

# MIND THE GAAP

A STUDY ON THE EFFECTS OF PROPOSED  
CHANGES IN ACCOUNTING STANDARDS  
FOR LEASES ON INVESTMENT IN ENERGY  
EFFICIENCY RETROFITS IN THE UNITED STATES



## Issue Brief

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# ABSTRACT

It is well known that energy efficiency retrofits of buildings provide attractive and stable financial returns through energy, water and operational cost savings over a long period of time. McKinsey estimates that \$1.2 trillion in potential annual energy savings can be achieved through \$520 billion of energy efficiency investments over the next decade.<sup>1</sup>

However, despite these attractive returns, and despite the rising tide of environmental awareness, many barriers prevent the market from capturing the savings. Chief among them is the scarcity of capital available to building owners to fund up-front project costs. In the wake of the recent financial crisis, competition for scarce capital within companies and institutions has intensified.

Some organizations currently use operating leases or service agreement financing structures, enabling them to cover the up-front cost of energy efficiency retrofit projects without having to record the value of the project as a new asset and long-term liability on their balance sheet. In the current economic climate, off-balance-sheet financing will continue to be important in unlocking the full potential economic and environmental benefits of energy efficiency retrofits.

Recently, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) initiated a joint project to develop a new approach to lease accounting, whereby standards established under U.S. Generally Accepted Accounting Principles (U.S. GAAP) and overseen by FASB will be reconciled with the International Financial Reporting Standards (IFRS). The proposed new lease accounting approach outlined in FASB's recently published exposure draft would ensure that assets and liabilities arising under all leases are recognized in the statement of financial position. In other words, the proposal aims to move all operating leases, which today are not "seen" on the balance sheet of a building owner, onto the balance sheet. Notably, the exposure draft posits that a contract that supplies the purchaser with all but an insignificant amount of the output of an asset, and specifies payments in terms of a fixed price per unit of output, is not a lease.

Without strategic response by industry and policymakers, these proposed accounting changes may, unintentionally, slow the growth of the building retrofit market. Elimination of operating leases and other service agreement financing structures may prevent building owners from making internal building improvements. That is because without such tools, they would need to rely on their own limited debt capacity, and an investment in an efficiency retrofit may not compete well with multiple other priorities. Building retrofit activity is already significantly lower than its economic market potential suggests it should be. The elimination of off-balance sheet financing solutions may further stall activity in both public- and private-sector buildings.

By bringing the potential ramifications of these changes to light, the Institute for Building Efficiency hopes to spur dialogue on strategies that can be employed by energy service companies (ESCOs), financiers, and policymakers to ensure continued growth in energy efficiency building retrofit activity. The Institute believes that to unleash the true growth potential of this market and accelerate investments in energy efficiency, off-balance-sheet financing needs to remain available to the private and institutional sectors.

<sup>1</sup> Choi Granade, Hannah et. al. (2009) "Unlocking Energy Efficiency in the U.S. Economy." McKinsey & Company.

## HISTORY OF GAAP/IFRS CONVERGENCE

In October 2002, the FASB and the IASB signed the Norwalk Agreement, a memorandum of understanding that formalized the commitment of both parties to work towards convergence of their accounting standards into a single universally recognized standard that would accurately account for (and reflect in financial statements) the assets and liabilities that arise out of leases. The FASB currently uses U.S. GAAP, while IASB promotes the use of IFRS. Although these two systems differ with respect to accounting protocols in a number of areas, this paper will primarily explore the differences in lease accounting. Since 2002, representatives from the two organizations have met monthly to work out details of the new standards. As part of this process, FASB and IASB initiated a joint project to develop a new approach to lease accounting. In March 2009, the working group released a discussion draft of the new standards and solicited feedback. In August 2010, the organizations published an exposure draft on the new standard. The working group recently proposed the following timeline for implementation of the new lease accounting standards:

- **Q3 2010** – Publication of exposure drafts proposing accounting standards for leases, from both the lessor and lessee perspective
- **Q4 2010** – Holding of public roundtable meetings to solicit stakeholder input on the drafts
- **Q2 2011** – Publication of finalized standards
- **TBD** – Effective date of standards

The purpose of the joint project is to develop a new approach to lease accounting that would ensure that assets and liabilities arising under leases are recognized in the statement of financial position. U.S. GAAP currently draws a distinction between two types of leases – capital leases and operating leases – and requires different accounting treatment for each. These existing accounting models have been criticized for failing to meet the needs of users of financial statements because they do not provide a faithful representation of leases. The new system will virtually eliminate operating leases. While IFRS will be shifting its standards slightly, U.S. GAAP will be moving much closer to the international standard in this aspect (although that is not the case with every change under consideration in the convergence process). Before diving into the details and ramifications of these lease accounting changes, it is useful first to define what a lease is.

## WHAT CONSTITUTES A LEASE<sup>2</sup>

A business arrangement involving an ongoing series of payments can be classified as either a service agreement or a lease. A service agreement is broadly defined as “an agreement to sell output (raw materials, energy etc.) or provide some type of performance to a recipient, regardless of the assets used to achieve that end.” A lease, meanwhile, can generally be thought of as periodic payment for the right to use a particular asset. The Emerging Issues Task Force created by FASB issued EITF 01-8 in order to clarify the tests that determine whether an arrangement is a lease or service agreement, as officially defined under Financial Accounting Standard No. 13 (FAS 13). FAS 13 uses two tests, *both* of which must be met, to determine whether an arrangement constitutes a lease:

- Does the arrangement involve specifically identified property, plant, and equipment (PP&E)?
- Does the arrangement convey the right to control the use of the PP&E?<sup>3</sup>

<sup>2</sup> Most information adapted from: Davis, Betty, Jerusalem, Marc, Whitley, Chris, “Hot Topics: Lessor Accounting” Equipment Leasing and Financing Association, 2005 ELA Accounting Conference.

<sup>3</sup> “Issue No. 01-8” EITF, www.fasb.org.

