to their operating budgets. Unless energy costs are built into the rental rates, tenants have to cover their monthly heating, cooling, and lighting bills. Any organization that pays its own energy bills can benefit from improved energy efficiency. Unfortunately, a particularly challenging hurdle inhabits this space between an owner's priorities and a tenant's utility bills—the split incentive issue. Perhaps no hurdle is more daunting than the split incentive. A Champion should endeavor to coordinate an owner's interests with a tenant's need for energy efficiency improvements, leading both to a point of mutual benefit. Hurdle 8—"It's Not Worth the Investment"—provides some additional financial strategies and tools to help Champions overcome the split incentive challenge.

STRATEGIES AND TOOLS

Challenge: Unclear Benefits

- ☐ Use terminology associated with your mission and daily operations **[PfS]**
- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Quantify the potential for energy savings **[F5]**
- ☐ Explain that efficiency is improving existing systems

Challenge: Not Important to Tenants

- ☐ Research green building certifications **[O1]**
- ☐ Identify relevant market trend data for a competitive analysis **[R]**
- ☐ Collaborate with colleagues who want to reduce costs and operate more efficiently **[PfS]**
- ☐ Encourage tenants to use green leases **[F6, R]**
- ☐ Quantify decreased operations and maintenance costs **[F5]**
- ☐ Use terminology associated with your tenant's mission and daily operations [PfS]
- ☐ Tell potential tenants about efficiency measures

Challenge: Low Value to Future Buyers

- ☐ Research green building certifications **[O1]**
- ☐ Tell appraisers about efficiency measures
- ☐ Explain that efficiency is improving existing systems
- ☐ Identify relevant market trend data for a competitive analysis **[R]**
- ☐ Quantify rent premiums charged due to improved energy efficiency **[R]**
- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Quantify decreased operations and maintenance costs **[F5]**
- ☐ Encourage tenants to use green leases **[F6, R]**

Challenge: Split Incentives

- ☐ Encourage tenants to use green leases **[F6, R]**
- ☐ Explain that efficiency is improving existing systems
- ☐ Quantify decreased operations and maintenance costs **[F5]**

Strategies and Tools that Apply to All Challenges

- ☐ Prepare a proof-of-concept argument with case studies **[R]**
- ☐ Frame the savings in a way that boosts your bottom line

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5. "Our Organizational Culture Is Too Conservative."

Energy efficiency improvements offer a tried-and-true opportunity to save money.

UNDERSTANDING THE HURDLE

When decision-makers hear "energy efficiency," they may be concerned about investing in new and unproven technology. In reality, established energy service companies and product providers stay away from unproven technology, especially when they are guaranteeing energy savings. This hurdle can involve the following two sentiments:

- Belief that potential savings are unrealistic.
- Belief that existing systems are adequate or not in need of improvement.

Many energy efficiency investments have become mainstream. The decision-makers in your organization need to know the importance of keeping up with the building-management curve. Your organization's competitors are also likely to be considering or investing in energy efficiency. Whether motivated to attract higher-value tenants or to decrease energy-dollar waste, organizations in just about every sector have made energy efficiency a core element of their business model. These businesses are investing in energy efficiency because they understand it gives them a competitive advantage.

PREPARING FOR THE RACE

The important message to convey is this: energy efficient systems are often updated and improved versions of older technologies. Much of the benefit from an energy efficiency improvement project comes from the first phase of operations, in which waste is identified and eliminated—in other words, from making improvements that require little if any new technology. If decision-makers are reticent to make the first step in embracing energy efficiency a new systems purchase, perhaps engaging in a retro-commissioning process (reviewing and tuning existing systems to ensure they work as efficiently as possible) is a good introduction to the simple, time-tested, common-sense strategies that make energy efficiency so compelling.

Proof-of-concept case studies are important when presenting your proposal to a skeptical audience. Case studies demonstrating the wide adoption of energy efficiency measures by similar companies combined with statements of support from your internal energy efficiency team can be powerful motivators. Whether you are suggesting a specific technology upgrade or just want to bring in a contractor to provide recommendations, proof of experience is essential. Ask a utility or energy service company contact for references from other companies like yours that have invested in energy efficiency improvements.

If the decision-makers believe that your building's systems are "good enough," they likely have not recognized the scope of savings available through efficiency upgrades. Presenting concrete information on the financial benefits of energy efficiency improvements will help overcome this challenge. These include the decrease in

operations and management costs as well as the positive impact on building valuation and rental rates. Many energy service companies will guarantee that savings will be realized, so it is important to work with companies with the financial resources to support their claims.

It is important to convey to decision-makers in your organization the disadvantages that can come from falling behind the building-management curve. Old systems are often harder and more costly to run and maintain than newer systems. Plus new energy efficient technologies can lead to improved occupant satisfaction, fewer maintenance calls by tenants, and less money spent on outside technical support.

STRATEGIES AND TOOLS

Challenge: Too Good to Be True

- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**

Challenge: Our Systems Are Just Fine

- ☐ Engage in a retro-commissioning process

Strategies and Tools that Apply to All Challenges

- ☐ Frame the savings in a way that boosts your bottom line
- ☐ Explain that efficiency is improving existing systems
- ☐ Prepare a proof-of-concept argument with case studies **[R]**
- ☐ Hire an energy auditor **[O3]**
- ☐ Quantify the potential for energy savings **[F5]**
- ☐ Quantify decreased operations and maintenance costs

Reference Number Key

PfS = Preparing for Success in Section 1
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FINANCIAL HURDLES

6. "We Can't Afford It."

We can invest in our facility or pay the utility.

UNDERSTANDING THE HURDLE

Even if the investment looks attractive, your organization's CFO and other executives may be reluctant to commit to new projects that require upfront capital. A CFO's concern could reflect a variety of internal concerns, starting with:

- Energy efficient equipment is more expensive than "regular" equipment.
- We have to wait until the funds are set aside in a future budget.
- We need to hold our credit line open for other operating expenses.

More serious external concerns include:

- Debt ceiling limitations imposed by existing lenders.
- Concerns about the impact borrowing could have on existing loans.
- A poor credit rating in a challenging economy.

No matter what causes the concern, as a Champion, you have to have a lot of options available to address this hurdle.

PREPARING FOR THE RACE

The bottom line of energy efficiency is this: if your organization has money to waste on inefficient equipment, it has the money to invest in energy efficiency improvements. This is especially the case because financing an efficiency project can provide a net positive cash flow when the financing costs are lower than the energy savings. By choosing to stick with inefficient systems, organizations are just *paying for wasted energy* instead of *investing in their facilities*.

For many projects it is possible to demonstrate how quickly energy savings exceed the project's cost. Significant utility and state incentives, combined with today's low interest rates, can make a compelling argument to do the project. Financing a project with a reasonable payback may soon look like a "no-brainer" to even the most skeptical financial manager.

