## The Commercial Building Market Structure: An Act with Five Players<sup>1</sup>

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### ABSTRACT

Recent market research by PG&E has established a "Five Player Model" useful for understanding the operating structure of commercial office building markets in the United States. The work has significant implications for the strategies and tactics that program implementers may wish to employ in designing and promoting programs for the commercial building market. The research describes the business models and unique characteristics of each player type.

- Each player can be viewed as having a "fleet" of buildings and as engaging with one specific aspect of the "fleet" operations (i.e., fee-based property managers focus on a specific aspect of building operations; engineering service providers provide facility engineering).
- Multiple players can interact with each building, but, despite the convergence for any given building, one player's *fleet* is likely to be almost entirely different from a second player's, and so on.
- Each player type maintains a clear, independent view of the impact that operational decisions have on its own operation. Most importantly, one player's *interests* are not necessarily congruent with those of another player.
- The decision-making structures tend to be independent, with each player examining the impact of efficiency options from its own perspective. A hallmark finding has to do with the separate, independent nature of the players.

Key findings include details on market complexity and the need to target high-level decision makers in firms that deal with fleets of commercial buildings. Not surprisingly, many account based customer contact strategies traditionally used by utilities are ineffective in reaching high-level decision makers within most of the five player types.

### Introduction

The key insights behind this "Act with Five Players" began with a key finding from a comprehensive 2004 study of the commercial buildings market (Reed, et. al. 2004) that there is a high concentration of building ownership in all submarkets including the commercial office lease market.<sup>2</sup> Twenty-five large firms in the US own between 17 and 18 percent of total office leased floor space. In 2001 and 2002, just 25 large companies developed approximately 80 percent of

<sup>&</sup>lt;sup>1</sup> The authors would like to acknowledge the contributions of Isabelle Gecils, Charles Bailey, and Moria Morrissey to this work

 $<sup>^{2}</sup>$  The commercial office lease market is the part of the office market that is available for lease. It represents rougly 28 percent of the 10.4 billion square feet of the office building submarket in the United States.

the new commercial office space. Although there is some overlap between the largest 25 office property owners and the 25 largest developers, there are also firms unique to each list.

The owners with large amounts of lease space tend to own the largest structures in central places of large metropolitan areas and their adjacent suburbs. For example, in early 2006, just one of the large property owners in Northern California owned and managed approximately 20 million square feet spread throughout PG&E's service territory. This same firm owned another 16 million square feet in Southern California and many millions of square feet of commercial office space in cities elsewhere in the country. There were at least 20 other owners with 5 million or more square feet in PG&E's service territory and many additional players with more than one million square feet.

PG&E realized that this concentration of ownership represented a new opportunity for delivering energy efficiency. Further, this "concentration" had analogs in other parts of the commercial building industry including building management, leasing and operations. Traditionally, PG&E's account representatives have been the front line for promoting energy efficiency with large commercial users. Because their job is to deal with customers in specific geographic areas, they tend to work with customer representatives at the building level. PG&E recognized that it needed to focus at least some of its efforts at higher organizational levels within these firms targeting decision-makers that oversee the fleets of buildings. PG&E also comprehended that the same might be true with "non-owner" players, for example, firms that manage buildings for a fee, in this market, and that the development of specialized services for these non-owner players ought to be considered.

Based on these incipient concepts, PG&E commissioned a market study of its large commercial office customers from the perspective of ownership and operations in 2006. The purpose of the study was to identify key segments among the players, decision-makers within those segments, and to identify tactics and strategies for reaching the market players in the segments.

The study identified five key segments grouped in a distinctly unconventional manner (Reed 2007). These segments are:

- Firms that are sole owners and manage their own buildings
- Owner/manager investor organizations (such as Real Estate Investment Trusts REITS)
- Fee-based property management firms
- Large institutional investors and pension funds, and,
- Engineering service/construction firms

Building tenants were assumed to be a given in the mix, and were not analyzed in this analysis.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Our intention is not to minimize the importance of tenants. Tenants specify the improvements when space is leased and can ask for "green space" or energy efficiency. In California the improvements must meet Title 24 standards. Tenants can be divided into national and local tenants. National tenants typically have real-estate specialists within their organization and/or hire real-estate specialists to locate space, negotiate lease rates and terms including tenant improvements. The may have design standards and/or architects or design firms that specify the layout and aesthetics of the space. The may also manage the construction in the lease space. Local or smaller tenants may use a local real-estate firm to find space and then hire a designer or use the designers and contractors recommended by the building manager.