### Does the arrangement involve specifically identified PP&E?

First, if the agreement involves either land or depreciable physical assets, it may be considered a lease, except in the case of intangible assets, inventory or precious metals. Second, if the arrangement specifically identifies PP&E for sole use, it is classified as a lease, except under certain circumstances.

Even if PP&E is explicitly specified, the arrangement does *not* constitute a lease if the owner of the PP&E has the right and ability to fulfill its contractual obligations using other PP&E than that which is explicitly identified. (Although, if it is either cost-prohibitive to use that other equipment, or if the other equipment does not have sufficient capacity to fulfill the agreement, then this exception does not apply.)

This is the first test, and a negative answer under this test means that the arrangement will not be classified as a lease for accounting purposes. Even if the answer is yes (i.e., the agreement does specifically identify PP&E), the second question must be answered in the affirmative, as well, for the agreement to be considered a lease.

### Does the arrangement convey the right to control the use of the PP&E?

For the agreement to be a lease, the customer/purchaser must control the use of the asset. EITF recommends three tests to determine right of control, and only one of these must be met for right of control to exist:

- Does the customer/purchaser have control of the operation of the asset?
- Does the customer/purchaser control physical access to the PP&E?
- Does the customer/purchaser receive substantially all of the output at non-market pricing?

If the PP&E is both specifically identified and any of these three right-of-control tests are met, then the arrangement must be classified as a lease. As discussed below, this is an incredibly important distinction for the energy efficiency retrofit industry if and when the new accounting standards are implemented.

## CURRENT LEASE ACCOUNTING UNDER U.S. GAAP

Under U.S. GAAP, once an arrangement is deemed to be a lease, it can be classified into one of two categories: capital leases or operating leases. Capital leases, generally speaking, are assumed to constitute a purchase of the underlying equipment, through which the lease arrangement is a financing mechanism. The FASB outlines four tests to differentiate between the two. If any one of these four criteria is met, then the lease must be classified as a capital lease:

- Is ownership of the assets transferred at the end of the lease term?
- Is there a bargain purchase option?

### DEFINITION OF A LEASE

"A lease is defined as:

A contract in which the right to use a specified asset is conveyed, for a period of time, in exchange for consideration.

While the definition is not limited to property, plant, and equipment, the proposed new lease requirements do not apply to assets other than property, plant, and equipment.

Additionally, the right to use an asset is conveyed if the contract conveys the right to use a specified asset and the contract conveys the right to control the use of the underlying asset."

*(FASB/IASB Board Meeting, 6/23/2010)*

- Does the lease term comprise over 75% of the useful life of the asset?
- Does the present value of all lease payments, discounted at an “appropriate” rate, comprise 90% or more of the fair market value of the asset?

Once a lease is classified as either operating or capital, it must be recorded on the financial books of the lessee company. The brief example below outlines the two different ways in which these leases may be recorded. These examples have been greatly simplified and, in reality, details may exist that alter the specifics of the accounting (i.e., around tax treatment or interest expense). The numbers are also very rough and do not consider the time value of money. We will assume that Firm A is contemplating the lease of a piece of equipment worth \$100 for \$10 in annual payments over a 10-year lease term.

*Table 1 – Sample Partial Balance Sheet and Income Statement of Firm A Before Lease*

Balance Sheet				Income Statement	
Assets		Liabilities			
PP&E	500	Long-Term Leases	200	SG&A Expense	50
				Depreciation Expense	50

*Table 2 – Sample Partial Balance Sheet and Income Statement of Firm A with \$100 Operating Lease*

Balance Sheet				Income Statement	
Assets		Liabilities			
PP&E	500	Long-Term Leases	200	SG&A Expense	60
				Depreciation Expense	50

The only difference here is the extra \$10 in operating expenses that Firm A incurs each year for 10 years as a result of paying rent on this equipment

*Table 3 – Sample Partial Balance Sheet and Income Statement of Firm A with \$100 Capital Lease*

Balance Sheet				Income Statement	
Assets		Liabilities			
PP&E	600	Long-Term Leases	300	SG&A Expense	50
				Depreciation Expense	60

As is readily apparent, a capital lease requires Firm A to record the full fair market value of the equipment as an asset, and the present value of all future lease payments as a liability on its balance sheet. In reality, this number will *not* be equal to the gross value of all future payments, but will be discounted. The company will also need to depreciate that asset over time, although the number represented here will not usually equal the lease payment for that term, as is done here for simplification. Instead, it will be depreciated according U.S. GAAP guidelines. One exception here is that companies are often able to value the lease at zero (regardless of whether it is classified as an operating or capital lease), if the arrangement

contains contingent rental payments. The FASB is also eliminating this exception, however, so this will no longer provide any sort of relief.

In most cases, companies want to take on operating leases, not capital leases, as that will improve their attractiveness to potential investors, who typically use various financial ratios (debt/equity, return-on-assets etc.) to assess existing debt burdens of the company. While FAS 13 operating leases are not put on the balance sheet, they are listed in the footnotes, so analysts can capitalize the leases for their own internal purposes if they choose. In any case, higher long-term liabilities on the balance sheet can lead to more expensive debt and a lower stock price given the appearance of lower returns on assets. However, FASB believes that the current treatment of operating leases is misleading to stockholders and other stakeholders, hence the push to align more with IFRS, which requires all leases of any variety to be capitalized on the balance sheet.

It is important to note also how rating agencies conceive of operating versus capital leases. Rating agencies, which help determine the riskiness and pricing of debt, treat operating leases and capital leases the same when rating them. They view the unconditional obligation to pay over time, irrespective of the FASB's or the IRS's interpretation, as debt. However, it is worth noting that some energy efficiency financing structures provide guaranteed positive cash flow or net present value neutrality. Service agreements, depending upon their structure, are often not considered debt if payments under these agreements are contingent upon performance.

## PROPOSED CHANGES IN LEASE ACCOUNTING

Although the new accounting standards have not been finalized, much information is provided in FASB's recent exposure draft and from previous discussion drafts. The proposed new lease accounting approach would ensure that assets and liabilities arising under *all* leases are recognized in the statement of financial position. In other words, the converged standard under U.S. GAAP and IFRS would eliminate the concept of an operating lease. Therefore, any contract that could be classified as a lease would need to be accounted for as a capital lease, and the resulting assets and liabilities recorded on the balance sheet of the lessee, as represented in Table 3. The lessor would apply either a performance obligation or a derecognition approach to account for the assets and liabilities arising from a lease.