STRATEGIES AND TOOLS

Challenge: "It Costs Too Much"

- ☐ Use life-cycle cost analysis **[F1]**
- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Limit evaluation to the additional cost of the more efficient equipment
- ☐ For larger projects, work with an energy service company, possibly using an energy services agreement or energy performance contract **[F2]**
- ☐ Finance and structure the project so finance costs are less than savings **[F4]**

Challenge: Debt Ceilings

- ☐ Attempt to renegotiate restrictive covenants **[F7]**
- ☐ Portray financing as a means to a better result **[PfS]**
- ☐ For larger projects, work with an energy service company, possibly using an energy services agreement or energy performance contract **[F2]**
- ☐ Ask primary lender to lift blanket lien **[F7]**
- ☐ Consider a "mortgagees disclaimer and consent" release for new lenders**[F7]**

Challenge: Creditworthiness

- ☐ Seek a specialty lender willing to lend against cash flow **[F7]**
- ☐ Suggest pledging unencumbered collateral **[F7]**
- ☐ Discuss financing with equipment vendors **[F7]**
- ☐ Speak to lenders about state or local government guarantees, including "capital access" programs
- ☐ Cross-collateralize loans **[F7]**
- ☐ Get a creditworthy guarantor, such as a corporation, individual, or government body

Challenge: Structure of Asset Ownership

- ☐ Seek a specialty real estate lender **[F7]**
- ☐ Suggest pledging unencumbered collateral **[F7]**
- ☐ Contact a commercial mortgage broker **[F7]**

- ☐ Get a creditworthy guarantor, such as a corporation, individual, or government body
- ☐ Seek a specialty lender willing to lend against cash flow **[F7]**

Strategies and Tools that Apply to All Challenges

- ☐ Apply for state or local government grant funding **[F3]**
- ☐ Research utility, state, or local government efficiency financing options **[F3]**
- ☐ Identify potential rebates and subsidies **[F3]**

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7. "Other Projects Offer Better Returns"

Comparing efficiency with other capital investments is apples to oranges.

UNDERSTANDING THE HURDLE

CFOs and finance managers have many projects competing for a limited capital budget. Effective managers invest these capital budget dollars in the projects that deliver the greatest returns. This requires a prioritization of projects according to some criteria. The most common financial prioritization tools are simple payback and return on investment (ROI). Other tools include net present value (NPV) analysis and internal rate of return (IRR) calculations. For more information, see Section 3—"Training for Success"—and refer to F4: "Understanding the CFO Toolbox", and also Section 4—"Resources and Appendices."

Unless your company has a mandate to embrace energy efficiency, your organization is likely to view energy efficiency projects myopically. This is especially the case in organizations that manage capital and operating budgets in separate sections of the organization. When making the case for energy efficiency, Champions should remember that it is far easier to control energy usage than energy costs. Energy efficiency can be an effective "hedge" against considerable—and mostly uncontrollable—rises in oil, natural gas, and electricity costs in the future. Champions: do not miss an opportunity today that will benefit your organization's bottom line for a long time to come.

This hurdle could reflect one or more of these underlying issues facing an organization:

- Difficulties evaluating returns.
- Capital budget constraints.
- Competing capital priorities.

PREPARING FOR THE RACE

Utility bills, which contain wasted or underutilized energy, always get paid. The question is whether you prefer to continue paying for wasted energy, or capture the waste and spend it on improving your facility. Paying for wasted energy will never be refunded to the organization.

Efficiency projects can stop the leak of wasted money. Because they lower energy bills, projects can be financed and paid from operating budget savings rather than be forced to compete with other capital budget initiatives. Cash-flow analysis is particularly important when evaluating an energy efficiency project.

When talking with your CFO, be sure to know both the simple payback and the ROI of an energy efficiency project. The two analyses are different and should be used appropriately to convey the right messages in favor of an energy efficiency project. But do not limit your analysis to these two metrics. Instead, be prepared to explain the importance of evaluating your project against other investment choices using other analyses that better express the benefits of energy efficiency, including life cycle cost analysis and cash-flow analysis, which are often underutilized by CFOs.

STRATEGIES AND TOOLS

Challenge: Evaluating Returns

- ☐ Use life-cycle cost analysis **[F1]**
- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Frame energy efficiency and improved cash flow as a competitive advantage **[F4]**

Challenge: Capital Budget Constraints

- ☐ Use capital funds set aside for equipment replacement
- ☐ Speak to lenders about state or local government guarantees, including "capital access" programs
- ☐ Discuss refinancing or getting a second mortgage with your mortgage holder **[F7]**
- ☐ Bundle with other capital improvement projects **[PfS]**

Challenge: Competing Priorities

- ☐ Use life-cycle cost analysis **[F1]**
- ☐ Demonstrate the low risk of investing in energy efficiency

Strategies and Tools that Apply to All Challenges

- ☐ Identify potential rebates and subsidies **[F3]**
- ☐ Finance and structure the project so finance costs are less than savings **[F4]**
- ☐ Use ENERGY STAR's Cash Flow Opportunity Calculator **[F5]**
- ☐ Use cash flow analysis rather than IRR and ROI **[F4]**
- ☐ For larger projects, work with an energy service company, possibly using an energy services agreement or energy performance contract **[F2]**
- ☐ Explore alternative financing options **[F8]**
- ☐ Limit evaluation to the additional cost of the more efficient equipment
- ☐ Focus project on short-term measures with immediate or near-term positive cash flow **[F4]**

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8. "It's Not Worth the Investment"

Efficiency investments are as close to guaranteed as you can get.

UNDERSTANDING THE HURDLE

Long-term investments are always scrutinized and subject to capital budget constraints. Management is likely focused on projects that increase revenue, gain market share, or are otherwise central to the organization's mission and goals. However, during uncertain economic times it is prudent to focus more on cost-cutting measures like efficiency projects.

This hurdle could reflect one or more of these underlying issues facing an organization:

- Lease-related challenges (triple-net or short-term).
- Economy-wide uncertainty.
- Incompatible investment horizons.
- Weak or non-existent external incentives.
- The treatment of energy as a fixed cost.

PREPARING FOR THE RACE

While absolute guaranties of success and improved cash flow may be hard to find, energy services companies and equipment vendors can provide energy savings and quality estimates based on proven modeling methods. In addition, there is growing consensus that energy efficiency improvements can lead to the following positive outcomes for commercial property owners:

- Higher property valuation.
- Greater tenant satisfaction.
- Reduced maintenance expenses.

Earlier in this section, as part of the discussion of Hurdle 4—"This Isn't a Core Competency"—the issue of split incentives was raised as a particularly important challenge. Champions have some financial strategies and tools to consider as part of overcoming this challenge. Some consideration of specific lease terms that bust split incentives and energy-aligned rent arrangements can help bring owners and tenants together to implement mutually beneficial energy efficiency projects.