Several key findings emerged.

- The commercial office building lease market is comprised of a complex mosaic of interacting firms.
- There are significant differences among these firms in terms of their business models and how they achieve their goals.
- Investment decisions are made at the highest level in these firms.
- Reaching these firms to effectively promote energy efficiency at the corporate level requires understanding these differences and developing multiple strategies, multiple channels, and multiple messages for the different types of firms.
- Many of the largest firms are national rather than regional or local firms so their portfolios extend well beyond local service territories. Utilities may have to work with other utilities, the US Environmental Protection Agency (EPA), the US Department of Energy (DOE), or national and regional organizations to get these large national firms to think in terms of their portfolio of buildings.

## **"Market Player" Descriptions**

In working through the analysis, five categories of "player types" began to emerge. In constructing this analysis, the key criteria for creating the groupings had to do with common business activities, strategies and drivers. It became apparent that different points of leverage and messages would be needed for each player type in delivering efficiency programs. The five "player types" or segments are described below.

### Sole Owners - Firms that Own and Manage Buildings

These firms own and manage their buildings. Examples of this type of firm are Equity Office Properties (or what was formerly EOP) and Sunset Development. Firms of this type already tend to make decisions at the portfolio rather than at the building level. Approaches to decision making range from considering paybacks and return on investment leavened with the decision-makers' values to carefully calibrated model driven financial assessments parsed by a committee and top decision-makers. These owners operate Class A buildings and are driven to operate them at the highest possible level. An appropriate utility strategy is to work with key decision-makers at the highest levels to undertake an analysis of the buildings and to develop a portfolio level energy plan. Because they tend to hold buildings there is more potential to engage in long term planning than with some other types of firms. These firms may also be willing to invest in projects with longer paybacks than is generally true of other forms of

An important fact that is not well understood is that the owner often pays the energy bill. The tenant's energy costs are fixed in proportion to the amount of space leased relative to the total lease space. Specialized areas such as data centers may be handled separately. The amount the owner pays is generally fixed in the lease (known as an "expense stop") using a base year. Tenants pay the marginal energy costs above the expense stop. The owner benefits from energy efficiency to the extent that energy costs can be reduced below the expense stop because the amount of the lease is fixed. In a large building there could be a hundred leases each with its own lease rate and energy expense stop. It is necessary to know all of the expense stops in order to assess benefits from energy efficiency.

ownership. The owners with whom we spoke were interested or had installed building level monitoring and had started or were interested in doing building analysis.

#### **REITS - Owner/Manager Organizations (with Co-Investors)**

These firms and their investors are looking for high but stable returns. Examples of this type of firm are Hines and Boston Properties. Some aspects of Shorenstein's operations fall into this category as well. These firms typically have a minority investment in a property and manage them as well. Unlike sole owners who tend to be more portfolio oriented, these firms tend to have strategies for individual buildings that are then balanced across the holdings to achieve the goals of the fund. Thus, buildings may be bought and held or they may be purchased with a goal of developing or buying and repositioning a building, and then selling the building. Important targets in these firms are the high-level asset managers. These managers need to know about the importance of energy efficiency to asset value and carbon footprint. Benchmarking and analysis are important because of the individual capital budgets for buildings.<sup>4</sup> Because there are different strategies for different buildings, it is important to have tactics for both buildings that are expected to be in the portfolio for the short and the long-term. It may be particularly important to capture buildings that are projected for a short-term hold when they are purchased.