Firms across all industries will be affected by this change – some more than others. Companies that currently make extensive use of operating leases, such as retail stores, airline companies and drug stores, among others, will all see substantial “new” long-term debt added to their overall debt burden. This will affect various aspects of the businesses in different ways. For instance, this may or may not affect analysts' views of the company. Since operating leases are footnoted in the financial statements, many analysts may already factor these into company ratings. Rating agencies may take a different tack. They also have the financial statements, which may mean their ratings will not be much altered, but that outcome is not certain. Companies are also beholden to covenants made with existing mortgage and bondholders, many of which state that certain debt levels may not be exceeded. Some of these debt agreements, called indentures, would “grandfather” in the new standards (i.e., allowing debt levels to be exceeded because they did not violate those levels under the old standards), but in other cases these debt covenants would be breached, causing many companies to be in violation of contracts with bondholders. These are only some of the potential ramifications of the accounting changes on businesses generally.

While these accounting changes will affect any entity that enters into a lease in a variety of ways, this paper will focus on lease classification for energy efficiency improvements. Goods and service providers and their financial partners have worked for years to ensure that as many assets as possible receive operating lease treatment in order for customers to obtain off-balance sheet financing for the assets covered by those agreements. Now, organizations will aim to ensure service agreement treatment, in order to keep financing for those services off their balance sheets.

In other words, rather than determining whether the agreement is an operating or a capital lease for accounting purposes, the important question becomes whether the agreement contains a lease at all. Notably, the exposure draft continues to define a lease on the basis of the two-part test described earlier: 1) whether the contract depends on providing a specified asset, and 2) whether the contract conveys the right to control the use of a specified asset for an agreed period of time. Perhaps more important, the draft posits that “a contract that supplies the purchaser with all but an insignificant amount of the output of an asset and specifies payments in terms of a fixed price per unit of output *is not a lease.*” The question then becomes whether energy savings (e.g., negawatt-hours<sup>4</sup>) could be considered an “output” under this approach.

<sup>4</sup> Negawatt is a term coined by Amory Lovins (1990) to refer to a unit of avoided energy use.

## IMPORTANCE OF OFF-BALANCE SHEET FINANCING FOR ENERGY EFFICIENCY INVESTMENT DECISIONS

Before we can understand how these accounting changes will alter the landscape for investment in energy efficiency, we must first describe that landscape. The annual Energy Efficiency Indicator survey, produced by Johnson Controls, tracks data on energy efficiency decision-making in commercial buildings within a wide variety of public and private organizations. This data provides a good background on the importance of, and willingness to engage in, building energy efficiency projects and programs.

Overall, there is ever-increasing attention and commitment to energy efficiency, but less economic ability to act. Of respondents in North America, 52% said that energy management was either very or extremely important to their organizations, down from 56% in 2008. Additionally, 52% expect to make energy efficiency investments with their capital budget within the next 12 months (60% would use their operating budget).<sup>5</sup> These numbers are underwhelming given the strong business case for energy efficiency. Moreover, the majority, if willing to spend anything at all, were only willing to spend a small fraction of their capital budget for energy efficiency. Many efficiency measures, such as lighting retrofits, have a quick payback. These can be a good start, but only scratch the surface of the potential savings lying latent in the existing building stock. What is preventing building owners from spending more?

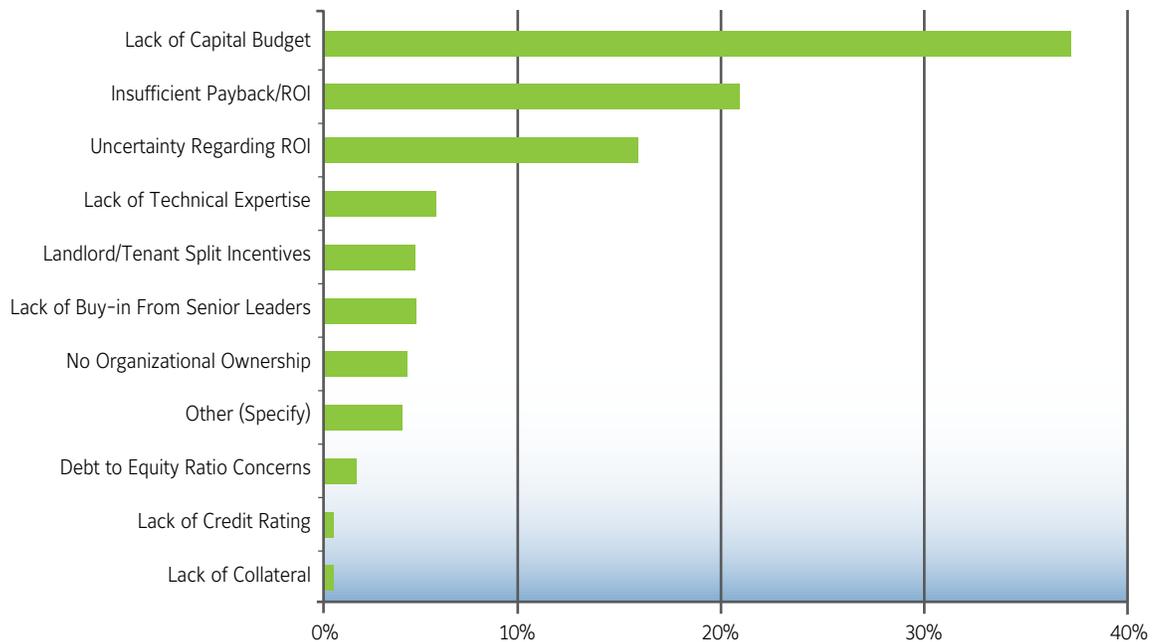
<sup>5</sup> Johnson Controls Inc., International Facility Management Association (2010) “Global Energy Efficiency Indicator.”