STRATEGIES AND TOOLS

Challenge: Lease-Related Challenges

- ☐ Investigate whether a "Green Lease" is applicable **[F6]**
- ☐ Set rent rates to factor in savings from improvements **[F6]**
- ☐ Talk to tenants about financial and other benefits of energy efficiency **[R]**

Challenge: Economy-Wide Uncertainty

- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Use life-cycle cost analysis **[F1]**
- ☐ Finance and structure the project so finance costs are less than savings **[F4]**
- ☐ Work with an ESCO, possibly using an ESA or EPC **[F2]**
- ☐ Focus project on short-term measures with immediate or near-term positive cash flow **[F4]**

Challenge: Incompatible Investment Horizons

- ☐ Use ENERGY STAR's Building Upgrade Value Calculator **[F5]**
- ☐ Finance and structure the project so finance costs are less than savings **[F4]**
- ☐ Use life-cycle cost analysis **[F1]**
- ☐ Limit evaluation to the additional cost of the more efficient equipment
- ☐ Use cash flow analysis rather than IRR and ROI **[F4]**
- ☐ Work with an ESCO, possibly using an ESA or EPC **[F2]**

Challenge: Weak or Non-Existent External Incentives

- ☐ Focus project on short-term measures with immediate or near-term positive cash flow **[F4]**
- ☐ Use capital funds set aside for equipment replacement

Challenge: Treatment of Energy as a Fixed Cost

- ☐ Work with an ESCO, possibly using an ESA or EPC **[F2]**
- ☐ Finance and structure the project so finance costs are less than savings **[F4]**

Challenge: Split Incentives

- ☐ Investigate whether a "Green Lease" is applicable **[F6]**
- ☐ Talk to tenants about financial and other benefits of energy efficiency **[R]**

Strategies and Tools that Apply to All Challenges

- ☐ Identify potential rebates and subsidies **[F3]**
- ☐ Use ENERGY STAR's Cash Flow Opportunity Calculator **[F5]**
- ☐ Identify relevant market trend data for a competitive analysis **[R]**
- ☐ Frame energy efficiency and improved cash flow as a competitive advantage **[F4]**
- ☐ Explore alternative financing options **[F8]**

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SECTION 3: TRAINING FOR SUCCESS

STRATEGIES AND TOOLS EXPLAINED

Reference	Tool and Strategy
Organizational Tools and Strategies	
O1	ENERGY STAR Recognition
O2	Benchmarking
O3	Energy Audits
O4	ENERGY STAR Portfolio Manager
Financial Tools and Strategies	
F1	Assessing Efficiency Project Value
F2	Energy Contracts and Contractors
F3	Government and Utility Programs
F4	Understanding the CFO Toolbox
F5	Quantification Tools and Techniques

Reference	Tool and Strategy
F6	Lease-Related Tools
F7	Working with Lenders
F8	Alternatives to Traditional Financing

O1 ENERGY STAR RECOGNITION

ENERGY STAR recognition, through the award of an ENERGY STAR label, can be given to commercial buildings that achieve a rating of 75 or higher in Portfolio Manager (see O4 below). ENERGY STAR labels, a bronze plaque is awarded to the building's owner, are suitable for mounting on the exterior facade or in the building lobby to signify the energy performance rating of for a specific year. ENERGY STAR buildings tend to attract tenants who value social responsibility, which can result in higher rents.

www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager_intro.

O2 BENCHMARKING

Benchmarking is the first step in undertaking an energy efficiency project, following only the identification and empowerment of a Champion. Benchmarking is typically an exercise based on compiling at least the prior 12 months utility bills and establishing a baseline of energy usage. A full year's worth of energy data is important because usage varies with the weather and transition of seasons.

Collecting energy usage from tenants may also be required to complete the benchmarking of your building. Tenants who pay their own utility bills are the most obvious source of their energy usage data. Some tenants might not be willing to go through the trouble of gathering 12 months of past usage. Some might consider energy usage data sensitive information. Explaining why energy usage data is important and how the end-result (i.e., successful implementation of an energy efficiency project) will be beneficial to them might help. Incorporating savings that accrue to tenants shows a commitment to the tenants at the same time as increasing the building's value through lower energy costs. Developing constructive and friendly tenant relationships is an important plus when presenting your project's benefits. Hopefully, your tenants will be cooperative and provide the data.

Utilities can also be a source of energy usage data when tenants are unwilling or unable to provide their utility bills. To share this information, a utility might be required to remove identifiers and other tenant-specific signatures to make the data generic. Utility data, even when non-specific or aggregated for all building tenants or occupants, is still useful.

O3 ENERGY AUDITS

Energy auditors can help identify building envelope shortcomings, and recommend lighting and air handling improvements. Check with your state energy office and local utility to see if you qualify for any local programs. The U.S. Environmental Protection Agency's (EPA's) ENERGY STAR's Web site lists energy services and product providers who have demonstrated skill in this area. Remember, however, a government agency can only provide lists of qualified companies; it cannot recommend individual companies.

O4 ENERGY STAR PORTFOLIO MANAGER

ENERGY STAR's Portfolio Manager is a free, building-wide management system that can be used at the individual-building or real-estate-portfolio level. It allows an organization to input a variety of building data, create a best-case energy profile, and maintain a close watch on building performance over time. You can also use

Portfolio Manager to track and access energy and water consumption before and after efficiency improvements are made. It generates a Statement of Energy Performance, which reports year-to-year energy consumption (and is a regulatory requirement in some localities). This can be used to hold an installing company responsible for meeting energy savings performance promises.

Portfolio Manager automatically rates a building's performance against its national peer group. Buildings that rank in the top quartile qualify for an ENERGY STAR label. This ENERGY STAR rating will give your company two important pieces of information: how the building compares to the marketplace and how well the building performs over time. A significant drop in an ENERGY STAR rating indicates a process or system shift that likely needs to be addressed. Visit ENERGY STAR online at www.energystar.gov for more information.

One of the significant benefits of using Portfolio Manager is the information generated through the initial **benchmarking** phase when you create a baseline of your energy use. According to the Institute for Market Transformation (IMT), benchmarking is the first step in the race to get to "yes." Benchmarking is defined as a process of assessing energy performance relative to a baseline. Once a baseline is established, building owners and operators can track and manage energy usage and efficiency performance over time. Benchmarking can also enable Champions to identify further opportunities for energy efficiency, help decision-makers prioritize energy projects and investments, and evaluate performance over time.

F1 Assessing Efficiency Project Value

Life Cycle Cost (LCC) analysis is a method for evaluating the relative cost effectiveness of alternative project designs. It takes into account the total cost of facility ownership and usually includes an assessment of net savings, savings-to-investment ratio, adjusted internal rate of return, and years to payback. An LCC analysis can be used to compare project designs that have higher initial costs but lower operating costs over the project life to project designs that have a lower initial cost but higher operating costs in order to determine which is more economical in the long run. It is an important tool that helps make a convincing business case for higher-cost, energy-saving equipment. ENERGY STAR offers resources online at www.energystar.gov.

To help public entities determine whether the initial price of efficiency improvements are worth the investment over the long run, the U.S. Department of Energy developed the Federal Energy Management Program (FEMP), which is available at http://www1.eere.energy.gov/femp/information/download_blcc.html.