#### **Fee-Based Property Management Firms**

These firms manage properties for owners for a fee. These are usually multi-line businesses and may own property, may broker properties, and may buy and reposition buildings as well. Examples of such firms are CBRE, Jones, Lang, LaSalle, Trammel Crow, and others. Key individuals in these firms, officers and senior property managers, work with owners to manage their buildings. The fee-based operations of these firms make money from the services they sell. They are interested in expanding the services they offer while improving the quality and financial performance of the real estate they manage. They are mindful of maintaining customer relationships. When they believe ideas or programs will find acceptance, these managers will promote them with owners. Fee-based property managers are most interested in programs that can be distinguished from what has previously been offered, that resonate with their desire to provide services, and that are consistent with the interests of owners. Senior executives tell us that owners are interested in sustainable (LEED) buildings as well as global climate change. Executives in these firms expressed interest in programs aimed at modifying tenant behavior to reduce energy consumption.<sup>5</sup> Executives may need information about utility

<sup>&</sup>lt;sup>4</sup> Some large firms have already done some benchmarking. The director of engineering at one firm with several million square feet had informally benchmarked his buildings to see how they compared to other buildings. Benchmarking is beginning to be more widely used. According to some directors for engineering, facilities engineers have tended to resist this and monitoring of daily energy use (when appropriate monitoring systems are available) because of the press of other responsibilities. Senior property managers, who could use benchmarking to understand their buildings, either don't know about the tool or have not learned to use it. The Environmental Protection Agency (EPA 2008) has a benchmarking tool and PG&E has developed a front-end that connects their billing data to the tool allowing for its use in "real-time." The Building and Owners Manager Association (BOMA 2008) has a course called "BEEP" that employees of building firms can attend to learn about benchmarking.

<sup>&</sup>lt;sup>5</sup> Our informants tell us that interest in Energy Star, LEED and LEEDB buildings stems more from the status conferred on the owner or the firm in the building community than the economic benefits. None of the informants were willing to assert that they obtained higher rents from LEED buildings. One informant had completed a platinum and silver LEED building but wanted to wait and see what happens before committing to consistently

programs and would likely be interested in developing tailored and or collaborative programs for their clients, especially if they were able to help provide the services.

The owners should also be targeted with information about the value of energy efficiency, the relationship of energy efficiency to global climate change, and the idea of managing energy at the portfolio level. They should be encouraged to ask their fee-based managers about portfolio energy planning.

#### Large Institutional Investors and Pension Funds

These investors have substantial investments in buildings and/or equity funds that own buildings. Examples are CalPERS, CalSTRS, TIAA-CREFF, and Prudential Insurance. The investments are managed through real estate trust or fee-based managers. For example, CalPERS has two large real estate funds that are managed by Hines. One of the funds is a Green Building Fund with potential investment capital of \$500 million (Hines 2008).<sup>6</sup>

Institutional investment managers exercise varying degrees of control over the property managers. At one end of the continuum institutional investment managers largely attend to overall results of the investment portfolio leaving the details up to and including buying and selling properties to property managers. At the other end of the spectrum investment mangers may closely monitor and guide the management of individual assets.

The policy makers and the investment managers for these funds can and do influence the direction of the property managers. Periodic contacts with policy makers and investment managers providing focused and concise information about the relation of energy and asset value, the potential for energy efficiency, monitoring, benchmarking, carbon footprint analysis, the potential and benefits of energy planning, and utility program opportunities could assist these investors in making more informed decisions and encouraging the property managers with whom they collaborate to take greater interest in energy efficiency. Utility executive level contacts with policy makers could influence greater attention to efficiency.

#### The Portfolios of Engineering Service/Construction Firms

These firms provide the services of operating engineering personnel to numerous property firms within Northern California as well as to Southern California and elsewhere in the United States. Examples are Able Engineering and ABM. For example, Able has several hundred clients with multiple buildings in Northern California as well as throughout the country. Owners and property managers rely heavily on engineering personnel for advice and recommendations for operations and capital budgets.