Figure 1 shows the most commonly cited barriers to increased investment. Lack of capital budget is clearly the greatest limiting factor, so providing organizations with financing is a key step toward growing the market. Closely related to this are concerns about the return on investment of energy efficiency projects. If returns on an efficiency investment are below the organization’s cost of capital, below the returns of other competing capital investments, or highly uncertain, the building owner is unlikely to invest.

This is further complicated by the fact that, in most instances, energy efficiency is not the core business of the organization. So while the “business case” for energy efficiency can be made from a positive NPV standpoint, the organization may have more financially advantageous options for its existing capital budget. And those same organizations also have little incentive to take on a substantial amount of new debt to finance non-core business projects, as doing so may adversely affect their debt covenants, credit

rating, and financial ratios without directly boosting revenue. While earnings are indeed the most important factor, in most organizations there is a bias toward revenue-boosting projects, and projects that increase revenue will often win out over projects that reduce overhead expenses. Organizations often lack an appropriate process for evaluating these projects. While many organizations have budgeting processes for their different business units, energy efficiency projects usually draw from a different and much smaller pool, so there is limited capital for deep retrofits. Finally, in tenant-occupied commercial real estate, there is little incentive for owners to make investments if they cannot pass such costs on to the tenants, who (under a traditional triple net lease) reap the benefits from energy bill savings.

*Figure 1. What is the Top Barrier to Capturing Potential Energy Savings for Your Company/Organization?*



This is where off-balance sheet financing becomes so important: It allows organizations to install energy efficiency retrofits at no up-front cost and without impairing their existing debt picture, or market value. This obviates the need to go through a capital budgeting process that either does not exist or does not allow the full value of a retrofit to be realized. In effect, it fulfills the basic premise of performance contracting as a truly self-funding facilities renewal. Another perspective is that these off-balance-sheet arrangements create an opportunity for building owners and third-party asset ownership entities to effectively arbitrage the inefficiencies in utility and operating budgets by replacing old, inefficient equipment. Currently off-balance-sheet structures account for only about 5% of all energy efficiency projects, although those deals tend to be much larger given the increased transaction costs (i.e., legal and accounting) associated with them. The remaining deals are all done either through capital leases or up-front purchases.

# OVERVIEW OF VARIOUS OFF-BALANCE-SHEET FINANCING STRUCTURES

Customers today use several structures in both the public and private markets that allow for off-balance-sheet financing of energy efficiency projects. The descriptions here provide context for how customers make investment decisions depending upon which options are available to them, and how the value added by those options might change with the proposed accounting alterations. Of all the options presented below, operating leases are used most often.

## Operating Lease

There are many different lease structures that public or private entities can use to fund energy efficiency retrofits. The current accounting rules can be used to have these leases characterized as operating leases, as opposed to capital leases, and therefore kept off the customer's balance sheet. This may be done through a financial institution, third-party financier, or directly with an Energy Service Company (ESCO),<sup>6</sup> A performance contract may or may not be used, as there are many options for ancillary structures in this case. Operating leases will be the first and most obvious casualty of the FASB's accounting change, as these leases will undoubtedly be added onto balance sheets. While the size of the current market for operating leases to finance building retrofit projects is unknown, this is easily the most popular financing method used today.

## On-Bill Financing (OBF)

On-bill financing is a structure offered by utilities in which the retrofit is financed via a loan from the utility. The loan is secured by the utility's ability to interrupt service and is paid off over a defined term through a surcharge on the customer's utility bill. These loans are typically made to small and medium-sized commercial customers, but can theoretically be made to any commercial and institutional building owner. OBF programs are not necessarily designed to provide an off-balance-sheet financing alternative, but they can be structured as such. It is unclear whether these programs would be affected by the accounting changes. On-bill financing is currently active in seven states and is being considered in a couple others. California's OBF program, the nation's largest, has less than \$10 million in outstanding loans, so the current total market size is likely less than \$50 million.<sup>7</sup>

## Shared Savings Agreements

The shared savings agreement is used primarily by ESCOs, often in conjunction with an energy performance contract. In this agreement, the ESCO installs the energy efficiency retrofit in the customer's building(s). The assets are owned by a third party, which then shares the forward savings generated on the project with the customer on a negotiated percentage basis. The third party pays the ESCO for the cost of the retrofit. It must be noted that shared savings agreements are often considered operating leases, so there is some overlap between these two groups. Shared savings agreements represent a small fraction (about 1%) of the total dollar value of projects completed by ESCOs in the U.S. However, there is strong customer interest in these arrangements, so it represents a tremendous growth opportunity. One ESCO, for example, has over \$200 million in prospective business in need of an off-balance-sheet solution. Shared savings agreements could fulfill this need, but concerns about the future of their balance sheet treatment prevent these deals from going through. At least one major credit rating agency has ruled that shared savings agreements do not constitute debt, since future payments are contingent upon performance of the ESCO. Therefore, the counter-party bears relatively little risk.

<sup>6</sup> According to the National Association of Energy Service Companies, an Energy Service Company (ESCO) is "a business that develops, installs, and arranges financing for projects designed to improve the energy efficiency and maintenance costs for facilities over a 7-20 year time period. ESCOs generally act as project developers for a wide range of tasks and assume the technical and performance risk associated with the project."

<sup>7</sup> Brown, Matthew (2009) "On-Bill Financing: Helping Small Business Reduce Emissions and Energy Use While Improving Profitability," prepared for the National Small Business Association.

## Property Assessed Clean Energy (PACE) Tax Lien Financing

This popular new innovation allows local governments to fund energy efficiency, water efficiency, and renewable energy improvements in residential and commercial buildings by using the “land-secured financing district” structure, which historically has been used to fund a variety of projects with a public purpose (e.g., street paving, open space, water and sewer systems, street lighting). The outlay for project costs is then paid back by the owner as a line item addition to the annual property tax assessment over a 5- to 20-year term. It is unclear whether this would be classified as debt by the FASB, rating agencies, or under indentures, so its ability to provide off-balance-sheet financing is unclear. As such, it is also unclear how this would change under the new rules. To date, most PACE programs have been geared toward the residential sector, but there is growing interest in establishing PACE programs for commercial buildings.