F2 Energy Contracts and Contractors

Energy Performance Contracts (EPCs) can be used for comprehensive energy efficiency projects and are usually used for deep energy retrofit projects. EPCs often include turnkey services, financing, and a guarantee that the full cost of the project will be financed by the savings the project produces. Energy Service Companies (ESCOs) typically use EPCs.

Energy Service Companies (sometimes referred to as ESCOs) can provide a one-stop-shop solution for organizations that want to avoid the management and financing coordination of energy efficiency improvement projects. Energy service companies provide services that range from efficiency audits, to system installation and monitoring, to the sourcing of project financing. Using energy performance contracts (EPCs), energy service companies structure third-party financing that fund project installations through the project's energy savings. Usually the energy service company shoulders the risk of the energy savings not being realized by providing guarantees that the retrofits will produce the projected savings in units of energy. Promoting a project through internal hurdles is often easier when the savings for the project is backed up with financial guarantees.

ESCOs are capable of developing comprehensive projects that are customized for a building's needs. They can provide assurance that the energy savings can cover the cost of financing the improvements. Most energy service companies are required to meet strict certification requirements established by the National Association of Energy Service Companies (NAESCO) at www.naesco.org.

Managed Energy Service Agreements (MESAs) have many similarities with an energy service company arrangement. However, instead of utilizing standard third party loans and leases an investment fund assumes the role of paying the building owner's on-going utility bill directly and charges the building owner a fixed monthly fee equal to the building's historical energy rates, adjusted for certain variables. The investment fund becomes an intermediary between the building owner and the local utility. Revenue, for the MESA, is generated by capturing the differential between the building's old energy costs and its decreasing energy costs. MESAs may provide a way to keep the cost of the energy upgrades off the organization's balance sheet, depending on the opinion of the organizations CFO.

Efficiency-Services Agreements (ESAs) are similar to MESAs but have some major differences. For starters, the energy efficiency equipment is owned by the energy-efficiency company and not the owner of the building. The building owner continues to pay the utility bills and pays the energy-efficiency company a portion of the savings. As with a MESA, the cost of the project may not need to be reported on the organization's balance sheet. This accounting decision is made by the building owner's chief financial officer.

F3 Government and Utility Programs

Time is of the essence with many **federal, state, and local tax benefits and rebate programs**, which are currently available but may be discounted or reduced in the near future. An invaluable resource for researching available programs is the Database of State Incentives for Renewables and Efficiency (DSIRE). Visit DSIRE online at www.dsireusa.org.

Some state or local governments may also manage **revolving loan funds (RLFs)**, which lend low-cost capital for energy efficiency improvements and allow borrowers to arrange repayments to match savings generated over time. The National Association of State Energy Officials provides a list of state RLFs, which is available at www.naseo.org/resources/selfs/State_Energy_RLF_Report.pdf. Another comprehensive report of state RLFs is available at www.cleanenergystates.org/.../staterevolvingloanprograms.pdf.

As of the date of this publication, twenty seven (27) states have authorized **Property Assessed Clean Energy (PACE) Districts** for Commercial Properties. PACE programs allow owners of existing commercial properties the opportunity to finance energy retrofits as a voluntary special assessment on their property tax bills. This can overcome traditional barriers such as the split incentive issues because many leases allow both utilities and taxes to be passed on to the tenants. In addition, the tax assessment can be passed on to a new building owner, alleviating the concern about having to pay off the remaining principal on the loan upon property transfer. PACE transactions have full tax lien status, fall ahead of the primary mortgage. See F8: "Alternatives to Traditional Financing" for more information.

Some **utilities offer financing** for equipment and improvements as part of comprehensive commercial and industrial energy efficiency programs. Where available, **on-bill financing** (OBF) can offer a related means of financing. See F8: "Alternatives to Traditional Financing" for more information.

The Department of Energy's **Better Buildings Challenge** is an initiative intended to bring the public, private, and non-profit sectors together with a common goal of improving energy efficiency in the nation's built environment. A list of participating organizations can be found online at http://www4.eere.energy.gov/challenge/.

F4 Understanding the CFO Toolbox

Cash Flow Analysis tracks the movement of money in and out of an organization or project, measured over a specified period of time. Organizations can be profitable, but if they have no liquidity (cash) they are in trouble. The impact of cash flow is typically reflected on the organization's operating statement. Properly structured energy efficiency projects improve liquidity and contribute to the overall health of the organization.

Cash-flow positive financing is possible with efficiency projects when the cost of financing stays below the savings from the project. Monthly payments are a consequence of the term (number of payments), interest rate, amount borrowed, and whether or not there are any balloon (sometimes called a "bullet") payments at the end of the financing. A lower interest rate has a surprisingly small impact on the monthly payment (this can easily be demonstrated using the Cash Flow Opportunity Calculator; see F5); extending the term (e.g., from 5 to 7 years) or adding a balloon payment are better options to reduce the monthly payment amount.

Internal rate of return (IRR), sometimes referred to as the "hurdle rate," tracks the cash flows in and out of a project. It is one of two discounted cash flow techniques that reflect the time value of money (the other being Net Present Value - NPV). IRR is often used to compare investment opportunities that generate future savings (or income). It is expressed as a percentage rate, which reflects the discount rate generated by future savings offsetting the initial cost of the project. Using some imagination, it could be compared to the interest rate paid on a bank account over the life of the account. When an organization is making capital budget choices, many organizations use IRR to determine which competing projects have greater financial growth potential.

Return on Investment (ROI) is the return per dollar of investment used on a given project. It values an investment based on its benefits and costs. Financial analysts use ROI to measure how efficiently capital resources are employed. Knowing the ROI of one project is useful, but it becomes a better tool when it is used to compare more than one project. Projects with higher ROI values are more beneficial than those with lower values. Like IRR, ROI is commonly used to evaluate capital budget choices. Some people confuse ROI with simple payback (which is expressed in years, not percentages).

Net Present Value (NPV) is the discounted value of an investment's future cash flows after subtracting the original amount of the investment. While NPV provides a powerful way to evaluate investment opportunities, it can be a difficult concept for non-financial people to comprehend. In theory, any project that generates a positive NPV number should be implemented. In practice, however, projects are limited by the amount of the capital budget. NPV is one of several valuation assessments that are considered prioritizing projects within a limited capital budget. NPV can be a useful for Champions because it provides insight into the long-term value of investments using a tool that is popular with financial people. Unfortunately, it forces the energy project into the category of capital budget events.

Simple payback is an unsophisticated method of calculating how long it will take to recover the costs of an investment. It is calculated by dividing the installed equipment cost by the annual savings (energy, operating, and maintenance). Many organizations have an arbitrary maximum simple payback, which might be based on practice or an industry norm. Different industries and customers will have different simple payback targets, for example, three years. Short payback periods often exclude efficiency projects that go beyond the low-hanging fruit (e.g., fast payback projects, like lighting). Simple payback analysis is easy to calculate and intuitive, but it often does not fully capture the benefits of efficiency projects or reflect the time value of money. It is often confused with Return On Investment (which is expressed in percentages, not years).

