

Building Lasting Partnerships: Program Strategies that Enamor Decision-Makers & Enable Savings in the Commercial Real Estate Office Sector

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ABSTRACT

Complex management, decision-making structures, and diverse leasing arrangements create a difficult environment for local and regional energy efficiency program administrators trying to engage commercial real estate (CRE) office owners. While challenges remain, several programs are using sector-specific strategies to overcome split financial incentives and other traditional challenges to promoting energy efficiency in the CRE office sector.

This paper will identify and examine several common CRE office program strategies from three leading U.S. energy efficiency program administrators: The Northwest Energy Efficiency Alliance (NEEA); The New York State Energy Research and Development Authority (NYSERDA); and Xcel Energy (Minnesota). These strategies include: 1) identify forums and partnering opportunities to secure longer-term customer commitment to program; 2) benchmark whole-building energy performance with the U.S. EPA ENERGY STAR[®] Portfolio Manager; 3) establish a multi-step, streamlined screening process to find appropriate building candidates; 4) re-assess whole-building energy performance and promote continuous improvement.

Beyond program strategies, this paper will report initial energy savings and other results, program lessons learned and future plans for program direction and evolution.

Introduction

Complex management, decision-making structures, and diverse leasing arrangements create a difficult environment for local and regional energy efficiency program administrators trying to engage commercial real estate (CRE) office owners. While challenges remain, several programs are using sector-specific strategies to overcome split financial incentives and other traditional barriers to energy efficiency in the CRE office sector.

This paper will: 1) generally describe the CRE market sector environment and how it creates challenges for efficiency program administrators; 2) discuss emerging, common CRE sector strategies that NEEA, NYSERDA and Xcel Energy employ to gain traction in this sector; 3) outline initial program results including energy savings and other benefits; and 4) describe common program lessons learned and future direction.

For the purposes of this paper, “commercial real estate” includes commercial office properties that are income-generating buildings producing rental income for the owner. This term does not include owner-occupied office buildings.

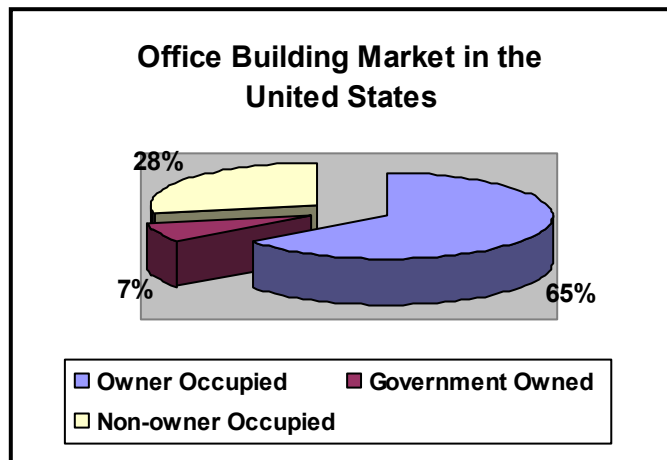
RE Office Characteristics Create Program Challenges

Commercial real estate office space represents about one-quarter of the total U.S. office market, comprising roughly three billion square feet of space (Reed et. al., 2004). In some local markets, such as New York City, commercial real estate offices represent a much higher percentage of office space than the national average (Real Deal Databook, 2006). Figure 1 shows a breakdown of the U.S. commercial office sector.

There are real or perceived attributes about the CRE office market that create challenges for local efficiency program administrators seeking to engage and enroll these customers. The CRE office market ownership and management structures are complex. For any given property, a number of key decision-makers may have roles in property management decisions that affect energy usage. These stakeholders could include the owner, which may be an investment corporation (e.g., real estate investment trust, REIT), a third-party real estate services provider, a regional or local property management firm, an outside engineering services firm, a building engineer, and service providers.

The layering of property management decision-making across multiple parties, some of whom are national or international investment firms complicates program engagement at the local level. In some cases, program managers may have difficulty identifying or accessing the building owner (i.e., where a third-party property manager manages the building).

In addition to these challenges, CRE owners may believe that their buildings are already efficient or that property managers have appropriate control over energy usage and expenditures. Owners may view energy costs simply as a pass-through to tenants or as an insignificant cost. If they plan to sell the building in the short-term, the owner or manager may feel that they will not accrue the value of capital upgrades or other energy-related investments. Similarly, tenants may feel that the benefits of energy projects will accrue solely to the owner. Table 1 summarizes several of these market attributes and the associated local program challenges in reaching these customers.