Owners and property managers are pressing the engineering service companies and operating engineers to find ways to operate buildings more cost effectively. Operating personnel are looking for ways to reduce operating costs.

building to LEED standards. Recent work (CoStar 2008a; Miller, Spivey and Florance 2008) suggests that both rental rates and occupancy are higher in green buildings than other buildings. While the data are impressive, the authors admit that the analysis does not yet sufficiently control for external factors to firmly establish the incremental value conferred by green attributes. Finally, CB Richard Ellis (CoStar 2008b), with 1.4 billion square feet of space world wide, has just recently committed to making its operations "carbon neutral" by 2010.

<sup>&</sup>lt;sup>6</sup> A description of the fund can be found at <u>http://www.hines.com/investment/funds-narratives.aspx#HCG</u>, last accessed May 1, 2008.

Service firms can influence owners and property managers directly. They are in a position to provide knowledge and information to engineers working for specific owners and to engineers in general. Operating engineers, especially those contracted to the same firms, support and assist each other. More generally, they like to exchange operating experiences. Operating engineers are very competitive. Equipping engineers with benchmarking tools might stimulate intra- and inter-firm competitive interest in running buildings more efficiently.

The service firms are potentially in a position to offer energy efficiency services such as retro-commissioning. In fact, these two firms as well as another similar firm either offer or are organizing competitive services. A lead person is needed to work with engineering service firms and to assist in providing information and organizing services. A lead representative could also coordinate the efforts of PG&E account representatives who work with chief engineers represented by these engineering service firms.

## **Implications for Program Design and Delivery: Building "Fleets"**

This "Act with Five Players" has profound implications for utility program design and delivery. The first and most important implication from the perspective of program design and implementation is that now it rarely makes sense to think of individual buildings as "customers". Despite the fact that each utility account is always a "customer of record," the following facts that emerged from the analysis caused PG&E to rethink some basic program strategies:

- A small handful of large national engineering service companies run the chiller and building control systems in most large buildings (the top two companies control ~60% of the "big building" chiller systems in the San Francisco Bay Area of California).<sup>7</sup>
- A fairly small group of fee-based property management firms are intimately engaged with leasing arrangements for most buildings; these arrangements establish owner/manager/tenant obligations regarding energy costs, build-out allowances and so on.
- Large REITs control huge amounts of square footage from an ownership perspective.
- Individual "owner/operators" routinely use fee-based property managers and engineering service companies to manage and operate their buildings.
- There is substantial cross over of fleets.

To influence what ultimately happens at any individual building, especially a large building, one needs to influence the company that runs the chiller system, the company that controls the leasing arrangements, the company that owns that building—and, of course, the tenants. In other words, the decisions for any given building may involve the intersection multiple decision-makers each with its own fleet of buildings and its own business model and value proposition. Under this model, it's generally accurate to say that the key decision-makers at those firms do not have offices in the building, except by coincidence, and may well not be in the same city or state (or country!).

<sup>&</sup>lt;sup>7</sup> This fact is based on observation relating buildings with chillers and the firms providing operating engineers. "Big buildings" are typically high-rise buildings of more than 100,000 square feet that have chillers. "High-rise" and "chiller" are the operative terms.

Today, each player type wants to be "green" or perceived as being "green", but being "green" means different things to different individuals and to different business types. The business interests of the different players are not the same, so, despite general agreement that efficiency is a good thing, the intersection of interests among the players around energy efficiency is not the same. For example, the most attractive (profitable) lighting upgrade from the perspective of a lighting services contractor—perhaps a subsidiary of a facilities engineering company—is not particularly likely to be the most attractive from the perspective of the leasing agent, who is concerned with the lease implications of a change-out. And, neither player's preferred option is particularly likely to provide the best lighting solution for the tenant. The tenant may want a custom lighting design that is both functional and aesthetic, the leasing agent may be concerned about negotiating an expense stop for tenant improvement that will maintain the customer's interest in the space and getting the customer into the space quickly, and the lighting services company may want to provide standard layouts to minimize the costs of design and maximize profit by minimizing time consuming design and installation. The business interests, time frames and constraints are different.