Currently, many residential PACE programs are effectively on hold after the Federal Housing Finance Agency (FHFA) and the Office of the Comptroller of the Currency (OCC) issued letters expressing concern with the PACE model due to the seniority of the tax lien position relative to existing mortgages, as well as a perceived lack of consumer and lender protections.<sup>8</sup> However, if implemented properly, following best practice standards developed by the U.S. Department of Energy, the PACE model can mitigate risk to mortgage lenders and even enhance the mortgagee’s position by improving the property owner’s cash flow and ability to pay debts, thus lowering the risk of mortgage default and improving the marketability of the property, the mortgagee’s underlying collateral asset. In addition, federal loan guarantees could enable PACE financing with attractive rates and terms without senior liens to overcome the mortgage holder objections, while maintaining the PACE model’s key advantages, such as survival through any ownership transition. About \$50 million in PACE financing has been distributed thus far by pilot communities.

<sup>8</sup> FHFA (2010) “FHFA Statement on Certain Energy Retrofit Loan Programs.” Available at: <http://www.fhfa.gov/webfiles/15884/PACESTM7610.pdf>, <http://www.occ.treas.gov/ftp/bulletin/2010-25.html>

## Energy Services Agreements/Efficiency PPAs

Several third-party financiers have sprouted up in recent years offering innovative financing structures, particularly for private-sector and institutional clients, that eliminate the first-cost burden for their customers and keep the resulting payments off the balance sheet. Some examples of these companies and their contracts are as follows:

- **Metrus Energy (“Metrus”)** – Uses an Energy Services Agreement (ESA) through which Metrus funds the upfront costs of the project, contracts with an ESCO to perform the retrofit and provide ongoing maintenance, and the customer pays Metrus a periodic service charge over a specified term that varies depending upon energy savings achieved. The service charge is set to always be less than existing utility payments, so that the customer is always cash-flow positive.
- **Transcend Equity Development Corp. (“Transcend”)** – Uses a Managed Energy Services Agreement (MESA), mostly done with commercial investment properties, through which the landlord or tenant pays a monthly amount equal to the property’s historical utility bill. Transcend keeps the profits that result from the energy efficiency improvements it makes, while paying the utility directly for actual energy used.
- **Energy Resource Management Corporation (“EnergyRM”)** – Uses an Energy Efficiency Power Purchase Agreement very similar to the Transcend model. In addition, EnergyRM monetizes and sells the “negawatts” generated by the project back to the local utility in states where energy efficiency can be used to fulfill commitments, quotas or standards under a variety of state policies (Renewable Portfolio Standards, sale into forward capacity markets, etc).<sup>9</sup>

<sup>9</sup> Equilibrium Capital Group, “Energy Efficiency: Turning Negawatts into Marketable Securities,” April 2010.

The referenced models are much more nuanced than presented above, and these brief descriptions serve merely to provide an overview. The total dollar value of deals completed through these types of agreements is not available, but it is likely less than all other options listed here, given how new these structures are to the industry, and how few firms offer these services.

Aside from PACE financing, energy service agreement models have the greatest chance of continuing to provide off-balance sheet financing to the customer, in particular because payments are structured in terms of a fixed or market price per unit of output (e.g., dollars/gallon chilled water, dollars/negawatt-hour of energy savings). Whether these models will maintain off-balance-sheet treatment under the new accounting regime is not for this paper to speculate; that determination will depend upon both the specifics of the new regulations and the nuances of each individual model. That said, all such models would greatly benefit from continuing to be treated off-balance-sheet, and such treatment would accelerate the financing of retrofits in private-sector buildings.

## IMPACT OF ACCOUNTING RULE CHANGES BY VERTICAL MARKET

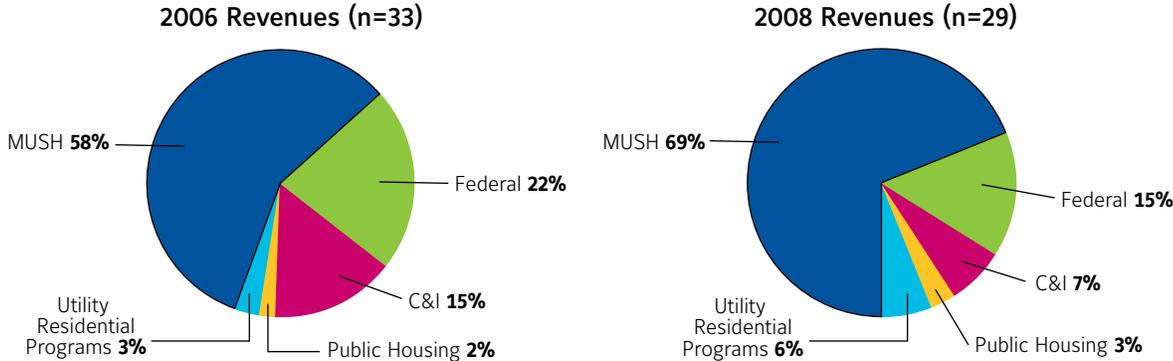
All of the financing mechanisms listed above can provide off-balance-sheet financing to customers today, although concerns about future accounting changes are tempering their use. It should be noted further that off-balance-sheet financing is not equally important to all customers. The market for energy efficiency is heterogeneous, and some market segments have regulatory, tax and accounting environments that may cause them to value off-balance-sheet financing differently. Recognizing these differences will help us determine which markets will be most affected by the new FASB/IASB lease accounting standards.

### ESCO Market Segmentation

The ESCO market can be used as a proxy for the larger commercial building energy efficiency retrofit market for the purposes of segmentation. The most recent data from the National Association of Energy Service Companies (NAESCO) shows the breakdown of the ESCO industry by sector in 2006 and 2008, as displayed in Figure 2.<sup>10</sup> The municipal/ state government, university, school and hospital (or “MUSH”) market represents the large majority of the market at 69%, while the federal government plays a large role as well. What is perhaps most surprising is that commercial and industrial (C&I) customers only account for 7% of the market, down from 15% in 2006, due mostly to adverse macroeconomic conditions and poor credit availability. The residential market is limited, even if utility programs and public housing are included, and will not be addressed in this paper.