Source: U.S. DOE, EIA, CBECS Data, Table B-12,

Table 1. CRE Sector Program Challenges

CRE Office Sector Attribute/ Perception	Challenges to Local/Regional Program
Complex management structures, e.g., owner is international investment firm and contracts management to national, third-party property manager	Difficult for local program to identify party to engage; Challenge to identify and gain an audience with financial decision-makers (e.g., CEO, CFO)
Owner/decision-maker feels that building is already efficient	Program challenged with proving otherwise
Owner/decision-maker feels that energy costs do not affect bottom line (pass through costs to tenants)	Program must have capacity to perform lease analysis to determine who pays for energy and demonstrate how energy efficiency project benefits accrue to owners versus tenants
Owner/decision-maker says capital is constrained for building improvements	Program may only promote capital upgrades and not have capacity to support operational improvements
Owner wants projects that improve net operating income (NOI), asset value and have the greatest return on investment (ROI)	Program may speak in simple payback terms that do not resonate with CRE financial decision-makers
Tenants feel that owner will benefit from energy efficiency project	Program challenged with proving otherwise
Building appraisers ignore or discount influence of energy costs on building value	Owner may not feel that value of building upgrades will carry over into higher appraised property value

Information based on Walraven (2007), Jewell (2007), Majersik (2007)

Overcoming Sector Challenges with CRE-Targeted Strategies

In the 2006-2007 timeframe, the Northwest Energy Efficiency Alliance (NEEA), New York State Energy Research and Development Authority (NYSERDA), and Xcel Energy (Minnesota) developed programs to target commercial real estate customers in their respective areas. Faced with those challenges listed in Table 1, these administrators developed targeted sector strategies that would help overcome barriers to entry and build longer-term relationships with CRE customers. This section outlines and summarizes the strategies employed by NEEA's BetterBricks, NYSERDA's Focus on Commercial Real Estate (Focus CRE), and Xcel Energy's Commercial Real Estate Efficiency programs. In most cases, these strategies are common to all the programs; however, some strategies may not be reflective of all of the programs. Unique program strategies are also noted in this section.

Identify Forums and Partnering Opportunities to Secure Longer-Term Commitment to Program

Gaining access to the appropriate CRE decision-maker with a message that ties the benefits of energy efficiency to value propositions these stakeholders care about is a challenge. All three programs employ the following strategies to gain access to and build credibility with key decision-makers:

- Leverage national and regional efforts, such as the U.S. EPA ENERGY STAR Buildings Program, the Building Owners and Manager Association's (BOMA) Energy Efficiency Program (BEEP) and 7-Point Energy Challenge, and others;
- Build ongoing, cooperative partnerships with the local real estate industry, local universities, city government, or investor-owned utilities (IOU's) if applicable;
- Highlight mutual goals and map efficiency benefits to CRE-specific value propositions.

Partnering with groups such as BOMA and others provides an opportunity for local and regional energy efficiency program administrators to leverage outside resources and support mutual energy efficiency and other goals. Given the general market interest in "green" buildings and carbon issues, some commercial real estate organizations are becoming more receptive to partnerships and involvement with efficiency programs. However, the varied goals of these stakeholders, competing objectives of owners and tenants, and the complexities of lease-structures requires efficiency program administrators to carefully coordinate program and project activities.

Working with BOMA local chapters, or "locals," may help energy efficiency program managers connect to CRE decision-makers and industry leaders. BOMA International represents more than 90 local associations in the United States and these members include building owners, managers, developers, leasing professionals, corporate facility managers, asset managers, and product and service providers (BOMA International Web site). BOMA offers efficiency program administrators with a potential conduit to reach out to local and regional CRE market players and an established platform from which to voice shared energy efficiency goals.

The BOMA 7-Point Energy Challenge offers a framework for this audience to begin thinking through energy efficiency issues, and gives energy efficiency administrators an "in" to begin a dialogue with CRE decision-makers. NEEA, for example, has partnered with BOMA local associations in Portland, Oregon, Seattle and Spokane, Washington and Boise, Idaho to deliver BOMA's Energy Efficiency Program (BEEP) curriculum. The BEEP training helps companies understand how to build efficiency into their business processes and upper management decision makers to understand how energy improvements benefit their bottom line. NEEA utilizes this venue as an educational platform and then helps map building owner needs to their specific program offerings.