Energy efficiency projects financed with payments lower than the energy savings will result in **improved cash flow**. IRR, ROI, NPV, and simple-payback evaluations are effective methodologies when prioritizing limited

capital budget projects. They, however, usually place energy efficiency projects at a disadvantage because they force the project into the capital budget category and do not properly recognize the avoided operating savings. If the efficiency project is not implemented, the organization will continue to pay for wasted energy to the utility. To overcome this hurdle, you have to get your decision-makers to decide whether (1) to pay the utility or (2) invest in their facility.

If your financial decision-making process emphasizes IRR, ROI, or simple payback as a primary metric, **focus on the long-term value** of the project by increasing the asset value of the property or using a life cycle cost analysis (see F1: "Assessing Efficiency Project Value") and NPV. Another question to explore is whether the ROI or IRR of a project is greater than the cost of borrowing. If so, an efficiency project might be a good investment. The bottom line with energy efficiency projects is that they can be financed using third-party investors, effectively avoiding the capital budget process altogether. The important thing to get your decision-makers to understand is they should implement any project that is cash-flow positive.

If unable to convince management to finance larger projects, reducing the scope of the energy efficiency project can be a fallback position. While this short-term solution may affect medium-long term projects by cream skimming, doing something today is better than doing nothing. Plus the savings realized through short-term measures may help you get to "yes" more easily with the next project. In any case, it is important to emphasize to your CFO that properly structured energy efficiency projects improve liquidity and contribute to the overall health of the organization.

Off Balance Sheet Financing Treating repayment of the financing for energy efficiency projects as an operating expense can keep the financing "off balance sheet." And, because the immediate benefit of installing energy efficiency projects is reducing the operating expense budget earmarked for paying the energy and water bills, off balance sheet treatment makes sense. Post-ENRON, however, having your auditors treat financings as "off balance sheet" is becoming increasingly difficult, especially in light of The Sarbanes-Oxley Act of 2002, which established new or enhanced standards for all U.S. public company boards, management, and public accounting firms. Nevertheless, several financing vehicles currently allow financing payments for energy efficiency upgrades to be treated as operating expenses (e.g., operating leases, power purchase agreements, and tax-exempt lease-purchase agreements).

F5 Quantification Tools and Techniques

ENERGY STAR's Cash Flow Opportunity Calculator was developed to address the "we don't have the money" objection many Champions face when trying to implement energy efficiency projects, and to help facility managers translate energy savings into "financial speak." It incorporates lessons learned from field experiences selling energy efficiency projects to decision-makers around the country and uses simple financial arguments familiar to all financial managers. This tool is excellent for calculating the cash-flow consequences of project delay and is in the public domain (i.e., free).

This calculator can also be used to answer the following three key questions:

1. How much new energy efficiency equipment can be purchased from the anticipated savings?
2. Should this equipment purchase be financed now or is it better to wait and use cash from a future budget?
3. Is money being lost by waiting for a lower interest rate?

Two counter-intuitive observations will be clear after using this tool:

1. Energy inefficiencies are so large that one year's worth of energy waste is typically more than the entire cost of financing a project for terms of 15 years or more.

2. The interest rate, which is commonly used to judge the best financing deal, has a relatively small impact on the efficiency project.

In fact, it is often a better financial decision to enter into a financing with a higher interest rate if it can close quickly rather than wait for lower cost financing. The Cash Flow Opportunity Calculator makes it clear that when it comes to energy efficiency, time is money.

www.energystar.gov/index.cfm?c=business.bus_financing.

ENERGY STAR Building Upgrade Value Calculator estimates the financial impact—including traditional financial metrics and the impact on asset value—of proposed office-sector energy-efficiency investments. The calculations are based on data the user enters about conditions present at their properties. Required inputs are limited to general characteristics of the building and information on the proposed investments in energy efficiency upgrades.

www.energystar.gov/index.cfm?c=comm_real_estate.building_upgrade_value_calculator.

Operations and Maintenance (O&M) Savings

Quantifying decreased operations and maintenance costs can be a complex process that requires infrastructure and process changes that result from the improvements. This is further complicated by the fact that every project and each organization is unique.

Some improvements are relatively common and simple to quantify while others are harder to measure. Certain parts of operation savings are measurable in your bills, and maintenance is measurable. For example, changing from traditional incandescent bulbs to compact fluorescent (CFL) or light-emitting diode (LED) bulbs will save both electrical energy and worker-hours. If you replace the bulbs every four years rather than twice per year, there is a quantifiable savings in labor. However, many improvements are inherently complex, making the savings difficult to quantify. For example, a highly efficient HVAC upgrade can save on utilities, but you may have to train or hire qualified staff to operate it.

Equipment vendors often have the most experience with the savings potential of their recommended systems. Asking vendors to help quantify O&M savings will also give you greater insight into the equipment and how it will integrate into your facility and staffing workflow.

The discipline of calculating energy savings is called **measurement and verification (M&V)**. There are three main ways to do this:

1. Deemed (stipulated) savings.
2. Simple M&V (e.g., projections based on engineering calculations).
3. Full M&V (e.g., measured and verified savings).

Deemed savings are the easiest and least expensive way to calculate savings. The deemed method is usually used to calculate the savings from simpler improvements, like lighting installations. Assuming the usage does not change after the improvement, the savings are based on the difference between the energy used before and after the installation. Full M&V techniques are more complicated and likely requires engineering analyses after some time following a project's completion and commissioning.

www.centerpointenergy.com/services/electricity/business/energyefficiencyprograms/commercialandindustrialstandardoffer/98aa6954e3853210VgnVCM10000026a10d0aRCRD/.

F6 Lease-Related Tools

Green Leases attempt to solve some challenges presented by traditional commercial property leases and offer multiple benefits to lessor companies. To begin with, green leases formalize tenant responsibilities to minimize energy waste. This can lead to improved building energy ratings and lower energy bills. In addition, the green lease allows the tenant and landlord to establish creative strategies for sharing realized benefits.

For more information about green leases, including guidance, best practices, and toolkits, see sustainca.org/green_leases_toolkit and www.greenleaselibrary.com.

F7 Working with Lenders

Understanding Different Lender Types

Lenders tend to fall into three categories: balance-sheet lenders, cash-flow lenders, or both. **Balance-sheet lenders** want to see a strong net worth for the borrower. **Cash-flow lenders**—such as leasing companies—look toward the cash flow of the business rather than the net asset value shown on the borrower's books. **Banks and credit unions** tend to look to both.

Commercial real estate balance sheets may not reflect a strong net worth (assets minus liabilities), however they often show strong cash flow. **Leasing companies** tend to give more value to cash flow than traditional banks.