This model would seem to diminish the role and influence of the on-site building manager or management team. It does and it does not. Like the captain of a large ship or airplane, the on-site manager has enormous and immediate responsibilities for the safe and efficient operation of the vessel. But an airline pilot does not control scheduling, routing, air traffic control, fuel prices, engine selection, and so on, all of which affect the "energy efficiency" of a given flight. The analogy isn't perfect, but, the choices available to the building manager regarding energy efficiency are likewise highly constrained. The on-site staff can make few if any major decisions affecting efficiency unilaterally but the facilities engineer may have great influence with a senior property manager who may influence the owner.

Following through on the model and its implication, it becomes critically important to know and understand who the major players are in each category, their business drivers, their decision-making hierarchies and, finally, what points of influence or leverage a utility and its program might actually have with each player type.

It's relatively easy to consider the group of buildings of a given bank, for example, as a fleet: we all recognize Bank of America, Wells Fargo Bank, Wachovia, Washington Mutual and so on. These "fleets" are large and by design highly visible, consisting of hundreds and hundreds of buildings nationally. More often than not, banks, like other businesses, lease rather than own much of their space.

Large banks may well have national agreements with one or more fee-based property managers, organized geographically (one company in one state and another company if a different state) or by building function (a company for small branches, and a company for data centers). Of course, each of the fee-based management companies has multiple clients as well, which may range in size from other large chains to small individual firms such as doctors' or lawyers' offices. Just as the large banks may be said to have fleets, so may the fee-based property managers—but they are not the same fleets, and they are far less visible than commercial brand entities like banks.

Likewise the facilities engineering service companies that operate big buildings can be viewed as having fleets of buildings. They may or may not be aligned in an exclusive way with any particular commercial enterprise (such as a bank) or fee-based operator. They have fleets, too, but again, different fleets.

REITs, which likewise have fleets of buildings in which they may have shared ownership with investor groups, may lease to a variety of clients, (from large chains to individuals). They may engage fee-based operators and definitely work with facilities engineering service companies. Again, they service "fleets" of buildings, but different fleets from the other players.

For the purpose of program implementation this points to the opportunity to work with each major player type and view each as an opportunity to aggregate buildings rather than view each building as an entity and buildings them one by one. This offers greater efficiency in terms of the number of contacts that are required and in terms of delivering larger numbers of buildings. This has long been obvious for highly visible commercial brand entities such as banks, but much less so for fee-based management companies, facilities engineering service companies, REITS, and investor groups.

Aggregating services with the visible commercial entities (e.g., the banks) is leading to aggregation opportunities with the other service providers that these visible firms engage.

PG&E has begun experimenting with this approach and has begun reaching out to key players in each group. An example is a program offering called "More than a Million" in which PG&E offers "earmarked" funding and special dedicated technical support to customers who provided multiple projects at multiple sites that will produce one MW of savings or more. Most importantly, this effort is designed to get the customer to engage in comprehensive planning that includes benchmarking and establishing a set of priorities across and within buildings. A dedicated support team is available to support the benchmarking and assist in the prioritization.

Also, PG&E is making some internal adjustments to increase the focus on higher-level decision-makers in large property companies. PG&E is developing education and marketing messages and tools attuned to the needs of different decision-makers ranging from vice-presidents and senior property managers to facility engineers.

Table 1 summarizes the leverage points and messaging opportunities identified in the research. The findings are identified in three categories: characteristics, relationship to the utility, and strategy. Under characteristics there is a description of the business model and a description of decision making.

In terms of relationships to the utility, we have identified whether holdings might be identified through utility records and described the typical interactions with the utility. In some instances the holdings are listed in the name of the firm. In other instances, buildings may be individually incorporated and listed separately. In this case it may be difficult to identify the buildings held or serviced by a firm. For investment firms and engineering firms the utility may only have informal information about the holdings. The interactions between the utility and the firms are also described. For strategy, leverage points, targeted players, goals, and messages are identified.

### **Summary and Conclusions**

Utility energy efficiency programs have tended to focus on recruiting individual commercial buildings to their programs. While this strategy works and has been successful, it overlooks the fact that most large commercial buildings are typically part of much larger fleets of buildings and that these fleets represent a significant and much larger opportunity to promote energy efficiency and carbon reduction. A single building may be a part of a fleet owned by an investor organization, managed by a REIT, and serviced by a facilities engineering services firm.