Ongoing cooperative partnerships with the U.S. EPA, real estate industry, local universities, city government, and investor-owned utilities (IOU's) help to further add credibility to the programs. NYSERDA's FOCUS CRE has collaborated with the New York City Mayor's Office of Long Term Planning and Sustainability, Real Estate Board of New York (REBNY), the City University of New York, and IOUs within New York State to determine protocol and develop a streamlined approach to benchmark buildings and implement savings measures.

NYSERDA has also teamed with Consolidated Edison, Southern California Edison (SCE), and others to assist the Clinton Climate Initiative (CCI) in guiding and encouraging the energy service company (ESCO) industry to seek whole-systems energy savings.

Traditional efficiency program approaches that market capital improvements with short simple payback periods do not connect to CRE-specific value performance indicators: property asset value, net operating income (NOI), tenant retention and satisfaction, tenant comfort, rent levels etc. NEEA, NYSERDA and Xcel Energy help to build momentum for their programs by mapping energy efficiency benefits specifically to the propositions that CRE owners' value. For example, NEEA supplements the BEEP curriculum with a newly created module that investigates the leasing allocation issues in energy efficiency, and how cost savings accrue specifically to CRE owners and tenants. Xcel Energy and NYSERDA have contracted with outside firms to help educate CRE owners on how lower operating expenses increase NOI and building asset value. NYSERDA is also engaging building tenants and working with the Clinton Foundation and the owner to resolve owner-tenant split incentive issues resulting in a retrofit and capital investment strategy that can serve as a model for other buildings in New York City and around the world.

To expedite program buy-in and owner investment and implementation decisions, it is helpful to streamline access to program resources. For example, NYSERDA offers the option of cost-sharing the services of a technical consultant to serve as the owner's representative and provide in-house energy management (e.g., customized services include drafting RFPs and reviewing proposals, assessing the feasibility for meeting the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) requirements, managing project implementation, measuring performance, etc.) Xcel Energy also finds it crucial to streamline customer access to their program and helps walk customers through each step in the process.

Benchmark Whole-Building Energy Performance with the U.S. EPA ENERGY STAR Portfolio Manager

Traditional energy efficiency programs have focused on general market approaches and equipment-specific offerings (e.g., incentives for more energy efficient commercial lighting). To help generate CRE decision-maker program buy-in and build understanding of whole-building energy performance, the programs use these strategies:

- Support whole-building energy performance benchmarking using the Environmental Protection Agency's Portfolio Manager tool and scoring system;
- Harness competition amongst building owners and managers.

The EPA's Portfolio Manager benchmarking tool is particularly useful to local programs working with CRE customers. This tool allows programs to leverage the credibility of the ENERGY STAR brand, which is gaining recognition among owners of office building portfolios. Portfolio Manager is used as the basis for the Energy and Atmosphere credit in the LEED for Existing Building (LEED-EB®) rating and is also covered as part of the BEEP training curriculum. As CRE owners and managers are beginning to realize the benefits of ensuring that buildings meet the sustainability goals of their organization, some are working to achieve the ENERGY STAR and LEED-EB certification for their buildings. This atmosphere has created a

healthy dose of competition between owners and managers as they assess how they measure up against their peers in the Portfolio Manager benchmarking system.

The Portfolio Manager tool indicates the national percentage of buildings that have normalized energy use intensities higher than that of a given building. Ratings are presented on a 1-100 scale, which is more easily interpreted by CRE decision makers than the traditional kBtu/square foot metric. Importantly, the tool regresses against such variables as the number of occupants and space use characteristics, and normalizes for climate. The rating represents the annual whole building energy performance (all fuels), and compares that performance to buildings of similar type. Through this process, programs can show owners how their properties perform relative to other like-buildings and can point out poor performers. This activity both helps to dispel the notion that a building is already efficient and helps to motivate CRE stakeholders with lower performing portfolios to action. NEEA harnesses the competitive energy of this sector by supporting local energy-efficiency contests among CRE owners utilizing the Portfolio Manager system.

Establish Multi-Step, Streamlined Screening Process to Find Appropriate Building Candidates

A streamlined approach to screening building candidates and completing a preliminary energy efficiency assessment helps programs to meet goals in an aggressive timeframe. The programs use the following approaches to screen and identify good CRE office building candidates for project resources:

- Establish a consistent, multi-step building candidate screening and investigation process starting with Portfolio Manager benchmarking;
- Support lease-by-lease analysis to understand how proposed project energy benefits, both operational expenditures (OpEx) and capital expenditures (CapEx), will accrue to owners versus tenants based on the lease types in a given property.