Firms may choose to work with a few different types of **specialty lenders**. Some **specialty finance companies** will look at the rent roll to determine credit worthiness, even if the financial statements show a loss (depreciation is not a cash event). **Asset-based lenders** can also be a source of capital should you have other assets that can become liquid (e.g., accounts receivable). **Specialty real estate lenders** start by looking at the market value of the real estate holdings. **Cash-flow lenders** look at the cash running through the business.

Many money center (large) banks have **specialty real estate groups** that can offer credit and non-credit financial solutions for real estate developers, REITs, and commercial property owners. In addition, **mortgage companies and mortgage brokers** may be able to provide a new or second mortgage on the property.

Some **utilities, states, and counties** offer loans for energy improvements in commercial properties. Visit www.DSIREUSA.org for information about these programs.

In addition to traditional lenders, there are **specialty finance companies** that provide financing for Energy Service Agreements or Power Purchase Agreements, so make sure to ask your **ESCO** if they can help. Finally, **equipment vendors** sometimes offer special financing programs to help sell their equipment. They may work with an affiliated finance company, provide low-interest financing, or have a special arrangement with a third-party lender.

Collateral

Pledging **unencumbered collateral** (assets that are easy to sell and not already used to secure financing) can help organizations secure loans. Options include inventory, accounts receivable, or other equipment that is not being financed. Cash reserves, letters of credit, or corporate guarantees may convince the lender to approve your transaction.

Lenders may also agree to **cross collateralize loans**, assuming this language is not already written into the loan documents and your other loans are with the same lender. If the older loans are close to being paid off and the

financed assets are valued more than the remaining balance on the loans, it may be possible to use this asset value to support the new financing. Cross collateralization will not work unless your organization is financially sound.

Liens

On a large loan, it is common practice for a lender to place a lien (called a **blanket lien**) on all primary assets of the borrower (e.g. land, equipment, receivables). Under the Uniform Commercial Code (UCC), any new assets going onto the customer's balance sheet after the lien filing has been perfected (i.e., filed on time) becomes subject to the perfected filing. This means new assets acquired after the blanket lien is filed may be subject to the preexisting lien. A new lender financing energy efficiency equipment will want to use the new equipment as collateral on the new loan. Unless the earlier lender is willing to exclude the new assets from their blanket, by providing a **mortgage disclaimer and consent release**, the new lender may be unable to perfect a security interest on the energy assets being financed, increasing the new lender's risk.

Restrictive Loan Covenants

Bank loans to small and medium businesses usually include restrictive loan covenants, which detail what the company can and cannot do without bank authority. Common covenants include providing the lender with periodic financial statements, maintaining working capital ratios, taking on new debt, or even paying dividends. Lenders place more restrictions on businesses they consider riskier credits. Violations of these covenants usually are cause for the lender to call the loan (force repayment of principal without delay). Point out to lenders that installing energy efficiency equipment will improve the operation's cash flow (and profitability) and should improve working capital and leverage ratios.

Options for Accessing a Second Mortgage

A good place to start inquiring about refinancing or a second mortgage is to talk with your existing mortgage holder or with a commercial and/or community bank. If your bank says "no," it may be due to the internal limitations caused by their existing portfolios rather than your company's credit. In this case, you should consider turning to a well-established commercial mortgage broker that works with numerous lenders, some of which may have more latitude in issuing new mortgages.

F8 Alternatives to Traditional Financing

Some utilities offer **on-bill financing (OBF)** or **on bill repayment (OBR)** programs that allow organizations to finance projects by adding the financing costs to their existing utility bills. In some states, this type of program is known as PAYS (Pay-As-You-Save). Under these programs the utility usually covers the cost of the energy improvements, which is paid back through a charge on the organization's monthly utility bill. See Section 4—"Resources and Appendices"—for more information about OBF and links to related web sites.

An emerging alternative finance technique, known as **Property Assessed Clean Energy (PACE)**, proposes to use a pre-existing municipal finance tool—the special assessment district—to aggregate energy efficiency loans and supply a constant source of capital to loan programs. The special assessment tool provides a public mechanism for servicing loans by collecting the payments similarly to property taxes. PACE programs might be available for your project in Minnesota, California, Michigan, Connecticut, Ohio, Florida and the District of Columbia. These programs are expanding rapidly, so check with your state's energy office to learn more. See F3: Government and Utility Programs for more information.

Foundations sometimes help support energy efficiency upgrade efforts by making **program related investments (PRI)** or **mission related investments (MRI)**. Through PRI, foundations sometimes make low-interest loans or

equity-like investments to non-profits and or for-profit companies—especially low-profit limited liability companies (L3Cs)—for the installation of efficiency upgrades. In contrast, through MRI, foundations can also use endowment money to make market-rate investments in local projects, companies, or revolving loans funds that support the mission of the foundation by generating a positive social or environmental impact, such as increased energy efficiency. See Section 4—"Resources and Appendices"—for links to MRI and PRI-related web sites.

SECTION 4: RESOURCES AND APPENDICES

RESOURCES

Building owners and managers often want to know that they are neither too far ahead nor too far behind the industry curve. Case studies and industry trend data are great tools for demonstrating the importance of investing in energy efficiency.

The resources listed in this Guide are intended to give you a starting point in tailoring your argument for your organization and stakeholders.

Market Trends and Case Studies

The following publications and websites offer case studies and market trend data that can be used to bolster your case for energy efficiency investments.

Green Building Study (CoStar, 2008)

- Sale price comparison.
- Rental rate comparison.
- Occupancy comparison.

www.costar.com/uploadedFiles/Partners/CoStar-Green-Study.pdf.

Energy Efficiency and Real Estate Opportunities (CERES, 2009)

Includes case studies that explain why large real estate investment and management firms are actively looking for energy efficient investment opportunities.

www.ceres.org/resources/reports/energy-efficiency-and-real-estate-opportunities-2009.

Business Case for Energy Efficient Building Retrofit and Renovation (McGraw Hill Construction, 2012)

Includes case studies, recommendations for companies considering energy efficiency upgrades, and business benefits of energy efficiency.

apps1.eere.energy.gov/buildings/publications/pdfs/alliances/business_case_for_energy_efficiency_retrofit_renovation_smr_2011.pdf.

Case for Green Building Grows Stronger for Owners, Occupants (CoStar, 2011)

Summary of findings from a 2011 joint survey. Includes data on occupancy and rental rates, as well as industry trends.

www.costar.com/News/Article/Case-for-Green-Buildings-Grows-Stronger-for-Owners Occupants/127092.

Green and Energy-Efficient Trends in Real Estate (National Building Museum presentation, 2012)

Includes industry trends, data, and projections through 2015.

www.nationalbuildingmuseum.net/pdf/PubProg_Buildinginthe21stCentury_HarveyBernstein_3-26-2012FINAL.pdf.

A Landmark Sustainability Program for the Empire State Building (Jones Lang LaSalle, 2012)

Case study on a major office building renovation. Includes industry trend quotes by market leaders.

www.us.am.joneslanglasalle.com/SiteCollectionDocuments/United%20States/JLL_Empire_State_Building_Project_Plan.pdf.