<sup>10</sup> Satchwell, Andrew et al, “A Survey of the U.S. ESCO Industry: Market Growth and Development from 2008 to 2011” Lawrence Berkeley National Laboratory, June, 2010.

Figure 2. NAESCO Breakdown of the ESCO Industry by Sector.



There are generally three major goals for pursuing off-balance-sheet financing at present. The deal must fulfill at least one or two of these goals for the transaction to make sense for the customer. First, the customer wants the transaction to be classified as an operating lease or service agreement in order to avoid recording those assets and liabilities on its balance sheet. Second, the customer wants to ensure that the arrangement is not classified as debt under its mortgage agreements or bondholders master trust indenture. This will ensure that it is not violating any of its debt covenants. Finally, the customer wants the major rating agencies not to classify the arrangement as debt,<sup>11</sup> to ensure that the transaction does not negatively affect the customer's credit rating. While the FASB ruling would not directly affect the latter two, the first would clearly be affected. The following is a brief speculation of the importance that each segment (Federal, MUSH, C&I) might place on off-balance-sheet financing for energy efficiency projects, based upon interviews with salespeople in those markets and with other experts.

<sup>11</sup> Because, for example, the arrangements may provide guaranteed positive cash flow.

### Federal Government

The federal government market is not held to the same standards of financial accounting as companies and institutions (regulated by FASB), or even state and local governments (regulated by GASB), although the Government Accountability Office does act as the government spending "watchdog." The federal government generally finances energy efficiency projects out of either a capital budget or an operating budget, both of which are funded through any number of measures (bonds, tax receipts, etc.). Most comprehensive building retrofit projects are undertaken through the Super ESPC process managed by the U.S. Federal Energy Management Program (FEMP). This program allows agencies to accomplish energy projects for their facilities without up-front capital costs and without special congressional appropriations to pay for the improvements.<sup>12</sup> While the federal government places nominal value on having payments for projects classified as operating expenses versus capital expenses, it would not place as much emphasis on whether these loans added to their overall debt burden. Energy efficiency investment is trivial compared to other federal debt and would not affect the credit rating of the U.S. Government.

<sup>12</sup> U.S. Department of Energy (2010) "Energy Savings Performance Contracts." Available at: <http://www1.eere.energy.gov/femp/financing/espics.html>

If, hypothetically, the federal government were affected by the accounting change, and all operating leases needed to be classified as capital expenditures, this would affect the market from the ESCO perspective because all deals would need to go through the capital appropriations process, instead of being funded more easily and quickly out of the operating budget. As a consequence, the sales cycle would be longer, and the procurement process potentially open to more competition.

### State and Local Governments

Municipal and state government rules are established by the Governmental Accounting Standards Board (GASB), and it is unclear whether the GASB will pursue convergence along with the FASB. GASB often adopts FASB standards, but at times will create different standards that cater to some of the unique challenges facing governments. So whether the GASB will follow the FASB on all of these issues is uncertain. As with the federal government, therefore, state and local governments may not be subject to these reporting standards.

Financing structures for this market are also unique. By structuring tax-exempt leases, which can be paid for through the operating budget, state and local governments can issue bonds (presuming they have good credit rating and capacity) that typically give them a significantly lower cost of capital than they could get from a third-party financier. While municipal leases do provide for cancellation for non-appropriation (suggesting that they are a current liability rather than long-term debt), the trend has been toward more comprehensive disclosure than typically indicated by an operating lease.

It is unclear whether GASB will implement the same changes as FASB. If it does, these tax-exempt lease agreements will most likely be reclassified as capital leases, sending them through a more onerous appropriations procedure, negatively affecting investment in this arena in a manner similar to the federal market. And even if governments could use other financial structures to get the payments back off the books, the more important factor is the tax-exempt treatment. If this cannot be preserved in a structure, governments are unlikely to use it. Major fiscal imbalances in many state and local governments will also induce them to cut back on their overall debt burden as they seek to balance budgets. This will add even more pressure to cut energy efficiency investments.

Currently, these governments also receive direct aid through the American Reinvestment and Recovery Act (ARRA) and other programs, further lowering their cost of capital. Some governments also finance energy efficiency projects by levying new taxes, although that is more difficult in today's economic environment. Although constrained, traditional capital planning and budgeting processes will continue to support investments for various facility and energy efficiency improvements in government buildings. Overall, an accounting change here – should it happen through the GASB – would stunt market growth slightly, but would not be a deal breaker for most governments.

### **Schools, Universities and Hospitals**

For the market comprised of schools and hospitals, the situation is slightly different. Most of these institutions are registered as 501(c)(3) organizations, which gives them special tax treatment. However, they must still adhere to most of the same financial reporting requirements as private companies, which are governed by the FASB. In that sense, they are still concerned about their balance sheets, as their overall debt burden will, in part, determine the interest paid on their debt. If an energy efficiency project can be financed and paid for through operating expenses, that arrangement does not show up as debt and therefore will not adversely affect their cost of capital, and can be funded out of the operating budget without needing to go through the capital budgeting process. Given the current difficulty that organizations of all types and sizes are having in raising capital, they tend to reserve that scarce capital for projects that fall within their core mission, either education or healthcare. Compared to those types of projects, energy management tends to fall lower on the priority list. The 501(c)(3) market does qualify for a tax-exempt lease structure that mirrors a municipal lease, via a conduit process. These organizations also have a vested interest in receiving service agreement treatment as opposed to operating lease treatment, due to the preferential depreciation accounting they can receive.