Each of these organizations has a fleet of buildings although each fleet comprises a different set of buildings.

Improvement in the energy efficiency of buildings can be accelerated by focusing on the decision-makers guiding the fleets and appealing to the value propositions that underlie their business models. One key is to get high-level decision-makers for each fleet to address energy efficiency in terms of their own interests. For a fee-based operator this may represent a way to reduce cost, increase the asset value of a client's portfolio, and to strengthen relationships with their clients. For an engineering service firm, it may be a way to respond to demands to reduce operating costs and a way to grow by increasing their services and their profits.

A second key to the strategy is to convince decision-makers in fleet organizations that it is important to develop and overall plan for their buildings and to prioritize across buildings and measures. This can result in a more comprehensive approach to buildings with attendant greater savings.

Targeting management at high levels in these organizations requires reaching fewer people and takes advantage of top down decision-making. In a service territory such as PG&E's, contacts with between 50 and 100 firms can result in addressing thousands of buildings.<sup>8</sup> It leverages resources within the target organizations and provides multiple points of entry — ownership, building management, and facility engineering.

There are challenges to implementing this approach. It requires interventions at higher levels in client organizations and interventions with decision-makers at a distance. The first may require utility representatives with a different skill set than those who interact with facilities engineers at a building level and the second requires thinking beyond the utility boundaries. It requires identifying key decision-makers and firms that may not be customers of record. It may require higher levels in utility organizations become involved with larger customers. And, it requires thinking about how organizations whose operations are structured to deal with buildings and sites can be organized to address firms whose activities cut across geography and customers.

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<sup>&</sup>lt;sup>8</sup> The previously cited firm with 20 million square feet operated more than 200 buildings in Northern California. An owner with 10 million square feet had 28 buildings, etc.

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Type of Firm	Characteristics		Relationship to Utility		Strategy			
	Business model	Decision-making	Name on utility record	Interaction	Leverage points	Target	Goals	Message
Firms that own and manage buildings (full ownership)	<ul> <li>Buy and hold</li> <li>Make money on lease and appreciation</li> </ul>	<ul> <li>Decisions at the portfolio level</li> <li>Recommendations at the building level are screened as they rise through the hierarchy</li> </ul>	Yes	Corporate or account representative responsible for the whole account or multiple account representatives if if smaller or geographically spread firm	<ul> <li>They tend to hold property long-term</li> <li>Energy plan is needed</li> <li>May be willing to invest in projects with longer paybacks</li> </ul>	<ul> <li>Owner</li> <li>CEO</li> <li>Senior executives at national / regional level</li> <li>Financial analysts</li> <li>Vice president or regional vice president for engineering</li> </ul>	<ul> <li>Portfolio energy plan</li> <li>Individual building plans</li> <li>Building or end use monitoring and/or control</li> </ul>	<ul> <li>Improved performance of portfolio</li> <li>Quality building / better buildings</li> <li>Reduced costs</li> <li>Improved occupant comfort</li> <li>Environmental impacts</li> </ul>
Owner/manager organizations REITS (with co- investors)	Different goal for each building - buy and sell or buy and hold	Decisions are at building level depending on objective for buying or holding property	Yes or no	Corporate or multiple account representatives	<ul> <li>Buildings unlikely to be "flipped" within 3-4 years</li> <li>Recently "flipped" buildings</li> <li>Upgrades included in the building financing</li> <li>Buildings that are leaving the portfolio</li> </ul>	<ul> <li>Senior level trust managers</li> <li>Senior property managers</li> <li>Chief building engineers</li> <li>Buildings new to portfolio</li> <li>Buildings that just left a portfolio</li> </ul>	<ul> <li>Individual building energy plans</li> <li>Capital plans</li> <li>Portfolio plans</li> <li>Building level monitoring</li> <li>Including efficiency at purchase</li> <li>Track buildings leaving the portfolio</li> </ul>	<ul> <li>The importance of energy efficiency to asset value and cost reduction</li> <li>Green image and carbon reduction</li> <li>Availability of analysis money</li> </ul>
Fee-based property management firms	<ul> <li>Deliver high value services</li> <li>Increase services</li> <li>Provide high value services</li> <li>Produce high client satisfaction</li> </ul>	<ul> <li>Owners are the ultimate decisions- makers</li> <li>Property managers have varying degrees of control</li> </ul>	More likely no than yes	<ul> <li>Account reps work with staff on a building by building basis</li> <li>Utility may not be aware of all buildings managed by company</li> </ul>	<ul> <li>Build positive relationships by increasing asset value of building or reducing the cost of services</li> <li>Opportunity to sell a new high value service to clients</li> </ul>	<ul> <li>Owners</li> <li>Senior high-level managers (asset manager, property managers)</li> <li>Director of engineering</li> <li>Chief engineers</li> </ul>	<ul> <li>Create attractive product to be offered by fee- based managers</li> <li>Aggregate properties</li> <li>Get owners to ask fee-based managers to reduce energy costs</li> <li>See fee-based operators as having multiple owners with multiple buildings</li> <li>Provide customized building and portfolio energy plans</li> </ul>	<ul> <li>Energy efficiency is a value added service</li> <li>Service is a way to build positive client relationship</li> <li>Reduced operating costs</li> <li>Improved occupant comfort</li> <li>Services to reduce tenant consumption</li> <li>Carbon reduction</li> <li>Availability of analysis money</li> </ul>