High-Performance Tenant Build-Out: A Primer for Tenants (Institute for Building Efficiency, 2011)

Tenant-focused strategies. Useful both for tenants and landlords who are building their case for efficiency investments.

www.nrdc.org/business/CGI/files/High-Performance-Tenant-Buildout-Primer.pdf.

High Performance Buildings Database

Provides a wide variety of case studies, including but not limited to commercial building spaces.

www.buildinggreen.com/hpb/index.cfm.

NRDC Building Green Links

- Life-cycle cost analysis resources.
- List of websites that aggregate case studies.

www.nrdc.org/buildinggreen/links/default.asp.

Green Lease Library

- Guidance on pursuing green leases.
- Green lease case studies.
- Sample language and templates.

www.greenleaselibrary.com.

Psychology of Buying

- Neil Rackham (Huthwite, Inc.), "SPIN Selling" 1988, McGraw-Hill Book Company, New York, NY.

Community Energy Programs and Local Energy Alliances (LEAs)

Clean Energy Solutions, Inc., has developed an extensive compilation of financing and program design best-practices applicable to LEAs as well as different types of organizations.

- Sustainable revenue streams.
- Financing mechanisms.
- Energy performance contracting.

www.cleanenergysol.com/insights/

Industry Associations

The following organizations may be able to provide greater support in answering specific questions and accessing additional research.

- Institute for Market Transformation (www.imt.org).
- National Association of Energy Service Companies (www.NAESCO.org).
- American Council for an Energy Efficient Economy (www.ACEEE.org).
- Database of State Incentives for Renewables and Efficiency (www.DSIREUSA.org).
- DOE Commercial Building Energy Alliance. (www1.eere.energy.gov/buildings/commercial/index.htmlBEA).
- Building Owners and Managers Association International (www.boma.org).
- EPA ENERGY STAR Buildings & Plants Program (www.energystar.gov/index.cfm?c=business.bus_index).
- EPA ENERGY STAR Expert Help (www.energystar.gov/index.cfm?c=expert_help.find_exp_help).

Alternative Financing

Many alternative financing mechanisms are relatively unknown and may be rapidly evolving. The resources below offer further information for those considering these options.

Detailed Information about Clean Energy Financing

The U.S. Department of Energy published the Clean Energy Finance Guide for Residential and Commercial Building Improvements in December 2010. This thorough guide contains 16 chapters of information directly relating to financing clean energy projects.

http://www4.eere.energy.gov/wip/solutioncenter/finance_guide/.

Calculating Financial Metrics

EPA offers organizations a suite of energy-related financial metrics to help understand the effectiveness of current practices and find opportunities to improve corporate energy management practices. Use of the metrics allows senior decision makers and financial analysts to quickly and accurately gauge an organization's energy management performance within its specific sector. They can be found at: http://www.energystar.gov/index.cfm?c=metrics.metrics_index

For detailed explanations and formulas, refer to Wikipedia.org:

- http://en.wikipedia.org/wiki/Net_present_value
- http://en.wikipedia.org/wiki/Internal_rate_of_return
- http://en.wikipedia.org/wiki/Simple_payback_period
- http://en.wikipedia.org/wiki/Return_on_investment
- http://en.wikipedia.org/wiki/Discounted_cash_flow
- http://en.wikipedia.org/wiki/Life_cycle_assessment

EPA also offers a free Life-Cycle Cost Analysis Tool software package available online at: http://cfpub.epa.gov/si/si_public_record_report.cfm?address=nhsrc/&dirEntryId=161493.

ENERGY STAR offers downloadable spread sheets to calculate life cycle energy savings by a variety of products. Search online for "energy savings calculator + product" (e.g. lights, boilers, etc.) to find customized information.

Foundation Investing

The following web sites provide some background about foundation investments through program related investing (PRI) and mission related investing (MRI).

PRI

- http://www.irs.gov/charities/foundations/article/0,,id=137793,00.html
- http://www.fordfoundation.org/grants/program-related-investment
- http://www.macfound.org/programs/program-related-investments/
- http://www.primakers.net/about/members
- http://en.wikipedia.org/wiki/L3C

MRI

- http://www.missioninvestors.org/mission-investing
- http://www.cof.org/files/images/ExecEd/RockefellerPhilAdvisors.pdf
- http://www.nafoa.org/pdf/Mission-Related-Investing.pdf
- http://www.cambridgeassociates.com/foundations_endowments/working_together/specialized_e

On-Bill Financing (OBF) and "Pay as You Save" (PAYS) Programs

As of late 2012, states with successful on-bill or OBF/PAYS programs included: Connecticut, Hawaii, Illinois, Kansas, Massachusetts, Michigan, New Jersey, New Hampshire, and Rhode Island.

- http://www.localcleanenergy.org/State%20On-Bill%20Financing
- http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/OnbillRepayment.html
- http://aceee.org/sector/state-policy/toolkit/on-bill-financing
- http://regarchive.sdge.com/documents/business/savings/obf/SolanaBeachCaseStudy.pdf

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SNAPSHOT TABLE TO OVERCOMING COMMON HURDLES

Organizational Hurdles (Part 1)

	Who Will Do This?				Where Do We Start?		
	Lack of Internal Champion	Inefficient Decision-Making Process	Communication Lapses	No Extra Staff Capacity	Lack of Access to Aggregate Data	Lack of Understanding of Building Systems	Timeliness and Seasonality
Identify relevant market trend data for a competitive analysis [R]	●						
Collaborate with colleagues who want to reduce costs and operate more efficiently [PfS]	●	●	●	●			
Frame the savings in a way that boosts your bottom line	●	●	●				
Prepare a proof-of-concept argument with case studies. [R]		●	●				
Identify relevant market trend data for a competitive analysis. [R]		●	●				
Use terminology associated your mission and daily operations. [PfS]		●	●				●
Use ENERGY STAR's Building Upgrade Value Calculator. [F5]		●					
Quantify the potential for energy savings. [F5]		●					
Research green building certifications. [O1]			●				
Hire an energy auditor. [O2]				●		●	●
Contact an ESCO. [F2]				●			
Discuss energy use and potential savings with your tenants [R]					●		
Create a baseline of your energy use. [O3]					●	●	●
Use ENERGY STAR's Portfolio Manager. [O3]					●		
Contact your state energy office and utility [F3]						●	
Recommend efficiency projects at opportune times. [PfS]							●
Learn which fuels your building consumes.							●
Discuss energy use and potential savings with your tenants. [R]							●
Explain that efficiency is improving existing systems.							
Encourage tenants to use green leases. [F6, R]							
Quantify decreased operations and maintenance costs. [F5]							
Tell potential tenants about efficiency measures.							
Tell appraisers about efficiency measures.							
Engage in a retro-commissioning process							
• Quantify rent premiums charged due to improved energy efficiency. [R]							