Whole-building benchmarking with Portfolio Manager provides the program staff with an initial screen of a building – a “ballpark” understanding if it is a relatively better or poorer performer in an office portfolio. In certifying a building with Portfolio Manager, the EPA also requires a Professional Engineer (PE) to validate a Statement of Energy Performance. During this benchmarking and validation process, programs can gain valuable high-level building information from the PE about potential energy savings measures in the building.

After this initial benchmarking step, the programs vary in the next steps they employ to diagnose buildings for energy savings potential and high-impact projects. The program managers agree that a standard approach to expediently assess energy efficiency opportunities that have an immediate impact on building performance is important. The programs advocate a consistent approach to: review benchmarking results; evaluate load profiles using interval meter data (if available); assess annual energy usage patterns for all building fuels; and review the mechanical equipment schedules and the commercial building stacking plan to assess space use and tenant leasing. This multi-step screening process that includes lease-based analysis is important in the CRE office market.

The programs support lease analysis activities in different ways. NEEA has developed free, targeted educational materials for use by CRE building owners to help analyze and determine how their capital investments and energy savings will accrue based on current lease structures. After the benchmarking process, NEEA also passes along building information and project leads to its member utilities. In this way, the utilities can continue to work with the owners to identify and explore savings opportunities and implement agreed-upon measures. NEEA is currently developing a more involved screening and assessment strategy. Additionally, many building owners, upon learning about their benchmarking rating and the status of their ENERGY STAR certification, have independently asked their service contractors for assistance in improving efficiency. In turn, the service contractors have leveraged their prior relationships with utility programs to better deliver energy savings opportunities.

Xcel Energy and NYSERDA have additional screening steps and may directly support lease-based analysis as-needed by the owner. Table 2 summarizes the screening steps and commonality between the programs.

Table 2. Program Screening Steps

Program Screening Steps	NEEA	NYSERDA	Xcel Energy
1. Whole-building benchmarking, collect high-level building data	✓	✓	✓
2. Identify “lower” scoring buildings and generate initial high-level savings opportunity report for owner	✓	✓	✓
3. Have owner complete preliminary leasing questionnaire (e.g., identify who pays Cap/Ex, Op/Ex, planned upgrades, etc.)		✓	✓
4. Evaluate preliminary questionnaire data		✓	✓
5. If available, review building energy trends using interval meter data		✓	
6. Investigative site study to collect and check additional building information		✓	✓
7. Program-supported financial analysis report with complete financial assessment, efficiency measure options, ROI for all measures, owner/tenant benefits broken out based on lease structures	*Provides educational materials	✓	✓

NYSERDA and Xcel may not use all of these steps for each building owner enrolled in their CRE programs. Sometimes, owners will begin implementing measures after the benchmarking process and report without further investigation. With some owners, the programs

support additional leasing and building analysis for help facilitate project identification and implementation.

Re-Assess Energy Performance & Promote Continuous Improvement

Re-assessing energy performance through post-implementation benchmarking is either required or recommended to some degree by all the programs. Performance recognition is coordinated at a regional level or directly through the efficiency program administrator. Program strategies to promote continuous improvement include:

- Reward and recognize improved building energy performance through awards;
- Provide owners with continuous improvement tools/approaches;
- Build a "sustainability" culture.

Programs promote ongoing improvements in energy performance by helping building owners obtain the ENERGY STAR label. Alternatively, the programs encourage performance improvement over time without specific focus on achievement of the coveted building label. NEEA, for example, awards local energy efficiency leaders with recognition, awards, and prizes for the most efficient properties and for the most improved energy performance. NYSERDA encourages continuous performance improvement through annual benchmarking by the owner, often cost-shared through technical assistance programs, and requires pre-and post-assessment pursuant to program requirements for those participants receiving implementation incentives.

Early Lessons Learned & Program Results

The NEEA, NYSERDA and Xcel Energy programs are less than two years old. This section includes the preliminary energy savings results provided to date as well as some common lessons learned as the program administrators evolve their programs for the future.

Program Results & Energy Savings

The programs have reported some preliminary energy and other market transformation results. This section summarizes the energy, peak demand and other program results of each program. Table 3 provides a summary of the program results to date.