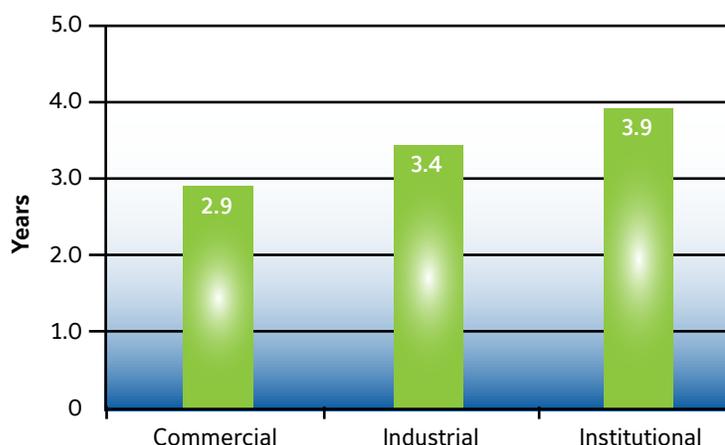
As a result of the accounting standards change, these institutions are likely to see a drop in energy efficiency investment, as projects that could once be funded through the operating budget instead would compete with all other capital projects. Fortunately, some schools and hospitals continue to see ancillary benefits to energy efficiency projects, beyond simply economic metrics (enhanced brand, educational opportunities) and have lower financial hurdle rates for projects, making the discounted cash flows on retrofit projects much more attractive to them than to the private sector. As such, investment will continue here, albeit at lower levels, in the face of the proposed accounting change.

### **Private Sector**

The private sector is the most difficult market in which to develop retrofit projects, and will be the most negatively affected by accounting standard changes. Out of all the markets, those in the private sector have the greatest sensitivity to taking on new debt. Investor reporting requirements, debt covenants,

analyst assessments and credit ratings are all top-tier issues for private companies. Additionally, private companies have the highest required internal rates of return, and that creates an even more difficult environment for energy efficiency investments. Traditionally, while energy efficiency investments provide healthy risk-adjusted returns (depending upon what types of credit enhancements are used and how the financing is structured), private companies usually look for quicker paybacks than what energy efficiency is able to provide, even if it involves more risk. Figure 3 displays data from the aforementioned EEI survey conducted by Johnson Controls, Inc., showing the maximum allowable payback period for energy efficiency projects worldwide. Given those paybacks in the 3- to 4-year range, performance contracting, which generally has a payback of 6 to 7 years, on average, for a 10-year term, has trouble competing. Using third-party financing can significantly reduce these payback periods, however.

*Figure 3. Maximum Allowable Payback Period for Energy Efficiency Projects.*



This short-term outlook toward paybacks on the part of private companies is also reflected in their decision-making around investments in their buildings. Schools and institutions are more likely to take a full life-cycle approach to their buildings, reflecting their longer planning horizon, and are more likely to see the long-term value in energy efficiency retrofits than private building owners, who tend to have a much shorter planning horizon.

Add to this a difficult environment for accessing affordable credit, and this helps explain the 7% drop in commercial and industrial market share in the ESCO market. As such, any effort to move financing off-balance-sheet is highly valued by these companies. As in the MUSH market, however, the reaction within the private sector is unlikely to be uniform. There is a significant difference between owner-occupied properties and tenant-occupied (commercial investment) properties.

#### *Owner-Occupied Properties*

These properties, in which the owner of the building is also the sole tenant, present both an upside and a downside when it comes to energy efficiency investments. On the upside, since the owner is occupying the building, that same entity has control over energy use as well as capital investments in the property.

However, finding the right person within the organization who will take ownership for the project can be difficult, so there may be long sales cycles. On the downside, energy efficiency is not typically viewed as part of the core business of the firm, and if the project cannot be kept off-balance-sheet, it will often lose out to other capital projects, or become significantly downsized. One of the keys to promoting investment in this market will be to continue to make a case that energy efficiency is actually part of the core mission of the customer. Many companies would benefit from increased brand awareness, and may even be facing pressure to be more environmentally conscious. Additionally, many companies have made carbon reduction commitments. Energy efficiency is the lowest-cost way of satisfying both of these demands.

### *Tenant-Occupied (Commercial Investment) Properties*

Commercial investment properties, in which the owner of the building manages the property and rents the space out to tenants, provide a different environment for energy efficiency projects. On the upside, commercial investment properties may be the only sector for which a case can be made that energy efficiency provides direct value to the core business. Property managers are in the business of maximizing the value of their properties. At the most basic level, the value of a property can be found by dividing the net operating income (NOI) of the property by the capitalization rate of the property. Net operating income consists of the revenues from the property (such as rent) less costs and other charges (such as depreciation and interest). Energy costs are among those costs. Lowering energy costs should therefore boost the NOI, and hence the overall value, of the property. The reality is far more complex, as often energy costs are borne by the tenant and not the building owner. But the existence of a core business case makes this market attractive if that case can be effectively communicated to the right people.

That said, there are many obstacles to getting projects completed in this market, as well. One of the largest of these revolves around counter-party risk. Most commercial lenders are unwilling to lend to a property management entity – usually an unrated LLC heavily laden with mortgage debt as is; the risk of default is far too high. Therefore, property managers rarely even have the option to finance with debt. If they do manage to secure financing, other obstacles remain. The project development process here is far different than in owner-occupied buildings. Many commercial investment properties have a 4- to 5-year refinancing cycle, and if an energy efficiency project does not get inserted at the right point, the process will continue without it. If the project gets into the refinancing cycle, and the property owners do not want to spend up-front capital on energy efficiency projects, then that property must take on debt to finance the project. Even though there is significant upside in the increased value of the property, bankers still see a property that has additional debt encumbering it. This makes the property more difficult to sell and reduces valuations despite the upside, as bankers generally want to see a property free from encumbrances (especially in the current economic environment). As mentioned earlier, there is also a disconnect between the owner of the property, who usually pays for capital improvements, and the tenant of the property, who will most often reap the rewards through lower energy bills.

Both owner-occupiers and commercial investors would place an extremely high value on off-balance-sheet financing given the circumstances laid out above, although there are other significant barriers to investment here. In the absence of policy that mandates energy efficiency targets or investments, companies in these markets are simply unlikely to invest heavily in energy efficiency.