SNAPSHOT TABLE TO OVERCOMING COMMON HURDLES

Organizational Hurdles (Part 2)

	We Don't Have the Technical Experience		This Isn't a Core Competency			Our Organizational Culture Is Too Conservative	
	Lack of Technical Expertise	Difficulty Verifying Benefits	Unclear Benefits	Not Important to Tenants	Low Value to Future Buyers	Too Good to Be True	Our Systems Are Just Fine
Identify relevant market trend data for a competitive analysis [R]							
Collaborate with colleagues who want to reduce costs and operate more efficiently [PfS]				●			
Frame the savings in a way that boosts your bottom line			●		●	●	●
Prepare a proof-of-concept argument with case studies. [R]			●			●	●
Identify relevant market trend data for a competitive analysis. [R]				●	●		
Use terminology associated your mission and daily operations. [PfS]			●				
Use ENERGY STAR's Building Upgrade Value Calculator. [F5]			●		●	●	●
Quantify the potential for energy savings. [F5]			●			●	●
Research green building certifications. [O1]				●	●		
Hire an energy auditor. [O2]	●	●				●	
Contact an ESCO. [F2]	●	●					
Discuss energy use and potential savings with your tenants [R]							
Create a baseline of your energy use. [O3]		●					
Use ENERGY STAR's Portfolio Manager. [O3]		●					
Contact your state energy office and utility [F3]	●	●					
Recommend efficiency projects at opportune times. [PfS]		●					
Learn which fuels your building consumes.							
Discuss energy use and potential savings with your tenants. [R]							
Explain that efficiency is improving existing systems.			●		●	●	●
Encourage tenants to use green leases. [F6, R]				●	●		
Quantify decreased operations and maintenance costs. [F5]				●		●	●
Tell potential tenants about efficiency measures.				●			
Tell appraisers about efficiency measures.					●		
Engage in a retro-commissioning process					●	●	
• Quantify rent premiums charged due to improved energy efficiency. [R]					●		

SNAPSHOT TABLE TO OVERCOMING COMMON HURDLES

Financial Hurdles (Part 1)

	We Can't Afford It				Other Projects Offer Better Returns		
	Costs Too Much	Debt Issues	Credit-worthiness	Structure of Asset Ownership	Evaluating Returns	Capital Budget Constraints	Competing Priorities
Use life-cycle cost analysis [F1]	●				●		●
Use ENERGY STAR's Building Upgrade Value Calculator [F5]	●				●		
Limit evaluation to the additional cost of the more efficient equipment	●				●	●	●
Use ENERGY STAR's Financial Value Calculator [F5]	●				●		
Identify potential rebates and subsidies [F3]	●					●	●
For larger projects, work with an ESCO, possibly using an ESA or EPC [F2]	●				●	●	●
Finance and structure the project so finance costs are less than savings [F4]	●				●	●	●
Apply for state or local government grant funding [F3]		●					
Attempt to renegotiate restrictive covenants [F7]		●					
Portray financing as a means to a better result [PfS]		●					
For projects over $1 MM, discuss executing an ESA or MESA with an ESCO [F2]		●				●	
Ask primary lender to lift blanket lien [F7]		●					
Consider a "mortgagees disclaimer and consent" release for new lenders[F7]		●					
Seek a specialty lender willing to lend against cash flow [F7]			●	●			
Suggest pledging unencumbered collateral [F7]			●	●			
Discuss financing with equipment vendors [F7]			●				
Research utility, state, or local government efficiency financing options [F3]			●				
Get a creditworthy guarantor, such as a corporation, individual, or government body			●	●			
Speak to lenders about state or local government guarantees, including "capital access" programs			●			●	
Seek a specialty real estate lender [F7]				●			
Contact a commercial mortgage broker [F7]				●			
Explore alternative financing options [F8]					●	●	●
Use ENERGY STAR's Cash Flow Opportunity Calculator [F5]					●	●	●
Use cash flow analysis rather than IRR and ROI [F4]					●	●	●
Frame energy efficiency and improved cash flow as a competitive advantage [F4]					●		●
Focus project on short-term measures with immediate or near-term positive cash flow [F4]					●	●	●
Use capital funds set aside for equipment replacement						●	
Discuss refinancing or getting a second mortgage with your mortgage holder [F7]						●	
Bundle with other capital improvement projects [PfS]						●	
Investigate whether a "Green Lease" is applicable [F6]							
Set rent rates to factor in savings from improvements [F6]							
Talk to tenants about financial and other benefits of energy efficiency [R]							
Identify relevant market trend data for a competitive analysis [R]							

SNAPSHOT TABLE TO OVERCOMING COMMON HURDLES

Financial Hurdles (Part 2)

	It's Not Worth the Investment				
	Split Incentives	Economy-Wide Uncertainty	Incompatible Investment Horizons	Weak or Non-Existent External Incentives	Treatment of Energy as a Fixed Cost
Use life-cycle cost analysis [F1]		●	●		
Use ENERGY STAR's Building Upgrade Value Calculator [F5]		●	●		
Limit evaluation to the additional cost of the more efficient equipment			●		
Use ENERGY STAR's Financial Value Calculator [F5]		●	●		
Identify potential rebates and subsidies [F3]	●	●	●	●	●
For larger projects, work with an ESCO, possibly using an ESA or EPC [F2]		●	●		●
Finance and structure the project so finance costs are less than savings [F4]		●	●		●
Apply for state or local government grant funding [F3]					
Attempt to renegotiate restrictive covenants [F7]					
Portray financing as a means to a better result [PfS]					
For projects over $1 MM, discuss executing an ESA or MESA with an ESCO [F2]					
Ask primary lender to lift blanket lien [F7]					
Consider a "mortgagees disclaimer and consent" release for new lenders[F7]					
Seek a specialty lender willing to lend against cash flow [F7]					
Suggest pledging unencumbered collateral [F7]					
Discuss financing with equipment vendors [F7]					
Research utility, state, or local government efficiency financing options [F3]					
Get a creditworthy guarantor, such as a corporation, individual, or government body					
Speak to lenders about state or local government guarantees, including "capital access" programs					
Seek a specialty real estate lender [F7]					
Contact a commercial mortgage broker [F7]					
Explore alternative financing options [F8]	●	●	●		
Use ENERGY STAR's Cash Flow Opportunity Calculator [F5]		●	●	●	●
Use cash flow analysis rather than IRR and ROI [F4]			●		
Frame energy efficiency and improved cash flow as a competitive advantage [F4]		●			●
Focus project on short-term measures with immediate or near-term positive cash flow [F4]		●		●	
Use capital funds set aside for equipment replacement				●	
Discuss refinancing or getting a second mortgage with your mortgage holder [F7]					
Bundle with other capital improvement projects [PfS]					
Investigate whether a "Green Lease" is applicable [F6]	●				
Set rent rates to factor in savings from improvements [F6]	●				
Talk to tenants about financial and other benefits of energy efficiency [R]	●				
Identify relevant market trend data for a competitive analysis [R]	●				