## Table 1. Characteristics and Strategy for Major Players in the Commercial Building Market

Type of Firm	Characteristics		Relationship to Utility		Strategy			
	Business model	Decision-making	Name on utility record	Interaction	Leverage points	Target	Goals	Message
Large investment firms, pension funds, and organizations that invest in buildings or have partial ownership in buildings but do not manage buildings	Invest in property to achieve high and stable long term gains	<ul> <li>Investment managers provide policy and guidance</li> <li>Review and ratify decisions</li> <li>May cede a high level of control to trust manager at property firm</li> <li>Trust manager at property firm sets general policy and makes decisions about buy, sell, hold</li> </ul>	No	No linkage between utility and firm	<ul> <li>There is external pressure on some investment managers to increase the energy efficiency of their portfolio</li> <li>Executive contacts with policy makers could influence greater attention to efficiency</li> </ul>	<ul> <li>Institutional investment organizations</li> <li>Investment managers</li> <li>Property managers</li> </ul>	<ul> <li>Get institutional investors to develop EE polices</li> <li>Target investment managers with tailored EE information</li> <li>Provide information to property managers</li> <li>Target property managers for efficiency</li> </ul>	<ul> <li>Environmental value of efficiency</li> <li>Relation of energy and asset value</li> <li>Information on available resources</li> <li>Availability of analysis money</li> <li>Potential for energy efficiency</li> </ul>
Engineering service/construction firms that provide services to large numbers of buildings	<ul> <li>Deliver high value services</li> <li>Provide more services</li> <li>Provide new high value services</li> <li>Produce high client satisfaction</li> </ul>	<ul> <li>Prepare budget and capital plans</li> <li>Can influence decisions</li> </ul>	No	Chief engineers interact with account reps usually dealing with service problems	<ul> <li>They are looking for new high-value services</li> <li>They are in the position to provide knowledge and information to engineers</li> <li>Operating engineers are very competitive about building operations</li> <li>Benchmarking can provide a comparison tool</li> <li>Building and end- use monitoring provide opportunities for feedback</li> </ul>	<ul> <li>High-level decision makers at service companies</li> <li>Chief engineers assigned to specific property companies</li> </ul>	<ul> <li>Work with service companies to provide information and education to engineers</li> <li>Engage engineers and service companies with energy benchmarking</li> <li>Assist firms to develop retro- commissioning or other energy related services as an offering to companies for their clients</li> <li>Promote monitoring</li> </ul>	<ul> <li>Reduce operating costs through energy efficiency</li> <li>Opportunity for value added services</li> <li>Play on the competitive nature with benchmarks and the goal of the most energy efficient building</li> </ul>