NYSERDA: Program goals over the five-year program period are to serve over 200 million square feet (MSF) of commercial building space, and achieve 200 GWh and 30 mega-watts (MW) of peak electric demand reduction. The program pilot has been underway since March 1, 2007, and is expected to achieve 5 – 10 giga-watt hours (GWh) in energy savings by the end of 2008. During the first 12 months, seven owners representing 96 buildings and 66.5 MSF have participated in the pilot effort. All of the buildings have been benchmarked using the Portfolio Manager, and 6 of the 7 buildings representing just over 3.3 million square feet have completed the preliminary Energy Scan to prioritize energy conservation opportunities. For these 6 buildings, NYSERDA has identified approximately 4.2 GWhs in energy savings and 525 kW in potential peak demand reduction. The energy conservation measures (ECMs) were grouped by

system during the preliminary investigation; therefore, the total number of ECM's identified can not be reported at this time.

Xcel Energy (MN): Launched on January 1, 2007, Xcel Energy has enrolled 70 buildings representing 33 million square feet (MSF) in their program as of April 2008. Approximately 70% of the CRE building owners have completed a preliminary report and received their building benchmark as part of that deliverable. Xcel has identified savings for these 50 buildings that equates to more than 600 cost-savings measures. As of April 2008, building owners have implemented energy savings measures totaling 8.2 GWhs. Given current enrollment, Xcel expects a total of 33 GWhs to be booked or budgeted as of December 2009.

NEEA: NEEA is a market transformation organization and does not have the same energy savings goals that other efficiency programs may have. NEEA has engaged several building owners through contests coordinated with BOMA locals. To date, 23 CRE owners in Seattle have benchmarked 67 buildings representing 21,624,562 square feet of office space (20% of the Puget Sound office market). In Portland, Oregon, 10 participants with 26 properties representing over 7 million square feet are participating and all of these properties have been benchmarked.

Table 3. Program Results Summary

Program	Program Launch Date	Customers Enrolled (#, sq. footage)	Buildings Benchmarked	Preliminary Report	Energy Cost Saving Measures Identified	Projected Energy Savings (GWh)	Energy Savings Projects Implemented (GWh)
NYSERDA	Pilot Launch: 3/1/2007	7 owners; 66.5 million sq ft	96	6	NA	200	TBD
Xcel (MN)	1/1/2007	70 buildings; 33 million sq ft	45	50	Over 600	33	8.2 (including planned)
NEEA (Seattle, Portland)	2007	33 owners; 28 million sq ft	93	N/A	N/A	N/A	N/A

Table Source: Data reported from NEEA, NYSERDA, Xcel Energy, April 2008

Program Lessons Learned & Future Direction

The programs have reported several key program considerations and lessons learned thus far:

1. Partnerships with or the endorsement of a local or regional CRE organization can help programs gain an audience with key decision makers in this market. For those programs working with BOMA, each local chapter required a different approach and presentation (communication, hot-button issues, goals, financial situation, etc.) In NEEA's case, BOMA owns the BEEP program, and the NEEA takes the backseat. This strategy has the advantage of letting the BOMA locals benefit by bringing this program to their members and become the energy "hero". NEEA staff tasked with working in the CRE market helped to build the relationship and establish credibility by becoming active in the local chapter.

2. The program message matters. Marketing programs in terms CRE decision-makers care about is important (i.e., kWh, kW savings and simple payback period are not the right messages for this particular audience).
3. Using the ENERGY STAR benchmarking tool and building certification as a “sales” tool has been quite successful. Providing building managers and owners a “sneak peak” at what is going on in the building, and raising awareness on the actual performance of buildings is a good motivator for them to act and participate.
4. Many owners or building staff may be seeking the ENERGY STAR certification. At the same time, they may lack the internal resources or understanding to accurately rate their buildings or portfolio. Programs designed to streamline this process should generate significant energy savings opportunities; however, the Portfolio Manager tool is not always intuitive and programs need to be prepared to support training, answer questions and guide the customers through the process.
5. A significant challenge, in particular for utility programs, has been focused support and customer “hand-holding” to keep projects moving effectively given the long sales cycle.

Some of the future, desired program enhancements include:

- Further streamlining building benchmarking and the screening process is necessary. To achieve greater program savings goals (e.g., NYSERDA’s is 200 million square feet of benchmarked space), programs will need to further streamline the benchmarking process and have the ability to remotely assess good building candidates for energy projects. Enabling this ability means closer coordination between utilities and the party or parties supporting the benchmarking to ensure: 1) that the party benchmarking has access and authorization to obtain energy data from utilities; 2) that those data entered into Portfolio Manager (e.g., building square footage, meter numbers, etc.) are accurately captured;
- A more streamlined template and process to enable customer participation in relevant technical assistance programs.

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