## THE FUTURE OF THE PRIVATE AND INSTITUTIONAL MARKETS

There are certain policies that can help to advance the market, regardless of balance sheet concerns. Credit enhancement measures and other financing “superchargers” under consideration (i.e., loan guarantees, loss reserves, interest rate buy-downs, revolving loan funds, federal and state grants) can help get lenders to the table at reasonable prices. Additionally, policy mandates such as energy efficiency standards, labeling for buildings, and more stringent building codes will force companies to invest.

There are also business innovations that will help drive this market forward. Continued development of new or expanded core business value propositions for the customer, such as being able to link energy efficiency to increased worker productivity due to increased comfort, or increased sales due to brand enhancement, will help these projects compete in the capital budgeting process. The development of innovative new financing structures will give customers more flexibility in financing the projects. And continued technology development will make available a wider range of energy efficiency measures that may help drive down payback periods. **But to unleash the true growth potential of the market and accelerate investment, off-balance-sheet financing needs to continue to be made available to the private and institutional markets.**

## SERVICE AGREEMENTS FOR ENERGY EFFICIENCY

Before addressing recommended actions in response to these proposed changes, this paper will revisit the idea of using service agreements rather than leases to deliver efficiency retrofit projects. If projects can obtain service agreement treatment, then many of the negative effects described above due to the proposed accounting change may be mitigated. To review, as stated in the exposure draft, “at the date of inception of a contract, an entity shall determine whether the contract is, or contains, a lease on the basis of the substance of the contract, by assessing whether:

- a. the fulfillment of the contract depends on providing a specified asset or assets, and
- b. the contract conveys the right to control the use of a specified asset for an agreed period of time.”

We must remember that *both* of these tests must be met in order to necessitate lease treatment, so ensuring a negative response on at least one should allow for off-balance-sheet treatment. There does not seem to be much room for interpretation regarding “right of use” for building energy efficiency retrofits. Since facility improvement measures that increase efficiency are, by definition, part of the building, the customer for whom these measures are implemented must have a right to use and control them. A building owner is very unlikely to consent to third-party control of the building automation or HVAC system. Autonomy is important in order to maintain certain levels of comfort and safety. Measures such as lighting, windows and insulation are embedded into all parts of the building, so the building owner controls them by default. It seems unlikely that any agreement structured around energy efficiency investment would be able to avoid this “right of use” classification.

This leaves us with the first question of whether the arrangement explicitly specifies assets that would be used to satisfy the contract. This is where there may be more room for flexibility in interpretation under current FASB rules (and presumably the future rules). Existing guidance states that even if a particular asset is specified, if the service provider has the right and ability to use other assets to fulfill the contract, then the arrangement can be classified as a service agreement. While some ESPC contracts call for specific energy efficiency measures to be installed, this need not be the case. Indeed, in Europe, performance

contracts provide a list of possible energy reduction measures, but leave it up to the discretion of the ESCO to choose which ones are implemented in order to achieve the required level of savings, as long as certain standards of comfort and safety are upheld, and certain investment guidelines are followed. The customer has limited veto power. As such, potential exists, seemingly, to structure contracts to avoid explicit specification of assets and so maintain service agreement treatment.

Perhaps more important, the recent exposure draft states that FASB is in agreement with the conclusion in IFRIC 4 and Topic 840, that if the price the purchaser pays is specified per unit of output, the purchaser is paying for a product or service rather than the right to use an asset. Therefore, the exposure draft states, "a contract that supplies the purchaser with all but an insignificant amount of the output of an asset, and specifies payments in terms of a fixed price per unit of output or the current market price per unit of output, is not a lease."

From a broader perspective, the need to better communicate the risks borne by the parties in these structures must be acknowledged. While all leases may need to be accounted for as debt under the new rules, they do not all carry many of the traits of debt. Debt can be defined broadly and most simply as a future obligation to pay a certain amount in return for something of value. In many of these energy efficiency financing structures, however, the customer takes on a very minimal amount of risk. For instance, in a shared savings agreement backed up by a performance guarantee from an ESCO, the customer has no future obligation to pay. The ESCO simply takes a certain percentage of whatever savings it is able to generate in the building. If it does not achieve the savings specified in the performance guarantee, it must pay the customer the difference. In this case, the customer has no future obligation (and, in fact, holds something closer to an asset, given the upside). The rating agencies tend to concur on this. This inconsistency in classification gives rise to the need to communicate to regulators the risks inherent in these contracts.

## RECOMMENDATIONS

There is a strong need to obtain greater clarification from rule makers within the FASB and/or SEC on how exactly certain types of contracts and transactions will be classified after the accounting changes go into effect. The exposure draft published by FASB and IASB on August 17, 2010 outlines in greater detail the changes analyzed in this paper, and solicits comments by December 15, 2010. The following are some recommendations for steps to ensure that energy efficiency investment can grow as quickly and sustainably as possible:

- A formal venue should be established for dialogue among FASB, the U.S. Department of Energy, the OOC, the FDIC, ESCOs and contractors, energy efficiency and commercial real estate financiers, non-governmental organizations, commercial building owners, and other stakeholders to better understand and shed light on the issue.
- ESCOs, contractors and financing companies should analyze their internal operations, with specific focus on the private and institutional sectors, and implement any necessary changes that will put them in the best position to receive service agreement treatment for energy efficiency projects under both current rules and the proposed new rules. For instance, for ESCOs, this might mean suggesting alterations in the language of existing energy performance contracts, or promoting the expanded use of new financing models that will have a better chance of receiving service agreement classification.

- The energy efficiency industry should weigh in with comments on the proposed new lease accounting standards through written comments submitted in response to the exposure draft and during the FASB roundtable discussions in Q4 2010. The goal of these comments should be to establish open communication with the FASB on the effect lease accounting standard changes will have on energy efficiency investment.
- The broad group of stakeholders should discuss ways to move energy efficiency investment forward in other areas through policy, financial and technological innovation, and better communication. This type of alliance can ensure that future conversations with policymakers, regulators, financiers and other stakeholders will be represented by a broad range of interests, thus giving any issue under consideration more credibility.

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